

5th EDITION

A Guide to Teaching Practice

LOUIS COHEN, LAWRENCE MANION and KEITH MORRISON



Also available as a printed book
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A Guide to Teaching Practice

Fifth edition

'It is impossible to say which is the most valuable chapter: all contain useful material which will help those involved in the practical aspects of teaching, not just beginning teachers, to reflect more critically on the teaching and learning process.'

British Journal of Educational Studies, on the fourth edition

A Guide to Teaching Practice is the major standard text for all students on initial teacher training courses.

Authoritative yet accessible, it provides student teachers with the important basic skills and issues which students need to consider during their practice, such as planning, classroom organisation, behaviour management and assessment. The book's focus on the quality of teaching and learning and consideration of the latest regulations and guidelines ensures that it fits comfortably within TTA and OFSTED frameworks.

In addition, this fully updated fifth edition features brand new chapters on the foundation stage, legal issues, learning and teaching and using ICT in the classroom, as well as new material on numeracy, literacy, children's rights and progress files.

Additional learning resources for students are provided on a companion website at www.routledgefalmer.com/companion/0415306752, which contains further research, important links and downloadable materials.

This book is the most respected and widely used textbook for initial teacher training courses, and will be an essential resource for any student teacher.

Louis Cohen is Emeritus Professor of Education at Loughborough University of Technology. **Lawrence Manion** was formerly Principal Lecturer in Music at Manchester Metropolitan University. **Keith Morrison** was Senior Lecturer in Education at the University of Durham and is currently Professor of Education and Vice-Rector at the Inter-University of Macau. They are authors of many books, including *Research Methods in Education*, 5th edition, also published by RoutledgeFalmer.

A Guide to Teaching Practice – Companion Website

This fully updated Fifth Edition of *A Guide to Teaching Practice* is accompanied by a companion website which features downloadable* supplementary material for students and lecturers, and also a wealth of signposts and weblinks to useful material.

Organised thematically reflecting the chapter structure of this textbook, the website will be a valuable tool for any teacher or student teacher wanting to improve their practice.

Featured material includes:

- a variety of adaptable lesson plan templates;
- additional original material on subjects ranging from use of ICT in the classroom and assessment to legal issues and copyright;
- signposts to further reading;
- a wealth of weblinks to sites containing material relevant to students, and also practical sites offering classroom resources for teachers and pupils;
- presentation outlines for course lecturers.

It is intended that the companion website will provide real added value to this already comprehensive textbook – we hope you find it of use.

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A Guide to Teaching Practice

Fifth edition

**Louis Cohen, Lawrence Manion and
Keith Morrison**

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Foreword to the fifth edition

It is eight years since the fourth edition of *A Guide to Teaching Practice* was published and we are indebted to RoutledgeFalmer for the opportunity of updating and extending the text with a fifth edition. The book has been comprehensively rewritten, with inclusion of four major new chapters:

The foundation stage of education
Information and communication technology in education
Legal issues
Learning and teaching

The fifth edition also includes outlines and/or discussion of:

- 1 Educational reforms and developments in England and Wales.
- 2 Beacon, specialist and advanced schools.
- 3 The revised National Curriculum of England and Wales.
- 4 The revised requirements of initial teacher education from the Teacher Training Agency, including tests of numeracy, literacy and ICT.
- 5 Stress in teaching.
- 6 The use of web-based resources for planning and teaching.
- 7 Useful websites for teachers.

- 8 Brain-based approaches to teaching and learning.
- 9 Developing higher order thinking.
- 10 Direct instruction and whole-class interactive teaching.
- 11 Characteristics of effective teaching and learning.
- 12 Motivation and learning.
- 13 Inclusion and equal opportunities.
- 14 The role of special needs co-ordinators.
- 15 Attention Deficit/Hyperactivity Disorder.
- 16 Raising the achievements of boys in school.
- 17 Gifted and talented students.
- 18 Bullying in schools, and how this is addressed.
- 19 Homework and marking work.
- 20 The importance of formative assessment.
- 21 Authentic, portfolio and performance assessment.
- 22 Test construction.
- 23 Record keeping.
- 24 Progress files.

The book is comprehensively referenced to websites, to government documents, and to the latest research and scholarship in its fields. We should like to think that the considerable updating and additions of this fifth edition will ensure that *A Guide to Teaching Practice* continues to be a major, standard text on preparing student teachers to work in contemporary classrooms.

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Some perspectives on teaching and learning

Education is context-specific and context-dependent. Context refers to the settings or surroundings in which education takes place. A student teacher is faced with the exciting but challenging task of assimilating a variety of contexts very rapidly when embarking upon teaching practice, whether during a course of initial teacher pre-service education or as a newly qualified teacher entering a first appointment in a school. These contexts vary from the very broad and general macro-contexts at a societal level to the very specific micro-contexts of a particular individual in a particular school, class and lesson. The prospect can be daunting. The thrust of this book is to support students in their initial teaching experiences – the micro-contexts of everyday life in classrooms. However, localised education is set in broader contexts of society. This part of the book sets the contemporary scene for daily teaching and learning in these broader contexts.

It also describes some of the major themes of education in the last decade. Significantly, these include several developments and reforms from the government, changes to the requirements for student teachers, and revisions to the National Curriculum. Important amongst these is a new stage of education – the foundation stage – and a new chapter addresses this. Further, with the exponential rise of information and communication technology a new, large chapter is devoted to this. In an increasingly litigious age there is a need for student teachers to know key legal matters, and a new chapter discusses these.

The convention used in discussions here and throughout the book will be to refer to students in initial teacher education as ‘student teachers’ and to children and young adults attending school as ‘students’. Similarly, the terms ‘he’ and ‘she’, are used alternately in order to avoid the more cumbersome ‘he and she’.

A background to current developments in education

Introduction

It is the first day of your school visit for teaching practice. You maybe have a mixture of anticipation, anxiety, excitement, eagerness, trepidation and more than a few butterflies in your stomach. That is entirely natural and to be expected. Maybe you have made a positive decision to be a teacher and this is the first time you are going into school not as a pupil. All change! You are one of life's successes; you have gained a range of qualifications that have enabled you to reach this point. But here you are, a comparative novice, whose only experience of education so far has been on the 'receiving end'.

You want to teach; your experience of being taught may have been enjoyable (perhaps with a few negative aspects); you like the company of young learners and you have enjoyed the environment of a school; you like learning; you like knowledge, you like people and you like children. Maybe one of your relations has been a teacher and this has inspired you to want to teach; maybe you have been impressed by a particular teacher who taught you and you want to model yourself on him or her. There are many and varied reasons for wanting to teach.

So, here you are at the school gate. What will you want to find out? What will you need to learn? What will you have to teach? What will the class(es) be like? Where will you teach? What resources will you have? What will be appropriate for the pupils to learn? How will you teach? How will you keep order? How will you

handle pupils with different abilities, motivations and interests? What will be your timetable? Will you like your class teacher or mentor? Will you meet the headteacher? Will the children like you? How will you gain respect? How will you plan your teaching? The stomach churns a little more!

These are all legitimate questions and concerns, and it is right that student teachers will have an expectation of answers; indeed, we hope that this book will help you to address them all. The point here is that, as a novice teacher, you need to find out a range of matters, and quickly. You need to look at the specific circumstances of the school, teachers, children, resources, curricula, assessment, discipline and so on; in short you need to conduct a rapid situational analysis and learn from this very quickly. You need information, guidance and support, and we hope to indicate how you can gain these.

How can you do this? We intend to set some of the terms of this situational analysis in this book and in this chapter. For example, with regard to the 'what' of teaching, we will draw attention to, amongst other matters, the National Curriculum and the detailed and helpful guidance that the government has provided for its implementation with children at all ages so that there is no uncertainty about what should be taught, to whom, when and in what sequence. With regard to the 'how' of teaching, we will cover a range of issues in, amongst other matters, pedagogy, planning, discipline, motivation, learning and assessment, and the government's requirements

for, and guidance in, these matters. With regard to the support for teaching, we will draw attention to the government's guidance documents, to the roles of significant teachers at school (for example mentors, subject leaders and class teachers). With regard to what may be uppermost in student teachers' minds – how to keep order and maintain discipline in order to promote learning – we will draw attention to the current situation in schools, how discipline and order can be approached, what are the government's guidelines on discipline, and what to expect from the school.

The current situation in schools is one of permanent flux, with many innovations and developments designed to boost learning, raise standards and achievement, energise learning and meet the diverse needs and conditions of learners. This chapter outlines several of these, as they provide the necessary backdrop for understanding schools and the tasks of teachers. We hope that this eases student teachers' initial anxieties by providing information and by providing details on how to find more information and support. We paint a picture of extensive government involvement in education with the expressed intentions to raise standards, to improve social inclusion, to provide guidance and documentary support – in short, to help teachers in their daily work. We hope that by providing such an outline, we both inspire student teachers to teach and also inject a note of realism into what their expectations of teaching might be.

There will be many days when student teachers will experience a sense of achievement in school, just as there will be some days where they experience a sense of frustration, disappointment and downright dislike. That is the world of work. We hope that this book will help to increase the sense of achievement in accomplishing effective teaching and learning, and promote a sense of enjoyment of teaching. Effective teaching is pleasurable and richly repays the investment of time and energy that it requires.

If you do a web search with the words 'I had always wanted to be a teacher' you will find some 80 websites which include these exact words. If you key in 'I have always wanted to be a teacher' there will be over 500 websites returned to you.

If you key in 'I want to be a teacher' you will find close to 8,000 sites returned. If you key in 'I love teaching' you will have over 12,000 sites returned. If you key in 'I want to teach' you will have nearly 20,000 sites returned. One might suppose that the popularity of teaching is not in jeopardy. The rewards from teaching have traditionally included the opportunity to work with young and developing minds, to be a member of a human service, to share the excitement of learning and knowledge, to work with personalities and people, young and old, to be with the next generation, and to be with young people, shaping their personal development. These are their own rewards and they are very powerful.

How is it, then, that late in 2001, in the UK, a survey¹ found that over 36,000 teachers had left full-time permanent contracts, and close to 13,000 had left fixed term or part-time contracts, or that 12 per cent of those admitted to PGCE courses or reaching the final year of a B.Ed. course did not complete, or that 40 per cent of all final year students did not make it into the classroom (an annual loss of over £100 million in the initial training budget), or that 18 per cent of those who started teaching left within three years?

Why do they leave? The reasons given by secondary teachers were: workload (57.8 per cent); pupil behaviour (45.1 per cent); government initiatives (37.2 per cent); salary (24.5 per cent); stress (21.6 per cent); and resources and facilities (14.7 per cent). For primary teachers the most commonly cited reasons were: workload (73.9 per cent); government initiatives (42.1 per cent); stress (26.3 per cent); and pupil behaviour (15.8 per cent). We address these items in this chapter. Around half of these were teachers who were leaving with nothing in mind other than to leave – some to early retirement, others with no clear plans, others to go onto the supply register. Of those who were leaving with a plan in mind, some were going to work in the independent sector, others to work abroad. The authors of the report comment that these are sad statistics, for they represent a disillusioned workforce who had come into teaching with high hopes, commitment and ideals, indeed who had made a positive choice to teach.

One cannot presume perversity in government circles in trying to render teaching as unattractive as possible, yet certainly something has been happening to switch people off teaching. With the arrival of a new government the promise of 'education, education, education' for today's society became a slogan for reform of UK schools. There has been no shortage of government documentation support for teachers; indeed a litany of government prescriptions and interventions has been flowing thick and fast for years. This chapter charts some of these, and sets a context for the remainder of the book.

A plethora of innovations: standards and targets

Since the last edition of *A Guide To Teaching Practice* numerous developments, trends and initiatives have taken place in education. In 1984, perhaps portending the gloom of Orwell's book with the same date for its title, a small publication appeared entitled *The Tightening Grip: Growth of Central Control of the School Curriculum*.² In it, the author suggested that 'in a democracy, dispersion of control, rather than concentration at one level, is what is needed'.³ Some two decades later, the situation does not appear to have been ameliorated. Rather the opposite. In the earlier 1990s, in a compelling analysis, Hargreaves⁴ suggested an 'intensification' thesis: teachers' workload and responsibilities were increasing at an exponential rate, evidenced by lack of time for personal and professional development and preparation, limited professional control and personal discretion over workplace activities and decision making, 'chronic and persistent overload', lack of time for relaxation, indeed for even a proper lunch break. The effects of this, he argued, were the creation of cultures of dependency on externally produced materials and reliance on others' decisions, and, because there was inadequate time, to reduction in the quality of services provided in education. His analysis was remarkably prescient.

One response to this situation, he suggested, was for governments and national agencies to treat teachers as 'recovering alcoholics'⁵ who depend

on step-by-step guidance on instruction, and monitoring by inspection, imposed tests and curricula. Indeed, if we remain with his analysis, we can identify specific government interventions to address the issues.

In connection with teachers' workload and responsibilities the government issued a circular on reducing the bureaucratic burden on teachers,⁶ with advice on well-run meetings, written communications, preparing documents, receiving documents, pupils' reports, schemes of work and lesson plans, and use of school resources, most of which requirements were generated by the government itself. What spectacular naivety! If only the solution were that easy. The problem did not go away.

The requirement for personal and professional development, and lack of time for decision making, was addressed by relieving teachers of the responsibility to think for themselves: witness the production of copious documents covering every aspect of education and planning, cascading into schools in abundance, with thousands of pages of print. Exactly as Hargreaves had predicted, the rush of documents, prescriptions and requirements has not been stemmed, constituting a litany of consultations and responses from the centre to the periphery of education providers.

We are witness to the rise and fall of departments, agencies, individuals, governments and decision makers. Out go the National Curriculum Council, the School Curriculum and Assessment Authority, the Council for the Accreditation of Teacher Education, the Department for Education and Employment, the Department for Education; in come the shiny new Department for Education and Skills, the Qualifications and Curriculum Authority, the Teacher Training Agency, the Learning and Skills Council, the School Standards and Effectiveness Unit. Old wine, new bottles?

Perhaps one should not be uncharitable. There are many bold initiatives under way to improve education, and the government has been active in pushing through multiple agendas for reform and improvement. Under the flags of raising standards, excellence and social inclusion there have been several initiatives; these are summarised in Box 1.

Box 1: Interventions for school improvement

- The establishment of Education Action Zones.
- Increased attention to standards and target setting.
- Moves to reduce violence and bullying in schools.
- The push for literacy and numeracy in schools.
- Moves to address school exclusions, to improve attendance and to reduce truancy.
- The establishment of 'beacon' schools (centres of excellence which may share their experiences with others), 'specialist' schools (those offering a particular specialism, e.g. technology, languages, arts, humanities) and 'advanced schools'.
- The advocacy of lifelong learning and preparing lifelong learners in school.
- Legal frameworks for child protection, special educational needs and education for diversity.
- Attempts to raise the status of teachers by a new category of advanced skills teachers and advanced schools.
- The rewriting of the National Curriculum for schools, including the Foundation Stage and the inclusion of citizenship as a new subject.
- The development of value-added approaches to school improvement and monitoring.
- The rewriting of standards for the award of qualified teacher status and requirements for initial teacher education.
- The provision of copious amounts of support materials and guidance for schools implementing the National Curriculum.
- National Literacy and Numeracy Strategies at primary level, extending into the secondary age phase.
- Revisions to the 14–19 curriculum, including changes to post-16 curricula and qualifications.
- A range of new Education Acts and White Papers designed to improve standards and effectiveness.
- The advocacy and practice of newer forms of assessment.
- The production of guidelines for gifted and talented pupils.
- The establishment of a National College for School Leadership.
- The establishment of the Learning Skills Council (Learning Skills Act 2000).
- Changes in the nature and status of vocational qualifications.
- The provision of extensive ICT networks, the National Grid for Learning, the Virtual Teachers' Centre, the Teachernet.
- The provision of guidance for raising the achievement of boys.
- OFSTED's establishment of a PANDA (Performance and Assessment) report for each school to measure its performance and its value-added contribution to students' development.
- The provision of guidelines for homework.
- Support for world class tests in mathematics and problem solving for talented and gifted 9 to 13-year-olds.
- The development of e-learning.

If one were to judge the effectiveness of a government by the quantity of initiatives then surely the present government would be close to 'top of the class'. Yet, the very same innovations that have been designed to bring improvements, to render teaching a more attractive option, to reduce the pressure and workload on

teachers, in many ways have had the opposite effect to that sought. One could not fault the valuable documentation support provided by the government, and the need for support for overworked teachers seeking guidance on a range of educational matters. Yet it is rather like hitting the million dollar jackpot on the

'one-armed bandit' in Las Vegas, only to find that one cannot possibly catch or contain all the coins that are spewed out from the machine, so that they spill out everywhere. The sheer weight of government documents (literally, in paper) is staggering.

The government has expressed a laudable commitment to raising standards. This is evident in the interventions it has made. For example, in addition to the continuance of performance 'league tables' of schools, the Education Act 1997⁷ introduced baseline assessment into primary schools, enabling measures of the value-added components of schools to be measured by government-accredited bodies. Further, the White Paper *Excellence in Schools 1997*⁸ outlined the government's commitment to assessment and accountability for raising quality. It placed social inclusion, partnerships and modernisation at the heart of its agenda for education, and suggested requiring local education authorities to prepare Education Development Plans for raising quality. It included target setting by schools. Indeed the Department for Education and Skills set requirements for specific statutory target setting.

For the under-fives the targets were:⁹

By 2004, for the under-fives the government seeks to provide free nursery education for every 3 and 4-year-old whose parents want such a place, to provide childcare places for 1.6 million children, to establish 100 early Excellence Centres as 'beacons of good practice', and to establish 900 Neighbourhood Nurseries in disadvantaged areas.

No targets were set for Key Stage 1. For Key Stage 2 the targets included,¹⁰ for example:

- by 2004, 85 per cent of 11-year-olds will reach Level 4 or above and 35 per cent achieve Level 5 or above in each of English and mathematics, with this level of performance sustained to 2006.
- By 2006 the number of schools in which fewer than 65 per cent of pupils achieve Level 4 or above in English and mathematics is greatly reduced.

Similarly for Key Stage 3 the targets included:¹¹

- By 2007, 85 per cent will achieve Level 5 in English, mathematics and ICT, and 80 per cent in science.
- By 2007, the number of schools where fewer than 60 per cent of 14-year-olds achieve Level 5 or above is significantly reduced.
- By 2007, 90 per cent of pupils reach Level 4 in English and mathematics by age 12.

Also for Key Stage 4 some of the targets were:¹²

- Raise standards in school and colleges so that between 2002 and 2006 the proportion of those aged 16 who get qualifications equivalent to five GCSEs at Grade A* to C rises by 2 percentage points each year on average and in all schools at least 20 per cent of pupils achieve this standard by 2004 rising to 25 per cent by 2006.
- By 2010, 90 per cent of young people by age 22 will have participated in a full-time programme fitting them for entry into higher education or skilled employment.
- Reduce by at least 40 per cent the number of adults in the workforce who lack NVQs or equivalent qualifications by 2010. Working toward this, one million adults in the workforce to achieve Level 2 between 2003 and 2006.

For teacher recruitment the targets are to employ at least 10,000 teachers and 20,000 extra support staff by 2006.¹³

Whether the setting of such targets is unrealistically optimistic (particularly when there is limited indication of resources to accompany such targets beyond advocacy of partnerships and associations that might be involved),¹⁴ an important motivating feature, or simply an irrelevance for many schools and teachers battling with daily problems of indiscipline, staff shortages, curriculum overload and a whole host of pressures, is an open question. It is easy to set targets but difficult to achieve them. Indeed one wonders what the penalties could possibly be for schools which fail to achieve them. Does simply raising the high jump bar alone improve performance? Surely not.

That said, the government has produced some impressive figures to show improvements.¹⁵ The percentage of children at Key Stage 1 who reached Level 3 in spelling rose from 14 per cent in 1997 to 23 per cent in 2001, and in mathematics the percentage of children who reached Level 3 rose from 20 per cent to 28 per cent. Between 1998 and 2002 the percentage of pupils who reached Level 4 and above in Key Stage 2 English tests rose from 65 per cent to 75 per cent, and in mathematics from 59 per cent to 73 per cent. Between 1997 and 2001 the percentage of pupils who reached Level 6 in English rose from 17 per cent to 22 per cent, and who reached Level 7 rose from 5 per cent to 8 per cent, and in mathematics at Level 7 from 1997 to 2001 it rose from 11 per cent to 17 per cent. It is notable that the backwash effect of tests and tasks on the curriculum and teaching does not receive comment.

The School Standards and Framework Act 1998¹⁶ included plans for reducing class size, preparation of Education Development Plans, the establishment of Education Action Zones, increasing the powers of government to intervene in failing schools, improving school discipline and good behaviour, school attendance targets, measures to address schools exclusions, and making religious education compulsory, together with a collective act of worship in each school day. Seventy-three Statutory Education Action Zones were established by the Act specifically to improve standards in over 1,300 schools across the UK whose standards were low, for an initial period of three years, extendable to five years, the funding for which would come from a range of providers, including government, business, voluntary organisations and private enterprise. Non-statutory Excellence in Cities Action Zones (EIC Action Zones), again funded by a combination of government and non-government sponsors, had a life of three years each and were designed to address schools in the major cities where standards had been low, and such zones focused on single secondary schools and their associated primary schools.

In 2001 the government produced the White Paper *Schools Achieving Success*,¹⁷ itself leading into the Education Bill 2001¹⁸ and the Education Act 2002.¹⁹ These documents not only reaffirmed the government's concern for quality and standards

in secondary schools, but included further steps to ensure that these would improve, including:

- measures to ensure high standards for all;
- promote autonomy, freeing schools to try out new ideas: the 'power to innovate', including the opportunity to pursue projects for a piloting period of three years with a possible extension for a further three years;
- the establishment of the City Academy Programme – enabling sponsors from private, voluntary and faith groups to establish wholly new schools, with funding from the government, and to be an innovative way of improving standards in deprived areas;
- extending the role of external partners in tackling failing schools.

In 2002, in its 'standards' website, the government provided a 'tool kit' (*sic*) of specific suggestions for raising the achievement of boys²⁰ (see Chapter 14).

The commitment to raising standards is not confined to pupils and Local Education Authorities. In 1997 and 1998 the Teacher Training Agency issued four documents:

- *National Standards for Headteachers*,²¹ indicating standards in: (a) core purpose of headship; (b) key outcomes of headship; (c) professional knowledge and understanding; (d) skills and attributes; (e) key areas of headship; this was superseded in 2000 by the Department for Education and Employment's *National Standards for Headteachers*.²²
- *National Standards for Qualified Teacher Status*,²³ indicating standards in: (a) knowledge and understanding; (b) planning, teaching and class management; (c) monitoring, assessment, recording, reporting and accountability; (d) other professional requirements; this was superseded by the Teacher Training Agency's 2002 document: *Qualifying to Teach: Professional Standards for Qualified Teacher Status and Requirements for Initial Teacher Training*.²⁴
- *National Standards for Subject Leaders*,²⁵ indicating standards in: (a) core purpose of the subject leader; (b) key outcomes of subject leadership; (c) professional knowledge and understanding;

(d) skills and attributes; (e) key areas of subject leadership.

- *National Standards for Special Educational Needs Co-ordinators*,²⁶ indicating standards in: (a) core purpose of the SENCO; (b) key outcomes of SEN co-ordination; (c) professional knowledge and understanding; (d) skills and attributes; (e) key areas of SEN co-ordination.

These documents set out a detailed range of requirements, and the emphasis on standards everywhere is clear to see. The documents provide a consistent and useful framework, which student teachers will find helpful in understanding legitimate expectations that they might have of teachers in school.

Democracy and control in question

The government's response to teacher overload is increased prescription and centralisation; nothing in education is left untouched by the government and the overall picture appears watertight. The response to lack of time for personal and professional development is increased centralisation and prescription, simply removing from teachers their need to make many professional judgements. The response to putatively falling standards is increased centralisation and prescription, with an arguably unholy alliance with standards, targets and testing. It is a leap of faith to rely so heavily on these as the engine of improved performance, or to employ testing to destruction as a way of ratcheting up quality. Weighing the pig does not necessarily cause the pig to grow. Underlining all of these agendas is a response to the perceived ills of education by increasing control, direction and prescription. Whether nailing down required performances in documents and statutory requirements ensures that performance flourishes is an open question; a bird whose wings are clipped cannot fly. Owners clip birds' wings so that they will remain with their mate rather than fly away; birds become used to, even enjoy, their captivity. As Orwell indicated, we come to love Big Brother!

There are more substantive issues at stake here than the simple transmission of government

prescriptions.²⁷ It is over fifty years since Karl Popper published the two volumes of *The Open Society and Its Enemies*,²⁸ which presents an analysis of democracy and the challenges that he saw to it. In the open society individuals enjoy freedom, are aware of the dangers of power and illegitimate authority, and have regard for a plurality of values and opinions. For Popper dissent is not only to be tolerated but actively encouraged, not least because it fits with his view of knowledge and learning as essentially conjectural (incomplete, tentative, provisional, open) and subject to constant refutation.²⁹ Dissent and challenge are essential ingredients if freedom, democracy and human development are to thrive. By contrast, for Popper, a closed society is characterised by the domination of a given and uncontested set of values, to which members have to assent, either by force or by consent – hegemony.

Social and political institutions, including schools, Popper argued, need to put their practices to the test of critical scrutiny and debate, and to be judged by the extent to which they promote democracy. The open society, for Popper, is democratic, and practises tolerance, dignity, justice, respect for individual freedoms and differences of view, free speech and, at its foundation, the freedom to judge one's rulers. *Respect for difference*, rather than merely tolerance of it, is central, as we learn from difference and dissent. Humans are fallible, society is fallible, knowledge is fallible, so they must constantly be open to critique, and the development of critique is essential for democracy.

Teachers, Popper suggests, have the task of educating developing minds to think critically and democratically, so that the open society can flourish. Democracy *requires* education, and free speech in a democracy must require its free speakers to have something useful to say. The open society is both an educated and an educative society. Such education bears several hallmarks; it:

- concerns itself with the furtherance of democracy;
- fosters critical judgement in students and teachers;

- requires students and teachers to question and justify what they are doing, saying, believing and valuing;
- respects evidence and argument, even if it refutes currently held positions, i.e. views are open to challenge and change;
- recognises individual fallibility and the tentative, conjectural and refutable nature of knowledge;
- respects others as having equal value in society;
- values and respects diversity and independence of ideas, views and values;
- gives all participants a voice;
- places the greater social good over self-interest.

Education, in this scenario, is not simply schooling in obedience or passivity – ‘specialised training in the art of keeping down its human sheep or its human cattle’³⁰ – nor is it instrumental as a service activity, e.g. schooling for jobs or for entrance to higher education, but it is to provoke learning, critique, the pursuit of the just, open society and a search for truth. Rather than being indoctrinatory, education is a potentially subversive activity since it develops the ability in students to question, challenge, and demand rational justifications for educational practices. For Popper, critique and the opportunity for critique are fundamentals of the open society.

The consequences of Popper’s views for education are several. For example, the transmission/delivery/received curriculum is criticised for being at heart authoritarian, and hence illiberal, however benevolent. In this vein the use of texts and prescriptions (as in the National Curriculum and its associated assessment) as if they hold unassailable truths, and the practices of teachers who do not, or who may not be enabled to, expose themselves to challenge or critique, are untenable. Transmission teaching, reinforced by tests which simply check the learner’s abilities to reproduce given knowledge, is one way, from the expert to the ignorant empty vessel. Moreover, it is not only an impoverished characterisation of sentient humans but a misrepresentation of the uncertainty of knowledge. Education and its associated testing is more than simply checking a student’s failure or success in reproducing given material against given criteria. The criteria

themselves have to be open to critical scrutiny, and, where knowledge is tentative and conjectural, assessment leads to learning from errors (refutations from conjectures) rather than public recognition of failure, as in league tables of performance and the ‘naming and shaming’ of schools in difficulty.

Popperian education is more than telling people what to think; indeed, given the fallibility of knowledge, it concerns raising doubts and uncertainties – ‘conjectures and refutations’.³¹ Of course, that pushes education out of the comfort zone of teachers, students, societies, politicians and the state.

It is an open question whether the government’s prescriptions, reinforced through statute, assessment, inspection and all the instruments of constant surveillance (not least the terminology of its key proponent, the *Qualifications and Curriculum Authority* (italics ours)), further Popper’s vision of democracy or his nightmare of a totalitarian state policed by mind control and the ‘nanny state’ emanating from a *dirigiste* government. We have great concern that the government prescriptions, for all their benevolent intentions, may be contributing to a closed, monitored and undemocratic citizenry. The issue of centralisation and prescription has a clearly antinomial character: on the one hand it can promote learning, entitlement, and the range of benefits that it ascribes to itself. But let us not be naïve; there is a powerful sub-text of control, compliance, conformity and instrumentalism within it. Does the degree of centralisation, direction and prescription from the government’s interventions in education promote or inhibit freedom, or both? The jury is out.

We have argued that the student teacher entering the world of school will encounter a situation in which there is little latitude for personal autonomy. In the name of improving quality – surely an endeavour with which one could not disagree – the government has taken an aggressively interventionist stance in telling people what they should do in education. We have been critical of this on three counts: first, because it is not the task of government to do this, but, in the interests of democracy, to adopt a much more ‘hands off’ approach, albeit, as Popper would

argue, with a safety net to prevent poor quality; second, because the fallout from such actions is causing more problems than it solves, e.g. in teacher recruitment and retention; and third, because the reliance on standards, testing, quality and their accompanying bureaucracy are a misplaced response to the problems which education faces.

On the other hand, one could speculate whether teachers and schools, if left alone to exercise their own autonomy, would arrive at a set of practices that differed widely from some of the prescriptions of, say, the National Curriculum. Perhaps not. It is not an either/or situation – *either* one supports the government's actions *or* one is against them; that is simplistic. There is no doubt that some of the government's interventions have brought improvements, and its expressed concern for social inclusion, be it out of desire or necessity in the face of the breakdown of social order, is laudable. Further, we have painted a picture of teaching in which there seems to be little room for autonomy; that could be contested and an overstatement – the day-to-day world of classrooms necessarily relies on considerable teacher autonomy and routine on-the-job judgement to be exercised; that is the professional duty and judgement of teachers interacting with learners in order to promote learning.

Stress in teaching

We cannot escape the fact that teachers are under very great pressure, and, despite the pleasures of working with developing minds and young people, their morale is low and they are leaving the profession in droves. As the start of this chapter indicated, teachers hold the government responsible for this in terms of workload and prescribing initiatives. More means less.

That teachers are under stress is well documented.³² Teachers were highlighted by medical insurers in 1997 as being at high risk of stress-related illnesses, reinforced in 1998, 1999, 2000, and 2001 by further studies that indicated that:³³

- 41.5 per cent of teachers reported themselves to be 'highly stressed';

- 36 per cent of teachers felt the effects of stress all or most of the time;
- calls to the Teacher Support Line (<http://www.teacherline.org.uk/>) show that the most common concern is stress (25 per cent of calls) (<http://www.teachersupport.info/index.cfm?a=63>);
- long working hours and workload were significant causes of stress, coupled with pressure of inspections and pupil misbehaviour.

In 2001 the Department for Education and Skills commissioned PricewaterhouseCoopers to review teachers' workload,³⁴ and found that:

- teachers work more intensive weeks than other comparable managers and professionals, routinely working more than a 50-hour week;
- teachers perceive a major problem to be lack of control and ownership over their work;
- rising expectations coupled with pupils' misbehaviours and lack of parental support were significant problems;
- more guaranteed non-contact time was needed for teachers to plan and prepare.

Further, specific websites for contact by teachers have been set up to cope with burgeoning teacher stress:

The Teacher Stress website:

<http://www.teacherstress.co.uk>

The Teacher Support Network:

<http://www.teachersupport.info/index.cfm?a=63>

The Stress and Work website:

http://channel4.com/health/microsites/H/health/magazine/stress/work_teachers/html

The Teacherline organization:

<http://www.teacherline.org.uk>

The National Healthy School Standard at the Wired for Health website:

<http://www.wiredforhealth.gov.uk>

The Department of Health³⁵ published a significant document on teacher stress, its causes, treatment and legal framework, indicating, for example, that 31 per cent of calls to a teacher support line concerned workplace stress in state schools, in comparison to 8 per cent of calls from private organisations.

Too much stress leads to 'learned helplessness', a situation in which, because one is unable to alleviate the situation because impossible tasks are set, one simply capitulates, surrendering one's autonomy to others; or it can lead to burnout and breakdown. Or one gets out.

Troman³⁶ reported that the main causes of teacher stress were: chronic strains in personal life; the 'intensification of work' (cf. Hargreaves's 'intensification thesis' mentioned earlier); teacher/pupil relationships; staff relationships, and accountability. Kyriacou³⁷ reported that the main sources of stress facing teachers were:

- teaching pupils who lack motivation;
- maintaining discipline;
- time pressures and workload;
- coping with change;
- being evaluated by others;
- dealing with colleagues;
- self-esteem and status;
- administration and management;
- role conflict and ambiguity;
- poor working conditions.

Whilst he makes it clear that an individual's stress is a unique and personal matter, nevertheless there are social facts that indicate common patterns, and one can see that government interventions in education bear some of the responsibility for this.

Indiscipline and bullying

A major source of teacher stress is the amount and handling of indiscipline in schools. There is scarcely a day passes without the media reporting cases of bullying and violence between students and towards teachers. The matter gained huge coverage with the murder of the head-teacher Philip Lawrence in London, and the earlier murder of Nikki Conroy, a teenager in a Teesside school, by an intruder, but these were only two incidents out of thousands.

In a study of over 2,000 schools,³⁸ some of the school violence was found to be crime- and drug-related, over a third of the schools (38.7 per cent) had been burgled (43.9 per cent of these

with more than one burglary), with theft (38.3 per cent), robbery with threat and actual violence (1.9 per cent), malicious damage (56.6 per cent) and arson (7.2 per cent) reported. Staff had been verbally abused by parents in 50.3 per cent of the schools, in the majority of cases more than once, with other outsiders verbally abusing teachers in 26.9 per cent of cases. The severity of assaults was graded on a three-point scale: Level 1 comprising spitting, pushing and unwanted touching; Level 2 comprising hitting with a fist, being punched or kicked; Level 3 comprising being hit with a weapon or other object. 16.1 per cent of respondents reported physical abuse on teachers by pupils at Level 1 and 18.7 per cent at Level 2, in the majority of cases more than once, with 2.9 per cent at Level 3. 12 per cent of the schools had found pupils carrying weapons on the school premises. 27.1 per cent reported outsiders causing disturbance on school premises, and 26.7 per cent of parents causing disturbance on school premises. More schools reported assaults by pupils on pupils at Level 2 than Level 1 (50.7 per cent and 47.4 per cent respectively), and around one in fourteen schools reported Level 3 assaults on pupils by pupils.

The responses to this state of affairs have been several. For example, most schools have restricted entry and increased security systems, including the identification and registration of visitors and the locking of entrances to schools; most schools have policies to deal with bullying, intruders, and violence; staff and pupils have been trained in personal safety and restraint; links to the local police have been strengthened. Dealing with discipline problems and maintaining discipline were reported to be major causes of stress in teachers.³⁹ The government's policy of inclusion has had the effect of having classes each with a significant number of disruptive students, the problem being worse in secondary schools than primary schools.⁴⁰ Indeed, after workload, pupils' behaviour was the most frequent reason that teachers gave for leaving the profession. In one study reported in 2001, 61 per cent of 700 teachers reported that they had either witnessed or been involved in physical or verbal abuse, and in another report of the same year one in ten teachers had been physically assaulted by

a pupil in the previous year. The problem is not confined to physical assault; rather it is the daily dose of verbal abuse and misbehaviour that wears down teachers, with pupils lighting textbooks, throwing furniture, slamming doors, swearing and screaming, threatening teachers sexually, refusing to work, and general physical restlessness. Such behaviour is not the preserve of teenagers; it happens in the infant school.⁴¹

One government response to this has been the issuing of guidelines on procedures for dealing with intruders, violence, safety and bullying, with specific indication of legal redress.⁴² Teachers and student teachers should not have to put up with violence or abuse, racial or sexual harassment; these are not part of the job. Student teachers will need to find out the school's procedures for handling violence, bullying, assault and discipline matters.

With regard to bullying, it was reported in 2001 that over half of all British school children had been bullied. One in ten of those reported severe bullying which included physical violence; one third of all girls and one quarter of all boys reported that, at some time, they had been frightened of going to school, and at least sixteen pupils' suicides each year were attributable to bullying.⁴³ 4.1 per cent of all children reported being bullied several times a week, and 32.3 per cent of children reported being bullied once or twice a week. 18.7 per cent of 10-year-olds, 13.1 per cent of 11-year-olds, 12.1 per cent of 12-year-olds, 10.5 per cent of 13-year-olds and 7.5 per cent of 14-year-olds reported being bullied. Perhaps equally alarming were the reports on children as bullies in the same document: 5.3 per cent of 10-year-olds; 1.4 per cent of 11-year-olds; 2.8 per cent of 12-year-olds, 3.6 per cent of 13-year-olds, and 3.3 per cent of 14-year-olds.⁴⁴ For 10- and 11-year-olds this extrapolates to around 35 bullies in the 10–11 age range in a school of 500 students, and 97 bullies in the 12–14 age range in a secondary school of 1,000 pupils. The statistics are more than alarming. Indeed the same report indicated that, in a survey of 300 secondary schools in England and Wales, 82 per cent of teachers were aware of verbal incidents and 26 per cent were aware of physical incidents (p. 15).

Three categories of bullying have been identified:⁴⁵

- physical (e.g. kicking, hitting, theft, being pushed about, attack, having one's possessions thrown around, being forced to hand over money or property (extortion), pinching, use of a weapon, hiding property (e.g. a school bag, clothes, shoes), spoiling things such as clothes, writing on books or homework, destroying a game, and sexual harassment);
- verbal (e.g. name calling, taunts and gestures, threats, racist remarks, teasing, comments about looks, or religion, sarcasm, ridicule);
- indirect (e.g. spreading rumours, being ignored, excluding someone from a social group).

The government's responses to bullying have been several, including the following.

- Circular 10/99 was issued,⁴⁶ which made it clear that headteachers have a legal duty to prevent bullying and to act on incidents.
- In 2001 the government issued a guidance pack and video, *Don't Suffer in Silence*, with a range of suggestions for action, including policies, monitoring, intervention, implementation of interventions, reporting, investigating bullying, whole-school approaches, tackling the issue through the school curriculum (e.g. in Personal, Social and Health Education) from age 5, assertiveness training for pupils, liaison with other services (the police, social services, libraries, leisure services), punishments, procedures for identifying bullies and victims, support groups for victims, how pupils should react to bullies, handling specific forms of bullying (racist, sexual, special needs, homophobic), reducing the risk of bullying (e.g. playground action), working with parents, advice for pupils, parents and families.
- A useful website has been established (<http://www.dfes.gov.uk/bullying>) to access a range of resources and links concerning bullying, with sections specifically targeted to take enquiries from children, parents and teachers.

The prescriptions appear sensitive, sensible and helpful. How far they improve the situation

is another open question. Simply writing documents could be seen as cosmetic. The problem of indiscipline and bullying seems less than tractable; if there were simple solutions we would have found them. How far the government has contributed to the very problems that teachers face through its unwavering and uniform prescription, with a massively disaffected set of pupils (one estimate puts a figure of 50,000 pupils truanting each day),⁴⁷ being forced to learn, and teachers being forced to teach contents in which pupils have little interest, is debatable. Real ground-level developments are needed, and they cost money.

Beacon, specialist and advanced schools

As part of its agenda for reform, particularly in the drive for 'excellence through diversity', the government established 'beacon', 'specialist' and 'advanced' schools. Beacon schools (close to 1,200 at the time of writing, though the secondary programme is due to be phased out by 2005, to be replaced by the Advanced School programme), part of the government's project for *Excellence in Cities*, are schools which are identified as centres of high-quality practice. They are designed to raise standards in schools through the sharing and dissemination of good practice. They have a dedicated series of websites which can be reached through the portal of: <http://www.standards.dfes.gov.uk/beaconschools>.

Beacon schools are intended to enter into partnerships with other schools and local education authorities so that they can promote two-way communication and the spread of knowledge of good practice, with a view to encouraging other schools to emulate their good practice and develop their own. They offer advice on a range of matters, for example: curricula, monitoring, management, provision for talented and gifted children, parental involvement, special educational needs, steps to reduce bullying. Some of them provide support for teachers in training and newly qualified teachers, whilst others work closely with designated failing schools or schools in 'special measures'. It is not intended that such schools only work with others in

difficulty, but enable a range of schools to benefit from their excellence. Dissemination activities may take the form of seminars, mentoring, work shadowing, in-service training, consultancy, exchange visits, working together, and so on; in short, a diversity of ways of sharing their expertise.

The designation of a 'beacon' school is based on application and recognition of sustained excellence from inspection data. The effectiveness of the partnerships, and the benefits that they bring to the schools which enter into the partnerships (e.g. in terms of pupils' achievements, reduction in truancy and exclusion rates) are monitored. Indeed the beacon schools themselves are required to prepare an outcome-focused evaluation plan of their own effectiveness.

The current priorities for beacon schools are:

- leadership and management;
- Key Stage 3 provision and transition;
- remodelling the school workforce;
- literacy and numeracy;
- promoting positive behaviour;
- reducing truancy and exclusions;
- police/school partnerships;
- supporting out-of-school learning and study;
- partnerships with higher education institutions;
- inclusion (e.g. special educational needs, medical needs, children in care, individual learning styles, curriculum enrichment);
- talented and gifted pupils;
- addressing underachievement (e.g. in relation to gender, ethnic minorities, multicultural provision, teaching and learning in the foundation subjects);
- creativity;
- use of ICT;
- involving parents in their children's education and the community and inter-agency partnerships;
- citizenship;
- widening the range of options at Key Stage 4 and in vocational education.

The coverage of issues represents the wider educational agenda of the government to effect good practice, social inclusion and the raising of standards of achievement for all pupils.

Specialist schools are those which have distinctive identities in providing a named specialism in one of the following:

- arts;
- business and enterprise;
- engineering;
- language;
- mathematics and computing;
- science;
- sports;
- technology.

They are funded by a combination of public and private money and have specialist status for a minimum period of four years, after which they have to reapply, with reacceptance contingent on their results. At the time of writing there are close to 1,000 specialist schools, with some 34 per cent of pupils in maintained secondary schools being educated in specialist schools. Whilst they place a special focus on the specialism chosen, they must also meet the full National Curriculum requirements, and they must continue to deliver a broad and balanced education to all their pupils. It is suggested that these schools are able to 'play to their strengths', and thereby become centres of excellence in their chosen areas of specialism, developing innovatory programmes. They might meet their specialism through increasing the range of courses and qualifications that they offer in the specialism. Indeed a school may apply to have more than one specialism (e.g. language with business and enterprise).

Specialist schools aim to:

- raise overall standards of achievement specifically and additionally in their specialism;
- extend the range of opportunities, to meet pupils' needs and interests;
- raise the standards of teaching and learning in the specialist areas;
- develop and make visible to other schools in the area their distinctive identity;
- make links between public and private partnerships; and
- enable other schools to learn from their example.

Such schools are referred to as colleges.

Specialist schools, like beacon schools, have their own dedicated series of websites which can be reached through the portal of: <http://www.standards.dfes.gov.uk/specialistschools>.

Advanced schools are those selected from the leading schools in the country, particularly those which are performing highly in relation to their circumstances (i.e. through indicators of the value-added benefits that they bring to pupils), to act as centres of excellence and levers of change in secondary education, particularly with a focus on collaborative learning communities. They are intended to be innovative, to promote research and development, and to push the boundaries of pedagogical practice. Like beacon schools, they are intended to create partnerships with other schools, and to disseminate and develop good practice, with a view to generating federations of good practice; in short, to take a leadership role in their locality, for the development and furtherance of effective practice.

Advanced schools are intended to be at the cutting edge of good practice and to demonstrate effective practice through strong leadership and partnerships, the evidence of which is derived from indicators of pupils' performance. Qualification for the title 'advanced school' is contingent on the demonstration of:

- sustained effective practice and student achievement;
- the experience, capacity and ability to transform secondary education;
- the experience of bringing considerable added value to pupils;
- an exemplary record of inclusion;
- active involvement in initial teacher education and continuing professional development;
- public recognition of effective innovatory practice and projects;
- a culture of professional learning across the school;
- a proven track record of active and effective collaboration and partnerships with other secondary schools, not least with underachieving schools and schools which face considerable challenges;
- an ability to take a leadership role in networking of schools in specialist areas;

- proven ability in excellence;
- effective strategies to tackle poor performance;
- an ability to nurture and disseminate good practice;
- an ability to ensure that their work with other schools leads to the raising of standards.

It can be seen that many of the features of beacon schools apply to advanced schools. As with specialist schools and beacon schools, advanced schools have their own dedicated series of websites which can be reached through the portal of: <http://www.standards.dfes.gov.uk/advancedschools>.

What characterises the criteria for the status of beacon, specialist and advanced schools is the development, sharing and dissemination of good practice through partnerships and collaboration, i.e. a grassroots strategy.

Changing the nature of teaching

The effect of many interventions is to change the nature of teaching very considerably. From being a key macro-decision maker, the scope of a teacher's decision making has been attenuated considerably; teachers are largely the agents of, the implementers of, major decisions taken elsewhere. The sphere of their decision making concerns how to implement others' agendas, and their own classroom role in this. Many teachers may feel comfortable with this, as it reduces the burden of their decision making and because it is seen as a move toward the creation of 'high-reliability schools'.

High-reliability schools possess several characteristics, many of which are characterised by standardised procedures:⁴⁸ schools where reliability through policies, procedures and consistency of practice and behaviour is a powerful device for raising achievement (bureaucracies lift the trailing edge of organisations to an acceptable minimum).⁴⁹ This might be the case for 'failing schools', where the absence of procedures or consistency contributes to their weakness. High reliability might be a useful concept, in that it involves:⁵⁰

- massive investment in training;
- detailed identification and rectification of weaknesses;
- a limited number of explicit goals;
- standard operations which are applied consistently;
- adequate resources for the school's operations;
- the alignment of management, administrative, curricular, pedagogic and cultural subsystems towards achievement of the school's goals;
- a blend of centralisation and controlled delegation;
- efficient and extensive communication;
- extensive back-up facilities and knowledge about the operations;
- close monitoring of activities and people.

Documenting everything, having procedures for everything, in short bureaucratising teaching, is one approach to raising standards. For other schools the procedures-driven mentality undermines their excellence (and bureaucracies can suppress excellence),⁵¹ identity and uniqueness, indeed it misrepresents the nature of education, as *in essence* it is non-standardised (because individuals are individual!), and because the impersonality and dehumanisation of a procedures-driven view misses the heart of the educative process.

We ought not to be too dismissive of this approach. For example the benefits of consistency have been well documented in school effectiveness research, not least in reducing bad behaviour in schools. That this is an important matter is well attested to by the reported incidence of bullying and violence in schools, on pupils and on teachers, reported earlier.

Teaching risks becoming a delivery system, a given rather than a negotiated activity. Somewhere buried in the whole picture there are people, not robots. Many teachers, having come into the profession with high ideals, find that these soon evaporate; teaching becomes simply a job, an occupation not a vocation. Education becomes a commodity like any other. This is a terrible loss.

The context of teaching practice, then, is mixed. Student teachers should be under no illusions: teaching is tough. It is not a profession for the

faint-hearted. There are multiple issues to be faced in entering classrooms. On the one hand there is a range of statutory requirements and initiatives whose effect has been seen to be the creation of stress, a flight from teaching, innovation fatigue and a very heavy workload, and a surfeit of documentation for teachers to absorb.

On the other hand, lest we be accused of being merely negative, we have to keep in mind that at the heart of education lie people, sentient, creative, full of potential, interacting with humour, imagination and personalities. That separates teaching from many other walks of life. We perhaps have to remind ourselves frequently about this, to restore the sense of vocation that may have brought us into teaching.

Further, though it is easy to carp about governments, nevertheless it would be difficult to criticise the beneficent intent of government in tackling deep and problematic issues in the education service. Whether we think they are going to the heart of the problem, whether we think their interventions are desirable, whether we think that the resources that they are putting into education are well targeted or misguided, whether we believe that the government is straying into areas of control and prescription into which it ought not be straying, or whether we think the government has 'got it right', nevertheless

it would be a hard-hearted commentator who would not wish to applaud its commitment to improvement of the education service for all.

The government's provision of guidance documents on all aspects of teaching is a worthy accomplishment. Student teachers will find much to praise in them, and will be able to draw valuable guidance from them together with practical advice and concrete suggestions. For some they reduce teacher autonomy, thinking and decision making; for others they provide welcome support and give a clear picture of expectations and actions.

We have tried to paint a realistic picture of the context of teaching and for teaching practice. Our palette has frequently been a little unattractive; it has also been replete with references to government actions. Nonetheless we have a duty to be faithful to the real situation in many schools, and considerable government involvement in education is quite simply the order of the day. We pick up the issues that this raises throughout the book. However, most schools are not negative places, and they are not all bear gardens; most schools are delightful and many children never let us down in their positive desire to learn, to work, to have good relationships with each other and with their teachers. It is good to be with them. We must be optimists.

Teacher training requirements

Introduction

The Teacher Training Agency has responsibility for providing guidance, frameworks, and enactment of government policy for important aspects of initial teacher education (also called Initial Teacher Training (ITT)). In effect the control of ITT is in the hands of the Teacher Training Agency. Much of the ITT takes place in schools, on variants of an internship model. This has been both welcomed and criticised. It has been welcomed as an opportunity to break the perceived stranglehold of initial teacher education by institutions of higher education and to ensure a highly professionally relevant ITT programme. It has been criticised for trying to offload onto schools responsibilities which they neither have time to undertake, nor should be undertaking (schools exist to promote learning in pupils, not to train teachers, or to use pupils as 'guinea pigs' for novice teachers). Indeed Maguire *et al.*¹ comment on an anomaly, wherein schools are being blamed for poor performance yet are being used to train the very teachers who might work in such schools following the completion of the ITT courses. All trainee teachers must be prepared to teach across at least two consecutive Key Stages, which includes the foundation stage and the 16–19 age range. The Teacher Training Agency has tied ITT very closely into the preparation of teachers to teach the National Curriculum alone, or largely alone. The desirability of this is a moot point.

The requirement to have much of the ITT taking place in schools means significant periods of school placement, as follows:²

- 32 weeks for all four-year undergraduate programmes;
- 24 weeks for all two- and three-year undergraduate programmes;
- 24 weeks for all secondary and Key Stage 2/3 postgraduate programmes;
- 18 weeks for all primary postgraduate programmes.

Each student teacher must have experience in at least two schools or other settings (provided that these enable the student to achieve the standards required for Qualified Teacher Status (QTS)).

There is a differential proportion in the amount of school-based work in ITT programmes. For all secondary and Key Stage 2/3 postgraduate programmes the proportion of school-based work is very high; for primary postgraduate programmes the proportion is smaller, whilst for undergraduate programmes the proportion is lower still. How this is justified is opaque. In its effects it means that, for students preparing to teach in primary postgraduate programmes, the pressure on non-school-based work taking place in higher education institutions and work in school is immense, in order to cover all the aspects of ITT to meet the standards required for QTS, indeed to be fit to teach a spectrum of subjects and to take on the extended role of teachers. For intending postgraduate secondary school and

KS2/3 teachers the pressure is similarly huge, as the amount of time out of school is minimal.

For ITT to happen effectively requires the development of active partnerships between schools and institutions that provide initial teacher education, in respect of:³

- planning and delivering initial teacher training;
- selecting trainee teachers;
- assessing trainee teachers for Qualified Teacher Status.

Such partnership agreements must:

- make clear to everyone involved each partner's roles and responsibilities;
- set out arrangements for preparing and supporting all staff involved in training;
- make clear how resources are divided and allocated between the partners.

For such partnerships to work requires co-ordination, consistency and continuity across the contexts where the ITT takes place, and this often entails careful negotiations about:⁴

- the partnerships' aims for each of its ITT programmes;
- the criteria and procedures used for recruiting, selecting and deselecting members of the partnerships;
- the management structure of the partnership, including lines of communication, decision making and accountability.

Moderation of assessments of trainees is required to ensure reliability, accuracy, parity and standardisation across schools and providers.

Standards for the award of qualified teacher status

Those who are awarded QTS are required to meet the following standards, set into three interrelated sections of:

- professional values and practice;
- knowledge and understanding; and

- teaching (planning, expectations and targets; monitoring and assessment, teaching and class management).

These standards apply to teachers of all the age ranges, and are not differentiated according to age phases except where indicated below. These are set out as follows.⁵

1 Professional values and practice

Those awarded Qualified Teacher Status must understand and uphold the professional code of the General Teaching Council for England by demonstrating all of the following:

- 1.1 They have high expectations of all pupils, respect their social, cultural, linguistic, religious and ethnic backgrounds; and are committed to raising their educational achievement.
- 1.2 They treat pupils consistently, with respect and consideration, and are concerned for their development as learners.
- 1.3 They demonstrate and promote the positive values, attitudes and behaviour that they expect from their pupils.
- 1.4 They can communicate sensitively and effectively with parents and carers, recognising their roles in pupils' learning, and their rights, responsibilities and interests in this.
- 1.5 They can contribute to, and share responsibly in, the corporate life of schools.
- 1.6 They understand the contribution that support staff and other professionals make to teaching and learning.
- 1.7 They are able to improve their own teaching, by evaluating it, learning from the effective practice of others and from evidence. They are motivated and able to take increasing responsibility for their own professional development.
- 1.8 They are aware of, and work within, the statutory framework relating to teachers' responsibilities.

2 Knowledge and understanding

Those awarded Qualified Teacher Status must demonstrate all of the following:

2.1 They have a secure knowledge and understanding of the subjects they are trained to teach. For those qualifying to teach secondary pupils this knowledge and understanding should be at a standard equivalent to degree level. In relation to specific phases, this includes:

- a. For the foundation stage, they know and understand the aims, principles, six areas of learning and early learning goals described in the *QCA/DfEE Curriculum Guidance for the Foundation Stage* and, for Reception children, the frameworks, methods and expectations set out in the National Numeracy and Literacy Strategies.
- b. For Key Stage 1 and/or 2, they know and understand the curriculum for each of the National Curriculum core subjects, and the frameworks, methods and expectations set out in the National Literacy and Numeracy Strategies. They have sufficient understanding of a range of work across the following subjects:
 - history or geography
 - physical education
 - ICT
 - art and design or design and technology
 - performing arts, and
 - religious educationto be able to teach them in the age range for which they are trained, with advice from an experienced colleague where necessary.
- c. For Key Stage 3, they know and understand the relevant National Curriculum Programme(s) of Study, and for those qualifying to teach one or more of the core subjects, the relevant frameworks, methods and expectations set out in the National Strategy for Key Stage 3. All those qualifying to teach a subject at Key Stage 3 know and understand the cross-curricular expectations of the National Curriculum and are familiar with the guidance set out in the National Strategy for Key Stage 3.
- d. For Key Stage 4 and post-16, they are aware of the pathways for progression

through the 14–19 phase in school, college and work-based settings. They are familiar with the Key Skills as specified by QCA and the national qualifications framework, and they know the progression within and from their own subject and the range of qualifications to which their subject contributes. They understand how courses are combined in students' curricula.

- 2.2 They know and understand the Values, Aims and Purposes and the General Teaching Requirements set out in the *National Curriculum Handbook*. As relevant to the age range they are trained to teach, they are familiar with the Programme of Study for Citizenship and the National Curriculum Framework for Personal, Social and Health Education.
- 2.3 They are aware of expectations, typical curricula and teaching arrangements in the Key Stages or phases before or after the ones they are trained to teach.
- 2.4 They understand how pupils' learning can be affected by their physical, intellectual, linguistic, social, cultural and emotional development.
- 2.5 They know how to use ICT effectively, both to teach their subject and to support their wider professional role.
- 2.6 They understand their responsibilities under the *SEN Code of Practice*, and know how to seek advice from specialists on less common types of special educational needs.
- 2.7 They know a range of strategies to promote good behaviour and establish a purposeful learning environment.
- 2.8 They have passed the Qualified Teacher Status skills tests in numeracy, literacy and ICT.

3 Teaching

3.1 *Planning, expectations and targets*

Those awarded Qualified Teacher Status must demonstrate all of the following:

- 3.1.1 They set challenging teaching and learning objectives which are relevant to all pupils in their classes. They base these on their knowledge of:

- the pupils
- evidence of their past and current achievement
- the expected standards for pupils of the relevant age range
- the range and content of work relevant to pupils in that age range.

- 3.1.2 They use teaching and learning objectives to plan lessons, and sequences of lessons, showing how they will assess pupils' learning. They take account of and support pupils' varying needs so that girls and boys, from all ethnic groups, can make good progress.
- 3.1.3 They select and prepare resources, and plan for their safe and effective organisation, taking account of pupils' interests and their language and cultural backgrounds, with the help of support staff where appropriate.
- 3.1.4 They take part in, and contribute to, teaching teams, as appropriate to the school. Where applicable, they plan for the deployment of additional adults who support pupils' learning.
- 3.1.5 As relevant to the age range they are trained to teach, they are able to plan opportunities for pupils to learn in out-of-school contexts, such as school visits, museums, theatres, field-work and employment-based settings, with the help of other staff where appropriate.

3.2 *Monitoring and assessment*

Those awarded Qualified Teacher Status must demonstrate all of the following:

- 3.2.1 They make appropriate use of a range of monitoring and assessment strategies to evaluate pupils' progress towards planned learning objectives, and use this information to improve their own planning and teaching.
- 3.2.2 They monitor and assess as they teach, giving immediate and constructive feedback to support pupils as they learn. They involve pupils in reflecting on, evaluating and improving their own performance.

- 3.2.3 They are able to assess pupils' progress accurately using, as relevant, the Early Learning Goals, National Curriculum level descriptors, criteria from national qualifications, the requirements of Awarding Bodies, National Curriculum and Foundation Stage assessment frameworks or objectives from the national strategies. They may have guidance from an experienced teacher where appropriate.

- 3.2.4 They identify and support more able pupils, those who are working below age-related expectations, those who are failing to achieve their potential in learning, and those who experience behavioural, emotional and social difficulties. They may have guidance from an experienced teacher where appropriate.

- 3.2.5 With the help of an experienced teacher, they can identify the levels of attainment of pupils learning English as an additional language. They begin to analyse the language demands and learning activities in order to provide cognitive challenge as well as language support.

- 3.2.6 They record pupils' progress and achievements systematically to provide evidence of the range of their work, progress and attainment over time. They use this to help pupils review their own progress and to inform planning.

- 3.2.7 They are able to use records as a basis for reporting on pupils' attainment and progress orally and in writing, concisely, informatively and accurately for parents, carers, other professionals and pupils.

3.3 *Teaching and class management*

Those awarded Qualified Teacher Status must demonstrate all of the following:

- 3.3.1 They have high expectations of pupils and build successful relationships, centred on teaching and learning. They establish a purposeful learning environment where diversity is valued and where pupils feel secure and confident.
- 3.3.2 They can teach the required or expected knowledge, understanding and skills

relevant to the curriculum for pupils in the age range for which they are trained.

In relation to specific phases:

- a. those qualifying to teach foundation stage children teach all six areas of learning outlined in the *QCA/DfEE Curriculum Guidance for the Foundation Stage* and, for Reception children, the objectives in the National Literacy and Numeracy Strategy frameworks competently and independently;
- b. those qualifying to teach pupils in Key Stage 1 and/or 2 teach the core subjects (English, including the National Literacy Strategy, mathematics through the National Numeracy Strategy, and science) competently and independently.

They also teach, for either Key Stage 1 or Key Stage 2, a range of work across the following subjects:

- history or geography
- physical education
- ICT
- art and design or design and technology, and
- performing arts

independently, with advice from an experienced colleague where appropriate.

- c. those qualifying to teach Key Stage 3 pupils teach their specialist subjects competently and independently using the National Curriculum Programmes of Study for Key Stage 3 and the relevant national frameworks and schemes of work. Those qualifying to teach the core subjects or ICT at Key Stage 3 use the relevant frameworks, methods and expectations set out in the National Strategy for Key Stage 3. All those qualifying to teach a subject at Key Stage 3 must be able to use the cross-curricular elements, such as literacy and numeracy, set out in the National Strategy for Key Stage 3, in their teaching, as appropriate to their specialist subject.

- d. those qualifying to teach Key Stage 4 and post-16 pupils teach their specialist subject(s) competently and independently using, as relevant to the subject and age range, the National Curriculum Programmes of Study and related schemes of work, or programmes specified for national qualifications. They also provide opportunities for pupils to develop the key skills specified by QCA.

- 3.3.3 They teach clearly structured lessons or sequences of work which interest and motivate pupils and which:
 - make learning objectives clear to pupils
 - employ interactive teaching methods and collaborative group work
 - promote active and independent learning that enables pupils to think for themselves, and to plan and manage their own learning.
- 3.3.4 They differentiate their teaching to meet the needs of pupils, including the more able and those with special educational needs. They may have guidance from an experienced teacher where appropriate.
- 3.3.5 They are able to support those who are learning English as an additional language, with the help of an experienced teacher where appropriate.
- 3.3.6 They take account of the varying interests, experiences and achievement of boys and girls, and pupils from different cultural and ethnic groups, to help pupils make good progress.
- 3.3.7 They organise and manage teaching and learning effectively.
- 3.3.8 They organise and manage the physical teaching space, tools, materials, texts and other resources safely and effectively with the help of support staff where appropriate.
- 3.3.9 They set high expectations for pupils' behaviour and establish a clear framework for classroom discipline to anticipate and manage pupils' behaviour constructively, and promote self-control and independence.
- 3.3.10 They use ICT effectively in their teaching.

- 3.3.11 They can take responsibility for teaching a class or classes over a sustained and a substantial period of time. They are able to teach across the age and ability range for which they are trained.
- 3.3.12 They can provide homework and other out-of-class work which consolidates and extends work carried out in the class and encourages pupils to learn independently.
- 3.3.13 They work collaboratively with specialist teachers and other colleagues and, with the help of an experienced teacher as appropriate, manage the work of teaching assistants or other adults to enhance pupils' learning.
- 3.3.14 They recognise and respond effectively to equal opportunities issues as they arise in the classroom, including by challenging stereotyped views, bullying or harassment, following relevant policies and procedures.

The Teacher Training Agency has provided a *Handbook of Guidance on QTS Standards and ITT Requirements*,⁶ which includes details of the scope of each of the statements and the evidence which is required to support assurances that the standards have been attained. Such scope derives from records, observations, reporting, professional judgement, samples of feedback, pupils' work discussions, classroom grouping and organisation, ongoing documentation, written tasks and assignments, tests and online audits, other qualifications obtained, consultations and interviews, lesson planning and evaluations, self-evaluations, resources made and used, diaries and journals, evidence of a student's research, use of ICT (including e-mail, software, internet usage, digital cameras, electronic whiteboards, use of the National Grid for Learning).

The evidence is given by a range of assessors, mentors, teachers, and other school-related adults, ITT providers and experts. We strongly advise students to read the handbook in order to prepare themselves thoroughly for the scope and evidence for assessment. If the situation smacks of Foucault's⁷ constant surveillance and 'interrogation without end' then we consider this to be a fair assessment of actuality. The

requirements for evidence suggest that student teachers themselves may have to ensure that they have had the opportunity to experience and demonstrate the contents which are assessed during their teaching practice.

Since the inception of the competence-based movement in initial teacher education (and though the terminology of 'competence' has been dropped by the Teacher Training Agency, the concept is still alive and well in practice in the 'standards'), the achievement of standards/competencies is often recorded in a developing profile or portfolio by each student teacher; it has been suggested above that the compilation of a portfolio of achievements is an integral part of student teachers' development. The standards for QTS feature significantly in action planning. An action plan is the outcome of a review of present achievements of the standards and a process wherein the student teacher is guided into electing which standards need to receive attention and when they are to be addressed – in schools and during a student teacher's course. If a student teacher is to meet the standards during the course then an initial appraisal of 'threshold' performance is necessary and becomes the springboard into future action planning. Though the nature of the development of student teachers in principle is student teacher-driven, the reality of the situation is that usually student teachers often do not have the appropriate background or expertise to assess their own performance or to plan for its development. Indeed that is why they come onto the course in the first place!

It is possible to meet this problem by having experienced and significant others – often tutors and mentors – *prescribing* a route or sequence through the lists of the standards and advising on areas for development and action planning. We address just such a sequence throughout the book, for example Box 2.

The sequence in Box 2 draws on the experience of tutoring many student teachers before the first whisper of 'standards' was heard. This box addresses from very early on the questions that are usually uppermost in many student teachers' minds: 'Can I keep order?' 'Can I avoid a riot?'

Box 2: A sequence of elements to meet the standards for the award of QTS**Professional values and practice**

E.g. how to have high yet realistic expectations; taking account of pupils' backgrounds; treating learners with respect and consistency; being a model of good learning; effective communication with all stakeholders; contributing to the corporate life of schools; learning from a range of parties; self-evaluation.

**Knowledge and understanding**

E.g. knowledge of the subject they are to teach; understanding of the National Curriculum that they are to teach: its aims and values, contents and Programmes of Study, general teaching requirements, teaching arrangements in their key stages, understanding of how learning takes place and the factors that affect it, use of ICT in teaching and learning, understanding the Special Educational Needs Code of Practice; understanding of a range of strategies for promoting positive behaviour.

**Teaching and class management (discipline and relationships)**

E.g. being proactive, vigilance, transitions, routines and rules, controlling movement, setting realistic and manageable tasks, acting reasonably and fairly, use of praise and encouragement, being clear in demands and expectations, promoting a positive environment, communicating, timing, developing motivation in children, maintaining tolerance and a sense of humour.

**Teaching and class management (teaching techniques)**

E.g. introducing, explaining, questioning, summarising, use of voice, dividing attention, listening, eliciting, demonstration, giving feedback, class, group and individual teaching, timing, beginning, continuing, finishing, transitions.

**Teaching and class management (teaching and learning styles)**

E.g. use of whole-class, group, individual work, formal, informal, didactic, experiential, gain insights into how children are learning and what affects this.

**Planning, expectations and targets**

E.g. subjects, topics, cross-curricular skills, matching, differentiation, breadth, balance, continuity, progression, sequence, timing, subject knowledge, objectives, coverage of Attainment Targets and Programmes of Study, analysis of task demands and task, drawing up schemes of work and lesson plans, communicating purposes to children, providing for children with special educational needs, creativity and imagination.

**Monitoring and assessment**

E.g. providing valid diagnoses, diagnostic teaching, judging, recording, observing, reporting, use of Level Descriptions, covering core and foundation subjects and other aspects of children's development, selecting appropriate assessment criteria, providing feedback, providing for children with special educational needs, recording and reporting, carrying out a range of types of assessment for a range of purposes and audiences.

Moreover this sequence recognises that very little teaching, attention to teaching and learning styles, and curriculum planning can be considered unless discipline has been established. This box also reflects the sequence in which student

teachers learn to teach during their teaching practice, whereby initially they work alongside a teacher, taking the initiative from the teacher and, typically, begin by working with small groups, trying out teaching techniques and teaching

and learning styles (discussed in Parts II and III). Gradually the responsibility for curriculum planning (initially perhaps for a small group, increasing by stages as confidence grows until working with the whole class) passes from the class or subject teacher to the student teacher. As confidence and accomplishment grow in these areas so the student teacher can begin to take stock of individual differences in the students and plan appropriately for differentiation and progression, both of which are contingent on formal and informal assessment (discussed in Part IV).

The standards for QTS are addressed not only during teaching practice but through those elements of courses that typically take place in institutions of higher education. This engages the issue that the criteria for assessing course work and teaching practice have to be harmonised to complement and support each other within the context of the standards for the award of QTS.

Skills tests in numeracy, literacy and ICT

In addition to the evidential bases for the standards for the award of QTS, student teachers are required to take skills tests in numeracy, literacy and ICT. There is no limit to the number of times the skills tests can be taken, but the award of QTS is contingent on passing them. Support and sample/practice interactive test materials are available from the Teacher Training Agency, as are details of how and where to register for the tests (www.canteach.gov.uk).

The numeracy test involves mental arithmetic, using and interpreting statistical information, and using and applying general arithmetic. The test is in two parts and covers:⁸

Mental calculations of:

- time;
- amounts of money;
- proportions, fractions and/or decimals;
- percentages;
- measurements (e.g. distance, area);
- conversions (e.g. from one currency to another, from fractions to decimals or percentages); and

- combinations of one or more of the following processes: addition, subtraction, multiplication, division.

On-screen work on:

- 1 Interpreting and using statistical information
Candidates will be expected to:
 - identify trends correctly;
 - make comparisons in order to draw conclusions; and
 - interpret information accurately.
- 2 Using and applying general arithmetic
Candidates will be expected to use and apply general arithmetic correctly using:
 - time;
 - money;
 - proportion and ratio;
 - percentages, fractions and decimals;
 - measurements (e.g. distance, area);
 - conversions (e.g. from one currency to another, from fractions to decimals or percentages);
 - averages (including mean, median, mode and range where relevant); and
 - simple given formulae.

On-screen questions may draw on graphs, charts and tables, using information that teachers are likely to meet in school (e.g. test results, absences, reading ages, student numbers).

The literacy test begins with an audio spelling section, then moves to questions on punctuation, grammar and comprehension. It requires student teachers to be able to:⁹

- spell correctly, including words which appear in a teacher's professional written vocabulary;
- punctuate texts with a professional content, in a helpful and consistent way;
- understand and analyse the kind of texts teachers encounter in their professional reading;
- recognise where writing does not conform to standard English, where it fails to make sense and where the style is inappropriate.

The ICT test contains tasks which require use of word-processing, presentation packages, databases,

spreadsheets, e-mail and web-browsers. The test covers:¹⁰

- general skills;
- researching and categorising information;
- developing and modelling information;
- interrogating and manipulating information;
- presenting and communicating information.

Each of the statements of standards for the award of QTS is an amalgam of different types, numbers and orders of sub-components; some are task-related, some person-related, some are generic, some discrete, some are low-level and others are of a higher order.¹¹ The operationalisation of each standard risks the same problems as behavioural objectives, *viz.* that it becomes impossible to avoid devising and endeavouring to complete lengthy lists of sub-components for each standard – an unworkable system.¹² Hence a degree of professional judgement must be exercised by those involved in assessing and planning for the achievement of these standards.

Mentoring

The success of the use of standards for developing and assessing student teachers' achievements relies on the sensitive support given to the student teacher in the school by the mentor and in the institution of higher education by the appropriate tutor. The development of a realistic action plan by, with and for student teachers is often the outcome of a review with a mentor. A mentor is a named teacher in the school (often in a middle or senior management position) who has responsibility for:

- advising student teachers how to teach their particular subjects;
- developing student teachers' understandings and appreciation of how students learn and how learning can be planned;
- advising student teachers on class management and the planning of curricula and assessment.

In short the mentor has a significant role to play in the student teacher's development as a reflective practitioner.¹³ The role of the mentor is multifaceted and complex, for in addition to providing content and skills-focused advice and support there is a large interpersonal and psychological dimension. The role includes some aspects of apprenticeship,¹⁴ but moves beyond these to co-mentoring, mutual learning, co-operative learning (mentor and mentee) in ways in which the mentor acts as a support for the student teacher, motivating, empowering, raising awareness, providing feedback and advice, reviewing sessions and guiding future planning, acting as a 'critical friend' – an unthreatening source of student teacher improvement and, in some cases, simply being on hand to discuss matters with the student teacher as they arise in school, acting as a link person between the school and the college or university tutor.¹⁵ Being a mentor requires the ability to employ several sensitive and sophisticated skills,¹⁶ for example:

- being a model of good teaching practice;
- listening, responding and advising;
- understanding situations through the eyes of the student teacher – empathy;
- developing observation skills in order to recognise and crystallise specific issues for discussion and the development of sound practice;
- the ability to conduct reviews and appraisals of lessons seen in a supportive manner.

(See www.routledgefalmer.com/companion/0415306752, Chapter 2 Teacher training requirements, Some tasks of the mentor.)

A mentor needs to be an experienced and effective practitioner, committed to the task, to be an effective and sensitive counsellor, and to have excellent interpersonal and communication skills. The mentor will need several qualities in communicating, for example: showing empathy, having positive active listening skills: listening, clarifying, responding, summarising, eliciting, questioning, challenging, reflecting, confronting, probing, taking the lead, acting as a sounding board, encouraging, advising and supporting, providing feedback, sharing ideas, reassuring, drawing on his/her own experience. The mentor

will have an important role in inducting the student teacher into the rules and norms of the school.

A student teacher has a reasonable expectation of guided support from the mentor. Reciprocally, a mentor has a reasonable expectation of co-operation in meeting negotiated targets by the student teacher. Typically a mentor will discuss the teaching file and lesson plans with the student teacher, negotiating what the mentor will be observing. The mentor then observes her/him teaching one or more of these lessons each week. Following the observation the mentor conducts a review meeting with the student teacher during which feedback is given and debriefing occurs. This meeting is timetabled and is designed to provoke reflection on the part of the student teacher – both through the setting of a pre-determined agenda and the opportunity for an open discussion to be held about other matters. At the meeting an action plan for further development will be negotiated.

Not only does the mentor have an important substantive role to play in the professional development of the student teacher but s/he has an important facilitatory role to play. For example the mentor is the link not only to the college or university tutor but to teacher colleagues in the school. Thus, the mentor might arrange for a student teacher to be attached for some time to another member of staff, to meet other departmental staff (in secondary schools) or teachers of other age phases (in primary schools); the mentor may put the student teacher in touch with a colleague with a particular expertise, e.g. information technology, multimedia resources, a music specialist, contacts with outside organisations and agencies, etc. The mentor will apprise the student teacher of protocols, rules and routines in the school, in short, the 'hidden curriculum' of the school.

Mentoring in schools accords significance to the part that experienced teachers can play in the initial preparation of teachers. Some schools do not wish to follow the mentoring road, arguing that it is too time-consuming, expensive (in supply teacher cover) and onerous for teachers whose prime responsibility is to teach children not student teachers. Indeed these sentiments often accord not only with those of parents but

of governing bodies concerned that standards do not fall because students are taught by novice student teachers.

Clearly it may be the case that schools have to nominate identified teachers to undertake the mentoring role. ITT providers may require mentors to be accredited or registered, and, indeed, to undergo mentor training programmes. It may be the case that the most effective teachers could become the mentors; schools may be reluctant to undertake this, as it could represent a 'loss' in teaching terms of their most experienced and effective teachers and, indeed, their replacement with novices. The issue at stake here is that mentoring is not an additional, bolt-on task that is undertaken at spare moments during the school week; rather it is integral to the school week, and requires dedicated time specifically set aside for its operation. It *replaces* rather than *adds onto* teaching time.

It can be seen from this that the processes of target setting and action planning which are being advocated for pupils in school are also being applied to student teachers.

(See www.routledgefalmer.com/companion/0415306752, Chapter 2 Teacher training requirements, Contents of the career entry profile.)

Conclusion

We close this chapter with some observations about the standards for the award of QTS. This chapter has laid out the several areas for focus and development of student teachers; in some respects they constitute a job description for teaching. There is no doubt that there is plentiful detail and supporting material for student teachers wishing to learn about the several aspects of their progression to be teachers. The standards for the award of QTS seek transparency through the publication and free availability to all of the requirements of the several parties involved in ITT. There is no stone left unturned in the prescriptions from the government and the Teacher Training Agency. The documents emanating from these two parties offer an almost seamless web of specification, and their coverage is very useful. It would be difficult

to disagree with many of the proposals and identified qualities of effective teachers, or even with the notion that an elected government that administers the disbursement of public taxation to bring the best return for that income has a duty to ensure high-quality teacher education.

On the other hand a seamless web has the whole scene 'sewn up'. We suggest that the picture is all too neat and complete. It offers a totalising picture and a 'grand narrative' that leaves little room for people, for values, for the very relationships that it purports to affirm between all stakeholders in education. Student teachers are told what to think, when to think it, how to think, and how well they have thought about it. The agenda is given and received, not constructed. There is little room for negotiation, disagreement, modification or question. That seems to be a striking contradiction: the aims of education, indeed of the very National Curriculum from the government, are to promote flexibility and decision making, and to produce resourceful and adaptable citizens. Yet the degree of prescription, uniformity, centralisation, conformity, standardisation and rigidity in the contents and degree of specification runs counter to these aims.

Let us be very clear: the prescriptions demonstrate an overwhelming control mentality in which the government seeks to exert control over the contents and framing of education and teacher education, a process of the homogenisation of initial teacher education. Though this might be intended benevolently – to help teachers and students teachers to become more effective – nevertheless in its effects teachers are reduced to technicians; an instrumental rationality is at work here, with little or no room for disagreement or debate. The frequent use of the term 'initial teacher training' by the government reveals, perhaps, a view of initial teacher preparation as training rather than as education. The effect of the plethora of government documents prescribing what student teachers need to do and think, and how they will be assessed, leaves little space for disagreement. Taking a conspiratorial line, one could argue that this is precisely what the government requires – teachers as technicians who will not question,

think, debate and set agendas, but simply carry out orders; teachers who will not disagree but who roll over and acquiesce. However, teachers do not do this; they leave.

It strikes us as ridiculous that the most straightforward and widely understood principle of workplace motivation – people having some control over their work – is either not recognised or not valued by a government struggling to fill thousands of vacant teacher positions in schools. It is a classic management ploy – overwhelm teachers with paperwork and documentation so that they have no time to disagree or even to think for themselves. Maybe this is what the government desires; whether it is or not, that is its effect. Do we really want the sort of teachers that these documents and prescriptions will produce: clones of government-speak? Do paperwork, prescriptions and documents really improve practice and quality? We have serious reservations about this. Given the flight out of teaching and the problems of retention and recruitment, it seems that we are not alone.

This is a factory model of teacher education and education (and it is interesting to note the use of the term 'corporate life' in clause 1.5 of the section on *Professional Values and Practice* in the requirements for QTS); factory models have for long been discredited in industries, yet the government appears reluctant to abandon such command-and-control models in education.

Do we really want education to echo Seneca, where human excellence aims to be 'like the stars: pitiless, passionless, perfect', or do we wish to invoke Pindar's response: 'but human excellence grows like a vine tree fed by the green dew, raised up, among wise men (*sic*) and just, to the liquid sky. We have all kinds of needs for those we love'. The fluidity, uncertainty, open-endedness and humanity of education have little place in a government apparently obsessed with statutory control of what people should do and think, reinforced through inspections and constant surveillance in the name of quality assurance such that, true to Foucault's analysis cited earlier in this chapter, institutions become self-surveilling. As management-speak reminds us: quality is built-in, not bolt-on: given enough imposition and total control, workers become self-surveilling and

self-controlling. This is paternalism and control run rife. Little wonder that there are so many dispirited teachers and teacher educators. Student teachers have little option but to follow the required elements of ITT. However we would hope that they would adopt a healthy scepticism about the degree to which these requirements adequately define the task of teaching, or the legitimacy of governments to be so prescriptive.

It is perhaps invidious to constantly 'second guess' the next policy initiative that emanates

from government and which will go out of fashion, and so, whilst this book provides the latest material from the government at the time of writing, nevertheless to forestall too early an outdating of the book, we focus on many key constants in teaching: effective relationships, humanistic teaching, effective planning, management, teaching, learning and assessment. The particular political hue given to these varies as the wind, but their underlying importance and relevance remain.

The whole curriculum and the National Curriculum

Introduction

The tasks of a teacher, during teaching practice or otherwise, are multi-dimensional. The teacher is not only the person who teaches a particular subject or subjects, but he or she has responsibility for the curriculum, widely interpreted. There are several interpretations of the curriculum which have evolved over decades.¹ For example, the former Schools Council² defined the curriculum as:

- subjects;
- processes (e.g. skills of observation, communication, problem-solving, physical and practical, creative and imaginative, numerical, personal and social);
- the study of problems (e.g. ecology, poverty);
- areas of knowledge or experience;
- that which the child defines as the curriculum.

This final statement can be a salutary lesson for teachers: the curriculum is that which the pupil takes from the learning situation in school, not necessarily that which was intended.

In 1985 Her Majesty's Inspectorate (HMI) defined the curriculum as comprising five main strands:³

- areas of experience (aesthetic and creative, human and social, linguistic and literary, mathematical, moral, physical, scientific, spiritual, technological);
- essential issues (e.g. environmental education, health education, information technology,

political education, education in economic understanding, preparation for work, careers education, equal opportunities, meeting the needs of students from ethnic minorities);

- elements of learning: knowledge, concepts, attitudes and skills (communication, observation, study, problem-solving, physical and practical, creative and imaginative, numerical, personal and social);
- informal, extra-curricular activities;
- characteristics (breadth, balance, relevance, differentiation, progression and continuity).

One can clearly see the influence of this important document reaching into the current National Curriculum of England and Wales (hereafter called the National Curriculum), and we discuss this below. HMI provided a very broad interpretation of the curriculum to include the formal and informal programme of content, pedagogy, organisation, assessment, and the extra-curricular elements which contribute to the school's ethos. The issue here is that the curriculum is not simply the syllabus, but all the experiences that the student has at school. This includes the significant area of the hidden curriculum, masterly defined by Jackson⁴ as comprising everything that is learnt without being specifically or deliberately taught, for example:

- the experience of crowds, praise, power, delay and denial;
- the recognition that the teacher has considerably more power than the students;

- rules, routines and rituals;
- public evaluation;
- individual interests being subordinated to group interests (e.g. the whole class) and management strategies.

For Jackson, pupils' success in school depends as much on their learning, and working with, the hidden curriculum as with the formal curriculum. The hidden curriculum also concerns the values, attitudes, ethos, norms, relationships, discipline and organisational aspects of the school. This is an extremely important area, for it presses teachers to ask what their pupils are learning without specifically being taught, and it has found voice in discussions of the experience of prejudice, cultural clashes between school and society, equal opportunities, and student 'voice'.⁵

Emerging from, and clearly informed by the seminal document from HMI, several formulations for the school curriculum were devised. For example Wragg⁶ discusses a 'cubic curriculum' in which the three dimensions of the cube comprise:

- subjects;
- cross-curricular themes;
- teaching and learning strategies.

Dowson⁷ identifies the subject curriculum, the cross-curricular elements, the pastoral curriculum (including equal opportunities, personal and social education, form and year groupings), the hidden curriculum, and the extra-curricular curriculum. Indeed the Qualifications and Curriculum Authority used the term 'curriculum' to 'describe everything children do, see, hear or feel in their setting, both planned and unplanned'.⁸

It had been argued for many years that the most satisfactory account of the curriculum has its expression in Tyler's⁹ famous and influential *rationale* for the curriculum in terms of four questions (see below).

Underlying this rationale is a view that the curriculum is controlled (and controllable), ordered, predetermined, uniform, predictable and largely behaviourist in outcome. However, this view has been criticised. It is important to recognise the behaviourist sympathies in this approach, for it embodies the debate on both the attraction and the problems with the behaviourist approach that are rehearsed in several pages of this book. For some the great attraction is that such curricula lead to behavioural and measurable outcomes; for others this is their greatest weakness, narrowing down education to that which is measurable, and missing the less tangible but no less significant aspects of education.¹⁰

We regard it as curious that, as Chapter 10 remarks, the significance of the use of constructivist approaches over instructivist and behaviourist approaches, together with the employment of the Tyler rationale as the clear model for the National Curriculum, represent an adherence to a style of curriculum planning which has been widely discredited not only for its undesirability but for its failure to meet the demands of a changing world. Doll¹¹ argues that it represents a *closed* system of planning and practice that sits uncomfortably with the notion of education as an *opening* process and with the view of society as open and diverse, multidimensional, fluid and with power less monolithic and more problematical.

This is not the place to rehearse such debates in detail. However, it is important to note that the National Curriculum uses a largely Tylerian

1 What educational purposes should the school seek to attain?	AIMS/OBJECTIVES
	↓
2 What educational experiences can be provided that are likely to attain these purposes?	CONTENT
	↓
3 How can these educational experiences be effectively organised?	PEDAGOGY
	↓
4 How can we determine whether these purposes are being attained?	EVALUATION

rationale, albeit wrapped up in different terminology. The Tylerian rationale is perhaps irresistible for politicians (and it was initially devised as a managerial response to large-scale curriculum planning and decision making), as it suggests that curriculum outcomes can be prespecified, practical and demonstrable; that they are measurable. It offers the security of putative certainty in curriculum planning. Once such a model has been accepted (even though the Tylerian rationale has been highly contested since its inception), it is a short step to holding teachers and schools accountable for the students' achievements of the curriculum. It is an even shorter step, perhaps, to specifying: the contents in detail; the time allowances, and the standards of achievement expected of students at different ages. Indeed the National Curriculum has addressed all of these matters.

The National Curriculum

Since the National Curriculum of England and Wales was given statutory weight, it has been subject to intense debate, modification and degrees of prescription. This is not the place to discuss the minutiae of that debate. Rather we consider it more appropriate to set out those aspects of the National Curriculum that impinge on a student teacher's preparation and planning. The early versions of the National Curriculum were very detailed and specific on the contents (and, in many cases, the pedagogy) of what students should be taught.

As a result of the professional opposition to the framing, contents, forms of assessment, elements of assessment, methods of assessment, levels of prescription, unworkability and teacher overload, and the hostility to the deprofessionalisation of teachers caused by having too many decisions taken for them, the National Curriculum was progressively trimmed in its degree of prescription. The revised National Curriculum is less detailed (though arguably still just as prescriptive), and it still includes the frameworks set out in the earlier versions. The climate towards the National Curriculum has warmed since its inception; whether this is because overloaded teachers have simply become tired of opposing

a curriculum that was doomed to succeed or whether they have accepted that it might have greater benefits than at first anticipated is a moot point. It is clear that the National Curriculum is here to stay, regardless of its framing and detail. Reinforced by the standard way of ensuring that proposals have power – through assessment, testing, examinations systems and inspection – it appears futile to continue to resist it. Indeed its ability, through assessment, inspection and measures of the value-added component of teaching, to enable the public to judge the putative quality of schools, coupled with its statutory force, renders it relatively untouchable.

The National Curriculum has gone through several versions and mutations since its inception, including:

- the reduction of a ten-level sequence to an eight-level sequence;
- the considerable trimming down of its prescription of content;
- the inclusion of a new subject (citizenship) for certain key stages;
- the inclusion of a new stage (the Foundation Stage);
- the reduction in the number of attainment targets for certain subjects;
- the closer focus on a few subjects for national assessment rather than coverage of every subject;
- the reduction of the standard assessment tests and tasks, typically (though not entirely) to written tests;
- a regularisation of what, in earlier versions, had been differences in terms of the framing of subjects, e.g. some had not included level descriptions, preferring to indicate end of key stage statements;
- greater clarification of Key Stage 4 curricula, with their associated qualifications;
- the provision of a far greater amount of teacher support materials from the government, with guidance on schemes of work, sample assessments and tests, and planning guidelines.

The present National Curriculum is replete with support material, either available as hard copy in schools or to be downloaded from the website of the Department for Education and Skills

(www.dfes.gov.uk and <http://www.nc.uk.net/home.html>) and the Qualifications and Curriculum Authority (www.qca.org.uk). Indeed so great is the degree of support material, arguably to reduce the bureaucratic burden on teachers and the time they have to spend on planning, that the *de facto* homogenisation of the curriculum is almost inevitable. It is a curious anomaly that, at a time when greater flexibility is being called for in the workforce, the response to this has been through greater degrees of prescription and non-statutory guidance from the government, leading to a degree of uniformity redolent of the Victorian era. Perhaps we are only one step away from the 'payment by results' of that era. Though the intention might be honourable – to reduce the burden on teachers – the outcome is a climate in which teachers are increasingly becoming technicians, serving given agendas with little say in the construction of those agendas. The mentality of government control, reinforced through the constant surveillance of testing and inspection, is all-pervasive. The situation is not confined to the UK; governments across the world are imposing forms of national or prescribed curricula, and, indeed, many are emulating that of England and Wales. It is clearly popular, and the drive for greater and greater control of teachers' and students' lives seems unstoppable.

Perhaps that is being uncharitable. If we have faith in the government's 'league tables' of students' results, the increase in examination successes, the achievement of the government's self-imposed targets for schools (e.g. for literacy and numeracy), then, clearly, the National Curriculum has driven up certain academic standards in schools. At what cost is an important question. The industrialist Peter Senge wrote in 1990 that yesterday's solutions are today's problems;¹² the National Curriculum may come to be viewed as both a force for lifting the trailing edge of poor schools' performance and creating 'high-reliability schools', or as a suppressant of excellence and creativity, or, indeed both (and bureaucracies, as Lieberman¹³ suggests, lift weak performance but reduce excellent performance). The bureaucratic burden which accompanies the National Curriculum is intolerable; teachers are becoming first and foremost form fillers rather than teachers, and, as mentioned in Chapter 1, the flight out

of teaching, coupled with stress-related absence, appears insuperable.¹⁴ We should not be blind to both the advantages and disadvantages of the National Curriculum; whether it is a force for good or a poisoned chalice is a moot point.

The National Curriculum originally applied to students of ages 5–16 in state schools; this has been extended at the lower age range to include children from age 3. The National Curriculum does not apply to independent schools, though such schools may choose to follow it. The government is clear that it does not constitute a school's complete curriculum. 'Schools have discretion to develop the whole curriculum to reflect their particular needs and circumstances.'¹⁵

The National Curriculum is organised into *key stages* that are age-related. The foundation stage is for children from the age of 3 to the end of the Reception year; Key Stage 1 is for 5 to 7-year-olds; Key Stage 2 is for 7 to 11-year-olds; Key Stage 3 is for 11 to 14-year-olds; Key Stage 4 is for 14 to 16-year-olds. It comprises *statutory elements* (core and foundation subjects, religious education and, for secondary school students, sex education) and *non-statutory elements*.

The key components of the National Curriculum, in terms of coverage, are: subjects, programmes of study, attainment targets and level descriptions.

These are set out in Box 3.

Religious education is a statutory requirement, together with a daily act of collective worship. Citizenship education, though statutory as a separate subject at Key Stages 3 and 4, is incorporated into personal, social and health education (PSHE) at Key Stages 1 and 2. The particular features of the early learning goals, key skills, thinking skills and other areas of the curriculum are set out in Box 4.

The assessment arrangements for the end of each Key Stage comprise:

- *Key Stage 1:* Statutory Key Stage 1 tests and tasks, combining teacher assessment judgements with national tests in mathematics and English, with the option for students who are on an accelerated programme to take the tests for the next key stage, and with the possibility of entering children for world-class tests in mathematics and problem solving.

Box 3: The National Curriculum of England and Wales

	Foundation stage	Key Stage 1	Key Stage 2	Key Stage 3	Key Stage 4
Age	3 to end of reception	5–7	7–11	11–14	14–16
Year groups		1–2	3–6	7–9	10–11
Typical level at the end of the key stage		2	4	5/6	Related to national examinations
SUBJECTS/PROGRAMMES OF STUDY					
English		En1: Speaking and listening			•
		En2: Reading			•
		En3: Writing			•
Mathematics		Ma2: Number			Foundation or higher level
		Ma3: Shape, space & measures			
			Ma4: Handling data		
Science		Sc1: Scientific enquiry			Single science or double science
		Sc2: Life processes & living things			
		Sc3: Materials & their properties			
		Sc4: Physical properties			
Design and technology		•	•	•	•
Information technology		•	•	•	•
History		•	•	•	
Geography		•	•	•	
Art		•	•		
Art and design				•	
Music		•	•	•	
Physical education		•	•	•	•
Religious education		•	•	•	•
Modern foreign language				•	•
Citizenship				•	•
Sex education				•	•
Careers education				• (year 9)	•
Early learning goals	•				
Key skills	•	•	•	•	•
Thinking skills	•	•	•	•	•
NON-STATUTORY GUIDANCE:					
PSHE	•	•	•	•	•

Box 4: The foundation stage curriculum

The early learning goals for the foundation stage:

- Personal, social and emotional development.
- Communication, language and literacy.
- Mathematical development.
- Knowledge and understanding of the world.
- Physical development.
- Creative development.

Six key skills which permeate all the key stages:

- Communication.
- Application of number.
- Information technology.
- Working with others.
- Improving own learning and performance.
- Problem solving.

Five thinking skills which permeate all the key stages:

- Information-processing skills.
- Reasoning skills.
- Enquiry skills.
- Creative thinking skills.
- Evaluation skills.

The government also suggests the promotion of four other areas of the curriculum:¹⁶

- Financial capability.
- Enterprise education.
- Work-related learning.
- Education for sustainable development.

- *Key Stage 2:* Statutory Key Stage 2 tests and tasks, combining teacher assessment judgements with national tests in mathematics, science and English, with the option for students who are on an accelerated programme to take the tests for the next key stage, with the possibility of entering children for world-class tests in mathematics and problem solving, and with the option for those who are below or above the level of the tests to take optional tasks.
- *Key Stage 3:* Statutory Key Stage 3 tests and tasks, combining teacher assessment judgements with national tests in mathematics, science and English, with the option for students who are on an accelerated programme to take the tests for the next key stage, with the possibility of entering children for world-class tests in mathematics and problem solving, and with the option for those who are below

or above the level of the tests to take optional tasks.

Additionally the government has provided optional tests in English and mathematics for students at the end of each of the Years 3–8.

- *Key Stage 4:* At this stage students enter the public examination system, and are also eligible to gain awards from government-recognised agencies. Under Section 96 of the Learning and Skills Act 2000,¹⁷ publicly funded courses leading to qualifications may only be offered to learners aged under 18 by schools, institutions and employers if the qualifications have been approved by the Secretary of State. The full list of recognised awarding bodies is long, and is available on the DfES's Section 96 website at: http://www.dfes.gov.uk/section96/awarding_bodies.shtml. The framework of national qualifications is continually being reviewed and amended.

Following a review of qualifications for 16 to 19-year-olds in 1996¹⁸ and developments in National Vocational Qualifications (NVQs) and Scottish Vocational Qualifications (SVQs)¹⁹ developments have been made in qualifications for 16 to 19-year-olds. For Key Stage 4 several new pathways have been opened: the occupational pathway, leading to National Vocational Qualifications (NVQs); the vocational pathway, leading to General National Vocational Qualifications (GNVQs) or vocational GCSEs; the academic pathway leading to A levels, AS levels and GCSEs.

GNVQs combine vocational education, general education and employment, and are based on the skills deemed to be required by employers. They cover, for example, business, health, social care and engineering. Occupational qualifications are addressed by NVQs, and are based on the knowledge, competencies and skills required for specific occupations, and are set out in five levels within 11 major sectors of commerce and industry:

- Level 1: foundation skills in semi-skilled occupations;
- Level 2: semi-skilled occupations;
- Level 3: technician/skilled/craft/supervisory occupations;
- Level 4: technician/junior management occupations;
- Level 5: professional/senior management occupations.

At the time of writing there are further developments in the field of vocational A levels, AS levels, and the accrediting of awards from a range of national bodies. The future of AS levels is under frequent debate. The nature of public examinations and awarding bodies is in constant flux, and it is invidious to predict which will survive in the future, and/or, if they do, what their role will be.

Each year the government updates and produces a handbook of guidance for the assessment and reporting arrangements at the end of each key stage, and these are sent directly to schools. They provide guidance on changes to assessments, the nature and operation of tasks and tests, teacher assessment, reporting and timetables. It

is advisable to check these annually in order to meet the requirements. Assessment is a sizeable topic, and it is discussed in considerably more detail in Part IV.

In terms of *pedagogy*, though the government indicated that the National Curriculum would leave room for schools and teachers to decide how to deliver the contents,²⁰ in fact contained in the National Curriculum document are specific principles for pedagogy, e.g. a requirement for using group work, collaborative work, whole-class interactive teaching, ICT-based teaching and learning, active learning and independent work. Indeed the National Numeracy Strategy and the National Literacy Strategy (discussed below) are very specific not only in prescribing pedagogic issues, but also in terms of giving time allowances for specific forms of pedagogy.

In terms of the *whole curriculum* the National Curriculum is designed to address certain features that were signalled in 1985 by the then HMI:²¹ breadth; balance; relevance; continuity; progression; and differentiation. To these can be added coherence. These issues will be discussed later in this book. Suffice it here to say that, even though they are problematic,²² the level of prescription in the National Curriculum attempts to ensure: *breadth*, *balance* and *relevance* by prescribing the contents of the curriculum; *continuity* by prescribing the curriculum from ages 5 to 16 largely in subject terms; *progression* by describing eight levels within subjects. The overall elements of the curriculum – the National Curriculum, the whole curriculum and the school planning – are presented in Box 5.

The intention in presenting this introduction to the National Curriculum is to indicate that when student teachers go into schools and discuss what and how they will be teaching, to whom and with whom, they will encounter very many changes from the days when student teachers were able to have a ‘free hand’ in deciding what to teach. Schools are required to have a yearly plan that indicates the main contents and organisation of the curriculum. Student teachers going into schools can expect to be told what they will be teaching and to have explained to them the context of their teaching in terms of the plans that have been drawn up by the school, the

Box 5: Elements of the whole curriculum

Element	National	Local	Whole school	Faculty	Department/subject	Individual teacher
1 Context: situational analysis						
2 Rationale						
3 Aims						
4 Objectives						
5 Learning objectives						
6 Intended learning outcomes						
7 Desirable learning outcomes						
8 Relationship to overall prescribed curricular frameworks: <ul style="list-style-type: none"> • core and foundation subjects • cross-curricular themes, issues, dimensions, skills • non-statutory subjects 						
9 Relationships to National Curriculum Attainment Targets, Programmes of Study, Level Descriptions, assessments						
10 Components of the curriculum: <ul style="list-style-type: none"> • Knowledge and understanding • Concepts/key concepts • Skills • Attitudes and values • References to hidden curricula • Sequence • Prioritisation 						
11 Characteristics of the curriculum: <ul style="list-style-type: none"> • Breadth • Balance • Relevance • Progression • Continuity • Differentiation • Coherence 						
12 Pedagogy and implementation: <ul style="list-style-type: none"> • Structure and organisation • Time and timetabling • Teaching and learning styles • Resources and their organisation: time, people, finances, administration, materials, space 						
13 Specific activities and experiences						
14 Planning documents: long-term, medium-term, short-term						
15 Student assessment and measuring 'value-added'						
16 Course evaluation						
17 Recording						
18 Reporting (to several audiences)						
19 Curriculum policy documents and links to other school and curricular policy documents						
20 Identifying/auditing/monitoring existing practices						
21 Planning change and innovation						
22 Quality assurance, quality control, quality development						
23 Management issues						
24 Development of whole department/institution plan						
25 Contribution to institutional development plan						
26 Links to school inspection						

department and faculty, the age phase leaders, curriculum leaders and co-ordinators, subject and age phase teams as well as individual teachers with whom they will have contact. Though there may be latitude in planning specific activities and in pedagogical matters, student teachers will have to slot into the school curriculum planning that has already preceded their arrival in school. They will have to work within the frameworks of a *received* curriculum, the parameters and contents of which teachers, in turn, have received from external sources.

In many respects the need to operate within a received curriculum can be very helpful to student teachers as it provides a considerable amount of support and guidance on what to teach and what will be matched to particular students, groups and whole classes. By placing some parameters on student teachers they are freed to consider other aspects of planning and pedagogy in more detail; it reduces stress. The issue of planning is taken up in considerably more detail later; at this point the intention has been to indicate that part of an initial or subsequent visit to the school will be to find out where and how student teachers will fit into existing curriculum plans and organisation in the school.

The point here is that during teaching practice the student teacher can expect to be involved in a range of activities, not simply teaching a single subject. The curricular responsibilities of teachers, within the range of the National Curriculum and more widely, are immense. Clearly it is unrealistic to expect student teachers to immerse themselves in all of these, but it does raise important issues for the planning of curricula and the activities that student teachers undertake in schools during their teaching practice. These are issues that we discuss in the remainder of this book.

The government has produced specific guidance for the curriculum at different key stages.

The fact that the National Curriculum is framed in terms of subjects has caused some consternation to those teaching in the primary and foundation years.²³ For many years primary teaching had been cast in terms of integrated, cross-curricular topics (e.g. 'Myself', 'Communication', 'Trees'), and, indeed in early years education, an almost

seamless web of activities which touched on several aspects of the curriculum simultaneously had been the order of the day. Indeed Blenkin and Kelly²⁴ suggest the National Curriculum sits very uncomfortably with early years education in this respect. Further, Coltman and Whitebread²⁵ argue that it exerts a downward pressure on the early years curriculum which is of questionable value, risking using early years education as a preparation for the National Curriculum diet of subjects and tests, putting pressure on children to press through curricula without ensuring a firm foundation of understanding or, indeed, enjoyment of learning, and reducing meaningful learning for young children, all reinforced by a vocabulary of teaching which places emphasis on 'delivering' a pre-packaged curriculum.

On the other hand, it is clear from the government's own guidelines that framing the primary and early years curriculum in subject terms does not necessarily mean that it is to be taught as discrete subjects (though quite how realistic this is, when the curriculum is reinforced by subject-specific assessment, is questionable). Further, within subjects, care has been taken by the Qualifications and Curriculum Authority to identify links that can be made to other subjects and areas of the curriculum, and in many subjects specific topics have been indicated (e.g. 'How do we know about the great fire of London?' for history; 'Going to the seaside' in geography).

In addition to the National Curriculum, in 1998 and 1999 the government launched two important new initiatives: the National Literacy Strategy and the National Numeracy Strategy, conceived as part of the government's commitment to raising standards through target setting. Though these do not have statutory status, in fact many schools have put them into practice, not least because they have to defend the decision *not* to enact them. Originally conceived for primary schools, the Numeracy Strategy has been extended to Key Stage 3.

The Literacy Strategy includes one hour daily on literacy (the literacy hour),²⁶ including word-level, sentence-level and text-level work, organised thus: the first fifteen minutes devoted to whole-class shared text work, followed by fifteen minutes

of focused word and sentence work, followed by twenty minutes of group and independent work, e.g. independent reading, writing or word work, while the teacher works with one or two ability groups each day (two for Key Stage 1 and one for Key Stage 2) on guided text work (reading or writing), followed by ten minutes of whole-class work, reviewing, reflecting, consolidating teaching points and work covered in the session.

The National Numeracy Strategy,²⁷ with a recommended daily coverage of 45 minutes at Key Stage 1 and 50–60 minutes at Key Stage 2, is based on four basic principles:

- dedicated mathematics lessons each day;
- direct teaching and interactive oral work with the whole class and groups;
- an emphasis on mental calculations;
- controlled differentiation, with all children engaged in mathematics relating to a common theme.

In practice this has meant increased focus on direct teaching, with a balance between several strategies: directing, instructing, demonstrating, explaining and illustrating, questioning and discussing, consolidating, evaluating responses, and summarising. A typical lesson might involve: oral work and mental calculation (5–10 minutes) with whole-class work, to hone mental and oral skills, followed by the main teaching activity (30–40 minutes) combining teaching input and children's activities in whole-class, group, paired or individual work, followed by a plenary session (10–15 minutes) to resolve, with the whole class, any misconceptions, to identify progress, to summarise key facts and ideas, to link to other work, for forward planning, and to set homework.

The Key Stage 3 National Strategy builds on the foundations laid in primary education, and includes English, and mathematics, science, ICT and the foundation subjects. The structure of lessons follows that used in the primary stages, viz.: a short starter activity with the whole class, followed by a main teaching activity with teacher input and students' own activities, and finishing with a summary rounding-off section to confirm what has been taught.

With regard to Key Stage 4, it can be seen in this chapter that the curriculum for Key Stage 4 and beyond has been covered more skeletally than for the other key stages. This reflects the considerable state of flux that characterises the education of 14 to 19-year-olds, not only in terms of qualifications and examinations (discussed earlier) but also in terms of curriculum coverage, specialisation and commonality, and degree of student choice. Attention is focused on this age phase by the government,²⁸ not least because of the low performance of many such students in the UK compared to France and Germany, and the low uptake of university by lower socio-economic groups. The government's proposals for this age group include:

- a more flexible curriculum;
- world-class technical and vocational education;
- a new Matriculation Diploma to which all young people can aspire to achieve at age 19;
- strong support from a variety of stakeholders, including pastoral systems at school;
- greater responsiveness to students with special educational needs, from a range of ethnic backgrounds, and those at risk of social exclusion;
- closer collaboration between schools, colleges and training providers;
- flexible access and delivery of learning through ICT;
- widening choices for 14–19-year-olds;
- increased commitment to lifelong learning and employability;
- more rounded, motivated, responsible citizens and workers;
- increased vocational emphasis at 14+;
- the moves toward a Baccalaureate (from 2003).

In addressing these aims the government has suggested that the new 14–19 phase of learning should have a clearly marked beginning, middle and end, commencing with a review of progress between a range of interested parties, goal setting, subject learning leading to qualifications, and the achievement of a new Matriculation Diploma (with GCSEs and equivalent qualifications as staging posts to the achievement of the Diploma). Indeed more vocational qualifications are suggested, some of which are combined with more

traditional subjects, and the identification of separate vocational GCSEs is suggested to be dropped.

To achieve these aims will require changes to the 14–16 curriculum, with greater attention being paid to student motivation, a sense of achievement, and a view of education which does not cease at age 16. This entails a reduction in the number of compulsory subjects in order to increase the possibility for more work-related and vocational learning. The government suggests that English, mathematics, science and ICT continue to be compulsory, together with citizenship, religious education, careers education, sex education, health education, physical education and work-related learning. Students could elect to follow a modern foreign language, design and technology, the arts and humanities in Key Stage 4. Greater guidance at points of subject choice needs to be available at age 14, together with a range of new-generation Modern Apprenticeships for the 14–19 vocational pathway. For the 16–19 curriculum a range of new qualifications is under way, including the Advanced Extension Award and the dropping of the separate labelling of academic and vocational A levels. Students in the 16–19 age range might be encouraged to remain in education through financial support. At the time of writing these are proposals only.

(See www.routledgefalmer.com/companion/0415306752, Chapter 3 The whole curriculum and the National Curriculum, The National Curriculum, statutory and non-statutory elements.)

Conclusion

This chapter commenced with an indication that the roles and tasks of the student teacher on teaching practice will be diverse and plentiful. If the scope of the task appears daunting, then, perhaps with little solace, this is because it is. Clearly a teacher, at whatever level or age group, has a wide range of responsibilities, having to be more than simply a subject teacher. Whilst the size of these responsibilities is very considerable, some of them will have a greater priority than others, depending on local circumstances. This is a matter to be discussed on preliminary school visits, with the mentor and the class or subject teachers. It is entirely unrealistic to expect a student teacher to move from a zero starting point to taking on the range of these responsibilities overnight, and, indeed, some of them may not have to be addressed on a teaching practice at all, e.g. aspects of items 20 to 26 from Box 5. Further, the student teacher should expect to *receive* information from the school on its practices in respect of the National Curriculum, not to have to go fishing for it.

The range of responsibilities is formidable, by any standard, and the rate at which these responsibilities can be addressed and assumed by student teachers is a matter of individual discussion and development.

The foundation stage

Principles and aims

Humans are characterised by the longevity of their learning and the time it takes for them to reach adulthood. Early years education is foundational for that learning and education is 'either about learning, or it is about nothing'.¹ The change of designation from the typically used 'early years' to 'foundation' years signals clearly that the early years of schooling are fundamental to successful learning and achievement. The quality of the young learner's education has far-reaching effects that persist into later life,² a feature which has underpinned early intervention programmes and the long-term success of these.³

Haddad⁴ reports that brain-based research indicates that learning is networked – it is not solely an individual activity – and that early interventions in education and early childhood education play a significant role in setting foundations for effective learning. Studies of brain growth and development resonate with constructivist principles of learning (discussed below), to suggest that room should be given for children to make meaningful sense of their environments and be engaged in problem solving, learning through social activities and in a secure yet challenging environment.

Further, Gopnik *et al.*⁵ indicate that the brain physically expands and contracts depending on experience, and that deprived environments starve the brain of the necessary stimuli to expand; the brain needs a rich environment to

thrive. They indicate that the young child's brain is twice as active as an adult's; Talay-Ongan⁶ indicates that the 2-year-old's brain is 70 per cent of its adult weight and that the 6-year-old's brain is 90 per cent of its adult weight.

Early childhood education is more than simply the starting line for school education; it is cognitively, socially, affectively, morally, physically, personally and behaviourally the foundation of the whole edifice of lifelong learning. The foundation years of schooling⁷ run from age 3 to the end of the Reception year (age 6), though 'early years' can embrace the first one or two years of Key Stage 1, i.e. until the age of around 7 or 8. Indeed there is some fuzziness of definition; it can run from ages 0 to 6. The changes in children during these years can be dramatic. They may come to nursery or kindergarten barely able to speak, unable to feed themselves, egocentric, unused to sharing, with very limited self-control and used to being the centre of family attention. It may be their first main break with home, which is sometimes equally traumatic for the parents as the children. They quickly learn the hidden curriculum of schooling⁸ – rules, routines, delay, denial, praise, power, control, authority, self-reliance, being only one out of many children vying for the teacher's attention – and they leave the early years as sophisticated, if embryonic learners. What has happened during this time? This chapter indicates some significant factors of early years – foundation years – education.

An early years classroom can be a bewildering place for the new student teacher and child

alike. Tables and centres of activity are set up, and children move around them, talking, playing and concentrating. The teacher adopts a combination of roles – from nurse to judge, from social worker to expert catalyst for learning. The task is as subtle as it is complex. Knowing when to intervene and when to stand back is a critical matter for the teacher. Teaching becomes an art, not simply an amalgam of competencies, an emerging, self-choreographed dance rather than a programmed, mechanistic routine.

Underpinning these experiences are fundamental and significant principles of learning, for example:

- Learning is a social as well as an individual activity (and Vygotsky⁹ reminds us that all higher order cognition is socially learned and transmitted).
- Sensory learning is closely linked to cognitive learning and young children need sensory stimuli.¹⁰
- Feelings, motivation and effective learning are closely linked.¹¹
- Learning begins with the learner and ‘where the learner is’, and where the learners are considerably in control of their learning.¹²
- Motivation, interest, engagement and enjoyment are key elements of learning.
- Language and communication are fundamental to learning and should be accorded high priority.¹³
- Even complex ideas and concepts can be learned in an intellectually honest way by young children.¹⁴
- Activity (physical and mental), experience, concrete learning and operations – learning by doing and applying – are fundamental to effective learning rather than passive, programmed behaviourism.¹⁵
- Ideas and knowledge are interconnected and networked in the learner’s mind (constructivism), hence there is a need to integrate and link knowledge in the learner.
- Children communicate in a variety of ways: ‘a hundred languages’.¹⁶
- Teachers and learners are involved in the co-construction of meaning, rather than simple transmission and reception respectively, and collaboration, language, verbalisation, discussion and dialogue are critical elements here.¹⁷
- Learning concerns investigation, exploration, and the formulation and solution of problems; it is problem solving.¹⁸
- Trial and error are significant aspects of learning (brain-based research indicates that seemingly redundant neural networks are activated when trial and error exploration is used; trial and error ‘strengthen’ and increase brain power); children must be able to make choices and mistakes, and to learn from these.
- Multiple intelligences are addressed through integrated learning and knowledge.
- Social and emotional factors feature centrally in learning – to separate cognitive/academic learning from social and emotional learning (typically, in many schools, to reduce the significance of social and emotional factors) and from all-round personality development misrepresents the nature of learning.
- Active learning is important for young children; children are active learners.¹⁹
- A secure (emotionally, cognitively, socially), caring environment and the promotion of children’s self-esteem, sense of accomplishment, experience of achievement and positive feedback (not least, praise) are essential ingredients for young children’s learning.²⁰
- Learning must be meaningful if it is to be effective.²¹
- Exploration and divergent thinking are often essential precursors of learning and convergent thinking.
- Learning must be unhurried and unpressured, with time to explore, develop and reflect on ideas and feelings.²²
- A competitive atmosphere must be reduced.²³
- Early reading, writing and numeracy must be embedded in young children’s preferred experiences and interests, rather than being too formal or disconnected from other areas of learning.²⁴
- Pressurising young children is frequently counterproductive.²⁵
- Punitive environments hamper growth, and enjoyment promotes learning.²⁶
- Early years learning must build on prior and ongoing rich experiences on which children reflect.²⁷

- Children must be encouraged to take risks and make mistakes in order to develop independence.²⁸
- People, cultures and the community all have a significant influence on children's learning.²⁹
- Adults can expedite learning through careful diagnosis, monitoring, assessment, talk and intervention.³⁰
- Too early a formalisation of learning into planned 'lessons' can inhibit effective learning.³¹

These principles have to accommodate several constraints, be they physical (space and layout); material (resources); human (the number of children in the class, the number of adults in the class – teachers, parents, classroom assistants, nursery nurses, learning support teachers – the developmental stages of children); curricular (the push in the National Curriculum away from integrated learning and towards subject-specific teaching); or assessment and its uses (the formal testing at the end of Key Stage 1 that contributes to 'league tables' of schools).³² Underpinning these principles are two views of constructivism, which we discuss in a later chapter.

(See www.routledgefalmer.com/companion/0415306752, Chapter 4 The foundation stage, QCA Principles for Early Years.)

Curriculum matters

In a series of significant documents, the Qualifications and Curriculum Authority³³ has set out several principles for early years education.³⁴

Within these principles the QCA sets out a curriculum for the foundation stage which develops:³⁵

- physical development;
- creative development.

These areas are refined into six areas of learning:³⁶

- personal, social and emotional development;
- communication, language and literacy;
- mathematical development;
- knowledge and understanding of the world;
- physical development;
- creative development.

The QCA³⁷ explicitly states that these 'are not a curriculum in themselves' (p. 26) but a basis for planning a curriculum which, indeed, extends beyond the foundation stage. Nor is it intended that children's learning is discretely planned in these areas; rather a single learning experience can serve many areas, and a single area of learning can give rise to a range of activities. Children building with blocks, for example, may learn about weight, size, dimensions, shape, carrying, co-operation, structure, balance, frustration (when the building collapses or when another child accidentally knocks it over!), and they may use the blocks to develop imaginative play, linguistic abilities, personal and social skills. Children's learning is integrated; they make links across areas of learning (the constructivist paradigm), and early years learning places emphasis on integrated learning, often through topic work.

In early years education it is important to stress first-hand experience, as well as higher order thinking such as exploration, investigation, problem solving, critical thinking, asking 'why', prediction and discussion.³⁸ Indeed the QCA appears to underline the importance of serendipitous learning, through the need to attend to unanticipated events in early years education.³⁹ Further, child-initiated learning has a central role in the early years,⁴⁰ in addition to learning from others. Young children learn through rich sensory experience, and it is important for this to be provided in the classroom.

It is very clear here that the curriculum should be developing all aspects of children, not simply inducing them to imbibe given academic knowledge. It is, perhaps, significant, that personal, social and emotional well-being head the QCA's

- personal, social and emotional well-being;
- positive attitudes and dispositions towards their learning;
- social skills;
- attention skills and persistence;
- language and communication;
- reading and writing;
- mathematics;
- knowledge and understanding of the world;

list; education develops people, not simply tops them up with knowledge.

Personal, social and emotional development (PSED) of early years children includes the development of autonomy, exposure to a range of working and playing groups, learning independence and dependence, and the development of positive social relationships and friendships. In this area children's motivation, interest, and excitement in learning should be encouraged, their confidence should be enhanced, and they should be increasing their attention and concentration span. Self-respect and respect for others are developed, and this includes a growing awareness of right and wrong as well as a recognition that others have needs, values and rights. Adults have an important role to play here as positive role models. Emotional intelligence⁴¹ is a key aspect of PSED: being self-aware and self-controlled and conscious of one's effect on others, persistent, empathic and motivated to relate positively to others.

The QCA⁴² lists the constituent elements of PSED as:

- dispositions and attitudes;
- self-confidence and self-esteem;
- making relationships;
- behaviour and self-control;
- self-care;
- sense of community.

Communication, language and literacy (CLL) concern not only the particular skills, but also the confidence and opportunity to use them, for children to communicate their ideas and feelings, to speak and to listen, and to develop their abilities to read and write. Language and literacy are symbol systems, and they comprise more than written words, embracing, for example, music, dance, movement and graphic images. Communication, language and literacy touch all areas of the curriculum. Young children's learning does not fit into neat compartments; this is a key message from constructivism.

Young children, just as most adults, love to talk. Talk is the testing-ground of ideas. Teachers must provide plentiful opportunities for children to talk – to each other, to adults, in one-to-one and one-to-many situations. Children love to ask

questions about anything; from the young child going through the phase of trying his/her parents' patience endlessly by asking 'why', to children wanting to know answers to everything about God, talk is an infinite learning experience. Children love words: look at their ability to copy the latest video releases, television advertisements, counting songs, rhymes, repetitive stories (e.g. the Gingerbread Man, the Three Little Pigs, the Very Hungry Caterpillar), memory rhymes; their capacity for repetition and pattern formation is huge.

The QCA⁴³ provides an important delineation of early learning goals for communication, language and literacy, which include placing exploration, experimentation, enjoyment, creativity and interaction high on its list of priorities, for example:

- enjoy listening to and using spoken and written language, and readily turn to it in their play and learning;
- explore and experiment with sounds, words and texts;
- listen with enjoyment and respond to stories, songs and other music, rhymes and poems and make up their own stories, songs, rhymes and poems;
- use language to imagine and recreate roles and experiences.

Included in the prescriptions are rules for language use, for example taking turns in conversation, attentive listening, and particular skills, for example hearing and saying initial and final letters, reading familiar and common words and sentences, writing for different purposes, developing phonic awareness, understanding, left-right orientation, and fine motor control for writing.

The QCA⁴⁴ lists the constituent elements of CLL as:

- language for communication;
- language for thinking;
- linking sounds and letters;
- reading;
- writing;
- handwriting.

For mathematical development (MD) the QCA⁴⁵ also emphasizes confidence as well as competence.

Mathematical understanding can be developed through a variety of means, for example: number songs, rhymes, games, puzzles, toys, play, practical activities, oral work, sorting and counting, matching and patterning, water play and sand play. It is important to note that the early learning goals for mathematics place comparatively little emphasis on writing and computation (sums!), as though there are important precursors to these which are built up through experiential learning. Of course, this does not preclude number work, and, indeed, children love to say and use numbers and to count – to 10, to 20, and the ‘big day’ when they can count to one hundred! Language and number are closely linked, and this can be widened to concepts such as ‘bigger than’, ‘smaller than’, ‘more than’, ‘less than’, ‘heavier than’, ‘lighter than’, and this can be extended in addition and subtraction work. Numbers can be used as labels and for counting.

Mathematical work in the early years, the QCA suggests, places important emphasis on problem solving and practical activity, for example using numbers for practical calculation. In learning about space, shape and measures, exploratory and practical work is accompanied by verbalisation, with teachers intervening to promote the ‘mathematics’ in relation to activities. Such learning is purposeful, and within the objectives, at times, set by the children themselves. Practice, confidence and usage are key features in mathematical learning. Adults must provide a range of mathematical experiences in which learning can occur.

The QCA⁴⁶ lists the constituent elements of MD as:

- numbers as labels and for counting;
- calculating;
- shape, space and measures.

With regard to knowledge and understanding of the world (KUW), this sets the foundation for history, geography, design and technology, ICT and science. For learning to occur in these areas a rich environment should be provided for children to explore, as well as practical activities and interaction: books, pictures, artefacts, materials, multimedia, aquaria, gardens, plants and flowers.

They need to experience ‘real-life’ environments – indoor and outdoor, on-site and off-site (e.g. farms, shops, the seaside, a river (with care!), hills and countryside, a park, a museum, a town, a village). Children should be encouraged to explore their own situation, families, environment, beliefs, history as well as those of more distant groups – the movement might be from the present and local to the past and distant (or, indeed, *vice versa*). The QCA⁴⁷ indicates clearly that the local community and environment are important resources for learning. Adults can provide activities and environments for learning, intervening (e.g. through questioning, direct teaching of knowledge and skills) to promote learning and concept formation, and, indeed, modelling exploratory behaviour.

The QCA⁴⁸ lists the constituent elements of KUW as:

- exploration and investigation;
- designing and making skills;
- information and communication technology;
- a sense of time;
- a sense of place;
- cultures and beliefs.

Physical development (PD) attends to gross and fine motor control and co-ordination, activity, confidence, healthy growth, muscular development and self-awareness, for example of what happens to their bodies when children are active. Clearly this draws on a range of equipment and resources (large and small), space, and the ability to handle equipment (large ball skills, small ball skills), to throw, catch, climb, roll, jump, hop and so on. Physical development enables children to travel (over, under, through, above, across, between), to increase their strength, co-ordination, balance, and to gain confidence and independence as they gain control of their developing bodies.

Here adults provide physical challenges, set up appropriate resources for learning and prompt that learning. They need to give time and space for children to explore, experiment and refine their physical environments and activities, and to ensure that learning environments are safe. Physical activity is not discrete; it can accompany other areas of learning (e.g. mathematics,

language, music). Teachers must be very vigilant with young children, who may know little fear or understand risks.

The QCA⁴⁹ lists the constituent elements of PD as:

- movement;
- a sense of space;
- healthy and bodily awareness;
- using equipment;
- using tools and materials.

Creative development (CD) is seen as ‘fundamental to successful learning’,⁵⁰ and enables links to be established across areas of learning. Creativity is developed through imaginative play, music, art, role play, dance, indeed no curriculum area is excluded. Creativity embraces originality and this requires concentration and time for children to complete tasks and express themselves, to explore and experiment with ideas, to have multisensory experiences, the opportunity to learn from adults (to model their behaviour), and to crystallise their ideas, i.e. creativity draws on linguistic, physical, emotional, social, artistic and cognitive aspects of children. In art, for example, teachers provide opportunities and stimuli for creativity through materials and support to explore and experience materials, texture, shape, form, two- and three-dimensional work, sounds and music, sensory awareness and development, story creation and imagination, and the range of technical and physical skills associated with these.

Teachers have an important role here in setting up opportunities for children to be creative in all curriculum areas and activities; to prompt the creation and discussion of, and reflection on, their own ideas; to promote verbalisation of ideas; to encourage originality and independence; to teach specific skills (e.g. technical skills); and to provide high-quality materials and resources.

The QCA⁵¹ lists the constituent elements of CD as:

- exploring media and materials;
- music;
- imagination;
- responding to experiences and expressing and communicating ideas.

It can be seen that, across the areas of learning, teachers provide opportunities and activities for children to learn. Further, rather than simply providing opportunities, teachers positively intervene to promote learning, through careful prompting, questioning, modelling, direct teaching, demonstration, reflection and assessment which leads to subsequent planning. Further, it can be seen that the delineation of the main aspects of learning in the six areas comfortably dovetail into the National Curriculum.

Gardner⁵² reports a much celebrated example of ‘good practice’ from the Reggio Emilia pre-schools in Northern Italy.

This approach has several key principles:⁵³

- The image of the child as a possessor of potential, creativity, curiosity, wanting to interact and establish relationships, constructing her/his own learning, negotiating.
- The importance of children’s relationships to peers, family, teachers, the school, the community and the wider society – an ever-widening circle of relationships – in which all participants are partners in learning.
- Children, parents and teachers together, with rights to the highest quality education, to be involved in education, and to grow as professionals respectively.
- Parents’ roles as essential participants in their children’s education (e.g. sitting on school committees, working in the school, taking part in special events, being consulted).
- The layout of the school, in which physical space is open, with close attention to detail and a rich pleasing environment, a combination of natural and made objects and personal space (each child has her/his own box/pigeon hole) and a profusion of children’s work, exquisitely presented.
- Multiple interactions between teachers, students and parents, in groups of flexible size and arrangements, and the opportunity to be alone.
- Continuity of learning: time follows the sequence of learning, activity, concentration span and task in hand, not the clock, with time provided for interaction.
- Collaboration, co-operation and collegiality as cornerstones of learning (e.g. non-hierarchical

staff relationships amongst teachers, *atelieristi* (artists in residence), *pedagogisti* (pedagogical co-ordinators of all adults)), and in which everyone learns from each other – adults and children alike.

- Copious documentation and presentation in multiple media by teachers and others, serving several functions – to inform planning, to communicate with parents, to understand and diagnose children, to facilitate internal school communication, to create a school archive, for teachers' self-evaluation.
- The dynamic, emergent curriculum, which is not pre-ordained in advance but which emerges *with* the children (often as a consequence of discussion with them, together with documentation and review).
- Project-based learning, which is integrated rather than subject-specific, with active, first-hand and experiential learning, and which emerges in discussions between children and teachers. These can last from a few days to weeks and months, as deemed appropriate by the participants, and can originate in a chance remark or observation which catches the students' interests.

At the Reggio schools parents and the community have an active and central role in education as equal partners (an 'extended family') with shared responsibilities. For Gardner, the Reggio Emilia schools embody his multiple intelligences, and encourage exploration of the child's world in the child's terms, for example socially, emotionally, cognitively and physically. Respectful relationships and community public-spiritedness are key watchwords of the approach. Empowerment of the children is part of the empowerment of the community. As Siraj-Blatchford⁵⁴ suggests, in the Reggio Emilia approach children are co-constructors of knowledge, identity and curricula.

Play

Far from being the non-serious, escapist and indolent, insignificant activity that the label often carries, Drummond⁵⁵ indicates that play is a central, highly significant activity in children's

lives and their learning.⁵⁶ It evokes the most intense personal and interpersonal feelings in children,⁵⁷ and they take it very seriously indeed; they become completely absorbed in it; it is very real for them. Play is a magnificent means of addressing and integrating several aspects of young children's development and of stimulating profound growth.⁵⁸ Play catches and develops children's intrinsic motivation; addresses their self-posed questions; offers the possibility for children to engage in divergent thought in which there is no one right answer; promotes socialisation and creativity; and prompts the development of both the left and right hemispheres of the brain.⁵⁹

Edgington⁶⁰ argues that 'play is a powerful motivator of young children' and that it has a long-term impact on adult life, enabling children to:

- handle setbacks and anxieties;
- experience fulfilment and a sense of well-being;
- develop social awareness and interaction;
- foster creativity and imagination;
- explore ideas and feeling;
- take risks and experiment;⁶¹
- try out, combine and recombine ideas;⁶² and
- make decisions and taking responsibility for them.⁶³

Play enables them to create alternative worlds and stories⁶⁴ and, as Bruner⁶⁵ reminds us, we make meaning of our lives through narrative and creating stories of our experiences.

Play improves learning in young children and long-term achievement has been seen to be present in children who have been exposed to such child-centred methods.⁶⁶ Indeed Sylva⁶⁷ cites US-based research which shows that young children who have been exposed to sharing experiences with carers and who bring mathematical experiences into their everyday worlds outperform children who experience more formal 'lessons' in mathematics.

Play, be it epistemic (knowledge-based: what does this thing do?)⁶⁸ or ludic (game-based: what can I do with this?), is a central element of young children's learning, as is the role of the practitioner in maximising learning from play.⁶⁹

It is sometimes noisy, sometimes quiet, sometimes gentle, sometimes boisterous, sometimes planned, sometimes spontaneous, sometimes rule-governed, sometimes rule-free. Siraj-Blatchford⁷⁰ suggests that play is central to young children's learning in that it can motivate them and enhance their learning and provide a context in which they can explore and experiment; it is under the child's control; it is the 'child's work'. As with many species, she argues, childhood is a separate stage of development and is qualitatively different from adulthood.⁷¹ Childhood is a state in itself, not a training ground or apprenticeship for the promised land and distant shores of adulthood.⁷²

Siraj-Blatchford⁷³ argues that play is 'developmentally appropriate', as, in it, children make meaningful choices and explore their worlds through active, experiential, first-hand learning. Developmentally appropriate programmes are informed by what is known about: child development; learning; children's interests, motivations, needs and abilities; local and situational factors. Such programmes have several key features, for example: positive relationships between all adults and children; teaching to enhance learning and children's development; assessment that is linked to planning for learning; mutual relations between home and school, and all the adults participating; developing a wide, all-round curriculum; authentic, diagnostic and formative assessment. The symbolic significance of developmentally appropriate programmes is that they start with the learner, not the teacher, not the curriculum, and not knowledge. They resist the pressure to force young learners to jump through the hoops of the National Curriculum.

In developmentally appropriate programmes teachers provide support, scaffolding (e.g. helping the child to understand, explore, extend, handle activities) and interventions to promote learning, and in which each child has the opportunities to work in solitary mode, flexible and collaborative group arrangements (with mixed ages and abilities), and as a member of the whole-class group. In these, the location and use of human and material resources is critical. Whole-class activities might be in singing, story work, dancing and music, though in terms of

the proportion of the day, whole-class activity is usually slight. In small group and individual activities the teacher adopts a range of different roles – guiding, suggesting, reflecting, expanding, demonstrating, directly teaching, probing, prompting, modelling, leading, answering questions, giving feedback. Underpinning the teacher's role is the need for the child to be engaged and involved in her/his own learning and to be initiating much of it. The adult-child relationship here is crucial and, avers Siraj-Blatchford,⁷⁴ symbiotic. Adults must know how to plan for children's play.⁷⁵

Providing scaffolding enables the teacher to extend what Vygotsky terms the child's 'zone of proximal development'. Vygotsky,⁷⁶ perhaps more than Piaget's more solipsistic turn, is clear that social interaction and collaboration are critical in developing the young child and that certain developmental processes are *only* (his word) able to operate when the child is interacting with people. Solitary and independent learning is simply less effective than social and interactive learning. Indeed, argues Vygotsky, children actively seek out others with whom to interact.

Consider the young child playing in a water area with another child. What are they learning? Socially they may be learning to share and take turns with equipment and they may be learning that cooperative play can be enjoyable and valuable – the early stages of teamwork that employers will value maybe twenty years later! Emotionally, they may be learning frustration tolerance and they may experience the pleasure of exploration. Morally, they are learning that it is not acceptable to hit other children if they have what you want, and they are learning how to solve conflicts and disagreements.

Cognitively, their senses are being sharpened through touch, sight, speech, maybe even taste (as babies our first reaction to something new is to put it in our mouth!); they are:

- learning about the properties of water, capacity and conservation;
- laying the foundation for early scientific methodology in terms of the 'what if . . . ?' questions (early experimentation and hypothesis formation);

- learning about problem solving
 - how can I put this amount of water into x number of containers?
 - how can I prevent the water from escaping through my fingers?
 - why do heavy boats float?
 - why do some objects float and others sink?
 - why does the water seem to push my hand up to the surface?
 - why does the empty sealed bottle feel as though it is being pushed to the surface and yet the half-full bottle doesn't feel like this so much?
 - why are there bubbles coming out of that bottle?
 - how can I make a bubble?
 - where does a bubble go when it reaches the top of the water?
 - how can I make this object sink?

Mathematically, they may be learning simple counting ('how many objects float?'), big and little, bigger and smaller, more and less, ordering and classifying. They are learning how to concentrate on the task in hand; they are sharing experiences through talk; they are imagining ('what is it like to be a duck that can dive?'; 'what would it be like to live under the sea?'; 'what would it be like to be a fish?'). They are learning about Design and Technology ('let's make something that floats'; 'let's join up these tubes to make the water move from one place to another'). Linguistically they are verbalising (and verbalising is a fundamental stage of learning), crystallising and articulating their ideas, maybe to share them with another child or an adult, and moving from a restricted code of shared, non-verbalised meanings to an elaborated code of explicit vocabulary and linguistic structures. Later they may find and draw pictures of ducks, boats, divers and sea creatures. They may trace over a word to learn how to write it ('ship', 'water', 'sea', 'cup'). They may watch and discuss a multimedia presentation on sea creatures; they may keep tropical fish in an aquarium. Physically, the young child is learning fine motor control (and motor control is proximodistal⁷⁷ (from the centre out) and cephalocaudal (from the top down)).

Play is intrinsically creative. In play children may be making up their own games, activities, rules and routines. *They* decide the activity, *they* decide the levels of difficulty, *they* decide the rules, *they* enforce the rules (indeed, in many young children, more time is taken on making up and enforcing the rules than actually playing the game!). The point here, well made by Guha,⁷⁸ is that in play the locus of control is with the children; they learn democracy by practising it. They express themselves and learn to live with the consequences of that.

Play is active – socially, emotionally, physically, cognitively. This embodies a key principle from brain-based research. The brain does not just receive information: it looks for it. It looks for regularities, it seeks confirmations. Cohen and Stewart⁷⁹ suggest that the organism deliberately seeks out – proactively – information from the environment in order to learn. They indicate that there are more neural connections *from* the brain to the ear than from the ear *to* the brain, and that some 10 per cent of the fibres in the optic nerve go 'the wrong way'. Sense organs, they argue, do not passively receive information, 'they go fishing for it'. Information, as Bailey⁸⁰ remarks, does not travel from the environment into the individual, but starts with the individual and moves outwards.

The possibilities are endless; play is a marvelous platform for learning. Behind all of these is the presence of the teacher, providing material, social, cognitive, moral, physical, emotional input, interventions and facilitation to encourage young children to maximise the learning potential of the activity in question. In the example of the playing with water the teacher has to decide judiciously when to let the children find out for themselves and when to intervene to facilitate ('scaffold') learning through careful prompting and probing. Given this, the assertion that play is an uneconomical time waster in early years education is simply naïve and should be dismissed.

Play has several defining features. It is, for example, frequently: spontaneous; enjoyable; process rather than outcome-focused; free of explicit rules unless made up by the participants; devised and owned by children; participatory and

first-hand; active and immediate.⁸¹ It extends a child's learning, sometimes with adult intervention. Play enables young children to express, fulfil and handle their wishes and fears (for example in play therapy)⁸² and to integrate and extend their understanding of the world.

Play can be structured or guided, and the environment is provided in which different kinds of play activities can take place (e.g. building, painting, constructing) with adult support for learning from the activities. This need not stifle exploratory and inventive play. There are several different types of play. In a famous delineation of learning, Bruner⁸³ discusses symbolic learning (through symbol systems such as language), iconic learning (through images, pictures, objects) and enactive learning (learning by doing and experiencing), and these figure significantly in types of play.

Physical play can involve, for example, running, walking, jumping, skipping, crawling, climbing, lifting, carrying, rolling, balancing, hopping, kicking, catching, digging, pulling, pushing, turning, dancing, holding, stretching. It can involve large, outdoor activities and equipment (climbing frames, digging, toy cars) and indoor activities. It encourages the development of healthy bodies, mobility and motor skills (gross to fine), agility, speed, spatial awareness, self-awareness and self-confidence.

Creative play can involve, for example, fine motor skills such as painting, drawing, 'pretend' writing, sewing, cutting, threading, model making, gluing and sticking, constructing, building and printing. It can encourage learning about shape, size, texture, colour and patterning. This can encourage divergent thinking and enable children to experience a sense of achievement and exploration.

Symbolic play (pretending) can involve role play, for example dressing up, the home corner, playing with dolls and toys, office play, a hospital or doctor's area, a post office. It can enable children to explore adult roles and their own feelings, use language, enable socialisation and collaborative learning, develop imagination through making up situations, and learn to care for others. This can extend to playing with dolls such as those which may appear on

the television (e.g. cartoon characters, children's stories, heroes and heroines). In this latter there is an important role for the teacher to discourage aggression (many television characters are extremely violent) and to avoid or break down stereotypes (e.g. the cute female doll, the commando male doll).

Construction play involves, for example, both commercial products (e.g. Lego, Sticklebricks) and non-commercial products, to build, for example, bridges, houses, towers, railway stations, cars, farms. It can encourage language development, fine and gross motor control, spatial awareness, mathematics (e.g. size, shape, counting, ordering), science and technology (e.g. properties of materials, capacity).

Game play usually, for example, involves commercially produced equipment (e.g. board games, large mats games, counting and ordering games). It can encourage mathematical thinking (e.g. shape, order, counting and number), rule following (the rules of the game) and how to make up and apply rules, social learning (e.g. taking turns), and learning how to cope with winning and losing.

Messy play⁸⁴ involves, for example, sand, water, playdough, paint, finger paints, liquids, sticky substances, and maybe harmless powders (e.g. flour). These are frequently activities which children are not allowed to do at home or for which they may find themselves in trouble, often because of the mess created! They enable children to explore texture, touch and smell. Emotionally they may offer children soothing sensations. Cognitively they enable children to understand important properties, for example, conservation, fluidity and liquidity, shape and texture, capacity and size.

In structuring and guiding play the teacher has a crucial role providing, for example:⁸⁵

- a safe, secure and stimulating environment to accelerate enjoyable and fulfilling learning;
- a range and balance of resources and equipment for all different kinds of play;
- intervention, scaffolding and challenge to promote linguistic, cognitive, social, emotional, physical and moral development;
- development of communication;
- careful questioning, summarising, prompting,

probing, suggesting, modelling, direct teaching, encouraging the children to learn from each other;

- support and extension of spontaneous play;
- a positive role model;
- opportunities for children to explore their surroundings and represent their learning experiences to make sense of the world;
- opportunities to develop concepts, ideas, skills and problem-solving competencies;
- support for children in taking risks, socially, emotionally and cognitively;
- the establishment of rules and routines;
- interventions to support creativity and imagination;
- information and opportunities for assessment, monitoring and feedback;
- supervision (e.g. to ensure equality of access to all equipment) and conflict resolution (e.g. turn taking);
- careful observation and assessment of the children's activities, development and progress, and its subsequent links to planning for further learning;
- communication and work with parents.

In some cases it is likely that children will not know how to play; they will need to be shown how to play. Reticent children, who would naturally self-select out of taking part, should be encouraged to participate.

Socialisation

Education plays a significant role in the early socialisation of the child, and is witness to her/his transformation from socialisation in the home to socialisation in the wider world. Underpinning this is the development of several key features:

- developing positive self-esteem;
- security in relationships;
- the development of trust in others and reliability;
- behaving and interacting in a socially acceptable way;
- controlling emotional outbursts;
- developing independence;

- learning roles and breaking stereotypes;
- co-operation and relating to others;
- developing social skills.

The former School Curriculum and Assessment Authority⁸⁶ includes in its list of 'desirable learning outcomes' the need for children to learn how to work, play and co-operate with others and also how to function in a group 'beyond the family'. This involves, it avers, the development of self-esteem and effective relationships with others, both children and adults. Part of the development of independence and socialisation, it suggests, is being able to take responsibility for oneself, e.g. for looking after oneself (dressing, toileting) and being sensitive to others. In this sense socialisation and social development are closely linked with personal development, and, indeed, the QCA links the two.

(See www.routledgefalmer.com/companion/0415306752, Chapter 4 The foundation stage, Empowerment through learning.)

Equal opportunities

'No child should be excluded or disadvantaged because of ethnicity, culture or religion, home language, family background, special educational needs, disability, gender or ability.'⁸⁷ This powerful statement is reinforced in early years education that addresses the need to break early-ingrained stereotyping⁸⁸ and any discriminatory practices. A critical factor in young children's education is the need to address their interest, motivation, excitement in learning, and the avoidance of a sense of failure. For many young children, particularly, for example, those presenting challenging behaviour, learning difficulties, attention difficulties, and a range of physical disabilities, such experience of failure may be their staple diet. They suffer from 'learned helplessness'.⁸⁹

'Disruptive' children, for example, who have no physical or visible disability, risk being labelled simply as troublemakers, and this can lead to a self-fulfilling prophecy if teachers are not alerted to the need to break down their own stereotypes. For children with special educational

needs such equality of opportunity and uptake of education can require additional support, for example:⁹⁰

- provision for additional communication, language and literacy skills (including sign language enrichment);
 - large print and Braille books;
 - ICT equipment and technological aids;
 - multisensory resources, accessed through touch, sight, smell, and sound;
 - adults in the classroom who work with children with special needs;
 - specialist equipment;
 - careful targeting of expectations and goals (e.g. for children with learning or behaviour difficulties);
 - the promotion of positive behaviour and building on even small improvements;
 - improving children's self-management of behaviour;
 - using a range of home and community languages for learning;
 - providing bilingual support in classrooms and for communication beyond the classroom (e.g. with parents).
- diagnose learning aptitudes, potential and abilities;
 - inform planning for learning;
 - profile and document young children's abilities, interests, competencies upon entry to school;
 - compare children, teachers and schools;
 - determine the most appropriate programmes for children;
 - document areas of strengths and weakness;
 - document children's development in curriculum, personal, social, emotional and physical development;
 - inform decision making about children's most suitable placement.

Not only do equal opportunities feature in the *provision* of early years education; they feature in the *process* of such education, breaking down stereotypes and discrimination.

In order to maximise learning, teamwork and collaboration are required with the adults who are involved in children's learning (inside and outside the classroom), for example, teachers, parents, classroom assistants, bilingual workers, speech therapists, school psychologists.

Assessment in the early years

Assessment has several purposes (see Chapter 16); for example, it is intended to:

- record what children can do, and have learnt;
- chart progress;
- identify children with special educational needs;
- screen children, e.g. physically, behaviourally, intellectually, socially (including family circumstances);

Children are required to be formally assessed at the end of Key Stage 1 (aged 7). What characterises the best practice in the examples given above is careful and close documentation and assessment. This is not simply the end-of-key stage assessment that characterises formal National Curriculum requirements, but is much richer than this. Bertram and Pascal⁹¹ provide a withering critique of simplistic assessment in the early years, arguing that:

- It will not yield adequate evidence to make judgements about what children know and can do and where they need to go next.
- Testing is an impoverished view of learning.
- Testing violates an essential principle of early years learning, which is that it is child-centred: testing is 'by definition' (p. 89) another person's judgement, based on a narrow set of indicators, of a child – the agenda is an outsider's, not the child's.
- Testing does not catch the art of learning and learning how to learn, which concerns motivation, socialisation and confidence.⁹²

Rather, Bertram and Pascal argue persuasively for a much richer view of assessment, which includes dispositions, social competence and self-concept, and emotional well-being (p. 91). For them, effective learning concerns the child's ability to explore the world and to sustain curiosity, to enjoy learning for its own sake, to feel empowered. It entails holding a broad embrace of assessment, to include (94–101):

Dispositions

- independence;
- creativity;
- self-motivation;
- resilience.

Social competence and self-concept

- establishing effective relationships;
- empathy;
- taking responsibility;
- assertiveness;
- awareness of self.

Emotional well-being

- emotional literacy;
- empowerment;
- connectedness;
- positive self-esteem.

Underpinning these areas is a recognition of the significance of emotional intelligence and the close inter-relatedness of feelings, socialisation and cognitive growth. At heart, as Drummond⁹³ suggests, assessment, must enrich children's lives and keep their interests as the highest priority.

Assessment of young children, then, must be comprehensive, covering not only academic matters, but a range of factors – social, emotional, feelings, attitudes, physical as well as intellectual development.⁹⁴ Much of the assessment 'data' are derived from informed, professional observation, and can focus on process and content of learning, social behaviour, emotional development, physical development, linguistic development, as well as the range of 'subjects' with the caveat that to arrange assessment under subject headings may be to misrepresent the nature of young children's learning, which, as this chapter has suggested, is integrated rather than subject-specific. Assessment is both formative (diagnosis which leads into formative planning) and summative (for example at the end of a key stage). Typically the richer of the two kinds of assessment is formative, as it is frequently not measurement-based nor highly selective.

Sparks Linfield and Warwick⁹⁵ suggest that formative assessment of young children is time-

consuming as it is often observation-based, and can involve considerable conversation with children. They suggest (p. 97) that teachers keep a notebook to jot down key observations as they occur.

Assessment can be undertaken by the adults and with the children, with facilitated self-assessment and, as in the Reggio Emilia schools, close documentation that is a document of record, a celebration of achievement, a story of a community, and a planning document.

Assessment then focuses on:

- cognitive development;
- 'academic' subjects;
- physical development;
- emotional and personal development;
- social development;
- communication, language and literacy;
- knowledge and understanding of the world;
- mathematical development;
- creative development;
- attitudes and dispositions to learning;
- learning requisites, e.g. self-confidence, concentration, interest, motivations, attention, frustration tolerance (which link to personal and emotional development).

Rich assessment data are authentic, i.e. they derive from real tasks, real learning, real activities in which they have been engaged, and real behaviour. They are not a bolt-on to learning, as in specific testing, but are integral to learning and are informed by, indeed in part comprised of, real events and noted observations in the day-to-day classroom. Assessment must both derive from, and be a springboard into, learning;⁹⁶ it must be useful. The main methods of assessment are likely to be:

- observations of children by a range of adults and in a range of situations; observations are not only *ad hoc* and responsive, but can be pre-ordinate (i.e. deliberately planned in terms of, for example: purpose, focus, timing, activity, curriculum area, children's interaction);
- evidence from ongoing records (e.g. notes kept by adults, samples of children's work (e.g. portfolios), records of what children have actually said);

- formal assessments (e.g. for statements of special educational need, from baseline assessment, from end of Key Stage 1 assessment, from annual reporting).

Assessment can be responsive, i.e. noting down issues as they occur, and it can be planned in advance, where the teacher deliberately sets up a situation in which the child can be observed. Here the teacher will need to plan:

- the purposes of the assessment;
- the activity, ensuring that it serves the purposes;
- the focuses/curriculum areas to be addressed (as appropriate);
- the kind of data to be collected and how they will be collected (e.g. numbers on a rating scale, teachers' notes in a notebook, sample of the child's work);
- the timing and duration of the assessment period;
- the children who will be assessed (and, not least, the presence and effects of other children and adults in the classroom);
- the recording of the information;
- how the activity will be introduced, developed and concluded, and what the outcome of the activity will be.

This does not mean that the assessment activity will be artificial, contrived and separate from the day-to-day 'real' activities in the classroom; rather it requires reflection on how those teaching and learning situations can be used for assessment purposes. The issue here is that the assessment is authentic, related to real-world learning and activities.

Assessment, then, should be authentic, formative, ongoing, diagnostic and summative. It can also include facilitated self-assessment by the children themselves. (These are all discussed in Chapter 16.) In many early years classrooms there is more than one adult; it is important, if only for the sake of reliability, that assessments are informed by the input from all participating adults (including parents), i.e. assessment is collaborative, for example with adults in the school, with parents, with social workers and psychologists, with the children themselves. A touchstone of

assessment here is that it is evidence-based and rooted in documentation and information, rather than based on teachers' personal views.

Assessment is discussed in more detail in Chapter 16.

Understanding the classroom

A typical early years classroom will be divided into several key areas, including some or all of the following, for example:

- a writing area;
- a drawing area;
- a painting area and area for drying paintings;
- a model-making and collage area with a range of small materials for cutting and sticking;
- a wet area;
- a wet sand area;
- a dry sand area;
- a science area (e.g. for growing plants, for fish);
- small block building and construction activities (e.g. 'Lego');
- table-based activities (jigsaws, puzzles, language and mathematics equipment and games, shape activities);
- play dough, plasticine and clay areas;
- role play (e.g. 'dressing up', home corner);
- computer and ICT area;
- an office/police station/post office;
- book corner;
- a music area;
- small equipment area (e.g. small cars on a mat, farm animals);
- woodwork/workshop area (with close supervision!);
- café;
- shop (e.g. grocery, hairdresser);
- petrol station;
- a carpeted area that can be used when the whole class meets together for sharing, circle time, story, singing, reading (e.g. with very large books), talking and watching (e.g. multimedia presentations).

A reception class may have some different areas, for example an 'office', a shop, a nomin-

ated area for a particular feature (e.g. a visit that the children made, a speaker who came to see them, a class topic, a project display area). Some teachers may have designated or dedicated curriculum areas in the classroom, e.g. a science area, a language area, a mathematics area; others may prefer a more fluid arrangement, with some tables and spaces being used *ad hoc*. Student teachers will need to find out about this.

In the wet areas and 'messy' areas there must be suitable clothes protection for children. The classroom layout must be such that children can be supervised and seen. The nursery/reception class might also have a secure separate indoor or outdoor area for larger equipment, e.g. 'solid' equipment such as slides, swings, climbing apparatus, sit-in cars/tractors/trains/trailers/tricycles, and 'soft play' equipment which often comprises sponge-filled blocks of different shapes and sizes on which children can bounce, climb, run, roll, jump etc.

Equipment may be accessible, but not all on show, and indeed an important early reading activity for children is connected with the careful labelling of trays of equipment. Frequently low-level storage racks, at young children's height, are set out in the classroom in the appropriate area.

The class teacher will already have planned the layout of the classroom, and indeed the number of tables and seats required – it may be the case that each child does not have his or her own permanent seat. Many areas will have no seats or tables (e.g. for construction activities, for some games and toys, for water and sand).

Safety is an important feature. With small equipment (e.g. scissors, very small apparatus like beads that a child may put into her/his mouth, woodwork tools) children must be taught how to access, use, return and store the equipment. With large equipment (e.g. slides, climbing apparatus) children must be taught how to use it safely and must be supervised very closely. A key factor in the running of the classroom is that the children must be taught, even trained, how to access, use and return all equipment, safely. These are classroom rules which can be negotiated with the children, but about which teachers must be very vigilant.

It is, perhaps, unwise to put out all the equipment at once, as a surfeit of equipment can lead to none of it being used to its maximum effect. Hence it is perhaps judicious for teachers to keep some equipment in store and bring it out when the other activities have begun to pall a little. This might be on a bi-weekly, weekly, fortnightly or monthly basis, or longer, as is deemed appropriate.

Organising the day

Let us imagine a typical day in an early years classroom. As the children come into the class the first matter may be to deposit anything that they have brought into the classroom and then to join the other children in the carpeted area, sitting down and waiting for the day to begin. The day may begin with the teacher talking to the whole class, or, if there are several adults, with adults immediately taking some children to particular activities.

This means that the adults must have planned in advance which activities are going to be available for which children at which times, so that there is no risk of too many children from different groups being at the same activity. Many classes are divided into colour groups, so that, for example, the red group can choose from activities a, b, c and d for the first 45 minutes of the day, whilst the blue group can choose from activities e, f, g and h in the same time, and so on. The groups can rotate during the day, as set out in Box 6.

Depending on the numbers of children, some classes will timetable all or half of the class to have the large equipment at the same time. In each of the groups children will be engaged in planning with the adult. Similarly, depending on the age of the children, some of them may not be present in the morning or the afternoon, some of them may need to have a short sleep in the afternoon, and times may vary depending on whether they have lunch in the school or out of school, and whether they eat in the classroom. The schedule indicates that children will all have some reading and writing activities each day. Clearly this schedule is very formulaic and risks being mechanistic. Some activities may need

Box 6: A possible plan of an early years day

	9.00	9.20	10.00	10.45	11.30	12.00	12.45	1.00	1.45	2.30	3.00
Writing Drawing Painting Model making/ collage Table-based	Greeting, sharing, planning	Red	Yellow	Green	Sharing and review	Lunch	Greeting, sharing, planning	Yellow	Music, PE or whole-class activity	Story sharing	Preparing for home
Writing Drawing Water Wet sand Dry sand Small building/ construction Table-based		Blue	Red	Yellow				Red			
Writing Drawing Play dough Role play/ home corner IT Book corner		Green	Blue	Red				Blue			
Writing Drawing Small equipment Woodwork Large equipment		Yellow	Green	Blue				Green			

longer than others; some may finish very quickly, and it is important for children not to become bored. Some children have extremely limited concentration spans (some only seconds!) and their interests may be ephemeral, so blocking off time as in the example may simply not work for some children. Some young children are able to sustain intense and prolonged concentration.⁹⁷ Indeed some teachers will baulk at the degree of prescription in the schedule, preferring a more open style of planning to reflect each individual child's interests, concentration, tasks in hand, and the need for more collective, whole-class activities. These are matters which the student teacher must find out during preliminary visits.

If the children only come for half a day then the schedule will be completely different, for example large apparatus may be used by everyone in the morning and the afternoon (maybe the last part of the morning, and again (for different children) in the afternoon).

Some teachers will be very experienced in their planning, and it is useful to learn from them. They will know, for example, whether it is wise to follow up a PE lesson with something quiet, individual, small-group or whole-class, whether it is a good idea to have large equipment at the beginning of the day, and whether it is advisable to have all the children doing a quiet but individual activity at the same time and in the

same curriculum area (e.g. a language, reading or mathematics activity – maybe more suited for later foundation years rather than earlier foundation years).

The key here is to ensure that a range of different types of activity is available for each group and individual, so that realistic choices can be made. The teacher or adult may wish to make it clear to the children that they *must* undertake such-and-such an activity, e.g. some writing, some language work, some construction play, but leave it to the child to plan how and when to do this.

The teacher may have a very different pattern to the day, for example it may be set out in a time sequence:

- 9.00 Children arrive
- 9.10 Registration and sharing activity
- 9.20 Language activities for all the children
- 9.40 Mathematics activities for all the children
- 10.10 Play time
- 10.25 Physical education
- 11.0 Several activities (e.g. by group or free choice)
- 11.50 Sharing
- 12.00 Lunch
- 13.00 Registration and sharing
- 13.15 Group activities (e.g. by group or free choice)
- 14.00 Music/television programme
- 14.30 Sharing/story
- 15.00 Home time

The attraction of this schedule is that the children are brought together to mark the start and end of each session (morning and afternoon) and that the day is punctuated by whole-class sessions as well as individual learning and choosing activities. The QCA⁹⁸ provides examples of specific activity planning and planning from the short term to the long term for the foundation years.

(See www.routledgefalmer.com/companion/0415306752, Chapter 4 The foundation stage, Activity planning – an example.)

Implications for student teachers

In preparing for teaching, student teachers on teaching practice and pre-practice visits will find it useful to address the following questions:

- 1 How are parents involved?
- 2 What key workers and adults are there in the class?
- 3 Which children have designated special educational needs under the Code of Practice?
- 4 Which children need to be drawn into greater socialisation?
- 5 Which children have particular physical/emotional/behaviour needs, even though they are not formally 'statemented'?
- 6 How are National Curriculum areas addressed (e.g. through subjects/integrated learning)?
- 7 How are the six areas of learning for the foundation years planned and addressed?
- 8 How are children's development and progress monitored and assessed?
- 9 How is learning made active, experiential, and first-hand?
- 10 Does the class follow a particular approach (e.g. High/Scope)?
- 11 What planning documents are required? How is the planning done?
- 12 When do the adults meet to share planning and review?
- 13 How is the classroom laid out?
- 14 How do children access and return equipment?
- 15 How is the day organised, structured and sequenced?
- 16 When are there quiet times?
- 17 How structured and unstructured is the play?
- 18 How is children's access to scarce resources planned and implemented (e.g. wet area, painting area, sand area, construction activities, home corner)?
- 19 In what areas do children have freedom of choice and decision making?
- 20 How is the time organised (e.g. blocks/free choice of time by children)?
- 21 When and for what activities do children come together as a whole class?
- 22 How does the morning/afternoon session begin/end?

- 23 What are the arrangements for toileting/washing/eating?
- 24 What supervisory and safety arrangements are there for activities?
- 25 Which activities require very close supervision?
- 26 How are children's interests brought into their learning?
- 27 How is indoor play organised?
- 28 How is outdoor play organised?
- 29 How are groups organised in the classroom? With which adults?

- 30 How flexible and permanent are the groups?
- 31 What assessment, recording and documentation is required?

Working with young children is both exhilarating and exhausting. This chapter has tried to convey the message that effective teaching and learning largely follow the child's interests. That is, perhaps, a salutary message in the face of National Curriculum requirements.

Information and communication technology

Introduction

The rise of information and communication technology (ICT) in schools is unstoppable, and developments in ICT encapsulate broader trends in education. ICT touches every aspect of education, building in new networks of teachers and driving in new paradigms of teaching and learning, and putting teachers and students in contact with each other on a truly global scale.¹ Schools are using their own websites and intranets to make learning resources available online and at any time of day.² Further, several factors are influencing education, for example:

- there is little certainty any longer about what counts as important knowledge;
- knowledge generation and construction have replaced knowledge replication and repetition as important;
- views of effective learning and how learners learn have moved away from the drill-and-practice, rote learning, memorisation and repetition styles of behaviourist learning;
- a premium is placed on higher order thinking for creativity, imagination, evaluation, and flexibility in order to keep pace with the information age and for learners to be able to judge what is needed and worth learning;
- students have to take responsibility for their own learning and thinking;
- higher order thinking is socially learned and developed, not with students sitting and working in isolation, but collaboratively and in co-operation and dialogue;
- motivation and engagement are seen as central requirements for effective learning;
- assessment has to move away from testing and become involved in real-world tasks and to take new forms;
- teachers' roles are changing from transmitters to facilitators and supporters of learning;
- the emphasis in education is moving away from teacher-centred teaching to learner-centred learning;
- learning is not simply a result of instructional teaching but of networking – the linear view of teaching and learning is replaced with a networked view of learning;
- changing practice requires changing the culture of teachers, teaching, and getting into the minds and hearts of teachers and schools;
- more effective ways of learning and retention of knowledge have replaced traditional methods;
- learning takes place outside classrooms and the walls of the school.

Given that these factors are all important, the 'trick' is to find an innovation, or intervention, in education, which addresses them all, or most of them. Such an intervention exists, and it takes the form of Information and Communication Technology (ICT) in schools. The new society is a networked society, with dialogue, communication and judgement as its hallmarks. ICT on its own is not sufficient to bring about the above changes. The key, critical component in this process is the teacher. A new culture of teaching has to be developed, and ICT is in the forefront of

this. Many teachers are overworked; yet another innovation may not be welcomed; the task is to work smarter, not necessarily more.

If the teacher is not sufficiently expert or well prepared, if the teacher has a negative attitude to the use of ICT, if the teacher does not change his or her teaching behaviour, or if the teacher does not enable learning styles and learner behaviour to change, then the best promises of ICT will not be realised – the computer will simply be another presentational device to reinforce traditional teaching with a bit of light entertainment added in to make life a little less tedious. The powerful opportunity afforded by ICT to change minds, to change hearts, to change learning, to improve education and to serve a changing society will have been lost. The risks for social stability and the economic fallout from a poorly educated populace hardly bear thinking about.

This chapter provides an overview of ICT and its implications for student teachers on teaching practice.

What is ICT?

ICT is a means of accessing, storing, sharing, processing, editing, selecting, presenting and communicating information through a variety of media.³ It involves finding, sharing and restructuring information in its diverse forms.⁴ Computers can be used as a tool (both technical and cognitive), a medium, a resource, and a tutee (where the computer is being programmed by students).⁵

Different kinds of ICT have evolved over the past decades, e.g. programming → drill and practice → LOGO → software, CD ROMS, simulations, databases and word processing → multimedia → internet usage.⁶ Castro⁷ indicates that the early use of computers tended to mimic teachers and used 'drill and practice' programs to practise what teachers do in conventional classrooms, e.g. spelling and multiplication tables. From here computer usage became more imaginative, moving to simulations and explorations. The turtle, which moved around on the screen, was seen as a means to teach programming algorithms,

with LOGO as a landmark in this. The turtle uses computers to develop higher order cognitive skills. Further, simulations and animations enable students to grasp theoretical principles, e.g. from models of the solar system to inferential statistics, and they have the advantages of concreteness, control, cost-effectiveness, and safety.⁸ Spell-checkers made spelling much easier to handle. Computers can do what is impossible or impracticable in real life. The introduction of multimedia, the World Wide Web and the internet for communication have the potential for transforming teaching and learning.

The types of ICT usage are enormous and diverse, in terms of both hardware and software, from a range of devices (e.g. concept keyboards, light pens and speech-sensitive devices) to enable students with a variety of learning difficulties to participate in learning, to many different kinds of usage, for example Box 7.⁹

Teachers and students are able to write and publish through the web; access resources directly or through virtual libraries; experience exploratory situations through adventure games, simulations and virtual learning; use real-time and asynchronous conversations; and share resources.¹⁰

There are several major forms of ICT set out in the following pages, each of which addresses the implications for practice.

Word processing

Sharp *et al.*¹¹ and Ager¹² suggest that teachers need to know several features of word processing software in order to teach effectively with and about word processing (Box 8).

Spreadsheets

Ager¹³ suggests several issues that teachers need to know about spreadsheet software in order to teach effectively with and about spreadsheets (Box 9).

Databases

Databases are structured stores of information such that retrieval and presentation are very straightforward, enabling graphical representation

Box 7: Different uses of ICT in education

Animations	LOGO
Assessment programs	Measurement and control
Bulleting boards and forums	Modelling packages
Chatlines	Multimedia
Communication	Music composers
Conferencing	Notice boards
Database entry programs and spreadsheets	Online information sources
Database packages (including remote databases)	Personal distance tutoring
Desktop publishing	Presentation packages (e.g. Word, PowerPoint)
Digital cameras and digital scanners	Programming
Drill and practice	Reference hypermedia
E-learning programs and materials	Simulations
E-mail, chatlines and whiteboards	Software CD-ROMs and virtual libraries
Games	Spreadsheets,
Graphics packages	Talking books
Handling information	Transferring data/files
Ideas processors	Virtual learning communities and study centres
Instructional hypertexts	Web authoring
Internet and the World Wide Web	Word processing

Box 8: Teachers' knowledge of word processing

- Creating, opening, saving, closing, deleting and printing documents.
- Selecting font, font size, colour, style (italic, bold), line spacing and justification.
- Altering default font, font size, colour, background colour, margins, page size and orientations.
- Inserting, deleting, selecting, cutting, copying, pasting and undoing.
- Utilising the 'help' function.
- Inserting bullet points, tables, clip art, borders, shading and columns.
- Altering page orientation (landscape, portrait) and margins.
- Forcing page breaks.
- Utilising tabs and indents.
- Utilising spelling and grammar checkers (including how to switch on and off), thesaurus, print preview, highlighter and talking facilities (including how to switch on and off) and find and replace.
- Connecting alternative input devices (overlay keyboards, touch screens).
- Inserting page numbers.
- Inserting text, graphics, tables and documents from other applications.

of information, even by young children.¹⁴ In using databases Ager suggests that it is advisable for students to start by adding data to existing databases and learn how to interrogate the

database and enter data. Sharp *et al.*¹⁵ suggest that teachers need to know several factors about databases in order to be able to teach with them effectively (Box 10).

Box 9: Teachers' knowledge of spreadsheets

- Creating, opening, saving, closing, deleting and printing documents.
- How to set up spreadsheets so that children can enter data.
- Selecting worksheet and cell size.
- Inserting, modifying and deleting row and column labels.
- Inserting, modifying, moving and deleting textual and numerical data.
- Inserting, modifying and deleting formulae and functions.
- Inserting and deleting cells, rows and columns.
- Formatting data.
- Searching and sorting data.
- Adding, modifying and deleting borders and shading.
- Selecting, modifying and displaying graph types.
- Formatting graphs to include axes labels, key and text.
- Exporting graphs and spreadsheets to other applications.
- Importing information from other applications.
- Selecting font and font size.
- Navigating through records.
- Searching and retrieving information.
- Plotting and replotting graphs/reports etc.
- Entering data.
- Designing a new data file.
- Inserting titles.
- Importing and exporting information.
- Utilising help.
- Copying and pasting.
- Altering defaults.
- Customising the spreadsheet program.
- Protecting cells and documents.

Box 10: Teachers' knowledge of databases

- Creating, opening, saving, closing, deleting and printing documents.
- Adding, modifying and deleting data and questions.
- Navigating through records.
- Searching and retrieving information.
- Plotting and replotting graphs/reports etc.
- Entering data.
- Designing a new data file.
- Inserting titles.
- Importing and exporting information.
- Selecting font and font size.
- Utilising help.
- Inserting text, images, borders, arrows.
- Copying and pasting.
- Altering defaults.
- Protecting documents.

Box 11: Teachers' knowledge of graphing programs

- Choice of variables (categorical, discrete, continuous).
- Types of data.
- Grouping data.
- Collecting and recording data.
- Presenting data.
- Creating, opening, saving, closing, deleting and printing documents.
- Adding, modifying and deleting data.
- Plotting and replotting graphs.
- Selecting and displaying graph types.
- Selecting and modifying constituent elements of graphs.
- Selecting, resizing, cutting, copying and pasting graphs.
- Selecting and modifying graph scales and autoscaling.
- Selecting two-dimensional or three-dimensional representations.
- Inserting graph titles, axes labels, key and text.
- Selecting font and font size for graph and axes headings.
- Exporting graphs into other applications.
- Importing information from other applications.
- Utilising help.
- Altering defaults.
- Customising the graphing program.
- Utilising alternative input devices.
- Selecting appropriate colours and/or patterns depending on printer availability.
- Protecting documents.

Graphing

Graphing software can be used for preparing resources, interrogating and presenting information. Graphs enable students to focus on the content of the information, not solely the problems of presenting data and constructing graphs. They can be produced directly from stored data (e.g. from databases and spreadsheets) and from data collected through sensing and measurement (e.g. temperature). Further, a range of different types of graph are available, and the scale of graphs is usually selected automatically on software packages. Sharp *et al.*¹⁶ suggest that teachers need to know several factors about graphing in order to be able to teach with them effectively (Box 11).

Graphics packages, clip art and sound packages

Sharp *et al.*¹⁷ suggest that graphics software allows images to be entered, stored, retrieved and manipulated. In using graphics Ager¹⁸ suggests that it

is important that students should be aware of the difference between paint and draw packages, that they should have opportunities to develop their abilities to scan, edit, enhance and customise images, whilst avoiding the overuse of irrelevant images. Sharp *et al.*¹⁹ and Ager²⁰ suggest that teachers need to know several factors about graphics packages, clip art and sound packages, in order to be able to teach with them effectively (Box 12).

Desktop publishing

Desktop publishing is a way of producing high-quality textual and graphics presentations. In using desktop programs Ager²¹ suggests that teachers need to be able to know several key points (Box 13).

Multimedia

The claims for multimedia usage are considerable. Sharp *et al.*²² suggest that multimedia presentation

Box 12: Teachers' knowledge of graphic, clip art and sound packages

- Creating, opening, closing, deleting and printing documents.
- Altering default page size, margins and page orientation.
- Inserting, modifying and deleting background colours.
- Selecting, modifying and utilising tools from the toolbar.
- Utilising fill.
- Utilising undo/redo.
- Grouping and ungrouping elements.
- Selecting, cutting, copying, pasting, cropping, resizing, reshaping, reordering and rotating elements and drawings.
- Switching grid on and off.
- Utilising zoom/magnifier.
- Exporting images to other applications.
- Utilising help.
- Altering defaults.
- Customising set up.
- Connecting alternative input devices.
- Protecting documents.
- Using sound software for manipulating sounds.
- Avoiding using the computer simply as an expensive form of cassette recorder.

Box 13: Teachers' knowledge of desktopping

- Laying out a page with text blocks, borders, shading, illustrations and photographs.
- Using word-processing skills and saving processed word data.
- Using draw or paint packages and saving such data as a file.
- Using template page designs in the software.

of information can lead to more effective learning, increase interaction and accommodate more fully than traditional teaching different learners' preferred learning style.

However, multimedia usage can over-emphasise image over content, presentation over substance, and entertainment over learning. Grabe and Grabe²³ caution against abandoning conventional instructional materials for the sake of multimedia simply because of the dictates of fashion.

If multimedia are to be used then several issues have to be faced (Box 14).²⁴

Internet

Related to multimedia presentation is the use of the internet. It is clear that internet use will become the major driving force for new developments in teaching and learning, such that a paradigm shift in conceptualising teaching and learning, teachers and learners, will occur.

To maximise the value of the internet, Sharp *et al.*²⁵ suggest that teachers will need to know several issues (Box 15).

E-mail

E-mail is a powerful way of developing teaching and learning. Smith²⁶ suggests that learning is improved through synchronous and asynchronous communication and feedback through e-mail, that it makes for equality in group dynamics and greater collaboration and can ensure rapid dissemination and sharing of information to all parties.

Box 14: Teachers' knowledge of multimedia

- Students must be clear about the purposes of using multimedia.
- Teachers and students must know how to gather and present multimedia information.
- Assessment criteria must be made clear for multimedia projects (particularly if they are group projects).
- Teachers and students must be clear on the kinds of information that are best handled with multimedia, and the forms of visual display.
- The limits and disadvantages of multimedia usage must be understood, together with the added cognitive and pedagogical benefits brought about by visual or auditory inputs over textual material.
- Teachers and students must be clear how the *main* messages of the multimedia are being conveyed (through text, through visual channels, through auditory channels).
- Teachers and students must know how the pictures, text and sound interact to make meaning.
- Students must be actively involved in multimedia creations, preferably as a group activity, with appropriate levels of challenge.
- Appropriate higher order skills must be assured in students.
- Students must understand the difference between linear and branching programs.
- Teachers will need to accept that multimedia writing by students is time-consuming but that the results are usually worth it.
- Judicious use of multimedia is required, in order to avoid converting every project to a multimedia project.

Box 15: Teachers' knowledge of the internet

- How to access the internet and how to access and use browsers.
- How to access, search, and navigate the World Wide Web.
- How to design, create, save, modify and publish on the World Wide Web.
- Use of e-mail for teaching and learning.
- Detailed knowledge of the school's policy and protocols for internet usage.
- Bookmarking favourite websites.
- Copying and pasting text, images and materials from web pages into other applications.
- Downloading and saving websites and files.
- Checking for, and preventing damage from viruses.
- Altering default browser settings.
- Utilising cache facilities.

On the other hand, Grabe and Grabe²⁷ suggest that e-mail requires students to access and use the facility (which may be difficult for those without the technical skills, access terminals, or who are poor at writing), the information is text-based and the loss of non-verbal cues and immediacy may be unwelcome and debilitating for some students.

There are several important factors to be addressed in using e-mail in teaching and learning, see Box 16.²⁸

It is commonplace to acknowledge that e-mail is both a blessing and a curse; it makes teachers over-accessible and, whilst having the potential to enable teachers and learners to work flexibly, can be yet another time constraint on both parties.

Box 16: Teachers' knowledge of e-mail

- Ensure that all students have an e-mail address (find out these and how they are stored and accessed in the school).
- Ensure that students know how to access and use e-mail, and what the 'rules' of procedure are for e-mail use and contacts in the school.
- Encourage the 'e-mail literate' students and better writers to help those who are not so proficient. Do not expect all students to use or wish to use e-mail.
- Decide whether to send copies of messages blind to certain parties (e.g. students' marked work).
- If students are sending work-related documents and comments to each other, encourage them to copy them to the teacher, as a helpful check.
- Set guidelines for the length and contents of e-mails.
- Encourage students to share information from the Web.
- If chat rooms are to be used, ensure that the focus is clear.
- Try to keep up with e-mails. Acknowledge receipt, and ask students to acknowledge receipt of your e-mails (as a record for you).

Most of us have had the disheartening experience of coming into work and finding dozens, if not hundreds, of e-mails waiting for us.

Games and simulations

Games and simulations have considerable attractions as pedagogical tools. Computer games and simulations can:

- improve the speed and quality of learning and performance;²⁹
- stimulate and develop motivation and curiosity;³⁰
- enhance learning and memorisation through visualisation, experimentation, prediction, manipulation and logical thinking;³¹
- enable students to experience success and a sense of achievement;³²

Whilst the range of attractions is very considerable, several voices have cautioned against over-use of games and simulations, suggesting, for example, that they:

- reduce dialogue and interaction;³³
- tend towards rote learning;³⁴
- only lead to predictable rather than open-ended or novel outcomes;³⁵
- are too removed from everyday life and over-simplify complex matters and everyday realities.³⁶

These are telling concerns, and require teachers to ensure 'fitness for purpose', careful preparation for, and follow-up to, the use of games and simulations, and to ensure that they do not replace deep learning with superficial entertainment.

Claimed advantages of ICT

There are many benefits claimed for using ICT in classrooms. Principal amongst these are that it can:

- raise student achievement in all subjects and for all students;
- promote higher order thinking in order to evaluate knowledge;
- promote learning for capability and problem solving;
- foster collaborative learning;
- raise students' motivation and engagement significantly.

Indeed Wishart and Blease³⁷ comment that ICT seems to change students' learning styles more than teachers' teaching styles, and Lajoie³⁸ showed how ICT could support cognitive processes such as memory and sharing cognitive load, particularly by engaging the learner in 'out of reach' cognitive activities.

The Department for Education and Skills³⁹ suggests that schools which were using ICT well

outperformed those which were not, in terms of achievements in English and mathematics at Key Stages 2 and 3, and in terms of better attainments in GCSEs.

Kosakowski⁴⁰ showed that using educational technology for drill and practice in the basic skills can be very effective and that students learn more, and more rapidly, using computer-assisted instruction, across all subjects and age groups. Indeed ICT, it is claimed⁴¹ enables students to take greater control of their learning and enhances learning on a variety of fronts.⁴²

In a major summary study, Cradler⁴³ reported improvements on several fronts and when several conditions are met:

1 Student outcomes

- Performance increases, particularly when there is interactivity and multiple technologies (video, computer, telecommunications).
- Attitudes improve and confidence increases particularly in 'at risk' students.
- Instructional opportunities are provided that otherwise might not have been possible.

2 Educator outcomes

Teaching with technology brings several benefits:

- moving from a traditional, directive approach to a student-centred approach;
- increased emphasis on individualised programmes of learning;
- greater revision of, and reflection on, curricula and instructional strategies.

(See www.routledgefalmer.com/companion/0415306752, Chapter 5 Information and communication, Benefits of ICT usage (BECTA).)

Concerns about ICT

However, the situation is not one of unbridled advantage. Higgins⁴⁴ for example, found few indications that ICT could bring about improvements in understanding, and considered that the benefits reported by studies of Computer Assisted

Learning (CAL) and Computer Aided Instruction (CAI) were both relatively low and not as effective as other approaches such as homework and peer learning (p. 167).

Hokanson and Hooper⁴⁵ question the initial claims for ICT as being both over-optimistic and unrealistic in predicting gains in student learning, achievement and test scores. Wishart and Blease⁴⁶ found that teaching had changed little, if at all, with ICT.

More fundamentally, Clark⁴⁷ questions the very use of computers as they only *represent* experience; they are virtual and second-hand rather than real and first-hand experiences,⁴⁸ and are a poor substitute for the real thing, being 'flat and electronic, two dimensional and already-interpreted'. In effect, Clark suggests, they may render learning too easy and sacrifice the development of cognitive rigour in students. The hypertext, non-sequential, non-linear thought processing enabled by computers may not serve well our world of linear learning.

It appears that the promise of ICT, and the very many claimed benefits of ICT sometimes remain unfulfilled or unrealised. More significantly, many studies report that it is *only under the right conditions* that the claimed benefits can be realised. Central to these conditions is the teacher and the way in which she/he promotes learning through ICT – the teacher is still at the heart of the process of learning.⁴⁹ The teacher is still critical in newer forms of teaching; computers are no substitute but a powerful tool for teachers and learners to use. They help people, not *vice versa*.⁵⁰ Schools are communities of people, not computer banks. Teachers are infinitely more responsive and sensitive to students' learning and development than computers.⁵¹ Indeed the teacher, in very many cases, will be making decisions on the most effective ways of using computer technology to enhance learning.⁵² It is as if the provision of ICT is a necessary but not sufficient condition for effective development, and that teachers are the critical factor, rather than hardware or software.⁵³

(See www.routledgefalmer.com/companion/0415306752, Chapter 5 Information and communication, Constraints on the teacher using computer technology.)

Traditional and new teaching and learning practices and cultures

Constructivism and ICT

The argument that is developed in this section is that teaching and learning have moved from instructivism to constructivism, and that constructivism underpins the more effective use of ICT. A corollary of constructivism is the development of:

- situated learning;
- metacognition;
- higher order thinking;
- the social basis of learning;
- a move away from didactic approaches to teaching;
- an emphasis on the process of learning, not simply on the product;
- the breaking of subject boundaries and the development of project-based, real world ('authentic') learning and authentic assessment;
- student-centred learning; and
- the significance of intrinsic motivation.

Many of these issues derive from, or are related to, the work of Vygotsky, in which he also discusses the role of teachers as providers of 'scaffolding', and ensuring that teaching and learning take place within the 'zone of proximal development' (discussed later in this book).

There has been a change in education from using ICT to *deliver* and *control* instruction to using ICT to support the learner's creation of knowledge, investigation and thinking, and from representation, using ICT to transmit information, to generation (for knowledge construction), from linear logic to non-linear, networked logic.⁵⁴ The use of computers, it is argued,⁵⁵ is best conceived in terms of metaphors from biology rather than instruction, being a *medium* for growth – intellectually and cognitively – rather than simply a tool. Schools have to move away from the over-emphasis simply on linear logic and programmed instruction and learning, towards non-linear, networked, branching, hypertext views of learning, in which connections between knowledge are made and developed. ICT, it is argued,⁵⁶ has considerable potential to catch the tentative nature of knowledge in constructivism,

as the use of ICT involves drafting and redrafting, editing and selecting, making connections and reflecting.

In a context where neither the teacher nor the textbook is the repository of all knowledge, the internet is an embodiment of, and medium for, the practice of constructivism. This is because it is an expanding store of accessible information⁵⁷ and requires students to evaluate and select that information⁵⁸ and to select their own pathways for learning. The internet calls into question conventional notions of authority, validity, the nature and ownership of knowledge.⁵⁹ Knowledge is non-hierarchical in the internet. Student-centred learning is a natural consequence of internet usage; indeed learner control of learning is a significant feature of ICT usage.

The implications of adopting constructivist principles are to suggest that learning is *situated*; it is context- and individual-specific and it must place emphasis on social interaction and active learning,⁶⁰ with the locus of control of learning moving from the teacher to the learner. The significance of the social basis of learning and 'situated cognition' owes much to Vygotsky. Hung and Cheng⁶¹ categorise this into four headings – situatedness, commonality, interdependency and infrastructure – and draw out their implications for e-learning (Box 17).

Further, with regard to ICT, the internet is claimed to have considerable potential to develop metacognition,⁶² as the non-linear nature of the internet and its use promote reflection and networked learning, both of which are essential ingredients of metacognition. Indeed Kramarski⁶³ argues that the development of metacognitive strategies must be built into the design of ICT use, and that this, using Vygotsky's notion of 'scaffolding' (discussed in a later chapter) can be facilitated through ICT.

Scaffolding can be provided by the teacher. Ager⁶⁴ suggests very powerfully that collaborative work on ICT with small groups of children can also enable them to provide scaffolding for each other. This emphasises Vygotsky's point that learning is a social as well as an individual activity.

In internet use Grabe and Grabe⁶⁵ suggest that the teacher can provide scaffolding by helping students to locate and evaluate material (e.g. from

Box 17: Four features of learning from Vygotsky

Principles of situated cognition and Vygotskian thought	Design considerations for e-learning
<p><i>Situatedness</i> learning is embedded in rich cultural and social contexts; learning is reflective and metacognitive, internalising from the social to the individual.</p>	<p>e-learning environments should be internet- or web-based; e-learning environments should be as portable as possible; e-learning environments can focus on tasks and projects, enabling learning through doing and reflection; e-learning environments can focus on depth over breadth.</p>
<p><i>Commonality</i> learning is an identity formation or act of membership; learning is a social act/construction mediated between social beings through language, signs, genres and tools.</p>	<p>e-learning environments should create a situation where there is continual interest and interaction through the tools embedded in the environment; e-learning environments should capitalise the social communicative and collaborative dimensions allowing mediated discourse; e-learning environments should have scaffolding structures.</p>
<p><i>Interdependency</i> learning is socially distributed between persons and tools; learning is demand driven – dependent on engagement in practice.</p>	<p>e-learning environments should create interdependence between individuals where novices need more capable peers capitalising on the zone of proximal development (ZPD); e-learning environments should be designed to capitalise on the diverse expertise in the community; e-learning environments should be personalised to the learner with tasks and projects embedded in the meaningful activity context; e-learning environments can track the learner's history, profile, and progress and tailor personalised strategies and content.</p>
<p><i>Infrastructure</i> learning is facilitated by an activity – driven by appropriate mechanisms and accountability structures.</p>	<p>e-learning environments should have structures and mechanisms to facilitate the activity (project) processes in which the learners are engaged; e-learning environments have the potential to radically alter traditional rules and processes that were constrained by locality and time.</p>

a web search), presenting students with challenging but achievable tasks, helping students to develop enquiry skills, identify problems and tasks, together with strategies for addressing them. This requires the teacher to locate learning within Vygotsky's 'zone of proximal development' so that it can be learned straightforwardly. The zone of proximal development is defined as 'the distance

between the actual development of the child and the level of potential development as determined by adult guidance or in collaboration with more capable peers'.⁶⁶ Learning should stretch students' capabilities.

Vygotsky is making two additional important points here: if the teacher is to provide appropriate scaffolding to fit the learner's zone

of proximal development, then this requires, first, the development of higher order thinking and second, attention to the social basis of learning. For Vygotsky, one cannot have the former without the latter; for him all higher order functions and cognition are socially learnt and transmitted.

Higher order thinking and ICT

Castro⁶⁷ claims that using ICT in classrooms, particularly in a constructivist approach, has great potential to develop students' higher order cognitive skills. Similarly Wishart⁶⁸ reports that computer programs can act as cognitive tools which facilitate the construction of higher order schemata and use of cognitive skills such as formal, abstract reasoning which were previously considered to be unattainable by younger children.

Stoney and Oliver⁶⁹ found that using a micro-world led to more emphasis being placed on the acquisition of higher order thinking and problem-solving skills and less emphasis being placed on the assimilation of isolated facts and more facts. Further, they found that students' motivation, engagement and concentration improved when their higher order skills were being exercised and developed (pp. 12–13). However, they offer a cautionary note. They report that interactive multimedia failed to deliver their potential where they are designed round the old (instructivist) paradigms, and, indeed this can narrow experiences. Rather, they suggest, a well-constructed multimedia program, with co-operative and situated learning, with an exploratory approach being adopted and with students working at their own pace and in their own sequences, can fulfil the potential of multimedia learning. Self-paced learning, they aver, can provide space for reflection and the integration of experience, understanding and conceptual development (p. 8).

The impact of ICT and new technologies is to shift the emphasis from teaching to learning, and from the product to the process of learning. Students will need to focus on how and where to acquire, store and utilise knowledge rather than to remember it all.⁷⁰ Effective teachers⁷¹ will be those who can scaffold learning for students, and support them in the navigation of their own learning.

Faced with massive potential information overload as a consequence of ICT, the notion of a 'lesson' or a 'subject' might have to change dramatically,⁷² moving toward a variety of types and contents of learning taking place simultaneously⁷³ and towards project-based work, often using primary sources. Teachers are faced with a situation in which their students may know more about ICT than they do, and the notion of increased student choice is opened. Indeed the content of curricula becomes debatable beyond fundamental literacy and numeracy. Project-based learning⁷⁴ should also encourage students to make decisions, encourage exploratory 'what-if' questions, actually require discussion and communication, and enable a final product or solution to be prepared. In particular, the content of curricula has increased potential to provide authentic, real-world learning and materials.⁷⁵

What is being suggested here is the need for engaged and meaningful learning, with real-life tasks, which will be multidisciplinary, project-based, participative ('minds-on' as well as 'hands-on') and collaborative.⁷⁶ Collaborative work will require fluid and *ad hoc* grouping of students, with active pedagogies.

Differentiation

One of the great claims for ICT is its ability to provide differentiated learning and differentiated activities: by task, process, materials (inside and outside schools), routes through learning, outcomes, pacing, timing, learning styles, abilities, kinds of knowledge, difficulty of material, personal involvement of the learner, enabling student choice, assessment and individual learning.⁷⁷

Affective factors

One of the important attractions of ICT and computer-mediated learning is its ability to engage learners affectively – their emotions, motivation and personality development. Krysa⁷⁸ suggests that this is one of the greatest benefits of computer use, be it through enjoyment or increased ease of learning.⁷⁹

For some students their enjoyment lies in being able to work with computers in private and at

their own pace.⁸⁰ For others it is the control of the learning which they value – they control their own learning⁸¹ and the computer can be tailored to individual learning styles. For others it is the ability of the computer to set appropriately challenging and achievable tasks at their own levels.⁸²

Social learning

A major claim for ICT in schools is its ability to foster social learning,⁸³ which, as was suggested earlier, is a major factor in the development of higher order cognition. ICT is also valuable in supporting co-operative learning.

In planning for social learning the teacher must consider the number of users at each work station, the duration of the use, the nature of the access to the computer, and turn taking. For example, if one user alone has access this gives highly individual and possibly closely matched work, but it is very expensive in terms of time at the computer, and other students may suffer from not having access. If a small group of students is at the computer, positive peer interaction may take place but there may be arguments about turn taking in the group. If a large group or class is working with the computer then teachers may need to be much stricter about access. Further, if the teacher is using the computer for a presentation then the traditional issues arise as for other audio-visual media – the ability of every student to see and hear the presentation on screen.

The social basis of ICT cannot be underestimated. It promotes higher order cognition, collaborative learning, authentic tasks and rich feedback. However, it has to be learnt, practised and developed. Vygotsky⁸⁴ encapsulates the significance of the social basis of learning when he writes that ‘social relations or relations among people genetically underlie all higher functions and their relationships’. Indeed he regards this position ‘as a law’.

Pedagogy

Schools exist to promote learning; that is their primary purpose. ICT will need to extend and improve student learning, and pedagogy concerns

enhancing learning.⁸⁵ We have made several allusions so far to the view that ICT will bring about changes to pedagogy. Further, we cited earlier instances where brain-based research suggested a vital role for motivation and for networked learning (joined-up thinking). Haddad⁸⁶ suggests that there are profound implications of brain-based research. Not only does it emphasise the crucial significance of early childhood learning but it moves away from regarding learning as an individual activity, with learning of isolated and decontextualised facts, with superficial and rote memorisation and repetition. Rather, studies of brain growth and development resonate with constructivist principles of learning, to suggest that room should be given for children to make meaningful sense of their environments and be engaged in problem solving, learning through social activities and in a secure yet challenging environment. Further, suggests Haddad, it is exactly these collaborative, problem-solving skills that learners require for today’s society.

Under the umbrella of changes to pedagogy brought about by ICT are several areas, for example:⁸⁷ approaches to teaching and learning, teaching and learning styles and behaviour, and contexts in which teaching and learning take place. The move is away from teacher-centred instruction and towards the facilitation of learning with ICT, particularly through group work and student-centred learning.⁸⁸ Teachers and learners are partners in the co-construction of knowledge.⁸⁹ With ICT the roles and tasks of teachers are still vital and add value to learning, but they change.

What is being argued here is that the computer is not a proxy for the teacher, there to reinforce traditional teaching styles or to help to soften the blow by employing ‘edutainment’, but is there to bring about new teaching and learning styles.⁹⁰ Indeed if it is used only to buttress existing teaching styles then its novelty value will soon tarnish and wither, and student achievements will fall.⁹¹ Many teachers may feel uncomfortable in moving to new roles and tasks, not least because they might see it as a threat to their control and authority⁹² and also because many students know more about ICT than their teachers.

The moves towards greater collaboration and interaction in students' learning is not something which will happen quickly. Many students will need to be taught, and to practise interaction and collaboration.⁹³ Hiltz⁹⁴ and Scrimshaw⁹⁵ suggest that students will need regular exposure to different roles and learning styles in order to maximise their benefit, for example having activities which:

- require regular participation and response (e.g. dialogue);
- set up 'conflicting opinions';
- place students in different roles (e.g. the 'agent provocateur', the visiting expert);
- require role playing;
- involve formal debate;
- develop writing groups;
- develop group/team projects;
- require groups to work autonomously and independently of the teacher.

Effective use of ICT requires teachers to be able to operate in different learning situations,⁹⁶ for example: the student and teacher engaged in individual one-to-one learning activity; students, teacher and other pupils engaged in whole-class teaching and learning; the student working with other students in a group activity; and the student working alone and independently.

Similarly teachers will need to develop their expertise in promoting interaction, for example:⁹⁷

- when to intervene and when to stand back;
- how to help students to search for information;
- how to help students to define the task, use information-seeking strategies, locate and access information, evaluate and synthesise information;
- how to help students to search, edit, draft, format, collate, connect, model, summarise and present information for a particular purpose and audience.

One claim of ICT is that it is able to accommodate different learning styles – the characteristic or preferred ways in which particular learners learn and interact with the learning environment.⁹⁸ On average, both students and teachers in primary schools prefer learners who

adopt the style of 'abstract conceptualisation' and 'active experimentation'. For ICT to be able to accommodate different learning styles teachers will need to be actually aware of how their students learn and like to learn, and build this into their planning for learning. Similarly Bates⁹⁹ and Tu¹⁰⁰ make it clear that, the younger the children are, the more they prefer direct contact with the teacher, as this maintains a necessary sense of security in the young learner's mind.

Learning styles with ICT is a matter with an important cross-cultural dimension. For example, Tu¹⁰¹ suggests that Chinese students prefer face-to-face contact with the teacher during learning, and value the teacher's watchful eye and feedback, making learning from a computer less attractive. Indeed Tu (p. 46) indicates that Chinese children learn, and prefer to learn, a lot from non-verbal communication with the teacher and peers, rendering the social presence and interpersonal aspects of learning to have considerable significance. They value highly the positive relationship with the teacher. Tu also suggests that many Chinese learners prefer 'solitary study techniques' (p. 46), and that they have an expectation that they will be instructed by the teacher and that they will follow, and conform to, the teacher's absolute authority (p. 48), that they may be hesitant to speak out in front of the teacher for fear of creating a poor impression, will not dare to question the teacher as this is deeply disrespectful in a culture in which respect has ancient roots. For the Chinese learner, the comparatively context-free situation of computer-mediated communication is not always attractive, whereas for western cultures this is less of an issue. Indeed for western learners the lack of face-to-face communication may be an attraction, enabling students to ask questions without embarrassment.¹⁰² Chinese students may prefer telephone conversations to e-mails, the latter being possibly too unfriendly.

What is being suggested here is that ICT has very considerable potential to change teaching and learning styles and behaviour, but that this is conditional upon a range of factors, at the heart of which lie people – learners and teachers. This suggests that we must still hold to models of effective teaching¹⁰³ which emphasise:

Box 18: Seven 'don'ts' with ICT

- Don't devise a task which has no relevance to anything else in school or at home.
- Don't assign pupils to computers before preparing them for the task they will be doing.
- Don't let the pupils sit at computers while you are talking to them at the introduction of the lesson.
- Don't leave the pupils for the whole lesson just working on their task with no intervention to remind them of the educational purpose.
- Don't expect the pupils to print out their work at the end of every lesson.
- Don't end the lesson without drawing them together to discuss what they have achieved.
- Don't rely on the technology to run the lesson.

- motivation;
- explicit sharing with students the desired outcomes;
- modelling, demonstration and supporting students towards the outcomes;
- active approaches to learning in which students spend more time doing than listening;
- formative assessment aimed at providing plenty of opportunity to practise new skills, to learn and create new knowledge and gain feedback;
- opportunities for students to engage collaboratively with new learning;
- authentic real-world contexts for the learning;
- learning which leads to production of some kind for real audiences;
- summative assessment which is closely tied to the desired learning outcomes;
- assessment and reporting which clearly signal the next stage of learning.

The authors suggest that these are fundamental principles of teaching and learning, irrespective of ICT, and that technology makes them easier and more fun to achieve.

Similarly, the National Council for Educational Technology¹⁰⁴ provides practical advice for teaching and learning with ICT, in the form of seven 'don'ts' (Box 18).

(See www.routledgefalmer.com/companion/0415306752, Chapter 5 Information and communication technology, Old and new pedagogies with ICT and Traditional and newer teacher roles with ICT.)

Assessment

Much traditional assessment has taken the form of testing of recall, memorisation and fac-

tual knowledge, leavened with some informed personal opinions. Students sometimes have to wait for several days or, in the case of public examinations, months for feedback in the form of a simple indication of the grade reached. Whilst we examine issues of assessment in later chapters, it is opportune here to suggest that ICT has the potential to develop and use alternative and maybe more fruitful assessment methods.

Assessment with ICT has several claims (Box 19).¹⁰⁵

Rapid feedback, argue Roschelle *et al.*¹⁰⁶ improves learning, and McClintock¹⁰⁷ suggests that the provision of rich feedback improves motivation. Assessment and motivation are profoundly linked. ICT can indicate the number of attempts a student has made, the number of clues that needed to be supplied, the percentage of correct responses, and the success of completion of the task.¹⁰⁸

There is a move to strengthen the links between assessment and learning. Whereas traditional assessment frequently took the form of summative – end-of-course – testing, the provision of diagnostic assessments of strengths, weaknesses, difficulties, achievements and ways of learning and thinking is enriched and facilitated by ICT, not least in terms of speed, but also in terms of the quality of feedback. Assessment becomes the springboard into learning, having a strong formative potential.

Authentic assessment (see Chapter 16) embodies constructivist learning principles,¹⁰⁹ for example through real-world simulations which enable students to demonstrate the extent to which they can transfer knowledge from classrooms to typical real-life situations.¹¹⁰ It has

Box 19: Advantages of assessment with ICT

- Feedback can be very rapid, if not immediate.
- Feedback can be private, avoiding public humiliation.
- As students are working with ICT in groups, this frees time for the teacher to give feedback to individuals.
- Feedback is richer because the computer can analyse the learner's performance in more detail and with more closely targeted feedback than the busy teacher can.
- The computer can assess higher order thinking and learning.
- Longitudinal assessment is possible through stored databases of each student, enabling progress to be tracked and presented easily.
- Authentic assessment is developed, and linked to real-world learning.
- Multidisciplinary tasks are able to be assessed.
- Assessment is based on performance of real tasks.
- The links between learning, diagnosis and assessment are strengthened; assessment is linked to learning.
- Student self-assessment is facilitated.
- Computer-adaptive testing enables assessment to be tailored to individual levels.
- Examination anxiety is reduced, and less emphasis is placed on a single 'right' answer recalled at high speed.
- Non-academic achievement and skills can be accredited and recognised.
- The gap between learners and assessors is bridged; teachers, peers and individual students become both learners and assessors.

been suggested that much learning with ICT is collaborative and requires different thinking strategies. To be able to reflect and embrace these new forms of learning and to present evidence of learning, a suitable form of assessment is portfolio assessment, in which students compile their own portfolios of work, selecting what to include and how to present the material. Such portfolio assessment is motivating for learners¹¹¹ because it makes them agents of their own assessment, building in involvement and engagement. Portfolios require students to collect, select, present and reflect on their work and their learning.¹¹²

Traditional assessment has usually been the task of teachers, and, indeed, Dykes¹¹³ suggests that this task will not be relinquished with the arrival of ICT. Rather, it will mutate, so that teachers set up learning activities and opportunities for rich assessment and students themselves become involved in assessment. For example, a student or a group of students submit a draft piece of work, maybe anonymously, which is then made available to peers online; students may pro-

vide feedback comments on the work, indeed may give it a provisional grade, on which the submitter(s) can reflect and from which learning may occur and improvements can be made before making the submission of the final piece of work for assessment. Feedback might include comments on projects, for example: coverage of content, data collection and presentation, argument and its clarity, screen layout, graphics, team and individual involvement, team support.¹¹⁴ Clearly this is time-intensive, and one has to be realistic about the extent to which this might be practicable in real life. However, it does demonstrate the potential for collaborative learning and sharing.

Collis *et al.*¹¹⁵ make several claims for the potential benefits of providing feedback through the internet. For example, that it can:

- provide personal feedback to a group of students who have all carried out the same assignment;
- provide public feedback when the teacher wishes students to learn from each other's

answers or maybe incorporate each other's ideas into a new assignment;

- provide group feedback to groups whose size is too great to enable individualised feedback to be given;
- indicate common errors made by many students and provide common remedies;
- enable peer feedback; and
- the teacher can enable students to learn how to give and receive feedback and how to act on it, i.e. to learn responsibility.

It is clear that ICT has the potential to make for greater provision of opportunity for portfolio assessment, self-assessment, peer assessment and authentic assessment. One should not be too sanguine, perhaps, that these changes will be rapid, as there is still a long way to go to address the incorporation of higher order learning into assessment with ICT, to clarify what should be assessed and what may or may not be assessed with ICT, and to ensure that ICT will enable the realisation of newer forms of assessment, rather than the proliferation of naïve multiple choice testing.¹¹⁶ Further, if ICT is to be used for large-scale and newer forms of assessment, then there is a need to guarantee that all students and schools have access to equivalent ICT facilities. The problem is that technologies change and are outdated very rapidly, rendering standardisation difficult. Moreover, Pachler and Byrom¹¹⁷ suggest that it becomes harder to find out whether the work is the student's own and that it is not always easy to find out if the student understands what she or he has written. (There is a need, perhaps, to require students to write material in their own words.) Indeed, a surfeit of computer-assisted assessment might lead to student boredom, rote learning and cheating.¹¹⁸

A recent trend in testing is towards computerised adaptive testing.¹¹⁹ Here a test is flexible and it can be adaptive to the testees. For example, if a testee found an item too hard the next item could adapt to this and be easier, and, conversely, if a testee was successful on an item the next item could be harder. Wainer indicates that in an adaptive test the first item is pitched in the middle of the assumed ability range; if the testee answers it correctly then it is followed by

a more difficult item, and if the testee answers it incorrectly then it is followed by an easier item. Computers here provide an ideal opportunity to address the flexibility, item discriminability and efficiency of testing. Testees can work at their own pace, they need not be discouraged but can be challenged; the test is scored instantly to provide feedback to the testee, a greater range of items can be included in the test, a greater degree of precision and reliability of measurement can be achieved, indeed test security can be increased and the problem of understanding answer sheets is obviated.

The use of computer adaptive testing has several attractions.¹²⁰ On the other hand it requires different skills from traditional tests, and these might compromise the reliability of the test, for example:

- the mental processes required to work with a computer screen and computer program differ from those required for a pen and paper test;
- motivation and anxiety levels increase or decrease when testees work with computers;
- the physical environment might exert a significant difference, e.g. lighting, glare from the screen, noise from machines, loading and running the software;
- having so many test items increases the chance of inclusion of poor items.

Computer adaptive testing requires a large item pool for each area of content domain¹²¹ to be developed, with sufficient numbers, variety and spread of difficulty; items have to be pretested and validated, their difficulty and discriminability calculated, the effect of distractors reduced, and the rules for selecting items enacted.

Equal opportunities

The power of ICT to make learning possible for a diversity of students is well documented. Underwood¹²² reports that students with special educational needs are viewed, and often view themselves, as failures, and that they have difficulty in completing work. With different technologies Bruntlett¹²³ suggests that several of these needs can be addressed, for example: learners who

are dyslexic can use voice-activated computers; learners with visual impairments can use screen magnifier and talk-back facilities; learners with cerebral palsy can use lightweight laptops. There are concept keyboards for a range of learning needs. Further, the Department for Education and Skills¹²⁴ indicates the use of ICT can make learning available to students who have been excluded from school (NotSchool.net), reinforcing the principle of inclusive education and social inclusion.

In examining issues of equity, Grabe and Grabe¹²⁵ point out that females predominated in learning clerical skills with ICT and that fewer females than males took computer sciences at higher education level. Indeed they report that females rated themselves as lower than males in computing abilities. They found that recreational software and competitive games were more geared to males and that, in school, there was more computer use as a tool for mathematics and science, both typically male-dominated subjects. If there was limited access to computers then males were more aggressive in gaining access to computers. It was important, therefore, for teachers to ensure equity of access, content and outcome in computer usage.

There is a gender issue here. Lachs¹²⁶ found that, generally, boys were more confident than girls in using computers, and, indeed, tended to take control (e.g. of the keyboard) more than girls. Clearly the teacher must be vigilant here to ensure equality of access and use. Further, Underwood¹²⁷ found that girls-only groups collaborated and co-operated better than the boys-only groups or mixed groups. This notwithstanding, boys-only groups performed well when given explicit instructions to co-operate. The teacher, then, will need to decide on the most judicious grouping – boys-only, girls-only, or mixed-sex groups.

Administration

Schools use ICT in a variety of administrative ways. Bialo and Sivin-Kachala¹²⁸ found that teachers used ICT to streamline record keeping and administrative tasks, to decrease isolation

through e-mail, and to increase their own professional development through distance education. Telem¹²⁹ noted that, with ICT, reports became more reliable, updated, timely and easy to retrieve and read, that there was a reduction in the need to sort through piles of documents, and that statistical and comparative analyses were available immediately. Further, through ICT, teachers and headteachers became more accountable (p. 354), e.g. in terms of student achievements, complaints about teachers, deviation from curriculum planning and timetables. Transparency was increased. School management information systems impacted on accountability, the evaluation of teaching and learning, supervision, record keeping (e.g. of attendance, writing reports, assessment marking, writing of lesson plans, resources), feedback and record keeping, meetings (and their frequency), and shared decision making, shared values, and continuous development of leadership, with increased efficiency in all areas.¹³⁰ However, Kwok *et al.*¹³¹ found limited gains in terms of administrative time or personnel, though the Teacher Workload Study in 2001 found savings of up to 3.75 hours, 3.25 and 4.55 hours each week in primary, secondary and special schools respectively in the UK.¹³²

Student teachers are advised to find out the school's practices on using ICT for lesson planning, preparation and recording, communication, timetabling, recording (e.g. student progress, attendance, personal details, electronic mark-books) and administrative work. They are advised to find out about the school's intranet and e-mail practices.

Evaluating websites

The use of ICT in education will require a developed ability in teachers and students to evaluate websites. The internet is a vast and growing store of disorganised and largely unvetted material, and teachers will need to be able to ascertain quite quickly how far the web-based material is appropriate. Tweddle *et al.*¹³³ provide an inroad into evaluating websites, suggesting that teachers need to be clear on the following:

- the *purpose* of the site, as this will enable users to establish its relevance and appropriateness;
- the *authority* of the material, which should both be authoritative and declare its sources;
- the *content* of the material – its up-to-dateness and relevance;
- the *design* of the material, which should be appropriate to its purposes, intended audiences and content;
- the *readability* of the material for the target audience and purposes (including words, sounds, pictures and other graphics);
- the *implementation* of the site, which should be easy to use by the target audience.

Some sites might provide assistance here, by including details of standards, courses, units, projects, lessons and lesson plans, student activities, information resources, interactive resources, assessments.¹³⁴ Others give no guidance at all, and teachers and students will need to be able to evaluate them for themselves.

In evaluating educational materials on the web teachers can ask themselves several questions:¹³⁵

- Is the author identified?
- Does the author establish her/his expertise in the area, and institutional affiliation?
- Is the organisation reputable?
- Is the material referenced; does the author indicate how the material was gathered?
- Does the website work well or badly?
- What is the role that this website is designed to play (e.g. informational, as a supplement) in the class?
- Is the material up to date?
- Is the material free from biases, personal opinions and offence?
- What is the teaching philosophy on which this website is based?
- What assumptions are made about the students' learning styles who are using this website?
- How do we know that the author is authoritative on this website?
- Is this website useful for all kinds of learners (e.g. those with visual impairments)?

Boklaschuk and Caisse¹³⁶ suggest that a website should be evaluated in terms of its audience,

credibility, accuracy, objectivity, coverage, currency, aesthetic and visual appeal, navigation, accessibility. Software and websites can be evaluated on several criteria (Box 20).¹³⁷

It is important for the teacher to keep records of the name of the program, website, author, level intended, curriculum areas covered, some details of the contents, and an overall evaluation (maybe a mark) of its general quality and utility, for future reference.

Finding out about the school's ICT for teaching practice

Student teachers have a limited time to find out about ICT in the school before they are faced with the task of having to use it. It will be useful, then, for students to ascertain the following:

- 1 What hardware and software is there in the curriculum areas?
- 2 Is there a reference list/resource list of software and resources? Where is it held?
- 3 Are there records of the *kind* and *level* of programs available, and details of their suitability/usage? Where are these held?
- 4 What CD-ROMS are there, where are they stored and how are they accessed?
- 5 Which CD-ROMs can students access with and without supervision, and which are for teacher use only?
- 6 What hardware can be used by students with and without supervision?
- 7 What hardware can be used by teachers for their own preparation and for classroom use?
- 8 What hardware has to be booked (e.g. digital cameras)? How is this done?
- 9 Does the school have internet links, and, if so, where are they and how are they accessed?
- 10 Does the school have an intranet, and how is it used? Who has access to it?
- 11 How many computers are there in the classroom(s) and what are the rules, routines and practices for using them?
- 12 How do teachers usually organise the computer use in the class?

Box 20: Evaluating software and websites

- Clarity of information.
- Authenticity and up-to-dateness of content.
- Speed of downloading and access (e.g. too many graphics can slow down the process).
- Cost of items (if any).
- Spelling (UK/US), language levels, vocabulary and jargon.
- Usefulness of pictures and photographs.
- Use of sound and animation.
- Appropriateness for the project/work in hand.
- Information overload or underload.
- Clarity of focus.
- Ease of navigation around the material.
- Ease of capability to select, cut and paste material.
- Copyrighted or with copyright clearance.
- Safety and ability to select out items (e.g. games, undesirable material).
- Guidance on how to use the material in teaching.
- Comparative advantage over books.
- Compatibility and ease of use with the intended curriculum.
- An indication of the level/age of the intended students and suggestions for how the materials can be used and followed-up.
- Accuracy and efficient presentation of the content.
- Motivating presentation and ease of navigation and structure.
- Potential to stimulate active thinking.
- Cost benefit (in terms of time and money).
- Suitability of pacing and sequence through the materials.
- Degree to which users can control the pace, sequence and activities included.
- Ability to save ongoing work.
- Provision of suitable and useful feedback to users.
- Quality of the materials, including supplementary materials, handbooks and manuals.
- Provision of virus-free downloads.
- The extent and coverage of the material.
- Capability for being used in different curriculum areas.
- Compatibility with existing and preferred learning styles.
- Indication of whether it is mainly a teacher or student resource.
- Quality of the presentation, graphics, audio and video materials.
- Degree and kind of interactivity.
- Additional facilities (e.g. bookmarking, recording progress);
- Indication of how it has been used with learners.

- 13 Is there a rota for student use of the computers?
- 14 Are there dedicated computer rooms, and how are they timetabled for use?
- 15 How is e-mail used in the school?
- 16 Can students use e-mail?
- 17 Do students and staff have individual passwords and identifiers?
- 18 What are the *requirements* for teachers in terms of computer use for administrative purposes

(e.g. for recording marks, attendance, lesson notes, feedback to students, report writing, working out statistics)?

- 19 What levels of clearance are required for stored information (e.g. personal details of students)? Who has access to which information and which databases?
- 20 Who are the ICT specialists in the school? How can they be reached?

- 21 What back-up facilities and support are there (e.g. who are the computer technicians and how can support be found if there are problems)?
- 22 Can teachers take home school laptops? If so, what insurance protections are there?
- 23 Are students and staff permitted to use their own diskettes and CDs on school ICT equipment?
- 24 How is ICT currently used for teaching, learning, assessment and recording keeping?
- 25 Are there 'open access areas' for ICT use by students? If so, what are the procedures for students using them?
- 26 What services does the school have in terms of purchased licences and membership of ICT groups? How are these accessed?
- 27 What are the policies, practices, procedures and packages in the school for: word processing, spreadsheets, databases, graphing, graphics, sound packages, desktop publishing, multimedia, sensing and measurement, control, framework programs, internet, games, intranet, e-mail?
- 6 What ICT did you use, and how effective was it, with regard to:
 - (a) word processing;
 - (b) spreadsheets;
 - (c) databases;
 - (d) graphing software;
 - (e) graphics and sound packages;
 - (f) desktop publishing;
 - (g) multimedia (use and authoring);
 - (h) internet (use and publishing);
 - (i) e-mail;
 - (j) games and simulations?
- 7 How effective have you been in your teaching roles in ICT-driven teaching and learning?
- 8 How effective have you been in providing scaffolding for students in their ICT use?
- 9 How have you helped students to search, retrieve, select, evaluate, store, edit, communicate, share, present information from ICT?
- 10 How well balanced was the use of ICT with individuals, groups, the whole class?
- 11 How successfully did you monitor and intervene in learning with your and students' use of ICT?
- 12 What theories of learning and motivation have you employed in your and students' use of ICT?
- 13 What value-added benefits did ICT bring to your teaching and students' learning?
- 14 What were your strengths and weaknesses in using ICT in your teaching?
- 15 What areas of ICT and teaching do you need to improve?

Evaluating your own use of ICT on teaching practice

In planning and evaluating teaching and learning with ICT, the following questions are designed to draw together the several issues on ICT which have been raised in this chapter for student teachers using ICT on teaching practice.

For you

- 1 How have you used ICT in lesson planning, evaluating, recording and record keeping?
- 2 How have you used ICT for assessing students?
- 3 What records have you kept of information about: CD-ROMS, websites, databases, software, multimedia, games and simulations?
- 4 What have you learned about teaching and learning with ICT from your teaching practice, for planning, implementing and evaluating your teaching?
- 5 How have you used ICT to differentiate work and learning?

For the learners

- 1 How have you used ICT to develop creativity?
- 2 How have you used ICT to develop higher order thinking in students?
- 3 How have you used ICT to promote collaborative learning, group work and team work?
- 4 How have you used ICT to develop student-centred learning and learner control of learning (e.g. contents, sequencing, timing, pacing)?
- 5 How have you used ICT to improve student motivation and curiosity?
- 6 How have you used ICT to develop interdisciplinary and within-discipline/subject project and topic work?

- 7 How have you used ICT to develop students' enquiry skills and exploratory work?
- 8 How have you used ICT to make learning enjoyable?
- 9 How have you used ICT to develop real-world learning and real-world, authentic assessment?
- 10 How have you used ICT to share information?
- 11 How have you used ICT to vary teaching and learning styles, strategies and practices?
- 12 How have you used ICT to accommodate students' different and preferred learning styles?
- 13 How have you used ICT to improve your own and students' presentations?
- 14 How have you used ICT to raise students' self-esteem, confidence and experience of achievement and success?
- 15 How have you used ICT to address and develop equal opportunities (equal access, use, uptake and outcome of the ICT curriculum and the other areas of the curriculum through ICT)?
- 16 How have you used ICT to increase student concentration?
- 17 How have you used ICT to improve the quality, rate and quantity of learning?
- 18 How have you used ICT to develop students' autonomy and responsibility for learning?
- 19 How have you used ICT to develop students' social and interpersonal behaviour?
- 20 How have you used ICT to develop students' abilities to *apply* knowledge?
- 21 How have you used ICT to promote active learning?
- 22 How have you used ICT to develop students' metacognition?
- 23 How have you used ICT to develop portfolios for assessment?
- 24 How have you used ICT to provide rich feedback to students?
- 25 What ICT did the students use, and how effective was it, with regard to:
 - (a) word processing;
 - (b) spreadsheets;
 - (c) databases;
 - (d) graphing software;
 - (e) graphics and sound packages;
 - (f) desktop publishing;
 - (g) multimedia (use and authoring);
 - (h) internet (use and publishing);
 - (i) e-mail;
 - (j) games and simulations?
- 26 What evidence is there of raised student achievement as a result of ICT use?

The use of ICT in education has tremendous potential to improve learning. As can be seen here, that is critically dependent on the effectiveness of the teacher.

Useful websites

It is invidious, perhaps, to indicate particular websites which may be useful to teachers, not least because issues of 'fitness for purpose' render simple prescriptions sometimes unhelpful. Rather, accessing the internet through a search engine by key words might be quicker and more helpful than trawling through prescribed or recommended websites. Further, websites are constantly being changed and relocated, and so they may quickly date. Nevertheless, and with these cautions, teachers and students teachers will find the following websites useful.

There are some key websites which provide copious materials for teachers, from planning to resources, to assessment, to lesson plans. There are several major government sites which should be teachers' first ports of call. The National Grid for Learning, one of the largest portals of its kind in the world, is located at <http://www.ngfl.gov.uk> and contains a wealth of materials for all ages and curriculum areas. Within this site is located the Virtual Teachers Centre at <http://www.vtc.ngfl.gov.uk> and this may be helpful, together with the site of the Local Grids for Learning (UK) at <http://www.ngfl.gov.uk/comgrids/> and the primary site of <http://www.mape.org.uk>. Equally important and rich are the information sources and resources for the National Curriculum at <http://www.nc.uk.net>, <http://www.nc.uk.net/home.html> and <http://www.dfes.gov.uk/curriculumonline/>. The UK's Qualifications and Curriculum Agency is at <http://www.qca.org.uk>, and the site contains comprehensive coverage of all aspects of the curriculum and assessment. Further, the Teacher Net (for lesson plans and resources) can be found

at http://www.teachernet.gov.uk/Useful-Lesson_Plans_Resources. This provides lessons for all subject areas and all levels and key stages of schooling, and is a sub-directory of TeacherNet at <http://www.teachernet.gov.uk>; this latter site provides copious links to other websites within each subject and key stage. Schemes of work in every National Curriculum subject can be found at <http://www.standards.dfes.gov.uk/schemes/>. Two other government sites are useful: The Office for Standards in Education (OFSTED) at <http://www.ofsted.gov.uk> and the Teacher Training Agency (TTA) at <http://www.canteach.gov.uk>.

The British Broadcasting Corporation (BBC) at <http://www.bbc.co.uk> provides a vast collection of high-quality teaching and learning resources, and a useful guide to these can be found at <http://bbc.co.uk/Webguide> and <http://www.bbc.co.uk/education>, with specific secondary revision topics for GCSE public examinations at <http://www.bbc.co.uk/education/gcsebitesize>. For schools the BBC site <http://www.bbc.co.uk/schools/> is outstanding. A huge resource bank can be found at <http://www.schoolzone.co.uk>. Channel 4 television provides many web resources, and can be found at <http://www.channel4.com/learning/index.html>.

A major source is the British Educational Communications and Technology Agency (BECTA): <http://curriculum.becta.org.uk>. Newspapers are a useful source, and often link readers to other websites, for example: http://www.tes.co.uk/educational_links/index.asp and <http://www.education.guardian.co.uk>. The National Foundation for Educational Research (NFER) provides many pages of links to a host of other organisations for all curriculum subjects, special needs, inclusive education, assessment, organisations, community links, professional development and indeed a comprehensive index of UK sites: <http://www.nfer.ac.uk/weblinks/wwwlinks.asp>.

There are several other providers of resources, for example:

British Computer Society:

<http://www.bcs.org.uk/schools/training.html>

British Educational Suppliers Association:

<http://www.besonet.org.uk>

Clipart:

<http://www.clipart.com>

Educate the Children:

<http://www.educate.org.uk>

Internet Public Library:

<http://www.jpl.org/ref/>

Multimedia teaching and learning:

<http://www.infotoday.com/MMSchools/default.htm>

Online education site professional development courses:

<http://www.onlinelearning.net>

Online library of internet sites for all subjects:

<http://www.jiscmail.ac.uk/lists>

Online library of internet sites for all subjects:

<http://www.kn.pacbell.com/wired/bluwebn>

Teachers' Library of Resources:

<http://www.teacherslibrary.org.uk>

World Wide Web Virtual Library:

<http://www.vlib.org>

For education and ICT in particular there are many major sites, including:

Apple's computer education site:

<http://www.apple.com/education/>

BECTA:

<http://www.becta.org.uk/technology/index>

Education resources:

<http://www.educationplanet.com>

Educational web adventures:

<http://www.eduweb.com>

Electronic portfolios for assessment:

<http://eric.syr.edu/ithome/digests/portfolio.html>

Global campus:

<http://www.csulb.edu/>

Hot links to educational resources on all matters of education:

<http://shawmultimedia.com/links2.html>

IBM's education site:

<http://www.solutions.ibm.com/k12>

International Review of Curriculum and Assessment Frameworks:

<http://www.inca.org.uk>

International Society for Technology in Education:

<http://www.iste.org/>

Learning online:

<http://www.curriculumassociates.com/LearningOnLine/>

Microsoft's education site:

<http://www.microsoft.com/education/>

New tools for teaching:

<http://ccat.sas.upenn.edu/jod/teachdemo/teachdemo.html>

Online encyclopaedias:

<http://www.spartacus.schoolnet.co.uk>

Student resources:

<http://www.lalhs.org/Students.html>

Teacher net (for resources):

<http://www.teachernetuk.org.uk/>

Teachers Evaluating Educational Multimedia:

<http://www.teem.org.uk>

Useful resources:

<http://www.theteachernet.co.uk/six>

Using the internet in schools:

<http://www.jiscmail.ac.uk/lists/uk-schools.html>

Using the internet for teaching and learning:

<http://www.jiscmail.ac.uk/lists/ict.html>

Virtual classroom:

<http://www.digitalbrain.com/document.server/admin/member.htm>

Virtual lessons:

<http://ericir.syr.edu/Virtual/Lessons/>

For special educational needs there are several sites, for example:

Blind links:

<http://www.seidata.com/~marriage/rblind.html>

Council for exceptional children:

<http://cec.sped.org/>

Deaf world web:

<http://deafworldweb.org.dww>

For students who are excluded from school:

<http://www.Notschool.net>

Gifted and talented children:

<http://www.nagc.org/>

Gifted children:

<http://www.nagcbrtain.org.uk/>

Inclusion resources:

http://www.hood.edu/seri/serihome.htm#inclusion_resources

Multicultural education:

<http://curry.edschool.Virginia.EDU/go/multicultural>

Multicultural resources:

<http://www.wmht.org/trail/explore02.htm>

Special educational needs:

http://www2.apple.com/disability_home.html

Special educational needs:

<http://www.ipsea.org.uk>

Special education resources on the Internet:

<http://hood.edu/seri/serihome.htm>

There are particular sites that provide search engines for educational material, for example:

Birmingham grid for learning:

<http://www.bgfl.org>

Eduweb:

<http://www.eduweb.co.uk>

European Schoolnet:

<http://www.eun.org>

Norfolk LEA:

<http://www.norfolk.gov.uk/education/default.htm>

SchoolsNet:

<http://www.schoolsnet.com>

University of the first age:

<http://atschool.eduweb.co.uk/astonman/ufa.htm>

Worcestershire gateway for learning:

<http://wgfl.networkcs.net/>

Yahooligans (a search site for children):

<http://www.yahooligans.com>

For legal matters there are three important sites:

Copyright:

<http://safety.ngfl.gov.uk>

Copyright:

<http://www.becta.org.uk/technology/infosheets/html/copyright.html>

Data protection:

<http://www.lcd.gov.uk/foi/datprot.htm>

For subject- and curriculum-specific sites, most of the sites above have facilities to search within each of them for subject materials. Additionally the following may be helpful:

English

<http://www.naturegrid.org.uk/infant>

<http://www.childrenstory.com>

<http://www.spaceday.com/postcards/index.html>

<http://www.pastforward.co.uk/vikings.runes.html>

<http://vtc/ngfl.gov.uk/resource/cits/english/ictandenglish/index.html>

<http://vtc.ngfl.gov.uk/resource/cits/english/resources/reviews.html>

<http://www.telegraph.co.uk>

<http://www.guardian.co.uk/guardian>

<http://www.independent.co.uk/www/>

<http://www.thetimes.co.uk>

<http://promo.net/pg>

Online English grammar:

<http://www.go-ed.com/english/grammar>

Punctuation:

<http://www.brownless.org/durk/grammar/punc1.html>

<http://www.englishl.org.uk/index.htm>

UK public libraries on the web:

<http://dspace.dial.pipex.com/town/square/ac940/weblibs.html>

The English server:

<http://english-server.hss.cmu.edu/>

Project Gutenberg:

<http://promo.net/pg/>

Books online:

<http://the-tech.mit.edu/Classics/index.html>

Shakespeare:

<http://www.shakespeare.com>

Science

<http://www.bbc.co.uk/education/health.kids>

<http://www.planets4kids.com>

<http://www.telescope.org>

<http://www.fi.edu/biosci/monitor/heartbeat.html>

<http://library.thinkquest.org/10348/home.html>

<http://www.britannica.com>

<http://seds.lpl.arizona.edu/nineplanets/nineplanets/nineplanets.html>

<http://www.aace.org/pubs/jcmst/index.html>

NASA:

<http://quest.arc.nasa.gov/>

Science Education Gateway:

<http://cse.ssl.berkeley.edu/segway/>

<http://www.explorescience.com>

Science learning network:

<http://www.sin.org>

Biology:

<http://ucsu.colorado.edu/~marcora/surf.htm>

Schools Online:

<http://www.shu.ac.uk/schools/sci/sol/contents.htm>

Mathematics

<http://atschool.eduweb.co.uk/ufa10/resource.htm>

<http://atschool.eduweb.co.uk/ufa10/currency.htm>

<http://www.bbc.co.uk/education/megamaths/picknumber1>

<http://www.bbc.co.uk/education/mathsfile/>

<http://nrich.maths.org.uk/primary>

<http://www.geocities.com/buildnextgen/puzzles.htm>

<http://www.teachingideas.co.uk>

<http://vtc.ngfl.gov.uk/resource/cits/maths/integrating.html>

<http://www.edu.bham.ac.uk//maths/links>

<http://forum.swarthmore.edu>

Resources:

<http://www-hpcc.astro.washington.edu/ecied/math.html>

Math goodies:

<http://mathgoodies.com>

Geometry:

<http://www.geom.umn.edu>

Mathematics made fun:

<http://www.c3.lanl.gov/mega-math>

Maths Net:

<http://www.mathsnet.net/>

Geography

<http://www.cybergeography.org>

<http://www.bfgl.org/secondary/ks3/subjects/frameset.cfm?subject=Geography>

<http://libstat.cmu.edu/DASL/>

World Atlas on the Web:

<http://pubweb.parc.xerox.com/map/>

Click a map:

http://www.atlapedia.com/online/map_index.htm

<http://www.geography-games.com>

Geo Net:

<http://www.pavilion.co.uk/dwakefield>

Citizenship:

<http://www.parliament.uk/>

<http://explore.parliament.uk>

<http://www.westminster.watch.co.uk>

<http://www.which.net/index.html>

<http://www.europa.eu.int/>

<http://www.vtc.ngfl.gov.uk/vtc/curriculum/geography/index.html>

<http://www.odci.gov/cia/publications/factsbook/index.html>
<http://pubWeb.parc/xerox/com/map>
<http://volcano.und.edu/>
<http://library.advanced.org/17457/english.html>

History

http://www.bbc.co.uk/history/multimedia_zone/3ds/index.shtml
http://www.hyperhistory.com/online_n2/History_n2/a.html
<http://landow.stg.brown.edu/vicgtorian/victov.html>
This day in history:
<http://www.9online.com/today/today.htm>
World History Compass:
<http://www.worldhistorycompass.com/index.htm>
History in the classroom:
<http://www.pbs.org/history/class.html>
History mystery:
<http://teacher.scholastic.com/histmyst/index.asp>

Design and Technology

<http://www.vtc.ngfl.gov.uk/resource/cits/dant/integrate/integrate.html>
<http://www.dtonline.org>
<http://www.data.org>
<http://www.foodtech.org.uk/index.html>
<http://www.howstuffworks.com>

Modern foreign languages

http://www.becta.org.uk/supportproviders/inspection/oth_sub/teach/sec/mfl.html
<http://www.vtc.ngfl.gov.uk/resource/cits/mfl/inpractice/index.html>
<http://www.hull.ac.uk/cti/>
<http://www.en.eun.org/eun.org2/eun/en/index.html>
<http://www.city.net>
MFL pedagogy:
http://www.livjm.ac.uk/language/pro_con.htm
MFL pedagogy:
<http://www.cortland.edu/flteach/methods/obj3/intro3.html>

Music

Classical:
<http://sss.classical.net>
<http://www.classicalmus.com/bmgclassics/comp-index/index.html>

Religious education

<http://www.educationunlimited.co.uk/netclass/schools/religion>
<http://www.cant.ac.uk/renet/>
<http://re-xs.ucsm.ac.uk/>
<http://www.theresite.org.uk>
<http://www.kids4truth.com/creation.htm>
<http://www.bbc.co.uk/education/darwin/leghist/bowler.htm>
<http://www.islamicinstitute.com/music.htm>

Humanities

<http://vos.ecsb.edu/>
<http://www.einet.net/galaxy/Humanities.html>

Administration

<http://www.easyweb.easynet.co.uk/~etfreedman/tfcv.html>
<http://www.dfee.gov.uk/cuttingburdens/>

Art

Museums and galleries:
<http://www.comlab.ox.ac.uk/archive/other/museums.html>
Art on the net:
<http://www.art.net/Welcome.html>
Resources:
<http://artresources.com>
Victoria and Albert museum:
<http://www.vam.ac.uk/>
Louvre:
<http://www.paris.org/80/Musees/Louvre/>
Getty:
<http://www.gii.getty.edu/giibroch/index.html>

Legal issues

Introduction

A teacher's legal responsibilities and obligations are legion. Legal matters touch every aspect of a teacher's work, for example: equal opportunities, school visits, photocopying, use of computer software, use of equipment, hours worked, discipline and punishment, physical restraint, health and safety, responsibilities to students, school uniform, reporting and assessment, confiscation of property, supervision and duties of care. Some legal obligations are written specifically for teachers (e.g. the School Teachers' Pay and Conditions Act of 1994); others are for all employees and employers, which include teachers, e.g. the Health and Safety Act 1974 and the Management of Health and Safety at Work Regulations 1999. Though student teachers will need to know all the legal requirements when they are qualified, there are many immediate concerns on teaching practice which this chapter discusses. In particular this chapter discusses issues which might be most in student teachers' minds when considering teaching practice:

- duty of care, supervision and the avoidance of negligence;
- discipline and its related fields of detention, confiscation and uniform;
- safety;
- educational visits;
- child protection;
- data protection;
- copyright.

The discussion here is introductory only, and student teachers are advised to pursue the matters with their teaching practice schools.

Under the School Teachers' Pay And Conditions Act,¹ which is updated each year, teachers have a legal responsibility for:

- planning and preparing courses and lessons;
- teaching children according to their needs (including special needs and equal opportunities);
- setting and marking work;
- assessing, recording and reporting on the attainment, development and progress of pupils;
- promoting the general progress and well-being of their pupils;
- providing guidance and advice to pupils on social, educational and career-related matters;
- communicating and consulting with parents and outside bodies;
- reviewing their own teaching;
- undertaking further professional development;
- maintaining good order and discipline;
- safeguarding health and safety (both on and off school premises, the latter if an educational activity is taking place);
- attending staff meetings;
- appraisal;
- preparing students for public examinations;
- being involved in management activities and required administration; registration and supervision of pupils (registration must take place each morning and afternoon);
- attending assemblies;

- working for 1,265 hours in any school year;
- being available for work in 195 days of any school year, of which 190 shall be days on which teaching might take place;
- spending additional personal time on preparation of lessons, materials, and teaching programmes.

Duty of care, supervision and the avoidance of negligence

Teachers bear a significant responsibility for the students in their care; indeed they have a legal responsibility or 'duty of care' for the students under their charge. Common law, civil law, statute law and criminal law all apply to teachers. In civil law, for example, teachers have a 'duty of care' and, if negligence is proven, then compensation can be secured, 'commensurate with any loss or damage suffered from the negligent action of the offender'.²

The 'duty of care' depends on several factors,³ for example:

- whether it is possible to anticipate harm;
- the 'neighbourhood principle', wherein acts must be avoided which are likely to cause harm or injury to a neighbour, defined as 'persons who are so closely and directly affected by my act that I ought reasonably to have them in contemplation as being so affected when I am directing my mind to the acts or omissions which are so called into question' (*Donoghue v. Stevenson* [1932]); and
- whether the court considers it 'just and reasonable to hold that there is a duty'.⁴

Teachers are *in loco parentis*, that is, they act in the place of parents; they serve the child as a 'prudent parent' would, within the additional requirements that the teacher usually has many more children in the class than the parent has at home. This is enshrined in the phrase that a school's duty is to take care such as a 'careful father could take of his boys' (*Williams v. Eady* [1893]), though quite what this means in practice can be confusing.⁵ Clearly circumstances differ between parents and teachers, home and school,

and so more recently courts have tended to abide by principles of negligence rather than by the *in loco parentis* principle.⁶ So, for example, schools have to ensure that their premises are safe and that all steps have been taken to prevent damage and injury by other students. The issue of the degree of risk in educational activities has to balance safety and protection from injury with the need for children to take risks in order to learn independence (and to engage in educationally worthwhile experiences).⁷ As Palfreyman reports, in the case of *Jeffrey v. London County Council* [1954], it would be 'better that a boy (*sic*) break his neck than allow other people to break his spirit'.⁸ The duty of care, demonstrated by close supervision of students, is tempered by the need to enable students to have enough space to learn to take responsibility for their actions, to learn independence and autonomy, to demonstrate creativity and exploration. A balance must be struck, and this depends on the age, maturity and the ability of the student to anticipate the consequences of her/his actions. For example, some young children are fearless to the point of recklessness in PE lessons, and they must be prevented from hurting themselves.

During school hours teachers, as part of their contractual terms of employment, do not have to supervise children during the lunch break, though the school is under an obligation to provide adequate supervision during this time. Generally schools are not responsible for children arriving at school before the start of the school day, though, if they are allowed into school premises (including outside premises) then health and safety requirements must be in place, and schools may be both responsible and liable if they have not provided adequate supervision. Indeed many schools do not let students into the school until supervising adults have arrived. At the end of the day the school has a duty to hand over children to parents or carers. This is particularly in the case of younger children. So, a school has a responsibility to hand over a child to a parent or responsible adult who is known to the child, or, indeed, to keep the child in the school until he or she is collected, or to arrange for social services or police to be involved, so that

the child does not simply wander off. Children should never be let out of school early unless parents have plenty of notice of this; in the event of an accident the school or local authority could be liable (*Barnes v. Hampshire CC* [1969]).

If the school has taken all reasonable precautions to ensure safety, then it is unlikely that negligence will be established. So, for example, if a child runs away and is injured, and the school has taken all reasonable precautions, then it is unlikely that the duty of care will have been breached. Of course, it is incumbent on student teachers to take steps not only to prevent this but to alert the senior staff of the school immediately if a pupil runs out of the school premises.

In other cases the notion of reasonable prevention may depend on the age and characteristics of the children. So, for example, in *Black v. Kent CC* [1983], negligence was established, and an award made, in the case of a 7-year-old child who stabbed himself in the eye with a pair of sharp-nosed scissors, as it was deemed to have been inappropriate for such a young child to have been using the equipment in question and the injury could have been avoided had blunt-ended scissors been used. Teachers have a duty to address and communicate health and safety issues with the students themselves, giving warnings as appropriate. Not to give such warning could be deemed to be negligent.

The issue of duty of care is influenced by the age, developmental stage and abilities of the students, the numbers of children in the class, the activity in question and the resources being used, and the school should have clear policies and established practices on these matters, which the student teacher should ask to see. Under the terms of the Children Act 1989, teachers have a statutory obligation to do 'all that is reasonable' to safeguard children and promote their welfare. Negligence must be proved before an individual can be held legally responsible for injury or loss, and so it is incumbent on student teachers to find out the precautions, policies and practices that the school has in order to prevent problems from arising. If the duty of care has been shown to have been breached, for legal redress to be established it is still necessary to prove that injury or damage has resulted from the breach. It is highly likely

that the school will have insurance policies, but prudent student teachers would be advised to check this matter, to ascertain whether, and in what ways, they are covered. If in doubt then do not put children or yourself at risk. The school and the teacher education institution have a duty to prepare teacher training students adequately for the matters of discipline, supervision, welfare and safety, so that a safe working environment is provided for student teachers.

Negligence is guided by the 'prudent and reasonable man' (*sic*) principle, which is the 'omission to do something which a reasonable man (*sic*) . . . would do, or something which a prudent and reasonable man would not do' (*Alderson v. Birmingham Waterworks* [1856]). In addition to this Booth, citing *Wilsher v. Essex Area Health Authority* [1998], indicates that the law expects additional responsibilities of a professional person, *viz.*, that the person must demonstrate an average amount of professional competence and that 'no allowance may be made for age or inexperience',⁹ i.e. a novice teacher must have the same level of competence, e.g. for a duty of care, as a more experienced teacher.

For negligence to be proven several factors must be addressed:¹⁰

- duty: the defendant must be shown to have a 'duty of care';
- breach: the defendant must be shown to have failed in that duty, either 'by an act of commission or omission';
- damage: the plaintiff must have been shown to have suffered damage as a result of the failure.

In addressing the legal aspects of supervision and negligence courts will take into consideration:¹¹

- the adequacy of supervision for the students and activity in question;
- the extent to which teachers have followed guidance and statutory requirements of safety and supervision;
- the extent to which teachers have followed school policies and procedures in their teaching, supervisory and health and safety arrangements;

- whether the students have been told the health, safety, supervisory and procedural arrangements;
- whether the teacher has 'given clear and specific warnings to children not following rules'.

It must be noted here that a student teacher is not a qualified teacher. Therefore the student teacher cannot be used for supply cover for absent teachers; schools should not put pressure on student teachers to act in this way. If there is any question about this, the student teacher must politely refuse.

Discipline

Related to the issue of supervision is the complex issue of discipline. Teachers have a contractual responsibility to maintain good order and discipline, under the School Teachers' Pay and Conditions Act, 1991. Discharging this role is one of the most difficult tasks of the teacher, and we devote several chapters of this book to it. There are several kinds of incident for which a legal consideration might be useful.

To all extents and purposes, corporal punishment is illegal. Period. Under section 131(4) of the Schools Standards and Framework Act 1998, corporal punishment is defined as the 'doing of anything for the purpose of punishing the child . . . which, apart from the justification, would constitute battery'. The same document makes it clear that corporal punishment excludes anything done to prevent personal injury to the person or property of any person, including the child. Hitting a student, or a student hitting a teacher, is a criminal assault.

Restraint is permissible, and staff may use reasonable force to prevent a pupil from committing or continuing to commit an offence, causing personal injury or damage to property (including their own) or from engaging in any behaviour prejudicial to the maintenance of good order and discipline at the school or among any of its pupils, whether that behaviour occurs during a teaching session or otherwise (e.g. off-site activities, but this must not contravene corporal punishment laws).¹² According to the DfES, schools should have a policy on

the use of force; if the school is aware of the potential need to use force with a child it is advisable that the parents be involved in the planning of this. Too much force may result in a police or social services child protection investigation and procedures.

Restraint may be necessary in the interests of the safety of the child and others. It should be the minimum necessary. Desirably more than one adult should be present,¹³ though this is not always possible. Physical restraint is permissible only in circumstances of the child causing harm to himself/herself or others, damaging property, or committing a criminal act which risks harm to people or property, and 'where verbal commands will not control the behaviour'. Schools have a duty to prevent assault and battery on one student by another (e.g. bullying) and on staff by students. 'The purpose of the intervention is to restore safety, and restraint should not continue for longer than is necessary. Physical contact and restraint should never be used in anger, and teachers should avoid injury to the child.' In practice charges of battery are seldom brought, though teachers should be guided by the use of the term 'reasonable force'. Parents should be told how restraint may be used (particularly in the case of children with emotional and behavioural difficulties); there should be a written policy for handling a specific child if necessary. Staff should be trained in proper and safe restraint.

In a litigious age school students are often only too keen to cause trouble to their teachers, and unfortunately some will not hesitate to cause extreme difficulty to teachers by wrongful accusations of assault, abuse and suchlike. Student teachers, and indeed experienced teachers, feel that talking to students in private may be useful. The advice we give is to be extremely cautious about this to the point of not doing it without another experienced teacher present, and not to be alone in a classroom with a student, even if it means leading a student out of the classroom into a public place. Many schools provide guidelines on physical contact with students. Clearly this may vary with the age of the child; it would be ridiculous not to have physical contact with very young children. However, teachers have to

be extremely cautious about any physical contact, and should expect the school to have guidelines on this, and then to adhere to them. Our advice is to avoid physical contact if at all possible; this is perhaps an unfortunate sign of the times, but such is the position nowadays.

It is advisable to be very wary of accepting a child's account of an incident (particularly if it is the child's hearsay) until it has been tested against other evidence. If it is deemed that the child is of 'sufficient age and understanding' then it may be wise not to take instructions from, or in the presence of, the parent, not least because some parents may be quick to condemn their own child and other parents may not wish to condemn their own child or accept that their child could do any wrong. It is unrealistic to expect parents to have kept school correspondence (e.g. on disciplinary matters). If a parent complains about a teacher it is important to investigate it professionally rather than to leave it or dismiss it.

If a criminal act is suspected then the headteacher can invite the police in to investigate. Here good practice suggests that parents or someone with parental responsibility should be present, even social workers. Police have the power to enter schools without invitation to search for offensive weapons. There is no requirement to caution a pupil before questioning him or her while investigating crimes, since the headteacher is not a person who is 'charged with the duty of investigating offences or charging offenders' *DPP v. G* [1997].

On the other hand, as we saw in Chapter 1, the incidence is rising of students themselves committing acts of violence against teachers, as well as against other students. Not only this, but teachers are subject to acts of violence, both physical and verbal, from outsiders who may be parents, carers or even intruders. In the case of such assaults or acts of violence teachers have protection from the law as follows:

- The Crime and Disorder Act 1998 (applicable in the case of pupils aged 10 or over who commit an assault).
- The Criminal Justice Act 1988, for common assault, carrying an offensive weapon.

- The Offences Against the Persons Act 1862, for assault on staff by parents or carers.
- The Public Order Act 1986, where a parent or carer causes a disturbance inside or outside the school.

Increasingly teachers are taking court action. In our view, this is entirely correct as they should not have to suffer assault in the workplace. Violence against teachers, where proven, is usually grounds for exclusion or prosecution. Student teachers are strongly advised to find out the school's policies and procedures for such eventualities.

Detention

Teachers use detentions for discipline. Detentions must be reasonable and moderate.¹⁴ To hold someone in detention for an excessive time for a small offence may be classed as false imprisonment. In *Terrington v. Lancashire County Council* [1986], the judge found that it was unlawful to detain the whole class when only one unidentified pupil had actually done something wrong.

The Education Act 1996, Section 550B, permits a student to be kept in detention after school without specific parental consent if:

- the headteacher has notified both parents and pupils in advance in general terms that detention is a punishment that may be imposed on pupils;
- the headteacher, or someone else authorised by the head, has imposed the detention as a punishment;
- it is reasonable in all the circumstances;
- the parent has been given at least 24 hours' notice in writing that the detention will take place.

The detention must:

- be in proportion to the circumstances of the case;
- be with due consideration to the special factors about the pupil – age, special needs, religious requirements, travel arrangements for the child to return home.

The detention must be supervised and a record kept of it (including the reasons for imposing it); care must be taken with travel arrangements for the child to return home.¹⁵

The letter to parents may be sent by hand or by post or left at the parents' address. Avoid sending it via the pupil. Seek confirmation, particularly if a fax is used. E-mail is not generally advised.

If a student fails to attend the detention then the headteacher must be notified and she/he should decide the course of action to be taken.

Confiscation

Teachers frequently use confiscation in the promotion of discipline. Some items *must* be taken from pupils, e.g. unlawful materials (drugs, pornography) must be taken and handed to the police. Others should be taken (e.g. offensive weapons). Taking someone's property may be construed as theft, though it may be hard to prove, as it implies dishonest appropriation of property and intention never to return; both parts must be fulfilled for it to count as theft. So, even if a teacher were to take away a toy, with the intention never to return it, this would probably not be construed in law as dishonest behaviour. Destruction of a student's property could be considered unlawful unless it was deemed to be necessary in the interests of safety. Confiscation could be deemed unlawful if it were taken for the confiscator's personal use. Confiscation rarely results in a legal case. In civil law there is 'trespass to goods', described as wrongful physical interference, when someone else's belongings are taken and the person refuses to give them back.

It is not a good idea to take property away and keep it for too long, particularly if it is valuable, and it is perhaps best to return it at the end of the school day. Return of goods and property may involve the pupil's parents, rather than giving it back to the child. It is important that parents and pupils know what may and may not be brought to school. It is also important to have a safe place where confiscated items (e.g. mobile phones) can be stored.

It is an arrestable offence to carry a knife or other offensive weapon on school premises with-

out reasonable excuse (Offensive Weapons Act, 1996, sections 1 and 4), and police have powers to search; the law is unclear whether teachers have the right to search pupils or their property (e.g. locker, bag, pockets). If pupils do not consent to their property being searched then it is inadvisable to force the issue of a personal search of their bags or pockets without the involvement of parents, unless there is a suspicion of danger, in which case the police should be involved. Not to abide by these cautions is to risk the charge of assault. It is extremely inadvisable to resort to force, as it may constitute a breach of the Human Rights Act. It is less troublesome in searching a locker or a storage place, as it could be argued that it is a condition of use that consent has been given to reasonable searches provided that no damage is done to pupils' property.

Uniform

Schools are entitled to have rules on uniform, and this is often a matter of school discipline. Rules which forbid Sikhs wearing turbans, or insist that girls wear skirts may offend the race relations and sex discrimination legislation. Consideration of health and safety may apply in the school's duty of care (e.g. the wearing of certain jewellery and bracelets, footwear, toys, sweets, food and hair fashions). Schools should have a clear policy on these and on the enforcement of school uniform rules, and parents should know of these.

Exclusions

School exclusions, though reducing, continue to be a significant problem in UK schools, with numbers of permanent exclusions moving from 12,668 in 1996/97 (the year of publication the previous edition of this book) to 9,135 in 2000/01, with boys being 'almost five times more likely to be permanently excluded than girls', boys being 'more likely to be permanently excluded at a younger age than girls' (typically at ages 13 and 14), 'a far higher proportion of Black Caribbean, Black African and Black Other groups [being] excluded than of other ethnic groups', and students

with statements of Special Educational Need being 'much more likely to be excluded from school than those who did not have statement'.¹⁶ Indeed Circular 10/99 indicates that a student with a statement of SEN is seven times more likely to be excluded than a student without a statement.¹⁷

In an attempt to reduce the number of exclusions the government issued guidance on non-excludable offences in 1999.¹⁸ Exclusion was not to be used for minor incidents (e.g. failure to do homework or bring dinner money; lateness; poor academic performance; truancy; pregnancy; breaches of the school's uniform policy, including hairstyle and jewellery).

Exclusion represents the 'end of the road' for students and schools alike; it is a last resort, and is not usually invoked until all other avenues for discipline (including asking parents to remove their child voluntarily) have been exhausted. Exclusions may be for a fixed period of time (not more than 45 days of a school year) or permanently, and the headteacher alone has the power to exclude. If a student is to be excluded, parents must be informed about the commencement and duration, the reasons for the exclusion, and appeals procedures, arrangements for the student to continue his/her education, the parents' rights to see their child's school record, and whom the parents can contact in connection with the exclusion. If a student is to be temporarily excluded for more than five days in a single term, or will miss an examination as a result of the exclusion, the headteacher must inform the governing body of the school and the local education authority. The governing body must take part in a review of the decision to exclude, at the parents' request, and may uphold the exclusion or reinstate the student at a named date. There is an appeals panel which is specially constituted by the local education authority.¹⁹

The nature of the offence for which exclusion is the penalty is indeterminate, but it may include:

- possession of an offensive weapon (for example a knife, gun, bicycle chain, matches) (e.g. *R v. Solihull BC ex parte H* [1997]);
- possession of a controlled substance (drugs);
- physical assault (e.g. *R v. Cardinal Newman's School, Birmingham and another, ex parte* [1997]);
- indecent assault (e.g. *R v. Newham LBC and another, ex parte X* [1995]);
- swearing at a teacher (e.g. *R v. Governors of St Gregory's Roman Catholic Aided High School, ex parte Roberts* [1995]);
- bullying and intimidatory behaviour (e.g. *R v. Headmaster of Fernhill Manor School, ex parte Brown* [1992]);
- spitting on the public;
- theft.

Permanent exclusions are often the culmination of a series of fixed term exclusions.²⁰

The practical effect of exclusion (apart from the stigma) is that the student receives less education. Indeed Circular 10/99 indicates that, if an exclusion is to be for a block of more than 15 days, plans must be made for the student's ongoing 'full-time and appropriate education', reintegration, and intervention to address the student's problems.²¹ The government indicated that, in September 2002, almost half of the permanently excluded students were receiving fewer than 12 hours education per week, whilst 40 per cent of students at Key Stage 4 were receiving over 20 hours per week.²² The government has taken several steps to address the issue of provision of education for excluded pupils, as part of its programme for social inclusion. For example, the Education Act of 1996²³ established Pupil Referral Units, to cater for students who, for a variety of reasons, including exclusion from school, need exceptional arrangements to receive education. Home tuition is another option for excluded students (often for younger rather than older students), as is placement in the voluntary sector, FE college, work-related placements, or 'mixed provision' (a combination of provision). That said, the government's own figures indicate that 10.4 per cent of permanently excluded students still have no provision,²⁴ with the problem being particularly acute for those in Key Stage 3.

Safety

Teachers are required to ensure their children's health and safety, under the Health and Safety at Work Act 1974 and the Management of Health

and Safety at Work Regulations 1999. These Acts seek to prevent accidents and to ensure that the workplace is as free from risk as possible. If the Health and Safety Acts are violated then criminal prosecution can follow, even if no accident has occurred. The employer is vicariously liable for civil wrongs of an employee,²⁵ e.g. some aspects of negligence (*Gower v. London Borough of Bromley* [1999]), though not for criminal wrongs, i.e. there may be cases where, if the Health and Safety Act 1974, is breached, then it is the teacher alone who is liable. The student teacher should find out, indeed be told, who is responsible for Health and Safety matters in the school, and what the procedures are in respect of health and safety, e.g. dangerous substances or equipment, school visits, reporting accidents, first aid treatment.

Certain activities carry a higher risk to children than others. For example, in sports, physical education and various science activities there may be a greater degree of risk than in mathematics or language activities. Here greater exertion of the duty of care must be applied, and, indeed, Health and Safety regulations must be observed in schools. In any activity that carries risks teachers must ensure that it is undertaken in a safe manner and with regard to foreseeable risks. So, for example, if dangerous chemicals are to be used then appropriate safety measures must be observed. If children are cooking with hot ovens then safety measures must be in place. In physical education and sporting activities, demands placed on children must not exceed their reasonable capabilities (and great care must be observed for children with special needs), in order to avoid the charge of negligence (e.g. *Moore v. Hampshire CC* [1981]).

Some two-thirds of accidents to students take place in PE lessons. The British Association of Advisers and Lecturers in Physical Education has produced several materials on safe practice in physical education, and, indeed, many other associations have produced similar guidance. The issue remains that supervision and reasonable demand on students head the list of concerns about safety in PE, particularly in respect of dangerous equipment, lack of proper safety equipment (*Povey v. Rydal School* [1969]), broken limbs (*Moore v. Hampshire CC* [1981]), and teachers joining in with dangerous tackles in rugby (*Affutu-Nartoy v. Clarke and ILEA* [1984]).

In science and technology lessons, in addition to government guidance on safety, several other associations²⁶ have produced guidelines for schools. Some of these include statutory requirements (e.g. safety glasses and safety screens, the Control of Substances Hazardous to Health, and requirements on the use of low-level radioactive materials). Care must be taken to point out the dangers of chemicals (e.g. phosphorus in *Shepherd v. Essex CC and Linch* [1913] and caustic soda in *Crouch v. Essex CC* [1966]), not only in terms of saying that they are dangerous, or 'don't touch', but in pointing out what the exact dangers are (*Noon v. ILEA* [1974]). Equipment must be in good order (*Barnes v. Bromley LBC* [1983] in respect of a riveting tool), and care must be taken to instruct children in its safe use. In *Hoar v. Board of Trustees* [1984] the school was found to be 50 per cent negligent in the use of a woodworking machine because it had not taken care to instruct a child in its safe use, as the child had been absent on the day when the explanation had taken place. In *Fryer v. Salford Corporation* [1937], negligence was established, as insufficient care had been taken to protect children and their clothing from a gas flame.

The student teacher must seek advice from qualified teachers about any proposals which might present a risk, and, if there is any doubt or the advice has not been able to be found, then that lesson cannot go ahead, and an alternative lesson must take place. In lessons where there is a risk, the regular class teacher must be available, either in the classroom itself or close at hand. In some lessons (e.g. PE, some science lessons) the class teacher must be present or else the planned activity should cease and an alternative take place.

In many situations the school may not be found negligent if it has taken due care to prevent danger (e.g. *Suckling v. Essex CC* [1955], where a pupil stole a handcraft knife and attacked another boy with it; *Smith v. Hale* [1956], where a pupil attacked another with a home-made arrow; *Ellesmere v. Middlesex CC* [1956], where a pupil attacked another with scissors in a handcraft lesson).

It must be made very clear that staff, unless they are specifically employed for the purpose, are under no obligation to, indeed should not, administer medicine. The Medicines Act of 1968

indicates that only a qualified practitioner should administer medication, including injections except in life or death emergencies, though, as part of the prudent parent principle, medication may be administered with parental permission. The government has issued *Supporting Pupils with Medical Needs: A Good Practice Guide*, which makes clear what schools should and should not do in the administration of medication. Student teachers are very strongly advised not to administer medication without having gained clearance from the appropriate party in the school, and to find out what is the school rule on administering medication. Clearly, if a school suspects that a child needs medical attention then it has a duty to ensure that it is provided, but from suitably qualified people. Teachers are not medics, and are not trained to deal with such cases. So student teachers are strongly advised not to administer first aid unless the emergency is extreme.

If there is an accident then the student teacher must send for help if it is necessary. In the case of an accident there are school procedures which must be adhered to in terms of notification, reporting, recording, and informing parents. Student teachers are advised not to admit liability for any accident in their lessons, but to take advice. Indeed if a case comes to court under civil law then vicarious liability often applies in cases of negligence,²⁷ i.e. 'the employer is held responsible for the actions of the employee whilst fulfilling any duties within the scope of employment' (p. 24), though the employer may seek a contribution to the award from an employee. This does not apply if the employee deliberately disobeys the employer's instructions, as the employee will be deemed to be 'out of the scope of the employment' (p. 24). The student teacher is strongly advised to find out the legal cover that the school provides for him/her (e.g. whether the student teacher is classed as an employee); indeed the school should feel an obligation to make this clear to the student teacher.

Student teachers are strongly advised to find out the school's policies on health and safety, equipment and usage, and to find out whether they are covered by the school's insurance policies. In particular, student teachers are strongly advised to have a qualified teacher present with them in risky situations. So, for example, in PE lessons the

student teacher may have to stop the lesson if he or she is left alone without the class teacher or suitably qualified adult present and if adequate supervision and insurance are not provided. For some subjects it is important to find out the school's policies and rules on children entering or not entering classrooms, laboratories, workshops, swimming pools and gymnasia before the teacher arrives.

Educational visits

On school and educational visits, legislation was brought in after a series of tragic events in which children were injured or killed for want of proper supervision or protection, and an important document from the government is *Health and Safety of Pupils on Educational Visits*.²⁸ It is folly to take students on educational visits if they are unprepared and if the safety and supervisory arrangements are not already assured and in place. Schools should have policy documents and rules/procedure for educational visits, and student teachers need to consult these. Before undertaking any educational visit or school trip there is a legal requirement that a written risk assessment is prepared and given to all the teachers and adults concerned, not least to show explicitly that 'all reasonable precautions' have been taken. A risk assessment will include addressing the following considerations:²⁹

- What are the hazards?
- Who might be affected by them?
- What safety measures need to be in place to reduce risks to an acceptable level?
- Can the group leader put the safety measures in place?
- What steps will be taken in an emergency?

Supervisory, health and safety considerations in planning an educational visit will vary according to several factors, for example:³⁰

- the type and suitability of the activity in question and its associated risk (e.g. sporting, water activities, walking and climbing may require not only proper equipment but proper preparatory training for the children and may need to be led by a qualified instructor/leader);

- the location of the visit (e.g. a visit to a local library may be easier to plan and supervise than a visit to a more distant farm, and a visit abroad will need meticulous preparation);
- the competence, experience and qualifications of the supervisory staff;
- the ratio of pupils to teachers and supervisory staff;
- the duration of the visit (e.g. an afternoon, a day, a week);
- the quality and suitability of the available equipment;
- seasonal and weather conditions;
- the age, developmental stage, nature and temperament of the children (including those with particular emotional, behavioural, physical and medical needs);
- the statutory requirements for health and safety (e.g. in visiting a power station);
- the provision of supervision on site by the staff at that site (e.g. at outdoor centres or in other schools if students are going to visit other schools, or if students are visiting a museum);
- the time of day of the visit (e.g. out-of-school hours (evening or weekend) visits to a theatre may need additional insurance cover and preparation);
- the safety provisions existing on the site (e.g. in sports stadia for local sporting competitions);
- the availability of first aid, emergency and medical services;
- procedures for handling situations when students are either unable or unwilling to continue (including how to send children home early, if appropriate);
- procedures for ongoing risk assessment and risk management during the activity (e.g. in the event of worsening weather conditions during a mountain activity);
- communication arrangements and contingency measures.

Student teachers are strongly advised to visit the site themselves before taking the students, to check out the educational potential, the Health and Safety matters, the supervisory arrangements and all aspects of reasonable prevention of accidents and injury. During the educational visit teachers are responsible for all the students

in their care; if non-teachers accompany the trip then they are bound by the same common law principle of acting as a 'reasonable parent', though they are not held as accountable as the teachers themselves. The message is simple: regardless of which other non-qualified adults are present, it is the teachers who share the supervisory Health and Safety responsibility. Non-teacher adults (including student teachers) should not be left in sole charge of children unless this has been cleared as part of the risk assessment (student teachers are cautioned not to put themselves in a position of being in sole charge). The Education (Teachers) (Amendment) Regulations 1998, means that 'List 99 checks' (a checking system for reviewing criminal background) should be carried out with volunteers and staff employed by contractors who have regular contact with young children. It should be made very clear to all the adults that none of them should be alone with a pupil wherever possible.³¹

In planning the number of adults required to accompany an educational visit, the DfEE 1998 and RoSPA make it clear that there is no absolute formula on ratios, but that there must be a high enough ratio of adults to students for the visit to be safe. The advice is very clear: err on the side of extreme caution, particularly with students with special needs. The schools and local education authorities should provide guidelines on staff/student ratios. Some local education authorities insist on a minimum number of teachers and/or adults for any trip out of school, and student teachers are advised to find out what they are for the school in question. The teacher unions also provide guidelines for school trips, indicating, for example, a minimum of two teachers per visit, a minimum ratio of 2:20, reducing to 1:5 or 1:4 for particularly hazardous activities. The advice to student teachers is unequivocal: do not take out a group of students on your own, however small the group; you must have a qualified teacher present with you. In mixed groups, have a male and a female adult/teacher. For very young children the ratio could be as low as 1:2, i.e. one adult to hold the hands of two children. Early years classes often use the guideline of 1:4, but for some classes of very young children this is simply inadequate.

Parents will need to be informed in advance of the educational visit and to have given their consent in writing; they have the decision on whether their child should go on the visit. Parents must not pay a compulsory charge, though they may be asked for a contribution.

If insurance is not provided then the trip cannot take place. The insurance should cover:

- personal injury;
- public liability;
- medical and related expenses;
- extra expenses (e.g. travel if the intended travel arrangements do not happen, e.g. a rail strike, a flight cancellation);
- personal effects;
- hired equipment;
- special activities (e.g. special arrangements and clauses may need to be inserted into policies to cover particularly risky activities);
- cancellations.

The provider of the transport has the legal responsibility for the children's safety whilst in transit (e.g. seatbelts and wearing of seatbelts), together with adequate insurance, and there must be adequate supervision whilst in transit (e.g. it may not be enough to devolve supervision to the driver). During the visit very judicious vigilance must be observed with students. Although there have been cases where negligence has not been established when children break into small groups on their own (e.g. *Murphy v. Zoological Society* [1962], in respect of a group of boys who entered the lion's cage at Whipsnade Zoo) it would be very foolish to court danger in this respect.

(See www.routledgefalmer.com/companion/0415306752, Chapter 6 Legal issues, Educational visits, staff-student ratios.)

Child protection

Under the Children Act, 1989 and following a series of high-profile legal cases, the issue of child protection has become a matter for schools and teachers. Schools and teachers must be vigilant to observe signs of abuse and harm, defined as physical injury, neglect, sexual abuse, emotional abuse and mental abuse. Schools are

obliged to have protocols and procedures for action in the event of abuse being suspected, and teachers should only act in accordance with these, and not take the law into their own hands here. If a teacher suspects that abuse and non-accidental injury have taken, or is taking place, then he or she must report it to the head-teacher or the designated person in the school, as there are legal procedures to be observed. Sometimes this may be as a result of something that a child has said, or that the student teacher has observed.

Data protection

Information about an identifiable living person held on a computer is subject to the Data Protection Act 1984, and the individual about whom the data are kept has a legal right to see that information and to ask for it to be amended if it is incorrect.³² This right extends to the parents of children under the age of 18. The Data Protection Act 1984 and the Data Protection Act 1998 require schools to be registered with the Data Protection Registrar as data users.³³ The 1984 Act applies to electronic records, including references stored for more than two months, though the 1998 Act extends this to manual records which are held in a filing system.

With regard to the disclosure of information the Education (School Information) (England) Regulations 1996, indicate that some information should either not or never be disclosed save to other educational establishments; such information might concern, for example:

- child abuse, be it suspected or proven;
- material which might cause serious physical, emotional or mental harm to the individual;
- material prepared for a juvenile court;
- statements of students' special educational needs;
- data on a student's ethnic origin.

Student teachers will have to abide by these regulations; we advise caution, therefore, in committing thoughts to record – be it in paper or electronic form.

Copyright

Many teachers and student teachers use photocopies, commercially produced materials and electronic materials. This brings them into contact with copyright. Though the law relating to copyright is convoluted, nevertheless it must be observed. Copyright covers a range of materials – written, performed, computer programs, newspapers, material downloaded from the internet, and many forms of intellectual property including original literary, musical, artistic (photographs, graphic art, sculptures, paintings, collages, models) and dramatic works. It covers sound recordings (including recitals of musical and non-musical recordings), broadcasts, films and cable television programmes, and also extends to the typographical arrangements of published editions of works. As soon as a work has been created and committed into writing or recorded³⁴ in the UK this is automatically a copyright matter, even if copyright has not been applied for or registered. The law on copyright is enshrined in the Copyright, Designs and Patents Act 1988.

(See www.routledgefalmer.com/companion/0415306752, Chapter 6 Legal issues, Copyright – legal issues.)

Implications for student teachers

In preparing for teaching practice students will need to discuss the following questions with their host schools:

- 1 What are the school policies, procedures, requirements and practices in terms of:
 - planning and preparing courses and lessons;
 - special needs and equal opportunities;
 - setting and marking work (including homework);
 - assessing, recording and reporting on the attainment, development and progress of pupils;
 - providing guidance and advice to pupils on social, educational and career-related matters (where relevant);
 - communicating and consulting with parents and outside bodies;
 - reviewing their own teaching;
 - maintaining good order and discipline, and what sanctions/rewards are in place to reinforce discipline;
 - policies on detention, confiscation, uniform and parental notification;
 - safeguarding health and safety (on and off school premises, the latter if an educational activity is taking place);
 - attending staff meetings;
 - preparing students for public examinations;
 - being involved in management activities and required administration; registration and supervision of pupils;
 - attending assemblies?
- 2 Who is the Health and Safety officer in the school?
- 3 What Health and Safety documents does the student teacher need to have?
- 4 What information does the Health and Safety officer need to have from the student teacher?
- 5 What are the school policies, procedures, requirements and practices in terms of:
 - Health and Safety matters, school visits, risk assessment and formal reporting; accidents, emergencies, administering first aid and medication;
 - supervision at the start and end of the lesson, session, day;
 - discipline, bullying and assault;
 - child protection;
 - suspected child abuse;
 - Data Protection;
 - copyright?
- 6 What are the school policies, procedures, requirements and practices in terms of educational visits, and their related issues of adult/student ratios?
- 7 What insurance cover does the school have for student teachers? (It is highly likely that the school will have such insurance.)

Many schools will have an 'induction pack' for new teachers and student teachers, in which such details are contained. If this is not available then student teachers are very strongly advised to ask specifically about these matters.

Preparation and planning

Within the contexts of education identified in Part I, student teachers are faced with a battery of tasks upon their immediate arrival in schools for their teaching practices. They quickly have to assimilate a range of issues in their planning for teaching and learning, and to ensure that their planning accords with the existing practices in the school. They will have demands placed upon them by the school, by their tutor, by their mentor, and, indeed, by the students. Careful attention to planning is informed by the rapid gathering of information about the school and the students.

The first visits to a school and the first meetings with classes can be nerve-wracking; this part is designed to reduce some of that anxiety by providing detailed support on planning for teaching, gathering information from and about the school and the students, and how to develop teaching and learning plans that work. It suggests what kind of information is useful to collect on initial visits to school.

Much has been made of objectives in educational literature, and, indeed, the prescriptions

for the National Curriculum, planning for teaching and learning, and school inspections are couched in variants of objectives models. These include, for example: attainment targets, target setting, intended learning outcomes and desirable learning outcomes. The objectives model is a useful starting point for student teachers' curriculum planning as it provides a sense of direction to the planning for teaching and learning. We utilise the objectives model in this part, and indicate how it can be used to promote effective teaching and learning. Student teachers are usually required to prepare detailed teaching and learning plans, yet they are unfamiliar with how to do this. Part II provides a careful, staged guide to this process, from the most general and long-term to the most specific and short-term levels, and for all age groups. It provides copious examples of planning documents. Further, student teachers are typically required to evaluate the planning and implementation of their teaching and the students' learning, and Part II provides extensive examples of how this can be approached.

The preliminary visit

Student teachers are normally given the opportunity to visit their schools before the period of teaching practice formally begins. This may take the form of an observation week or a system of school attachments in the period leading up to the block practice. The following points will be of interest to student teachers offered such facilities.

The purpose of the preliminary visit

The preliminary visit enables the student teacher to meet the headteacher, the mentor or teacher in charge of students (where such an office exists), and the rest of the staff; to become acquainted with her class or subject teacher; to see the students she will be teaching; to get to know the nature, layout and resources of the school; and to gather specific information relevant to the work she will undertake during the practice.

Before the visit

It is ridiculous to expect to go into a school and simply absorb everything that you need to know reactively. Student teachers must be proactive in their planning for the preliminary visits, so that they go into the school with an agenda for information. This entails considerations of exactly what they need to know about the school, what they need to gather and collect from the school, whom they need

to meet (e.g. the headteacher, the mentor, the class teacher(s), the subject teachers, the curriculum co-ordinators, the students), what they need to find out about the students, curriculum, assessment, special needs and so on – the list is exhaustive, and it is the intention of this chapter to set that agenda.

An initial familiarisation exercise might be to have sight of the school prospectus before you go into the school (maybe your HE institution has a copy, or you can approach the school in question about this). Further, many schools have their own websites, and these are very valuable introductions to the school, as, typically, they present a considerable amount of both general and detailed information about many aspects of the school. Student teachers are strongly advised to find out if the school has a website and to conduct a search of that website before the first visit.

Schools are subject to inspection, and it would be useful, again as a familiarisation exercise, to have looked at the school inspection report. These are freely available on the internet (<http://www.ofsted.gov.uk/reports>) and they provide an initial introduction to the school's performance. Further, you may find it helpful to look at the school's position in the national league tables of school performance (www.dfes.gov.uk/statistics). Although this latter is, at best, only an indicator of one aspect of the school, and arguably does not present a fair picture of the school, nevertheless, as an initial *sensitiser* to the school it may be useful.

The issue here is that you do not go into the school 'cold'; rather, you go in with an initial briefing about the school and an initial agenda. You must show that you have 'done your homework' about the school. That makes your visit(s) more efficient, as well as presenting a positive initial image of yourself in the school.

What to look for and what information to collect

It follows from what we said in the preceding paragraph that to make the most of the preliminary visit, the student teacher must systematically take note of and, where she feels it helpful, record those aspects of the school's organisation, policy and methods in so far as they will relate to her own work in the school.¹ To help her in these respects, we offer the following guidelines which arise from: *the physical features, the school in general, its philosophy, grouping of students, schools' expectations of student teachers, policies and other relevant documentation (e.g. the school prospectus), significant people and organisational matters, the classroom, control and discipline, rules, routines and protocols (e.g. for involving others), resources, record keeping, timetabling, curriculum organisation and planning, teaching and learning styles used, other adults involved (e.g. support assistants) and particular information to record (e.g. resources, schemes of work, details of students, timetable, curriculum planning, use of the photocopier, accessing resources – including computers, television and video).* We stress that some of the points raised, e.g. in the physical features, may be more pertinent to the work of the primary teacher than the secondary specialist.

The physical features

We suggest you begin by investigating features and resources of the neighbourhood in which the school is situated. Some of these may prove to be relevant to the lessons you will be teaching and organising, e.g. the social nature of the area – is it urban, suburban or rural, for instance? You could then build up a basic topography of the locality to include the pattern of the main

roads; churches and other buildings of significance; places of historical, geographical or social interest; recent developments; means of transport; details of houses, shops, businesses and industries; parks and beauty spots; museums; canals, rivers and bridges; docks; reservoirs; and markets. If there is a library nearby, the librarian may be able to supply information on local history, or even arrange a special display for your class.

The *layout of the school* should next engage your attention. Observe the general architectural style. Is the school's design conventional or open plan, for example? Approximately how old is the building? When might it have been built – in the late Victorian period or between the wars, for instance? Has the school an annex or other buildings on another site? The latter is quite common where previously separate schools have merged as a result of reorganisation. Find out where the headteacher's room, the staffroom, the general office and assembly hall are to be found (if these are not immediately apparent). Are any rooms used for specialisation? Where are these located? How is their use timetabled? Is there an audio-visual centre? Or a resources centre? How are the rooms numbered? If the school is a single-storey construction and extensive in its layout, you may find it useful initially to draw a rough plan of the building.

The school in general

Find out how many pupils there are in the school, the size of its annual intake and the approximate location of its catchment area or areas. The school's recent history may prove interesting, especially if it includes reorganisation or inspection.

The school's ethos has an important bearing on the work of both teachers and students. Check nerve points in the school's life to ascertain what the prevailing atmosphere is like in this respect, e.g. the staffroom, or morning assembly, for instance. Make provisional assessments of the quality of the relationships between the head and the staff, between staff and students, and among the staff themselves. If the school has a healthy atmosphere, you should have little difficulty fitting in and helping to maintain it. Where the atmosphere

is less than wholesome, however, then you must decide what personal and professional qualities you can display that will improve it.

The prevailing system of *control and discipline* operating in the school is of very great importance and you should find out how it works. What are the school rules, for example? Are there dos or don'ts? Who decides the rules? How explicit are they? Do all members of staff enforce them? What rewards and punishments are used? Who determines them? How effective are they? Which rules are broken? And how often? How are the more extreme forms of misbehaviour like classroom violence handled? Alternatively, how do individual teachers cope where there is no such clearly defined frame-work of rules? Or where an ineffectual one exists? Or where chaos reigns? Which teachers appear to be most effective in such circumstances? And why? How will *you* relate to one or other of these situations when you have to work in the school?

It can also be of value to find out what the school's *philosophy of education* is. It may be voiced explicitly in the school's prospectus, mission statement and website, or it may not be voiced explicitly, and there may even be a clash of philosophies in some schools. However, one can get some idea of the way in which teachers think in these respects by studying the organisation of the school and the lessons. Some schools, for example, foster and encourage competition; others, co-operative behaviour. Some enforce a school uniform, others do not. Some are restrictive and authoritarian; others, by contrast, encourage autonomy and freedom of expression. Teaching methods are another obvious indication of a

school's philosophy or philosophies. An important question arises for the student teacher in this connection: given an established system of teaching in the school, how does he or she fit in? The answer is that whereas the student teacher will generally adopt whatever method or methods are already in use, especially if they are well tried and effective, there is no reason why he or she should not introduce alternative ones. One could, for instance, employ group methods with a class that had only experienced the traditional or teacher-centred approach. As a matter of courtesy, however, the class teacher should be consulted before introducing such a change, not the least reason being that rearrangements of the room may be required.

It is particularly important to discover what forms of grouping are employed in the school, e.g. setting (and, if so, for what subjects), age groupings, ability groupings, team-teaching and so on. Likewise, where integrated days and integrated curricula operate, how are they organised? A student teacher placed in a school where one or more of these approaches are used should make a special effort to find out how work and routines are organised.

It can also be helpful to get to know something of *the school's expectations of him and her* with respect to time of arrival, attendance at morning assembly, involvement with extra-curricular activities, free periods, leaving the school premises, dress, general appearance, preparation of lessons and behaviour *vis-à-vis* the rest of the staff. Box 21 provides a list of basic points one should try to keep in mind on teaching practice.

Box 21: Professional courtesy on teaching practice

- 1 If you are absent, let the school know promptly.
- 2 On return from an absence, let the headteacher know you're back. Do not let him/her find out from hearsay.
- 3 Lateness calls at least for an apology and possibly an explanation.
- 4 Be respectful to senior colleagues, e.g. concerning chairs in the staffroom.
- 5 Be prompt, tidy and accurate in whatever administrative work you have to do, e.g. registers.
- 6 Maintain adequate standards of dress and appearance.
- 7 Leave a classroom tidy and the whiteboard clean at the end of a lesson.

There will be a number of *significant people* in the school whom you should at least meet and, better still, become acquainted with. These will include the headteacher and deputy headteacher(s), the teacher in charge of the pastoral and counselling aspects of the students, subject co-ordinators, heads of year, your school mentor and the class teacher(s) with whom you will be working. If you are in a secondary school where students will be involved in vocational preparation and work experience, it will be important to meet the co-ordinator for this. It can also be useful to introduce yourself to the school secretary, technicians or laboratory assistants (where relevant), and the caretaker.

Finally, if the school has its own librarian or resources organiser, find out what the procedures are for borrowing books for yourself, and for utilising the library's resources with the children you will be teaching, for example in topic or

project work. You can save yourself a lot of time and trouble by preliminary enquiries of this kind before your block practice begins.

The classroom

We have already stressed the importance of finding out what systems of *control and discipline* operate in the school. It is even more important to ascertain what management and control systems are used in the class(es) you yourself will be teaching. Where the class is taught chiefly by one teacher, make a note of established rules and routines, especially those relating to day-to-day matters such as speaking to the teacher, moving about the room, asking and answering questions, talking, finishing early and so on. (To help you make a start in these respects, we have listed guidelines in Box 22.)²

Box 22: Classroom routines

The following checklist was designed by Haysom and Sutton for use in science lessons. Selecting whatever items you feel relevant, use them in one of your observation lessons to discover the rules and routines governing the classroom behaviour of the pupils.

Is it the standard practice for pupils to:

- stand up at the beginning of a lesson?
- choose where they sit?
- go to allotted spaces?
- work in self-selected groups?
- help each other in their work?
- expect not to consult each other?
- put hands up before speaking to the teacher?
- speak directly to the teacher, butting in at any time?
- be silent when the teacher begins to speak?
- carry on with what they're doing when the teacher speaks?
- leave the room on own initiative?
- move about freely during lessons?
- compose their own notes?
- copy notes from the board?
- be expected to have with them pencils, rulers, rubbers etc.?
- be allowed to borrow these items?
- be allowed, if they finish early, to get on with homework?

You may feel it necessary to extend this list to accommodate rules and routines making up the standard practice in the particular situation you find yourself in.

Understanding rules, protocols, procedures and routines

We cannot overstate the importance of the student teacher understanding the ‘hidden curriculum’. The hidden curriculum ‘oils the wheels’ for the smooth running of the school and of the classes of students within it. In coining this term Jackson³ suggested that a key factor of students’ success in school was their ability not only to learn, but to work within, the hidden curriculum of the school.⁴ Indeed he argued that survival and success in school was a function of students’ achievements in the hidden rather than the formal curriculum. Exactly the same is true for the student teacher. Jackson argues that *students* in school have to learn very quickly to live with rules, routines, crowds, praise, power, denial and delay. So, too, do *student teachers*. The student teacher’s success depends in part on her ability to understand and work within the hidden curriculum of the school.

Some of the elements of the hidden curriculum are enshrined in the formal administrative and managerial aspects of the school at a whole-school level. Schools have formal, sometimes statutory protocols, e.g. for registering authorised and unauthorised absence, for reporting and handling suspected cases of child abuse, for handling aggressive parents, for security within the school, for arranging educational visits. Schools will also have protocols for handling students who arrive late for lessons, students who seek permission to be out of school, movement around the school, arrangements for break times and lunch times, use of the school library, access to computers, incidence of illness during school time, disciplinary matters, wearing uniform and jewellery, completing homework, failure to bring the correct equipment for lessons, matters of confidentiality, pastoral and tutorial responsibilities, meeting parents, handling complaints, ordering and collecting stock from central resource areas, use of the telephones, dealing with and reporting accidents (i.e. Health and Safety matters). The student teacher will need to find out about the formal arrangements that the school has for all of these matters so that she knows exactly what to do and whom to contact in particular circumstances. Some of these matters are contained

in school prospectuses; others are contained in ‘information for staff’ booklets; others might be found out in conversation with the mentor and other teachers.

Not only are there rules and routines at a whole-school level; at a classroom level the student teacher will need to ascertain very quickly – from observation and discussion with relevant parties (e.g. the teachers with whom she will be working) – the rules and routines that individual teachers adopt with different classes. Knowledge and practice of these provides security for students and for student teachers alike. Within each class there will be several strategies that teachers routinely use to ensure that learning is productive, efficient and effective and that behaviour is acceptable. These routines and rules operate at every stage of the lesson. Examples of the practical matters that the student teacher will need to find out about are set out as follows:⁵

Rules and routines at different points during the lesson

At the beginning of the lesson

- how the students enter the classroom and where they sit;
- whether the teacher enters the classroom before the students or *vice versa*;
- where the teacher is at the start of the lesson;
- whether any initial registration is taken;
- whether the students enter the room in silence or whether they are permitted to speak;
- whether the students are permitted to bring in bags, outdoor wear and where they are supposed to place them;
- how the teacher gains and maintains the students’ attention and interest;
- how long the lesson takes to start;
- what the teacher does when students arrive without appropriate materials (e.g. books, pens, paper, sports equipment);
- how homework is collected/returned/commented upon/followed up;
- how the objectives/intended learning outcomes and contents of the lesson are introduced;
- how the teacher settles the class;
- how a clear start to the lesson is signalled;

- how reference is made to the previous work/lesson and how the present lesson will build on this;
- how initial resources are distributed.

The transition from the introduction to the lesson

- how the teacher prepares the students for the transition;
- how the teacher manages the transition from the introduction to the subsequent activities of the students;
- what the teacher does, says, where she stands, where she goes, how she uses her voice and non-verbal behaviour immediately prior to the transition, during the transition, immediately after the transition;
- how the teacher monitors the transition and settles the students after the transition;
- how the teacher introduces individual, collaborative and group work;
- how the teacher explains the purpose of post-transition activity/work;
- how clearly the teacher explains what is expected to happen straight after the transition;
- what the teacher says and does to make sure that all the students know what they have to do and what they must not do during and immediately after the transition;
- how the teacher manages the use of resources immediately after the transition (e.g. access, uptake, organisation);
- how long the transition is expected to take and how the students are made aware of this (e.g. 'you have three minutes to . . .').
- in what kinds of activity collaborative work is used;
- how ICT is accessed and used in the classroom;
- when, where and how much talk is acceptable to the teacher;
- how the teacher gains and maintains silence and 'on-task' behaviour;
- how the teacher divides her attention amongst the class;
- how the teacher sustains the students' interest, motivation and self-esteem;
- what verbal and non-verbal means the teacher uses to gain and maintain the smooth running of the lesson;
- how the teacher handles difficult situations and students;
- how the teacher gives praise/rewards/sanctions/punishments – and for what;
- how the teacher uses her/his own questioning (e.g. low to higher order, closed to open, handling incorrect or incomplete responses, giving 'thinking time' for students to reply, prompting and probing students);
- how the teacher handles difficult questions or questions that she cannot answer;
- how the teacher deals with unacceptable behaviour (to her and to other students);
- what happens if equipment is deliberately or accidentally damaged;
- what happens if a student feels unwell;
- how the teacher copes with students who work more slowly/more quickly than others (i.e. what the teacher does with students who do not complete work in the lesson and with students who complete work before the lesson time has elapsed);
- how the work is differentiated for individual needs;
- what teaching and learning styles are being used;
- what happens if a lesson is not going well;
- how the teacher works with students with special needs and learning difficulties;
- how the teacher works with other adults in the classroom;
- how the teacher balances her *instructional*, *procedural* and *managerial* talk;
- how the teacher circulates round the class and monitors everything that is happening;

During the lesson

- how, whether, and in what numbers the students are able to move around the classroom;
- where the teacher is at different points of the lesson;
- how the teacher ensures that she can see all the students all the time;
- how the teacher and students access, use and replace resources;
- how students may ask for the teacher's attention;

- how the teacher keeps up with marking during the lesson;
- how the teacher responds to different requests and to different students (verbally and non-verbally);
- how the teacher assesses students.
- how students are to be seated at the end of the lesson;
- how the teacher draws together – summarises – the cognitive aspects of the lesson;
- how homework is set;
- how the teacher dismisses the class.

Towards the end of the lesson

- how the teacher draws the lesson to a conclusion in practical management terms – what she does, what she says;
- how students are made aware of how much time they have left to complete the work of the lesson;
- what happens with students who finish the work before the end of the lesson or who do not finish the required work by the end of the lesson;
- how plenary and feedback sessions are managed;
- how students clear away and return apparatus and materials;
- how the work is gathered together for the teacher – who does it, where it is put;

More specifically the student teacher may find it useful to focus on a specific feature during a lesson that she observes. In this instance she will need to plan in advance what she will be looking for – maybe by posing a series of questions. For example, let us imagine that she wishes to see what strategies the class teacher uses to motivate students during a lesson. The questions that the student teacher might wish to ask are contained in Box 23.

A focused observation of one or more aspects of a lesson enables the student teacher to find out how the smooth running of the lesson and working with the class is managed. This requires the student teacher to attend to the rules and routines in the lesson. It is often the case that student teachers are not in the school or with a group of students for a long enough period of

Box 23: Motivation: questions for use in an observation lesson

- 1 What techniques and approaches, if any, did the teacher use at the outset of the lesson to engage the class's interest?
- 2 How did he sustain the interest, once aroused?
- 3 How did she deal with the problem of flagging motivation?
- 4 In what ways did the teacher capitalise on the children's own interests?
- 5 Could any parts of the lesson be explained in terms of the concepts of intrinsic and extrinsic motivation? Did the teacher, for example, arouse the students' curiosity, challenge them or offer them some form of reward?
- 6 What part did *feedback* play in the lesson? How was it conveyed? And what was its effect on the class?
- 7 Could you establish any relationship between motivation and (a) social class; (b) ability; (c) age; (d) sex; or (e) aspects of the subject being taught or investigated?
- 8 What effect did the *personality* of the teacher appear to have on the overall success (or failure) of the lesson?
- 9 Were threats used as a means of motivating the students?
- 10 Examine the relationship between motivation and the instructional approach or approaches used by the teacher, e.g. formal class teaching; discussion; group work; guided instruction etc.
- 11 How would you describe (a) the teacher's attitudes towards his class, and (b) his expectations of their performance? Could either of these be seen to affect his class's motivation?
- 12 Which forms of motivation did the class appear to respond to best?

time to enable them to stamp their own way of working on the students. Student teachers inherit from, and hand back to the teacher a set of rules, routines, ways of working. Indeed a student teacher would be ill-advised to try to overturn an established way of working with a class for the comparatively short duration of a teaching practice. Hence in most cases the student teacher will have to find out about, understand, and operate within a given set of procedures – cognitive, behavioural, interpersonal – rather than attempting to replace an inherited system. This is not to deny the need for student teachers to try new ways of teaching and to experiment to some extent; it is to suggest that if the student teacher wishes to try something different she discusses it first with the class teacher.

Observe what sanctions the teacher employs with her class in order to enforce the rules. Are individuals kept in after school, for instance, or are they asked to stay behind at the end of a lesson, or reprimanded in front of the other children? Does isolation of disruptive students figure in a teacher's tactics? What happens if a student swears at a teacher? What happens if students refuse to work? What happens if a student bullies another, or bullies the teacher? For what actions are immediate removal from the classroom a rule of the school? For what kinds of offences are detentions used? Are there established rules for handling very difficult children (e.g. calling for assistance from a colleague)?

On a more positive note, find out what kinds of motivators and rewards the teacher uses. If the class is taught by other teachers, you can subsequently compare the different methods of control used and check how the class responds to them. The advantages of ascertaining prior knowledge on these matters is that you will then be able to relate your own control systems to the existing framework where this proves to be effective.

The reality of classroom life, unfortunately, is often very different from what one would like to see. Control systems may be either ineffective or non-existent. Where such is the case, you will have to decide what you can do to achieve some measure of control over the class when you eventually take over. In this connection, we recommend you read Chapter 15.

Successful class teachers' methods of organisation will have evolved in the light of their experience and knowledge of the particular students they teach. The student teacher does not have this experience or knowledge, nor obviously the time to acquire them, so it is advisable that he perpetuates effective routines established by the class teacher throughout the period of his practice (e.g. what is the established procedure for tidying up at the end of an art lesson? Or what is a child expected to do when he finishes his allotted task five minutes before the rest of the class?) Studying the classroom routines of an experienced and successful teacher requires close observation because the most effective methods are often the least obvious.

What should student teachers do, however, when they find themselves working with a disorganised teacher who has no routines? Having made a quick assessment of the position, they must then decide what they can do to improve the situation even though the extent of their influence is limited (they are, after all, in a position of dependence in a host school, and perhaps only teaching two or three lessons each day). Between the preliminary visit and the block practice, they should decide on a few basic classroom rules and routines that would impose some structure on the situation so that when they meet the class they can spend some time discussing them with the students to find out where they stand with them. They can thus improve the original situation at worst marginally and at best significantly.

Particular information to record

You will need to bring back a certain amount of information from your preliminary visit, chiefly for your own use. Thus it is important to find out details of the *resources and equipment* available in the school – the size and range of the library, the ICT hardware, software, intranet and internet facilities, the audio-visual equipment you may use, apparatus you may require, facilities for word processing and duplicating, resources for individual and group work (topics and projects, for example). Check that the school has

the resources, equipment and materials that you will require. Teachers of practical subjects like PE or specialist subjects like art or music need to be particularly alert in this respect. A PE teacher, for instance, may want to know how many badminton rackets are available; an art specialist, whether there's a sink in the room she will be using; and a music teacher, the extent of facilities for creative music making. Teachers of science subjects, too, will need to anticipate equipment they will need for practical work, particularly whether there is sufficient equipment for class practicals. Find out about Health and Safety matters and procedures.

You will need to gather details of the *schemes of work* you will be required to teach, together with any explanatory or ancillary information your class teacher may provide. You will need to find out what pro-formas you will be required to use and complete for planning and other aspects of the school's life, and how ICT is used in planning. You will need to find out when planning takes place, with which teams and groups, and what are the long-term, medium-term and short-term planning formats and contents in the school, so that you can fit into the school's requirements here. These aspects are examined in more detail in Chapter 9.

Coupled with details of schemes of work is the need for *information on the students you will be working with*, together with some indication of their previous experience and learning in the subject areas you will be teaching. This kind of information is crucial, as you need to know where to begin your work. The obvious source of information of this nature is the class teacher or subject teacher. If he or she keeps records on each student, ask if you may have a look at them.

You may find that you are involved in teaching courses leading to state or external examinations such as GCSE, GCE Advanced Level, the Scottish Certificate of Education, or additional arrangements. If you are, and are unfamiliar with the nature of these systems, find an introductory guidebook relevant to your needs. This may particularly be the case with the GCSE. One important factor in examinations and courses leading to these examinations is the inclusion of compulsory coursework for examination and this

you may very well be involved with if you are a secondary specialist.

Though student teachers may not be involved in public examinations, nevertheless most likely they will be involved in formal and informal assessment requirements, for the National Curriculum and for the ongoing, formal and informal reporting of students' progress to parents and documentation of progress within the school. Student teachers will need to become conversant with the procedures required here, and they should expect to have to work within them.

The preliminary visit also gives you the opportunity to ascertain details of text books, worksheets, ICT usage and other materials used by the class. Where you feel it necessary, borrow copies or examples of the ones you will be using as they will help you when planning your lessons.

Details of *topic work* and related approaches, where relevant, should also be noted. These could include organisational procedures: individual or group work, for example; topics recently covered; the stage of development of the class or individuals in this kind of learning; and ways in which topics have been presented and evaluated in the past.

Specific information on the class(es) you will be teaching should include:

- the name of the class and, if relevant, the significance of the name;
- the size of the class (the number of students makes a difference to the organisation and presentation of the various subject areas and curricular activities);
- the average age of the class, or its range if it is inter-age;
- the band/set of the class, or range of ability;
- the names of the students and a seating plan (the latter can be particularly useful in the early stages of the practice as an aid to getting to know a class);
- details of the classroom(s) in which you will be working; an annotated layout plan may be useful here;
- details of groups (if appropriate) – their organisational basis;
- details of students with special needs (again where relevant) – ones with emotional problems,

communication difficulties, physical disabilities or home background problems, for instance;

- details of particular problematic students, in terms of control and discipline, together with suggestions from the class teacher as to possible ways of handling them.

It is also important to find out as much as you can about curriculum planning in the school, routines, rules, specific students, discipline policies and strategies, classroom organisation, resources, teaching styles, topic work and subject-based work, schemes (e.g. for language, mathematics and other curriculum areas, matching and differentiated work, assessment), school policies, ICT and technology usage.

Additionally the student teacher may find it useful to ask questions to find out about:

- access to reprographic equipment;
- use of ICT for planning and personal, as well as student, use;
- timetabling of fixed times (e.g. use of the hall);
- what to do with latecomers;
- rules for moving around the classroom/school;
- arrangements for break times and lunch times (e.g. are the students allowed inside buildings, where are they allowed to go, where are they forbidden to go?);
- use of the school library;
- what to do if someone is taken ill during school time;
- the school's uniform policy;
- what to do if students do not bring equipment (e.g. PE kit);
- arrangements for meeting parents;
- ordering and collecting stock from centrally held resources;
- use of the telephone;
- reporting accidents;
- insurance cover for personal accident, injury, damage or theft;
- handling money (e.g. for school lunches, students' personal money for safe-keeping);
- use of support assistants and teaching assistants;
- when parent helpers come in and what they do;
- which teachers have responsibilities and what they are responsible for;
- arrangements for planning times with other teachers (i.e. team meetings);

- whether students can take school property home (e.g. reading books);
- if the students go to another teacher, and if so, when, where, what for;
- if students join other classes, if so, when, where, what for;
- which work is done in books, jotters, loose-leaf sheets, saved in software or the intranet;
- permission for going to the toilet;
- how the day starts;
- how the children change their reading books (for primary schools);
- the school's handwriting style(s);
- which children print and which children do 'joined up' writing (largely for primary schools);
- details of the students – names, ages, abilities, students with statements of special educational needs;
- which students it is advisable to keep apart;
- seating arrangements and layout of the classroom.

The *timetable operating in the school* should be noted. Finally, details of *your own timetable* should be recorded. These will include:

- lesson details – their times and duration;
- class(es) and subjects or activities to be taught or organised;
- indications of rooms and locations to be used (Room 3, Main Building; Room 23, Lower School; Room 7, Annexe, for instance);
- details of other teachers' lessons you will be observing (where appropriate);
- non-contact periods;
- extra-curricular activities (if relevant: Science Society after school Mondays; choir practice Thursday lunchtimes, for example);
- indications of when the school will be closed in the course of the practice period (local elections, half-term, special holidays);
- indications of when you will be prevented from teaching your normal timetable (because of school examinations, for example, or rehearsals for a school play);
- the name of the school, its address and its telephone number; the names of the headteacher, the teacher in charge of student teachers (if appropriate), your mentor and the class teacher(s), and appropriate contact details for these (e.g. telephone, e-mail).

The range of suggestions given above on what information to collect includes little reference to the kinds of problems and pitfalls you may encounter in seeking this information. We conclude this section, therefore, by highlighting some of them and indicating possible ways of dealing with them.

First, there is the problem of time. Some students spend as much as a whole week on their preliminary visit, but others are not so fortunate. If you are only in for one day, and time does therefore present a problem, decide on an order of priorities and begin by noting the most immediately important information that you need. The remainder can then be collected visit by visit, or during the first week of the practice itself. Even in the most favourable circumstances, it is going to take time to build up a total picture of the school, so do not expect to do it in half a day.

A second kind of problem may arise when you are confined to one or two rooms during your initial visit (if this only lasts one day) and cannot therefore move about the building. What you must do if you are in this position is to ask

politely and tactfully if you may see other features of the school.

One final point: what do you do when essential information you need is just not forthcoming? Or when the source of it is unreliable? Or when it is misleading? You cannot complain to the head, or ask the students! The best course is to ask the teacher in charge of students or school mentor to help you, or possibly the tutor from the HE institution who will be supervising you during the practice.

It must be remembered that schools will have experienced inspection visits, and, as part of the inspection process, as part of statutory requirements, and as part of their best professional practice, they should have to hand a battery of policies, prospectuses, records of attendance, examination and assessment results, documents, planning schedules, protocols, schemes and review pro-formas covering all aspects of the school's life. It would be useful for student teachers to enquire about these, to have copies of significant and relevant documents and to ensure that they act within the requirements of these documents.

Aims, objectives and intended learning outcomes

Introduction

Three key words/phrases will be used in this chapter – *aim*, *objective* and *intended learning outcome*. Fashion seems to have dictated the replacement of ‘objective’ with ‘intended learning outcome’ or, indeed, ‘desirable learning outcome’, but one can observe a high degree of synonymy here. ‘Intended learning outcomes’ indicate an important shift in the emphasis being placed in education: from teaching to learning. Teachers plan not only with learning in mind (the processes), but with the outcomes of learning in mind.

Aims, objectives and intended learning outcomes refer to expressions of educational intention and purpose, which may be expressed with varying degrees of generality and specificity. An *aim* is a general expression of intent, and the degree of generality contained in the statement may vary from the very general in the case of long-term aims to the much less general in the case of short-term aims. An *objective* or *intended learning outcome*, by contrast, is characterised by greater *precision* and *specificity*. Again, at one extreme will be objectives that are fairly specific, and at the other, objectives that are extremely so. An aim is, in principle, infinite (e.g. to become educated, a process which never stops), whereas an objective tends to be more finite (e.g. to understand why heat melts ice).

An objective is more like an achievable target than an unachievable goal. One can see the attraction of both aims and objectives to educationalists.

For the former, targets link into action planning for, and by, students in their own learning. For the latter it links into target setting at a systems level, to which we alluded in Part I, where explicit targets were set for school achievement, e.g. for Key Stage 2:¹

- 85 per cent of pupils nationally should achieve level 4+ and 35 per cent should achieve level 5+ in English and mathematics in 2004;
- all LEAs should have at least 78 per cent of their pupils achieving level 4+ in each of English and mathematics by 2004.

Setting targets is a useful strategy for accountability. For example, the Autumn Performance Report 2002 found the following in relation to the government’s own targets:²

Target: A reduction in school exclusions from 12,500 to 8,400 permanent exclusions a year by 2002.

Result: Met

Target: An increase in the proportion of those aged 16 who achieve one or more GCSEs at Grade G, or equivalent, from 92 per cent to 95 per cent by 2002.

Result: Not met

Target: An increase in the proportion of those aged 16 who achieve five or more GCSEs at Grade A*–C from 45 per cent to 50 per cent by 2002.

Result: Met

Targets, like many objectives, are specific, finite, frequently measurable, often time-bound, and strive for realism. In short, targets, objectives and intended learning outcomes are SMART: **S**pecific, **M**easurable, **A**chievable, **R**ealistic and **T**ime-bound. This can apply to governments, schools, individual teachers and learners, curricula and curriculum planning.

Long-term aims form the basis of a school's *raison d'être*, defining the nature and character of its overall educational programme in relation to societal and individual needs. Short-term aims will constitute the logical starting point for curricula construction and the devising of schemes of work. Objectives and intended learning outcomes expressing varying degrees of specificity will be derived from such aims, especially the short-term ones, and will represent their translation into specific and tangible terms necessary for planning a course of lessons, individual lessons or units of learning on which the ultimate realisation of the aims depends.

Aims constitute the basic elements in educational planning. Although existing at different levels of generality, collectively they make up the building blocks of the total programme. The most general aims, being broad and often abstract in their expression, will simply offer guidance as to the general direction of educational intention and will in no way indicate particular achievements within specified time limits (e.g. 'To prepare children to meet the challenges of a technological age'). Aims of this nature, frequently social in character, express basic concepts of the purpose of the school and its overall intended outcomes. In this sense aims are perhaps synonymous with values. For example the New Labour vision for education was one of inclusion:

One nation, in which each citizen is valued and has a stake; in which no one is excluded from opportunity and the chance to develop their potential; in which we make it, once more, our national purpose to tackle social division and inequality.³

The following examples of aims and objectives will help the reader to see the distinction between them more clearly.

Aims

- 1 To enable pupils to develop an appreciation of art in the twentieth century.
- 2 To introduce the class to the concept of heat.
- 3 To educate the whole child.

Objectives

- 1 To introduce the class to the principal characteristics of the violin.
- 2 A review of the events leading up to the First World War.
- 3 To further the students' appreciation of Hardy's 'The Darkling Thrush'.

Designers of educational programmes cannot always be too legislative on the question of what constitutes an aim and what constitutes an objective. What a teacher plans to do with a given statement of intent is the ultimate determinant of its nature. Aim 2 above, for instance, 'To introduce the class to the concept of heat', could conceivably form the basis of a lesson of one hour, in which case it would be seen as an objective. Alternatively, objective 1 listed above, 'To introduce the class to the principal characteristics of the violin', could equally form the basis of four weekly lessons, in which case it would be more appropriately labelled an aim.

The National Curriculum sets out two main aims:⁴

- 1 The school curriculum should aim to provide opportunities for all pupils to learn and to achieve.
- 2 The school curriculum should aim to promote pupils' spiritual, moral, social and cultural development and to prepare all pupils for the opportunities, responsibilities and experiences of life.

It also sets out four main purposes:⁵

- to establish entitlement;
- to establish standards;
- to promote continuity and coherence;
- to promote public understanding.

It is also explicit in its statement of values, which it sets out under four areas: the self, relationships, society and the environment, as the following examples show.⁶

The self

We value ourselves as unique human beings capable of spiritual, moral, intellectual and physical growth and development. On the basis of these values, we should:

- develop an understanding of our own characters, strengths and weaknesses;
- develop self-respect and self-discipline;
- clarify the meaning and purpose in our lives and decide, on the basis of this, how we believe that our lives should be lived.

Relationships

We value others for themselves, not only for what they have or what they can do for us. We value relationships as fundamental to the development and fulfilment of ourselves and others, and to the good of the community. On the basis of these values, we should:

- respect others, including children;
- care for others and exercise goodwill in our dealings with them;
- show others they are valued.

Society

We value truth, freedom, justice, human rights, the rule of law and collective effort for the common good. In particular, we value families as sources of love and support for all their members, and as the basis of a society in which people care for others. On the basis of these values, we should:

- understand and carry out our responsibilities as citizens;
- refuse to support values or actions that may be harmful to individuals or communities;
- support families in raising children and caring for dependants.

The environment

We value the environment, both natural and shaped by humanity, as the basis of life and a source of wonder and inspiration. On the basis of these values, we should:

- accept our responsibility to maintain a sustainable environment for future generations;
- understand the place of human beings within nature;
- understand our responsibilities for other species.

For the foundation stage, curriculum aims include:⁷

Supporting, fostering, promoting and developing children's:

- personal, social and emotional well-being;
- positive attitudes and dispositions towards their learning;
- social skills;
- attention skills and persistence;
- language and communication;
- reading and writing;
- mathematics;
- knowledge and understanding of the world;
- physical development;
- creative development.

These are built on such principles as:⁸

- Effective education requires both a relevant curriculum and practitioners who understand and are able to implement the curriculum requirements.
- Early years experience should build on what children already know and can do.
- No child should be excluded or disadvantaged.

For the primary phase a range of values are expressed, such as:⁹ 'appreciating the unique qualities of each individual and valuing honesty and tolerance . . . they aim to provide a safe, caring, stimulating and enjoyable learning environment, to maximise the attainment of all children and to promote high standards.'

For the secondary phase several values are expressed, such as:¹⁰ 'all schools will want to attach

particular importance to promoting mutual respect and understanding of different religions, cultural traditions and languages.'

At other levels, aims will express less generality. Such will form the basis of curricula (e.g. 'To achieve certain specified standards in the skills of reading and writing'). Unlike the more general aims noted above, they will suggest tangible achievements and imply rather more specified time limits. They are often statements of what can be expected to have been achieved at given stages over the formal educational period. There is a relationship between the degree of generality expressed in an aim and the time limit within which it can be expected to have been achieved. It may be expressed thus: the more general the aim, the more difficult to specify when it will be achieved, or, conversely, the less general the aim, the greater the likelihood of its being achieved within definable and predictable time limits. Thus, 'To prepare children to meet the challenges of a technological age' could only be achieved at some time in the relatively distant future; one could not be any more specific than that. The aim 'To achieve certain specified standards in the skills of reading and writing', however, could conceivably be achieved by, at the latest, the age of 16.

This relationship has very real and practical implications for the student teacher on teaching practice. Since she is only in school for a comparatively short time (four, six, eight or ten weeks, depending on the college or university and the particular block practice), the aims that will form the basis of her schemes of work may be even *less* general than some of the aims referred to above.

The relevance of aims for the student teacher is that they make up one of the major sources from which lesson objectives are derived; and it is essential to understand the relationship between aims and objectives, and between schemes of work and the individual lessons to be taught.

In conclusion, you may find the following checklist useful when formulating aims for schemes of work:

- 1 Does the aim express the appropriate level of generality?
- 2 Is it expressed simply, clearly and economically?

- 3 Does its content relate to the ability and previous experience of the class?
- 4 Can appropriate lesson objectives and intended learning outcomes be derived naturally from it?
- 5 Is it attainable in relation to the facilities and time available?

Two kinds of objectives and intended learning outcomes: (1) Behavioural and (2) Non-behavioural

Objectives and *intended learning outcomes* are formulations of educational intent that are much more specific and precise than aims. While the latter serve to indicate the overall direction and purpose of educational activities they are, by comparison with objectives and intended learning outcomes, general, imprecise and lacking in specificity. They are thus of little immediate value to the teacher in planning a particular lesson or unit of learning in that they cannot inform his decisions on precise content, teaching strategy and evaluation. To meet these needs, the teacher must utilise *objectives* and *intended learning outcomes* for individual lessons. *Desirable learning outcomes* are differentiated from *intended learning outcomes* by their degree of requirement. *Intended learning outcomes* are seen as a minimum necessary requirement; *desirable learning outcomes* are seen, perhaps, as a maximum possible, or a bonus to the minimum requirement, and they do not have such a degree of obligation as intended learning outcomes; indeed intended learning outcomes may be statutory whilst desirable learning outcomes are not. Intended learning outcomes, like objectives, must be developmental and sequential to ensure continuity and progression as topics/themes are revisited throughout the key stages.

An example of an intended learning outcome might be, for example in a Key Stage 3 geography unit of work: 'Students should learn to use maps to identify climatic patterns in western Europe', or 'Students should learn to interpret weather maps and compare their information with that shown on satellite images.' The schemes of work from the Department for Education and Skills (www.standards.dfes.gov.uk/schemes2) include

Box 24: An example of a non-behavioural and a behavioural lesson objective in poetry**Non-behavioural**

To further the class's understanding of Hardy's 'The Darkling Thrush'.

Behavioural

At the end of a forty-five minute lesson on Hardy's 'The Darkling Thrush' the class will be able:

- 1 to detail the images which conjure up a landscape of winter and death;
- 2 to compare the rhythms of the winter mood with those associated with the thrush;
- 3 to explain the meanings in context of, or give synonyms for: coppice, spectre, bine-stems, crypt, canopy, germ, fervourless, illimited, gaunt, carollings, terrestrial, air;
- 4 to account briefly for the poem's date (31 December 1900);
- 5 to assess whether the poem is mainly pessimistic or optimistic in meaning;
- 6 to describe their own emotional responses to the poem.

the intended learning outcomes for all of the elements of the National Curriculum.

A desirable learning outcome may be: 'Students should learn to take turns in a class discussion.' The intended learning outcome of the lesson may be that students are learning some of the causes of the outbreak of civil war in Ireland in the early

part of the twentieth century. As a by-product of this they are also learning to share ideas and take turns, as the lesson is discussion-based. The by-product is the desirable learning outcome.

An example of objectives and intended learning outcomes is given in Box 24, together with their referent – Hardy's poem (Box 25).

Box 25: The Darkling Thrush**The Darkling Thrush**

by

Thomas Hardy

I leant upon a coppice gate
 When frost was spectre-gray,
 And Winter's dregs made desolate
 The weakening eye of day.
 The tangled bine-stems scored the sky
 Like strings of broken lyres,
 And all mankind that haunted nigh
 Has sought their household fires.

The land's sharp features seemed to be
 The Century's corpse outleant,
 His crypt the cloudy canopy,
 The wind his death-lament.
 The ancient pulse of germ and birth
 Was shrunken hard and dry,
 And every spirit upon earth
 Seemed fervourless as I.

At once a voice arose among
 The bleak twigs overhead
 In a full-hearted evensong
 Of joy illimited;
 An aged thrush, frail, gaunt, and small,
 In blast-beruffled plume,
 Had chosen thus to fling his soul
 Upon the growing gloom.

So little cause for carollings
 Of such ecstatic sound
 Was written on terrestrial things
 Afar or nigh around,
 That I could think there trembled through
 His happy good-night air
 Some blessed Hope, whereof he knew
 And I was unaware.

December 1900

Some objectives refer to overt, visible, potentially quantifiable student behaviours. These may be termed *behavioural objectives*, and they identify the learner's overt achievements. Other objectives refer to more intangible qualities, are more open-ended, and do not explicitly state the behavioural outcomes. These may be referred to as *non-behavioural objectives* since they do not specify the precise terminal behaviour by means of which a teacher can assess whether his objectives have been achieved. They may indicate what the teacher plans to do ('To introduce the class to . . .'), or list the elements of content in some way or other ('A review of . . .'), or invoke patterns of behaviour in abstract terms ('Appreciation of . . .'). None of these manifestations can be perceived directly or measured, however.

Behavioural objectives, if used competently, are tools which can do much to improve teaching and learning. It is important to remember, however, that they are not in and of themselves better than non-behavioural ones. Each type has its place and contributes in its own way to the enhancement of learning. It would therefore be naïve and doctrinaire to claim that all objectives could be specified in precise behavioural terms. Some subject areas and certain kinds of learning – especially in the realms of attitudes, feelings and values – are not amenable to such specification and quantification; and 'open-endedness' is the *sine qua non* of teaching methods emphasising creativity and discovery. We recommend therefore that you give careful thought to which of your lessons should lead towards behavioural objectives/intended learning outcomes and which to non-behavioural objectives/intended learning outcomes. In order to help you with such decisions, a little more will now be said about behavioural and then non-behavioural objectives.

Some characteristics of behavioural objectives

A behavioural objective indicates a desired state in the learner; what a student will be able to do after a prescribed lesson; a behaviour that can be perceived by the teacher's unaided senses. When the learner can *demonstrate* that she has arrived at this state, she will then be deemed to

have achieved the objective (e.g. the student teacher *will select* five behavioural objectives from a list of fifteen miscellaneous aims and objectives). Thus the behavioural objective describes the desired outcome of a lesson in such a way that most people can agree that the lesson has been a success or a failure.

Other terms used to describe behavioural objectives include *measurable objectives*, *learner objectives*, *instructional objectives*, *performance goals*, *intended learning outcomes* and *terminal objectives*. All these terms emphasise the importance of, first, writing objectives that describe what a student should be able to do after he completes a learning experience; and second, describing the behaviour in such a way that it can be observed and measured.

So far, so good. But what are the characteristics of meaningful behavioural objectives? And how does one write them so as to maximise the probability of achieving them?

The most important characteristic concerns the need to identify the terminal behaviour of the learner that the teacher desires. Thus a behavioural objective is useful to the extent that it indicates what the learner must be able to *do*, or *say*, or *perform* when he is demonstrating his mastery of the objective. It must describe *observable* behaviour from which the teacher can infer particular mental skills. This observable behaviour or performance may be *verbal* or *non-verbal*. Thus the learner may be asked to respond to questions orally or in writing, to demonstrate his ability to perform a certain skill or to solve a practical problem.

A second characteristic follows from the first and arises from the need for specificity and precision in phrasing the behavioural objective. There are many words which we use in everyday life that meet our need to communicate with others well enough. But for behavioural objectives they are often too general and vague. Consider the following two columns of words:

to know	to write
to understand	to explain
to be aware of	to demonstrate
to appreciate	to evaluate
to be familiar with	to list
to grasp	to construct

The words and phrases in the left-hand column are too vague and imprecise to be of use in the formulation of behavioural objectives. They are ambiguous and open to various interpretations (they are, of course, perfectly legitimate as aims and non-behavioural objectives, where their very ambiguity can be an advantage). The terms in the right-hand column, however, are more precise, open to fewer interpretations *and indicate what the learner will be doing when demonstrating that he has acquired information or skills that will contribute to, or lead to, knowing, understanding, appreciating or grasping*. Objectives using such words, then, will have been given behavioural specification. Thus if a student can *list* events in Europe leading up to the First World War and can *evaluate* their significance, his teacher can *infer* that he has some *understanding* of the subject.

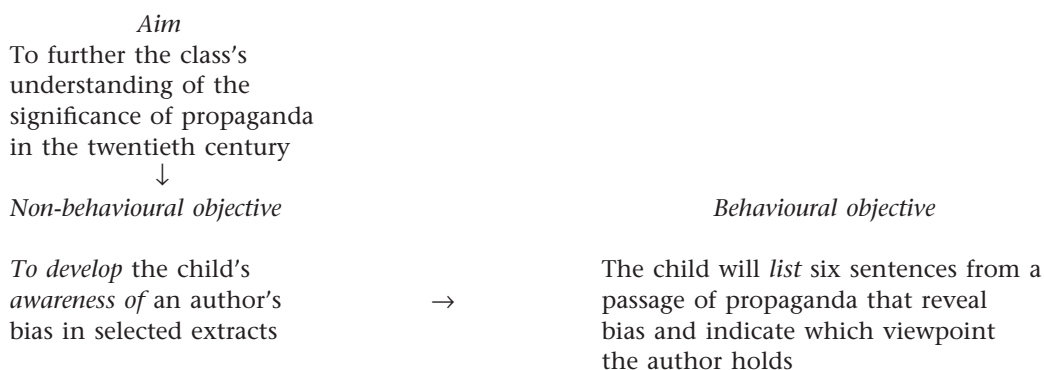
A note of caution needs to be sounded here. It must not be assumed that *understand* and *list* are one and the same simply because one substitutes for the other. As Hirst¹¹ has pointed out, states of mind should never be confused with the evidence for them. That a child can list events in Europe leading up to the First World War merely indicates minimal student mastery of the facts which, together with the achievements of related objectives on other occasions, may lead to fuller understanding subsequently. The same caution applies to similar pairings.

As suggested in parenthesis above, the kinds of words listed in the left-hand column are perfectly acceptable in the wording of aims and *non-*

behavioural objectives. The problem for the student teacher is one of knowing how to translate words and phrases of this kind into observable behaviours. Perhaps the best way is to take a simple example. It begins by stating an aim of moderate generality. From this is derived a *non-behavioural* objective in which the crucial phrase is *to develop ... awareness of*. This is then translated into a *behavioural* objective, the phrase now being replaced by the word *list* (see diagram below).

The problem is thus one of replacing open-ended infinitives such as *to appreciate*, *to understand*, *to develop an awareness of* and so on, with appropriate 'hard and clear' action verbs such as *to state*, *to write*, *to demonstrate*, *to identify*, *to distinguish*, *to construct*, *to select*, *to order*, *to make* and *to describe*. Rowntree's¹² example illustrates the point: a student would be able *to design* an experiment, *list* the precautions to be taken, *describe* his results, *evaluate* conflicting interpretations, *participate* in out-of-class discussions, etc. Gerlach and Ely¹³ consider that all 'action' infinitives of this kind have their roots in five basic types of behaviour, namely, *identifying*, *naming*, *describing*, *ordering* and *constructing*.

Two further characteristics of behavioural objectives may be mentioned; these sharpen the focus even further. The first concerns the conditions under which the mastery will be tested. These could include such factors as time limitations, evaluative procedures or situational factors (see below for examples). The second characteristic relates to the standards by which the objective is to be judged. These may include



such conditions as the percentage of problems a child must answer correctly; the number of correct answers she must obtain; or the tolerance within which she must learn.

In summary, behavioural objectives should ideally contain the following four elements:

- 1 An indication of *who* is to perform the desired behaviour (the student, the learner, the class).
- 2 A precise and succinct statement of the *specific terminal behaviour* that the learner is to perform. This will indicate what he will actually *do* and will comprise an 'action' verb and its object (list the events, identify the causes, write an essay).
- 3 Specifications of the *relevant conditions* under which the behaviour is to be performed. These will indicate the givens, the limitations, the restrictions imposed on the student when demonstrating the terminal behaviour (time factors, details of materials, equipment, information, sources to be used or not used).
- 4 Reference to the *standard* that will be used to evaluate the success of the product or performance (80 per cent correct; 7 out of 10 correct; will give six reasons for).

Wiles and Bondi¹⁴ indicate that behavioural objectives are helpful because they address the ABCD rule, specifying the *audience* of the objective (who will be displaying the behaviour), the intended *behaviour* to be demonstrated, the

context of the behaviour – the tasks, activities and resources, and the *degree* of completion – the criteria for assessing successful demonstration of the behaviour.

Example: given one hour and no reference materials, the pupil will write an essay synthesising the causes and consequences of the Second World War. The essay must contain at least three of the causes and three of the consequences that were discussed in the lesson.

The student teacher and behavioural objectives

The example of a behavioural objective given in the preceding section, 'the child will list six sentences from a passage of propaganda that reveals bias and indicate which viewpoint the author holds', is a relatively simple one and merely illustrates the principle. It is capable of extension and may even take the form of a number of itemised sub-objectives (see Boxes 24, 26, 27 and 28 for examples). The extent of its further elaboration in this way would depend on a number of situational factors – the ability of the class or group; its previous experience in the subject area; the direction of the lesson; the teacher's knowledge of the class; her skill as a teacher; the methods she uses and so on. Simply to frame a behavioural objective *in vacuo* without reference to the kinds of factors just noted and expect it to result in

Box 26: An example of a non-behavioural and behavioural lesson objective in the visual arts

Non-behavioural

To increase the class's appreciation of Roy Lichtenstein's painting 'WHAAM!'.¹⁵

Behavioural

At the end of a forty-five minute lesson on Roy Lichtenstein's painting 'WHAAM!' the class will be able:

- 1 to identify the essential visual qualities of the composition;
- 2 to compare the imagery with the comic strip sources and recognise the changes it has undergone;
- 3 to analyse the unity of the structure within the composition;
- 4 to explain the significance of the composition as part of the imagery of the 1960s;
- 5 to separate the idea of 'depiction' in the comic strip from the idea of 'unification' in the painting;
- 6 to describe their personal responses to the painting.

Box 27: An example of a non-behavioural and a behavioural lesson objective in music**Non-behavioural**

To develop the class's appreciation of Mendelssohn's 'Hebrides' overture.

Behavioural

At the end of a forty-five minute appreciation lesson on Mendelssohn's 'Hebrides' overture, the class will be able:

- 1 to summarise in one paragraph the circumstances surrounding its composition;
- 2 to compare the two main themes with respect to mood, shape and instruments used;
- 3 to describe how Mendelssohn deals with the middle section;
- 4 to account for the overture's description as programme music;
- 5 to say whether the work is 'realistic' or 'impressionistic';
- 6 to comment briefly on the performance.

Box 28: An example of a non-behavioural and a behavioural lesson objective in the visual appreciation of architecture**Non-behavioural**

To increase the class's appreciation of F. L. Wright's building, Kaufmann House, 'Falling Water', Connellsville, Pennsylvania, USA.¹⁶

Behavioural

At the end of a forty-five minute lesson on F. L. Wright's building, Kaufmann House, 'Falling Water', Connellsville, Pennsylvania, USA, the class will be able:

- 1 to recognise the essential visual and spatial qualities of the building;
- 2 to recognise Wright's belief in architecture's relationship to landscape and the unique suitability of a building to a site;
- 3 to explain what Wright meant by 'organic' architecture and 'spatial continuity' and how these relate to Kaufmann House;
- 4 to analyse the spatial structure of the house and recognise the unity between its parts;
- 5 to list the materials Wright uses and explain their integral relationship with structure, void and solid;
- 6 to give a brief account of their own responses to the building.

favourable outcomes is seriously to violate the principle of behavioural objectives.

The practical implications of this point for the student teacher are considerable. The use of behavioural objectives in contrast to non-behavioural ones places a much greater responsibility on the user. A behavioural objective has to be tailor-made to be effective; it will therefore require more thought and preparation in relation

to the situational factors than would be the case with a non-behavioural objective. The latter, being open-ended, covert and less specific, places the onus on the learner to make of it what he will, to match it up in so far as he is able with his own cognitive structures.

It follows from this that the student teacher who is only prepared to pay lip-service to behavioural objectives and go through the motions

by using superficially conceived, off-the-peg ones would be better advised to eschew them altogether. For those prepared to take them seriously, the following checklist will serve as a framework, at least initially, for setting them up:

- 1 Decide whether a behavioural objective is appropriate to the particular learning situation you are preparing. If it is, then proceed as in points 2–7.
- 2 Consider the relevant situational factors the objective must relate to. These may include: the ability of the class, group or individual; the duration of the lesson; the class's previous experience of the subject; your knowledge of the class; your skill as a teacher; and the teaching methods you intend to employ.
- 3 Specify who is to perform the behaviour (e.g. the student, the individual, the learner, the class, the group).
- 4 Specify the actual behaviour in terms of 'action' infinitives (e.g. to write, to list, to enumerate, to name, to specify, to demonstrate, to distinguish, to order, to identify, to construct, to describe, to state, to mark, to compute, to supply).
- 5 State the result or outcomes (the product or performance) of the behaviour which will be evaluated to determine whether the objective has been achieved (an essay, six sentences . . . , the first four problems on page 5, or whatever). This is invariably the object or object-clause of the infinitive stated in 4.
- 6 Specify the relevant conditions under which the behaviour is to be performed (the information, equipment, source material etc. that the student or class can or cannot use. Time limitations).
- 7 Indicate the standard that will be used to assess the success of the product or performance. This will often take the form of an expression of the minimal level of performance (the percentage to be correct; so many out of ten correct; . . . must list all the reasons; . . . must distinguish at least *four* characteristics, etc.)

Non-behavioural objectives

A desirable common characteristic of non-behavioural objectives, whatever their source and

whatever form they take, is that they should be expressed simply and clearly so that appropriate learning experiences may follow naturally. Tyler¹⁷ considers that such objectives can be conveniently placed in one or other of three groups.

First, they are sometimes expressed in a manner which indicates *what the teacher does*, e.g.:

- to outline the theory of relativity;
- to explain the principles of operant conditioning;
- to introduce the work of the war poets.

This is a common way of phrasing non-behavioural objectives though, as Tyler notes, because such statements tend to indicate what the teacher plans to do they are not, strictly speaking, statements of educational ends. The particular weakness of this kind of objective from the teacher's point of view is that they do not provide a satisfactory guide 'to the further steps of selecting materials and devising teaching procedures for the curriculum'.¹⁸

The second form often taken by non-behavioural objectives is in *stating topics, concepts, generalisations or other elements of content* to be covered in a lesson or course, e.g.:

- transport problems in urban areas;
- the concept of space;
- the air we breathe.

Here, the emphasis is on the content to be dealt with by the teacher and, like the preceding form, they are unsatisfactory in that they do not specify what the students are expected to do with the elements of content.

The third form of non-behavioural objectives identified by Tyler are those expressed in the form of *generalised patterns of behaviour* which usually relate to particular content areas, e.g.:

- to *develop a fuller understanding* of Picasso's paintings;
- to *develop an appreciation of* the variety of architectural styles within a five-mile radius of the school;
- to *increase the students' sensitivity* to manifestations of beauty in art and nature.

Behaviour patterns in this context are often expressed through infinitives like *to know*, *to appreciate*, *to be aware of*, *to understand*, etc. Objectives of this kind can sometimes be so generalised as to be of questionable educational value. Providing, however, they possess a *behavioural aspect* and a *content aspect*, then they are the most useful of the three forms from the student teacher's point of view. As they achieve a suitable balance between the two they will find that this will assist the structuring of their lessons and aid their decisions about teaching method, e.g.: to further the student's knowledge of the local social services.

Curriculum planners opposed to the use of behavioural objectives advocate the more general, flexible and open-ended approach of non-behavioural objectives. Class teachers, too, tend to prefer this broader interpretation and no doubt it is the one that student teachers are most familiar with. Arguments which have been advanced in favour of non-behavioural objectives include the following:

- 1 They permit the 'opening-up' process by means of which a student is able to match her own cognitive structures with the perceived content of the objectives. She must negotiate this match-making between her internal structures and the external world for herself.¹⁹
- 2 Human behaviour is broader in scope and purpose than the sum of specific bits of behaviour learned in isolation. Behavioural objectives fail to take account of the higher or more complex levels of functioning whereas non-behavioural objectives do not.²⁰
- 3 Non-behavioural objectives also take account of the broad, interrelated categories of human activity and are often more in line with the long-term aims of the school.

The debate surrounding the use of behavioural objectives

We shall be adopting the *objectives model* as a basis for our discussions on preparation and planning. Briefly, this involves specifying the desired outcomes of the learning situation in advance so that

the means to achieving them can be ordered in a logical and systematic way. The objectives model itself is associated with the rational approach to curriculum planning and as such has its critics. Those holding progressive views on education, for example, would argue that such an approach, in which the teacher pre-specifies the learning outcomes, ignores objectives the children may have and tends to discount the value of unintended outcomes. As one writer²¹ puts it:

The teacher's task is not to prespecify outcomes, rather to place children in learning situations which stimulate them in a host of ways but whose outcomes will emerge gradually from the constant interaction and negotiation between teacher and pupil.

Other critics point to the mismatch between the cold rationality of the objectives model and the constantly changing realities of school life. Shipman,²² for instance, writes:

Curriculum development does not proceed through a clear cycle from a statement of objectives to an evaluation of the learning strategies used. It consists of interaction, accommodation and compromise. Horse trading and horse sense are the concrete curriculum scene, not the clinical alignment of means with ends; that is the official version.

While conceding that such criticisms are perfectly valid, we for our part share the belief of the objectives school that the purpose of formal education is to bring about desired changes in children. Indeed it is a salutary exercise to ask oneself what students are able to do at the end of the lesson that they were unable to do at the beginning of the lesson. The strengths and weaknesses of behavioural objectives are summarised in Box 29.²³

It can be seen that several strengths also appear as claimed weaknesses. This indicates the ideological nature of aspects of the debate reflecting the personal preferences of their advocates or critics. If we want students to acquire certain kinds of knowledge and skills and to develop particular attitudes, we must identify these propensities

Box 29: Strengths and weaknesses of behavioural objectives**Strengths**

- 1 They are performance-based, measurable and observable.
- 2 They are easily communicated to teachers and students.
- 3 They facilitate organisation by specifying goals and outcomes.
- 4 They clarify thinking and planning and resolve ambiguities.
- 5 They are 'teacher-proof' and clear to anxious teachers.
- 6 They are highly prescriptive.
- 7 They make clear assessment and evaluation criteria.
- 8 They specify behaviours.
- 9 They render planning logical, sequential and linear.
- 10 They expose trivialities and emphases.

Weaknesses

- 1 They are highly instrumental, regarding education as instrumentally rather than intrinsically worthwhile.
- 2 They render students and teachers passive recipients of curricula rather than participants in a process of negotiation.
- 3 They only cover the trivial, concrete and observable aspects of education, thereby neglecting longer term, unobservable, unmeasurable, deeper seated aims and elements of education.
- 4 Education becomes technicist, tending towards low-level training rather than high-level thinking.
- 5 Because they are 'teacher-proof' they build out teachers' autonomy.
- 6 They lead to predictability rather than open-endedness, discovery, serendipity, creativity and spontaneity.
- 7 The *process* of education is overtaken by *outcome dependence*.
- 8 They replace the significance of *understanding* with an emphasis on *behaviour*.
- 9 Epistemologically they mistake the nature of knowledge, seeing it as *products* and *facts*, supporting a *rationalist* rather than an *empirical* view of knowledge.
- 10 They mistakenly 'parcel up' and atomise knowledge.

at the outset and formulate them in terms of aims and objectives. At the same time, we do not necessarily see them as fixed and unchanging; all kinds of chance factors are operating in the classroom which will affect our planning. There is, moreover, room for accommodation and modification. Indeed, Jeffcoate²⁴ suggests that:

Prespecified objectives should not acquire the status of sacrosanct unalterable absolutes. Instead they should be open to constant review, adaptation and revision . . . Hilda Taba²⁵ best conveys this notion of flexibility in the definition and use of objectives when she suggests they should be seen as 'developmental', representing 'roads to travel rather than terminal points'.

The great attraction of objectives and intended learning outcomes is that, carefully constructed, they provide criteria for evaluation and assessment. This is in direct keeping with the notion of action planning. Moreover the National Curriculum is cast in an objectives model. It will be argued later that by stating objectives and intended learning outcomes student teachers will have a set of criteria to use to judge the effectiveness of the lesson, i.e. the extent to which the objectives and intended learning outcomes were reached or achieved (see the discussion earlier in this chapter about target setting). The teaching-learning process is improved by, first, informing the children of the outcomes of their efforts; and second, checking these same outcomes against the

original aims and objectives to assess the extent to which they have been achieved.

It must be emphasised that the separation of the teaching-learning process into stages is necessary for the purposes of analysis and subsequent discussion. In practice, however, some stages may interact with others and occur at the same time. Objectives and intended learning outcomes, for example, cannot really be separated from the means of achieving them, nor the content of a lesson from the methods of teaching and learning being used.

An objectives model can apply at several levels and to several areas. For example, one can have whole-school curriculum objectives, objectives for a year group or a curriculum subject, for schemes of work, for individual lessons, for groups of students, for individual students. One can have objectives and intended learning outcomes for curricula, for physical, emotional and social environments, for behaviour and discipline, for teaching and learning styles, for addressing special needs, for equal opportunities, for school improvement.

You will have deduced from what you have just read that the issue of behavioural objectives has incurred a degree of *odium scholasticum* in some quarters. The reasons why some are inimical to their use are numerous. Principally, they arise from a rooted hostility to *behaviourism*, a view of psychology which in its radical form rejects concepts like 'mind' and 'consciousness' and emphasises the importance of the environment in influencing behaviour at the expense of hereditary potential.

Accordingly, learning theorists adopting this extreme position, and who perceive education with similar orientations, see behavioural objectives as tools for achieving their ends. It is thus the fear that the organism will be subjected to the 'shaping' processes of this particular instructional approach without taking mental experiences into account or acknowledging the complexity of human beings that provokes reaction from its opponents. Peters,²⁶ for example, writes:

If the inner life of man (*sic*) is banned from investigation, actions which necessarily involve intentions, emotions which necessarily involve appraisals of a situation, together with imagina-

tion, memory, perception, dreaming and pain must all be ruled out as scientifically proper objects of investigation; for none of these phenomena can be described or identified without reference to consciousness. There is precious little left of human behaviour to investigate. So the sterility of this approach to human learning is not surprising.

Advocates of behavioural objectives, on the other hand, view them from the context of a systematic approach to education. For them, behavioural objectives have been a central concept in programming and planning learning. While readily conceding the weaknesses of such objectives, those promoting their cause have cogently argued a case for their limited use in some contexts. MacDonald-Ross,²⁷ for instance, says:

For the present, behavioural objectives provide a well-worked-out tool for rational planning in education. They have made possible certain improvements in the technique of curriculum design and should not be discarded in disgust just because they fail to meet more exacting standards. But the application of these objectives should be tempered by a deep understanding of their limitations.

There will be occasions when behavioural objectives and intended learning outcomes will be useful, when student teachers have acquired the skills to formulate them and have had some practice in using them. Equally, there will be frequent opportunities to utilise the more familiar non-behavioural objectives and non-behavioural intended learning outcomes.

Objectives and intended learning outcomes in individualised learning

So far, we have chiefly considered aims, objectives and intended learning outcomes in relation to communities, groups, and classes. But they can also be used to guide and structure the learning intentions of the *individual* student, often in an independent learning situation. In addition to the intellectual, emotional and personal achievements

possible with individualised objectives, there are longer term gains to be had. The student, for example, can take greater responsibility for his own learning, and his ability to learn other things is enhanced. We look briefly at three possible areas where individualised objectives are relevant: students with learning difficulties, mixed-ability teaching, and projects and special studies.

When a teacher is dealing with children with learning difficulties (in particular, reading), short-term individualised objectives and intended learning outcomes can be specified, preferably in performance terms, which greatly aid the teacher (and/or the parent, if he or she is involved) to keep a check on systematic and cumulative improvement. For success here, objectives and intended learning outcomes need to be considered in relation to frequency of instruction, the amount of practice and the kinds of rewards used. In addition, there needs to be a carefully thought out system of recording to keep a check on progress over time. Or course, as students become older, they may also be involved in the specifying of objectives.

Where individualised objectives are used in mixed-ability teaching, possibly in conjunction with worksheets, a thorough understanding of individual differences is required on the part of the teacher. As we say later in the book, it will require not only knowledge of intellectual skills but awareness of those who require more time, who lack self-confidence, or who are impulsive. Student involvement in formulating objectives is a possibility at this stage.

Individual objectives and intended learning outcomes play a central role in projects and special studies. This will be particularly the case where these make up the coursework for examination, for example in the GCSE.

Conclusion – some suggestions

We have been concerned here with the problems surrounding the expression of educational intentions. Aims were seen as general goals formulated in clear and simple language which define the

nature and direction of a school's programme or an area of work within that programme. Objectives and intended learning outcomes, by contrast, were seen as more precise expressions of purpose and of particular value in planning lessons and other units of learning. We then attempted to trace a path between the behavioural view, advocates of which recommend the use of behavioural objectives as their principal tool of learning, and the more traditional practices in English education which employ non-behavioural objectives.

We conclude with suggestions that will guide the reader in deciding whether to use behavioural or non-behavioural objectives or intended learning outcomes. A behavioural objective may be used when the desired outcome is a skill that can be performed, or when the results of instruction can be expressed or demonstrated overtly in writing or speech (language learning would apply here). The acquisition of factual knowledge may likewise be formulated in behavioural terms. Where students are experiencing some difficulty in learning, the particular problem might be broken down into simpler steps or stages, each of which could then be expressed behaviourally. Individualised learning is another area where behavioural objectives would seem appropriate; and if one is producing material for programmed learning, behavioural objectives will be required.

However, when the intended or desired outcomes of learning are more general, developmental or complex in nature and need not, or cannot, be demonstrated by acts of fragmented behaviour, then behavioural objectives or behavioural intended learning outcomes are inappropriate. For example, the aesthetic and appreciative aspects of subjects like literature, art and music are better expressed in less prescriptive ways, since they involve the building up of complex, interrelated and subjective responses and the establishing of favourable attitudes. Broad, open-ended statements of intent serve teacher and student alike better in such contexts, though it must be remembered that some of the adjuncts to appreciation (historical, biographical or social, for instance; or technical, linguistic or stylistic) are often capable of being expressed behaviourally.

Beginning curriculum planning

The days when students could elect what to teach have long gone. Student teachers can expect to go into school and, with different degrees of specificity, be told what they will be expected to teach. There are three main areas of curriculum planning that we wish to address: (a) the context and levels of planning; (b) elements of planning; (c) focuses of planning.

The context and levels of planning

The content and style of planning is heavily influenced by the publications from the government, most notably the Qualifications and Curriculum Authority, reinforced by the Office for Standards in Education, which set out some useful points for curriculum planning (see Box 30)¹.

These several elements from OFSTED provide student teachers (and teachers) with important criteria for evaluating their planning, implementation and assessment of curricula and students, *viz.* the extent to which their plans demonstrate the potential to meet the OFSTED criteria. The OFSTED framework recognises that for curriculum planning to be effective it needs to take account of external and internal factors to the school, in short it rehearses the 'situational analysis' that is an important feature of curriculum planning.

Another important context for planning draws on the literature of school effectiveness. This movement gathered impetus through research throughout the 1980s and 1990s and was concerned to identify and document the factors

that made for effective schools. Several pieces of research found common factors that made for success:²

- effective leadership by the headteacher and senior staff, including their interest and involvement in the quality of the teaching and learning in the school and a sense of 'mission';
- a balance of collegiality and clear decision making by senior managers;
- the establishment of clear academic goals and a widely understood set of principles for teaching – a clear thrust toward achievement and academic excellence;
- consistency of practices with regard to discipline and instruction, together with increased instructional talk;
- developed relations with parents;
- the involvement of students (in academic planning and extra-curricular activities), the development of the social basis of learning;
- an orderly atmosphere throughout the school where the promotion of positive discipline pervades all aspects of the life of the school;
- the application of careful grouping criteria within classes;
- raised teacher expectations of students together with intellectually challenging teaching and carefully matched work;
- greater use of whole-class teaching in the primary school;
- flexible use of staff in primary schools;
- having a limited focus within lessons together with limited organisational complexity.

Box 30: OFSTED's aspects of the curriculum

- 1 *Standards of Achievement* compared to national norms; application to new situations; to be as high as possible.
- 2 *Quality of Learning* pace; motivation; ability to use skills and understandings; progress; learning skills; attitudes to learning; variety of learning contexts; acquisition of new knowledge and skills; development of understanding; showing engagement, application and concentration; productive outcomes; use of assessment for subsequent planning.
- 3 *Quality of Teaching* rigour; teacher expectation; strategies; development of skills and understandings; clarity of objectives (of which children are fully aware); subject knowledge; suitable content of lessons; activities chosen to promote learning of content; engaging, interesting, motivating and challenging activities; pace; range and fitness for purpose of teaching techniques; positive relationships with children; effectiveness of lesson planning, classroom organisation and use of resources; clarity of explanations; quality of questioning; imaginativeness; links between ATs; progression, continuity, relevance, matching, differentiation, balance, richness of provision; regular and positive feedback to students; encouragement of students; good behaviour and classroom climate; effective use of homework.
- 4 *Assessment, Recording and Reporting* accurate and comprehensive records; suitability of arrangements for assessment; outcomes of assessment useful to pupils, teachers, parents, employers; formative assessments; frequency and regularity of reports; consistency of reporting practice; frequency of reports to parents and for transfer; regularity of review of assessment procedures; staff-discussion of records received.
- 5 *The Curriculum* quality and range; equality of opportunity to an entitlement curriculum.
- 6 *Management and Administration* ethos and sense of purpose; effective leadership which is positive, which provides direction, which enables staff to understand their roles in the development of the school and which makes the best of people and resources available and which promotes positive attitudes to teaching and learning; planning (including school development plans and their usefulness as an instrument for improvement); audit of existing work and planning beyond the next school or financial year; implementation and monitoring of plans; working relationships; communication – with and among staff, parents, pupils, community; school self-evaluation and analysis of its own performance.
- 7 *Resources and their Management* teaching and non-teaching staff – expertise, deployment of specialist and non-specialist teachers, development (INSET and updating which are built into the school development plan), fairness of teaching loads; resources for learning – availability, accessibility and equality of access, quantity and quality, efficiency of use; in-school and out-of-school; relationship of resource provision to school development plan; accommodation – availability, condition, efficiency of use, specialist facilities, accessibility, quantity, quality, conduciveness to learning.
- 8 *Pupils' Welfare and Guidance* identification and meeting of pupils' academic, personal and career needs.
- 9 *Links with Parents and Other Institutions* informing parents and using their contributions; links to commerce and industry; quality of liaison; using others to promote learning; use of community resources; transfer documents.

It can be seen from this that effective learning has to be planned, that curriculum planning for effective learning entails attention to overall (long-term) planning, medium- and short-term planning, and planning very specifically for the

contents, organisation, pedagogy and feedback of every aspect of every lesson. Hence the literature from the school effectiveness movement provides us with several important principles for planning.

In primary schools the Office for Standards in Education³ found that the most effective schools held a firm belief that each student could achieve the highest standards possible, and that the curriculum was tailored to individual needs, that it was broad and challenging, that it should involve first-hand experience. Further, the curriculum was taught in a way which developed students' self-esteem and confidence. Indeed, emphasis was placed on the arts, physical education and humanities, as these were found to motivate students generally. Such a curriculum, it is reported, was largely planned and organised in separate subjects, with links drawn between subjects where relevant so that students could apply their knowledge and skills. The curriculum in school was enriched by the use of visits, residential work and the use of subject experts from within and outside the school.⁴

In primary schools student teachers will probably be involved in teaching the literacy and numeracy hours, and so student teachers will need to gather information on how these are addressed in the class.

In addition to the *contexts* of planning the Department for Education and Skills⁵ identifies three *levels* of planning: *long-term planning*, *medium-term planning* and *short-term planning*. The Office for Standards in Education found that most primary schools used the schemes of work from the Qualifications and Curriculum Authority for long-term and medium-term planning.⁶ This ties into the objectives model set out in this book; indeed the Office for Standards in Education specifically commented on the benefits of precisely specified learning objectives.⁷ Long-term planning resonates with the notion of *aims*, discussed in the previous section. Medium-term planning sets *objectives* and *goals*, maybe of a non-behavioural nature. Short-term planning – focused on *intended learning outcomes* – may be performance-based, possibly including behavioural objectives.

Long-term planning is that in which the whole school, departments, subjects and faculties set out the overall curriculum framework that fits with the school's declared aims and policies, the Programmes of Study for the National Curriculum, the time available for teaching, resources (both

within and outside the schools), reference to individual students' needs, abilities and interests, the balance of subjects on the overall curriculum diet for students, the need to establish continuity and progression within and across units of work. Long-term planning will have taken place before the student teacher enters the school.

It is envisaged that schools have a degree of flexibility in their long-term planning.⁸ The long-term planning will embody:

- the school's ethos, values and aims;
- the curriculum priorities and emphases;
- curriculum enrichment;
- the packaging and labelling of the curriculum (which subjects will be taught separately and which will be combined with other subjects);
- the distribution of the curriculum across the key stage;
- curriculum inclusion and differentiation;
- continuity and progression.

That the notion of 'packaging and labelling' renders the curriculum like a commodity may be distasteful for those who regard as retrogressive any movement to make education like any other market commodity.

Medium-term planning is that in which the programmes of work for each group (however defined, e.g. class, year group) are set out, together with an outline of how the programmes will enable assessment to be undertaken. Medium-term planning is that which identifies units of work over a half term or full term (discussed later: *schemes of work*). The student teacher can reasonably be expected to be part of this planning when involved in a long block practice (e.g. a term or most of a term).

Short-term planning is that in which individual teachers set out what they will be teaching on a week-by-week, day-by-day, and lesson-by-lesson basis. Clearly this is the stuff of teaching practice. Short-term planning is usually drawn up on a week-by-week basis, or a day-by-day basis, and depends, for its construction, on the actual events and learning that have taken place. Hence it is almost impossible to have a whole teaching practice's short-term planning worked out in advance of the commencement of the teaching

practice, as that would be to take no account of observations and assessment of learning that have taken place during the teaching time. Short-term planning is unavoidably evolutionary; that is its purpose.

A short-term plan will indicate the specific experiences, activities, learning, tasks, knowledge and skills that the students are expected to acquire, undertake, learn, practise, consolidate and apply.

Medium-term planning is often written either in outline form only, with the detail being reserved for the short-term planning, or, indeed, the opposite, with medium-term planning being written in detail and the short-term planning being written in outline form. Student teachers will need to find out how the school undertakes its planning, so that they can follow the required school practice here. Indeed many schools use ICT to facilitate their planning, and student teachers may need to access this.

For the *foundation stage*, a long-term plan is a means of ensuring that the six areas of learning are addressed in a balanced and coherent way, taking into account that some young children will be in the same setting for more than one year, necessitating the need for careful planning to avoid repetition and boredom. The long-term plan sets out broadly what the school intends the children to learn during a particular year, though it is not so rigid as to prevent flexibility in the case of unanticipated events taking place (e.g. a snowfall, heavy rain, a visit to the seaside).⁹ Long-term planning at the foundation stage might include:

- an indication of when you plan to teach aspects/areas of learning;
- an indication of how regularly and frequently you plan to teach aspects/areas of learning;
- an indication of how you will link aspects/areas of learning in a relevant and interesting way for children.

The Qualifications and Curriculum Authority suggests that, in long-term planning for the foundation stage, it is important to include all aspects of learning, to ensure that 'there is a balance within and between the six areas of learning, and

that there are sufficient opportunities for children to revisit all aspects of learning regularly and frequently'.¹⁰

A short-term plan for the foundation stage might include:¹¹

- clear learning intentions for individuals or groups of children informed by observations and based on the stepping stones/early learning goals;
- a brief description of the range of experiences and activities: adult-directed and child-initiated; indoors and outdoors;
- how experiences and activities can be adapted for individual and groups of children.

The Qualifications and Curriculum Authority provides examples of long-term and short-term planning for the foundation stage, and we advise students to consult these.¹²

Successful planning must demonstrate a strong logical coherence between the medium-term and short-term planning,¹³ both of which are nested within the school's aims and values. This is also made explicit to the students themselves, so that everybody is 'in the picture' and knows what is being expected. The Office for Standards in Education found that it was the co-ordinators for each subject who often had led the planning of the subjects and units of work for each year group in primary schools, and that, even with such leadership, in fact the planning was frequently a collaborative affair.¹⁴ Primary schools were found to draw together their overall plans into a cohesive curriculum, apart from mathematics and English, which tended to be planned separately. Long-term planning is usually with whole groups, classes and forms of students in mind, rather than being differentiated for individuals or sub-groups.

The student teacher can expect to have sight of the long-term planning that has preceded her teaching practice as she will have to fit her proposals into that framework. The student teacher will probably be concerned only with medium-term and short-term planning. With regard to medium-term planning it could well be the case that she becomes part of a team that plans the content and 'delivery' of the curriculum for, say,

a half term or full term. This planning would probably take place during the initial visits to the school, from which the student has sufficient guidelines to be able to go ahead with short-term planning – the specific lessons that she will teach for each week and each day.

Curriculum coherence ‘can be strengthened by linking together, where appropriate, units of work from different subjects or aspects of the curriculum’.¹⁵ This can take place when:

- they contain common or complementary knowledge, understanding and skills;
- the skills acquired in one subject or aspects of the curriculum can be consolidated in the context of another (e.g. the notion of generic and ‘transferable skills’);
- the work in one subject or aspect of the curriculum provides a useful stimulus for work in another.¹⁶

It is very clear that, for the sake of curriculum coherence, a team approach is required. Gone are the days when an individual teacher could plan what she would do with her class(es); teams can be within and across subjects, departments, faculties and age phases. The student teacher will need to find out what the teams are in a school, how they operate together and of which teams she is to be a member or which she is to consult.

The elements of planning

Morrison¹⁷ suggests that a full curriculum strategy addresses several features:

- a situational analysis (the contexts of curriculum planning, with reference to the wider society, the local community, and ‘within-school’ factors – e.g. students, teachers, resources);
- a rationale for the curriculum that is being planned for the teaching practice – its purposes, priorities and principles;
- a statement of how breadth, balance, coherence, continuity, progression, differentiation and relevance are addressed. All students should have a broad and balanced curriculum that is relevant to their particular needs;

- an indication of how the cross-curricular dimensions, themes and skills will be addressed;
- a plan of how the curriculum content will be addressed – its sequence (logically and chronologically), organisation (e.g. by topics and/or subjects) and resourcing (time, space, materials, staff, administrative support, money);
- an indication of teaching and learning styles to be employed;
- an indication of how assessment, evaluation and record keeping operate.

Characteristics of the curriculum

It is necessary to comment upon the ‘characteristics of the curriculum’¹⁸ that have been alluded to above: breadth, balance, relevance, coherence, continuity, progression and differentiation within curricula defined in terms of ‘areas of experience’, which comprised:

aesthetic and creative;
human and social;
linguistic and literary;
mathematical;
moral;
physical;
scientific;
spiritual;
technological.

They represent an augmented version of a liberal curriculum. Many found the notion of ‘areas of experience’ attractive as it emphasised experiential learning and permeable subject boundaries (HMI themselves indicated that children could gain mathematical experiences from art and *vice versa*).¹⁹ However these were overtaken by the subject framed version of the National Curriculum in 1988. Morrison and Ridley²⁰ argue that breadth should extend beyond curriculum content to include a student’s entitlement to breadth of pedagogic styles, learning processes and experience of types of classroom organisation. In the United Kingdom a prescriptive notion of breadth has now prevailed, interpreted as the National Curriculum in its several elements.

The same happened to the HMI notion of 'balance'. The open-endedness of the term was reflected in the looseness of the phraseology that HMI²¹ used in defining this as being addressed through 'appropriate attention' being given to the areas of experience and the 'elements of learning' – knowledge, concepts, skills and attitudes. Balance was able to be exerted not simply over the course of a week's work but in a longer time frame, so, for example, scant attention to science in term one could be rectified by greater attention to science in term two. For secondary schools the notion of balance was accompanied in the HMI report by a castigation of too narrow an emphasis on examination syllabuses in the years immediately preceding public examinations.²²

To some extent the National Curriculum has silenced the debate on exactly what is meant by balance. For example, Morrison and Ridley,²³ using the analogy of a balanced diet, comment that one person's balanced diet is another's unbalanced diet because people have individual dietary needs and preferences. The analogy holds in relation to the world of the curriculum; it misrepresents the individualistic notion of balance to prescribe a common curriculum diet. We know from our experience that some students need more social education than others simply to prepare them for adult life; others need more reading practice in order to be able to access the entitlement curriculum; others have a particular enthusiasm for, say, mathematics, such that to deny them an increase in this area is to demotivate them. The implications of the argument here is to suggest that the simplistic prescriptions of the National Curriculum misrepresent the complexity of the issue. One could argue that an attenuation of the simplistic view of the balance in the National Curriculum can be seen in the notion of 'differentiation', wherein individual needs and differences are intended to be addressed. However, as will be discussed below, this turns out not to be the case.

In addition to curriculum breadth and balance, the notion of 'relevance' implied for HMI²⁴ students' entitlement to a curriculum that would serve their present and future needs as adults and workers. HMI bracketed together relevance and practicality; for students HMI advocated

experiential, practical learning and problem solving, the need to relate experiences in school to the wider society. As with the notion of breadth, so HMI's suggestion for relevance was pre-empted by the National Curriculum programmes of study and cross-curricular issues, salted with reference to periods of work experience in secondary schools. It was the National Curriculum that was to be relevant.

Though HMI did not specifically address curriculum 'coherence' in its 1985 report, nevertheless one can detect this in the National Curriculum, where, for example, planners are exhorted to try to ensure that different subjects in the overall curriculum relate to each other where possible and that different areas within each subject relate to each other. So, for example, a student studying weather and climate in geography might use statistics and data about weather in mathematics, or study some important historical or religious events that turned on the weather, or undertake some poetry writing about the weather, or study (or compose) stormy and calm music. Clearly this is a matter that requires the careful co-ordination of subject teams in secondary schools and phase teams in primary schools so that the programmes of study of the National Curriculum are accessed without duplication or repetition.

It is, perhaps, an irony that the calls for coherence, wherein logical connections are to be made across subjects, are made in the face of the framing of the National Curriculum in subject terms. The notion of coherence argues very powerfully for integrated topic work; that seems to fly in the face of the arguments against topic work that have been voiced by government representatives (discussed later in this part).

However there is another different but no less compelling view of coherence that interprets it as intelligibility. In this sense we move away from a prescriptive view of coherence, *viz.* the coherence that curriculum planners plan, to a constructivist view of coherence. In this latter interpretation it is the student who causes subject matter and knowledge to cohere in the sense of being able to assimilate it and accommodate it to existing conceptual structures in her own mind, a view that resonates with Gestalt psychology. Though we can plan for coherence to

our heart's content it might not in fact occur for the student if we do not endeavour to communicate and facilitate it in the student's conceptual framework – their 'zone of proximal development'.²⁵ This argues for a view of learning through the student's eyes rather than the curriculum developer's, and echoes the salutary definition from the former Schools Council²⁶ that the curriculum is what each child takes away. It is perhaps utopian, then, to think that student teachers can plan for coherence in a teaching practice, for coherence-as-intelligibility requires an intimate knowledge of how each individual student learns. Though the teachers in school may have some of this knowledge it is perhaps unreasonable to expect a student teacher to be able to find out very much about this in the short period of a teaching practice. The safer, if less relevant, way is to plan for curriculum coherence rather than coherence-as-intelligibility!

The notion of 'continuity' is an important educational principle, arguing that the curriculum that is planned for a teaching practice must build on prior curricular experiences that the students have had. There can be continuity of:

- experiences;
- skills;
- concepts;
- knowledge;
- attitudes;
- in-school and out-of-school experiences;
- pedagogy;
- organisation;
- aims and objectives;
- management styles;
- social experiences;
- record keeping.

Continuity applies *vertically* as students progress through school, and *laterally* across different teachers and subjects.²⁷ The latter has increased significance in primary schools with the rise in subject and subject specialist teaching. The student teacher can plan for continuity, first, by discussing with relevant teachers what the students have done before and what they are doing in other curriculum areas, and second, by looking at records of work undertaken.

The list above refers not only to curriculum matters but also to management matters, interpreting continuity as consistency. Much attention has been given to generating whole-school policies on every aspect of a school's work in an attempt to bring about greater consistency of practice. For example, many policies on behaviour in school lay great stress on consistency of rewards, sanctions, referral systems, handling difficult students, being fair, and promoting positive behaviour. Moreover, the literatures both on behaviour management and on school effectiveness combine to indicate that consistency in behaviour policies has positive spin-offs in curriculum matters in terms of improved standards of student performance.²⁸ What we are arguing here is that a curriculum plan will make reference (if tacitly) to other aspects of school life – discipline, pedagogy, organisational arrangements.

As with the notion of coherence, the notion of continuity has two very different interpretations whose impact on practice is significant. We saw that an alternative to a prescriptive view of coherence was a view that saw coherence residing in the student's mind – a constructivist interpretation. The same applies to continuity. It is the student ultimately who establishes the continuity between existing knowledge, concepts, skills, ways of working, teaching and learning styles in her own mind, even though we might be able to facilitate that process of building links.

This draws on the work of Vygotsky²⁹ who argues that teachers ought to be able to identify the 'zone of proximal development' in students – the distance between the *actual* and *potential* intellectual, social, cognitive, emotional development in the student. This argues for careful assessment of where the student is in intellectual development etc. in order that her subsequent learning can be planned without it being so close to her existing knowledge and abilities as to render learning boring or so distant from her existing knowledge and abilities as to render learning impossible – to stretch rather than to dislocate. As with the student-centred version of coherence above, it is perhaps unrealistic to imagine that a student teacher can go very far in seeing a situation through a student's cognitive lenses in the short period of a teaching practice.

That is not to argue that it should not be attempted; it argues for realistic expectations to be held about what is possible.

The partner to continuity is 'progression'. The National Curriculum is overtly and massively prescriptive in its interpretation of progression. Whether one agrees or disagrees with the interpretation offered, nevertheless at least there is a clear view of what the National Curriculum considers progression to be. It is this: progression is seen as the cumulative, systematic and incremental acquisition of the knowledge, understandings and matters of the National Curriculum through its ten-level sequence for planning and assessment purposes and its programmes of study.

It is possible, in some cases, to detect a logical sequence through the levels and programmes of study (addressing the notion of logical connections that was raised in the discussion of curriculum coherence). However, a *logical* sequence, even if it were total, which, in the National Curriculum, it is not, does not necessarily imply a *psychological* sequence of learning.³⁰ Students' learning is eclectic, lateral and recursive rather than following the clean lines of the National Curriculum. For example, what one student finds difficult another will find straightforward; what one student finds easy another finds difficult, a factor that was confirmed, as mentioned in Part I, when the formal assessments showed that some young children who could do the tasks that met Level 3 were unable to do the tasks set for Level 2. There are no unequivocally objective criteria for ascribing levels of difficulty to tasks; indeed there are several ways in which progression³¹ can be defined that may stand as polar opposites to each other:

- simple to complex/complex to simple;
- general to specific/specific to general;
- singular factors to multiple factors/multiple factors to singular factors;
- low order to high order/high order to low order;
- unique instance to overarching principle/overarching principle to unique instance;
- concrete to abstract/abstract to concrete;
- familiar to unfamiliar/unfamiliar to familiar;
- present to past/past to present;
- present to future/future to present;
- near to distant/distant to near.

In fact when one turns to the documentation of the National Curriculum one can see a range of different views of what constitutes progression:

- 1 The development of an enquiring attitude.
- 2 Increasing attention, concentration and ability to sustain study.
- 3 Greater range of purposes, applications, activities, audiences, resources, equipment, demands and contexts.
- 4 Greater quantity of knowledge, skills, understandings, breadth and depth of study.
- 5 Greater complexity of ideas, concepts, sequences, stages and applications.

In planning for progression, therefore, the student teacher has to temper the view of progression that is sometimes implicit in the National Curriculum with student-centred and alternative views of progression. As with the notions of coherence and continuity mentioned above, the expectation that student teachers will be able to understand the learner in sufficient detail to be able to plan for a learner-centred view of progression in the period of a teaching practice is almost certainly unrealistic.

With regard to the final characteristic of the curriculum – 'differentiation' – a major study in 1984³² reported not only that work was poorly matched but that teachers were blind to their underestimation of children's abilities and hence held unnecessarily low expectations of their students. In mathematics only 43 per cent of work was well matched, with 28 per cent being too difficult and 26 per cent being too easy. In language only 40 per cent of the work was well matched, with 29 per cent being too difficult and 26 per cent being too easy. Low attainers were overestimated on 44 per cent of tasks and high attainers were underestimated on 41 per cent of tasks. These figures cast serious doubt on the extent to which students were working 'at their own rate'. These are crude statistics; the full data set is more sophisticated than this. The research analysed matching in terms of five types of task:

- *Incremental tasks*, involving the learning of new knowledge.

- *Restructuring tasks*, where students use familiar materials but are required to discover, invent or construct new ways of looking at a problem for themselves.
- *Enrichment tasks*, where students use familiar materials in unfamiliar contexts, i.e. applying knowledge.
- *Practice tasks*, where familiar knowledge is rehearsed to speed up thinking processes.
- *Revision tasks*, where students restore to their working consciousness knowledge that had been learnt some time previously.

The study found that underestimation included teachers setting what they thought would be incremental tasks but which, in fact, turned out to be practice tasks. Others overestimated students by setting what they thought would be practice tasks but which were, it turned out, incremental tasks.

The implications of this research are clear for student teachers; that they should conduct an analysis of the demands of the task for each individual, or, more realistically, for each group of students and adjust the demands accordingly to avoid boredom, demotivation, upset or frustration. That is not an easy task for several reasons. In *practice* students, particularly perhaps inarticulate students, do not always want to reveal their weaknesses, whilst more able students do not wish to reveal their strengths as this will only attract more work! In *theory*, as was mentioned in Part I, the notion that one can diagnose a student's abilities with a sufficient degree of precision to be able to make more than a crude estimate of how well the work can be matched, is flawed. Nevertheless the implications are clear for planning: as careful a diagnostic assessment as possible is needed of the students' abilities in order to be able to approach anything close to a good match of work.

The discussion of differentiation so far has been at a cognitive level, matching the child's abilities to the demands of different types of task – the 'zone of proximal development' mentioned earlier. However, Morrison and Ridley³³ argue for a more extended and complex view of matching. They argue not only for the need to analyse task requisites but to take account of characteristics of the learners in question: their preferred modes and ways of working and learning (e.g. on their own, in small groups, in large groups, with the teacher,

without the teacher, with a lot of apparatus, with little apparatus, writing, reading, drawing, listening, talking, doing, problem solving). The characteristics of children go beyond simply their preferences for learning and include, for example, their interests, self-concept, motivation, degree of autonomy. Indeed Withers and Eke³⁴ argue for a social constructivist view of matching that embraces social context and teachers' and students' discourses, i.e. 'matching' embraces more than a narrowly intellectual field. Differentiating learning, thus, will need to take account of personality characteristics, social interaction, emotional development, interest, involvement, potential for and willingness to study.

Nor does the discussion of differentiation end there, for just as there are factors that reside in students so there are important factors that reside in student teachers: their personalities, abilities, interests, preferred teaching styles, levels of subject knowledge, preferred organisational arrangements (of students, curricula, classrooms, resources), previous experiences, willingness to take risks, uses of resources, interaction with students, values, potentials. These exert an influence on matching and differentiation.

What we are arguing for is a notion of differentiation that moves beyond the simplistic and facile views of *differentiation by outcome* (where the same relatively open-ended task is set with the expectation that children of differing abilities will produce differentially successful outcomes) and *differentiation of input* (where different tasks are set to different children, depending on their abilities). What we are suggesting is that the student teacher will need to consider, for example, differentiation of:³⁵

- time allowances and pacing;
- the amount, type and quality of teacher attention, prompting, support, demand and challenge;
- the type of language that the teacher uses and the level and order of questioning;
- the style of teaching;
- the social arrangements, groupings and working arrangements in the class;
- the activity, task type (e.g. extension, application, practice), demands, cognitive challenge and expected outcomes, covering, for example, similar content but at different levels;

- responsiveness to students' optimum and preferred styles of learning.

This is merely an introductory list,³⁶ the intention of which is to suggest that differentiation is not simply a matter of the speed and order in which individuals progress through the National Curriculum, but that the concept of differentiation is itself differentiated and refracted through a host of different lenses – intrapersonal, interpersonal, cognitive, affective, behavioural, cultural, and so on.

Subject-based and topic-based approaches to the primary curriculum

A key feature in the planning of primary school curricula is their framing. In particular the debate about topics and subjects refuses to go away. The Plowden Report³⁷ gave legitimacy to a child-centred approach to primary curricula in which topic work featured large. This was taken up by others³⁸ who suggested that:

- primary children naturally view the world holistically and therefore integrated curricula would be more meaningful to them;
- children unify rather than atomise and fragment knowledge in their minds by assimilating new knowledge to existing knowledge;
- a child's 'whole personality' was best served by a holistic approach to the curriculum;
- to bind learning into subject compartments would prevent important links between subjects from being explored and would close up channels of investigation;
- a rhythm of learning would be better served by not requiring young children to switch from subject to subject, and this should lead to the planning of topics that integrated subjects and areas of knowledge;
- parcelling up knowledge into discrete subject areas misrepresented the nature of knowledge or knowing;
- many key concepts straddle subject boundaries;
- new knowledge is not always subject-bound;
- subject-based curricula reflect traditional academic and 'preparatory school' values that are out of place in a complex, information-rich world;
- subject-based curricula, marked by strong classification and framing, i.e. with clear boundaries put round them which neither students nor teachers have the power to control or remove, are indicative of a conservative and elitist curriculum that reproduces inequality in society;
- transferable skills will become increasingly necessary in a changing world and these are best served by integrated approaches.³⁹

Many of these arguments in favour of a topic-based approach operated at the level of ideology and values. Hence it is not surprising to see in the literature a range of counter-arguments that also operate at the level of ideology and values. Alexander,⁴⁰ for example, suggests that the world is only integrated if we wish to view it that way, a view that echoes Walkerdine's⁴¹ powerful argument that what is perceived to be a 'natural and given' ability to view the world in an integrated way is, in fact, no more than a social construction, a production rather than an uncovering of those characteristics that are deemed to be natural in children. Entwistle⁴² suggests that integrated studies provide a poor basis for acquiring knowledge in a manageable or disciplined form; Eggleston and Kerry⁴³ argue that to talk in terms of integration is, contrafactually, to suggest that the basic building blocks of the curriculum are in fact the disciplines of knowledge and that it is unhelpful to students to neglect the disciplines of knowledge and their methods of enquiry. A strongly worded attack on topic work is mounted by Alexander *et al.*,⁴⁴ who argue that to deny children access to subjects is to deny them access to some powerful ways of regarding the world. They advocate stripping out the ideological argument in favour of or against subject teaching and recognising the empirical limitations of topic work and the empirical possibilities in the promotion of subject teaching for effective learning.

Their views echo Morrison⁴⁵ who argues that subject knowledge in teachers and subject specialist teaching could help to raise standards because teachers with expert subject knowledge could better diagnose a student's needs and plan more carefully and knowledgeably for a differentiated and well-matched curriculum that would build in progression. He argues that a subject specialist

teacher might thereby, in fact, be more child-centred than the progressivist teacher. Indeed a teacher's subject knowledge is a critical factor in successful teaching and, for children in the upper end of the primary school, subject and subject specialist teaching might bring a depth and richness to their studies that they had previously been denied. Further, much of what had passed for topic work in primary schools had been unchallenging, superficial, undemanding copying out from texts and that progression was marked by its absence over the years of a primary school child's exposure to topics.

The Office for Standards in Education⁴⁶ argues that topics might be successful if they are carefully and co-operatively co-ordinated, if coherence and progression are planned consistently, if they address the subjects and programmes of study of the National Curriculum, if they specify intended learning outcomes, objectives and assessment, and if they have a single subject bias or emphasise particular subjects. However, more

recently, OFSTED reported that most primary schools used extensive amounts of subject teaching,⁴⁷ a sea change in practice on which they reported in 1993, in which only one of the 74 primary schools that they had visited organised their curricula entirely around subjects.

Staging curriculum planning

There is a saying that the best way to eat an elephant is by eating little pieces at a time!⁴⁸ The same applies here; though the list of factors above that require planning seems perhaps to be overwhelming it can be made manageable by careful staging. The following pages provide an indication of how this can be done. Essentially the process of planning involves the funnelling of issues and contents from the general to the specific, from outline areas of study to particular lessons. In essence this can follow a staged sequence, set out in Box 31.

Box 31: A planning sequence

- 1 Select the area of study (e.g. a topic or curriculum subject) with reference to the programmes of study, non-statutory guidelines and attainment targets of the National Curriculum.
- 2 Brainstorm – read around the area, collect relevant resources, investigate the possibilities in the area for study.
- 3 Organise the topic by curriculum areas (for primary schools) – the core and foundation subjects and the cross-curricular areas.
- 4 Note the knowledge, concepts, skills and attitudes that are to be developed overall and in specific lessons.
- 5 Identify the specific attainment targets and levels that the programme addresses.
- 6 Plan the sequence (logical and chronological) through the work.
- 7 Indicate how continuity and progression will be addressed.
- 8 Indicate how work will be differentiated in terms of tasks, knowledge, skills, abilities, needs and interests. Plan for differentiation of input, process and outcome.
- 9 Plan for good matching – looking at the type of task and the level of demand.
- 10 Plan appropriate resources – first-hand, second-hand, materials, time, space, display, people, e.g. whole-class, group, individual work, problem solving, investigational work, didactic and instructional, informal, experiential, practical.
- 11 Decide resources – first-hand, second-hand, materials, time, space, display, people – anticipating problems and how they might be addressed.
- 12 Plan how to introduce, develop and conclude activities and sessions.
- 13 Plan your evaluations and assessments.

General



Specific

Box 31 moves from the medium term to the short term. It provides a conceptual planning map that can be operationalised straightforwardly. The figure addresses a divergent, all-accepting phase of planning (stages 1 and 2) and a convergent, organisational phase (stages 3–13). It addresses the features of a situational analysis and, from such an analysis, identifies priorities and practices. This addresses the third major area of planning mentioned above – the *focus* of planning. We identify four stages in addressing the several focuses of planning.

Stage 1: a situational analysis.

Stage 2: the construction of schemes of work.

Stage 3: weekly and daily plans.

Stage 4: individual lesson plans.

These stages are addressed in order below.

Stage 1: situational analysis

This draws together the material that you have gained during the preliminary visit(s), identifying:

- the physical features of the school;
- the school in general;
- the classroom;
- particular information to record.

Out of this spring priorities to be addressed in the planning of curricula, teaching and learning. In terms of keeping a school experience file the contents might be presented thus:

- *Title page:* this could provide the following information:
date of the practice;
name of the student teacher;
name of the school, its address and telephone number;
name of the headteacher;
name of the class teacher (if appropriate);
name of the supervising tutor and mentor.
- *Page 2* and following: details of the class(es) to be taught:
number in the class;
its composition (i.e. boys, girls, mixed);

age range and abilities;
names of the students;
seating plan(s).

- A plan of the school.
- The timetable, indicating fixed slots, e.g. use of the hall, television rooms, computer suites, swimming (in primary schools), assemblies, lessons taken by other teachers (for primary schools), work experience (for secondary schools).
- Further information (e.g. notes and information on the students; details of specialist and other resources, the predominant catchment area of the students).
- Overall aims and purposes of the school, teaching practice, curriculum content (with reference to how some 'characteristics' of the curriculum will be addressed – breadth, balance, coherence) and students' learning.
- Schemes of work.
- Charts, diagrams and words which indicate the sequence of the work, i.e. so that it is possible to see at a glance the development within each subject and activity and the relationship (where applicable) between the subject and other curriculum areas.
- Weekly plans.
- Daily plans.
- Lesson plans (with evaluations).
- Records.
- Additional materials.

The focus here is on medium-term planning and short-term planning; indeed, as mentioned earlier, long-term planning will have probably been undertaken before the student teacher arrives at the school. The student teacher inherits the long-term plan and works within it.

Stage 2: the construction of schemes of work (i.e. planned possibilities)

Having reviewed aims and objectives in the preceding part, we now consider two important tools in the preparation for teaching practice where they play a vital part – schemes of work and lesson notes. The broader aims will provide a focus for a student's schemes of work and the

more specific objectives, the starting point for individual lesson notes, enabling the reader to see how each of these tools ‘fits in’ to the objectives model presented there.

A scheme of work in the context of school practice may be defined as that part of a school/class syllabus that the student teacher will be required to teach during her/his teaching practice. In addition to its primary function in providing an outline of the subject matter and content, it may also include information on the children (age, sex, ability, number, class, groups, etc.) as well as on organisational matters, evaluative procedures and ancillary aids. As already indicated, it is also advisable for the student teacher to find out what has gone before in the particular area he will be responsible for and include some reference to this in the scheme.

The scheme will therefore indicate the amount of ground a student is likely to cover in her stay with the host school. It will be a survey of the work she will undertake and will enable her to clarify her own thinking and to plan and develop those particular curriculum experiences which she may feel will require more time and attention in preparation. Although part of a school or class syllabus, a scheme should not be seen as fixed and rigid; modifications may be made to it subsequently in the light of new ideas or further experience of the children. One knows what the broad aim is, and there is nothing to stop one taking a detour along the route – like devoting a lesson to a topic that has arisen incidentally from the students’ own interests.

Planning schemes should be done in consultation with the class teacher. The criteria to bear in mind when planning one’s schemes in this context are *continuity in learning* and *progression of experience*. Let us be very clear: most schools plan by subjects and most make extensive and heavy use of the schemes of work provided by the Qualifications and Curriculum Authority, available on www.standards.dfes.gov.uk/schemes. Each subject is divided into *schemes*, *units* and *sections*; a scheme comprises several units, and each unit is divided into several sections. Even though the schemes, units and sections are non-statutory,⁴⁹ they are widely used.

A *scheme* provides guidance on:

- teaching the subject;
- aims and objectives;
- principles of constructing a scheme;
- links to other subjects and aspects of the curriculum, including the literacy and numeracy frameworks, where relevant;
- an overview of the units;
- progression and inclusion;
- sequencing the units;
- time allocations;
- useful organisations and websites.

The *units*, which are intended to be medium-term plans, indicate:

- how they address the programmes of study and non-statutory framework for each key stage;
- links to other subjects and aspects of the curriculum;
- how the work relates to previous work and what can follow from the work in question;
- vocabulary to be used and learned by students;
- resources needed for the unit;
- intended outcomes in terms of knowledge, skills and understanding.

Within each unit, the *sections* provide a series of lessons, as short-term plans, which indicate:

- learning objectives and the small steps to be taken to reach them;
- teaching and learning activities;
- intended learning outcomes and how they provide indications of student progress;
- examples of usage;
- short-term lesson plans;
- points to note, e.g. about teaching and learning, class management, Health and Safety, homework and links to other subjects.

All of these are able to be downloaded in two forms: as pdf files which cannot be adjusted, and as Word files which enables them to be tailored to individual schools’ and teachers’ needs. Additional materials are available on the Virtual Teacher Centre website: <http://vtc.ngfl.gov.uk>.

The Department for Education and Skills⁵⁰ reports that effective planning of schemes of work enables teachers to plan a coherent, relevant and engaging curriculum that promotes continuity, and that it should include clear objectives and how to achieve them. The use of ICT is also seen as a helpful tool in such planning. Planning is intended to start from the programmes of study, rather than, say, the level descriptions or attainment targets; both of the latter are intended to be used primarily for assessment purposes rather than for planning purposes.

The comments that follow are all intended to be informed by the very extensive use of the *schemes, units* and *sections* that are provided by the government for its National Curriculum.

Of particular use in the planning of schemes of work are the programmes of study for the National Curriculum as they indicate what students should be taught at each key stage; the 'matters, skills and processes'⁵¹ that should be taught to students of a range of abilities during the key stage. Student teachers will also need to plan within the context of the four general teaching requirements: inclusion, language, ICT and Health and Safety matters.

What to include in a scheme of work

The following information should generally be included in a scheme of work:

- 1 Particulars of the children in the class or group; these will cover number, age, sex, ability and stream (if appropriate).
- 2 Previous knowledge and experience of the class in respect of the subject matter.
- 3 Reference to the National Curriculum programmes of study, attainment targets and level descriptions.
- 4 Reference to the government's *schemes, units* and *sections*, where appropriate.
- 5 The number and duration of the lessons, i.e. the amount of time available overall and for each lesson.
- 6 The aim of the scheme: an outline of the subject matter and content, possibly with

the teaching and learning objectives for each lesson or unit of learning.

- 7 The main content to be covered, in terms of knowledge, concepts, skills, understandings and attitudes.
- 8 An indication of how the scheme will demonstrate relevance, differentiation, continuity and progression.
- 9 An indication of how the scheme demonstrates coherence (including relatedness to other curriculum areas).
- 10 Some indication of organisational factors, such as: how are the pupils to learn? What kind of work units are planned – class, group or individual? Methods of teaching and learning to be employed – formal class teaching, self-direction under guidance, etc.
- 11 Sources of information – books, worksheets, pictures, software, videos, speakers, visits, etc. The manner in which the children's work will be presented, for example oral, written, dramatic, folders, booklets, murals, display, exhibition, etc.
- 12 Means of evaluation: how are the pupils' achievements to be assessed against the lesson objectives? What criteria will be used?
- 13 Equipment available to be used: books, materials, apparatus, computers, whiteboard, chalkboard, LCD equipment and PowerPoint projectors, learning aids, audio-visual equipment, etc.
- 14 What the work will lead on to after the student teacher has completed the practice (i.e. when the class is returned to the class teacher).

It is usually recommended that schemes of work should be acquired or prepared before teaching practice begins. One such arrangement is as follows:

SUBJECT CLASS

PARTICULARS OF CHILDREN: age, sex, ability, number, groups, etc.

- 1 Lessons – number and duration (where appropriate).
- 2 Aims, objectives and priorities for each scheme (general and very specific).

- 3 Previous knowledge and experience of the area(s).
- 4 Outline of content and key concepts to be covered (possibly with lesson objectives):
Week 1 Lesson 1, 2, etc.
Week 2 Lesson 4, 5 etc.
- 5 Organisational factors, teaching styles, learning styles to be adopted.
- 6 Evaluative procedures and assessment evidence.
- 7 Equipment.

Schemes of work must demonstrate sequencing. A sequential scheme is one in which the components are logically related to one another and in which the achievements of the later components will depend in large measure on having mastered the earlier ones, i.e. the notion of progression. Much successful learning in 'linear' subjects (like mathematics) depends on such organisation and continuity.

An exception to the sequential scheme is a plan for topic work, an example of which we give in Box 32.

An approach to planning a scheme of work

In the case of the primary school Year 6 class, Box 32 represents the results of an initial 'brainstorming' of ideas about an integrated topic that have now been refined into the subject framework of the National Curriculum. The student teacher has made certain that her proposals for the curriculum content fit with the other programmes of study, schemes, units and sections of the National Curriculum for each of the subjects indicated. The programmes of study have statutory status but the cross-curricular skills, dimensions and themes do not. The student teacher has gone one stage further, which is to check that the scheme of work is correctly matched in terms of the attainment targets for each subject where applicable.

The next task, where applicable, is to address the level descriptions of the National Curriculum for each attainment target so that the work is appropriately matched in difficulty to the abilities of the students (though, as mentioned earlier, in fact the level descriptions are to be used more as

guides for assessment rather than as guides for planning). At this stage the student teacher will have to clarify how the scheme of work builds on previous knowledge, concepts, skills and attitudes and how it addresses progression and differentiation. What the student teacher has done so far is to create the framework for a scheme of work in each of the curriculum areas.

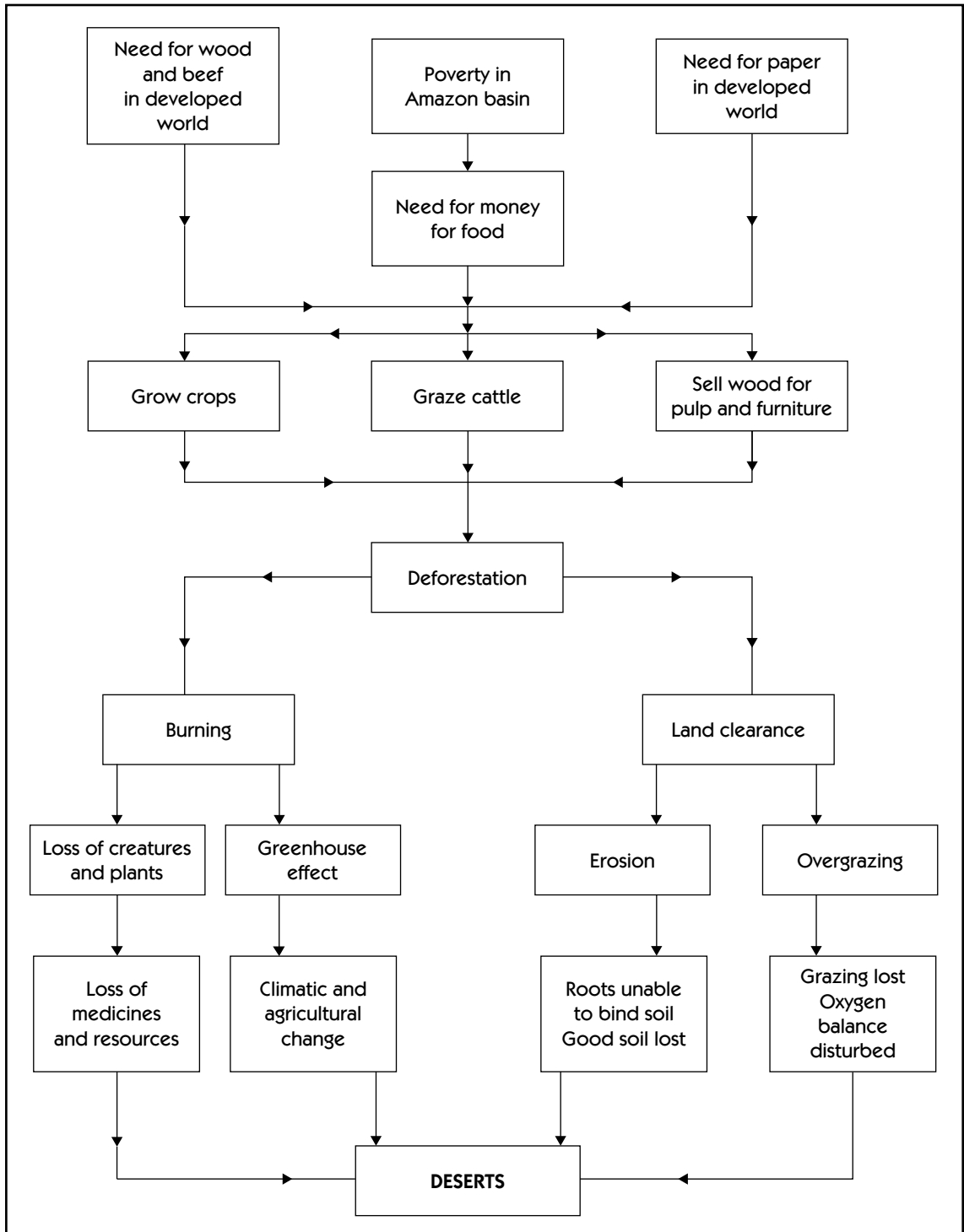
The final task is for her to go through each curriculum area in turn and for each devise a programme of work that has a clear sequence and structure. This means that she has moved from outlining an overall statement of content to subject-specific, detailed descriptions of the curriculum content to be covered. The schemes of work, then, will probably be subject specific, with each subject setting its aims and objectives, priorities, content, key concepts to be taught, teaching and learning styles to be employed, resources, and a delineation of what the expected learning outcomes will be and what the assessment evidence will be during and at the end of the programme. This means that the student teacher of a primary class will have ten schemes of work – one for each of the core and foundation subjects and one for RE. Once the schemes of work for each subject have been planned they can be transferred rapidly (particularly if the process is computer-assisted) onto a matrix, with subjects listed on the vertical axis, and Weeks 1–4 along the horizontal axis.

Using the matrix the student teacher will be able to see how each subject will develop over the four weeks by looking across the rows. Looking vertically down the columns enables her to see how each subject area relates to the others in any given week. Further, looking along the rows indicates how *progression* will be addressed in each subject, whilst looking down the columns indicates how *continuity* will be addressed by identifying the relationships between activities and subject areas in a single week. This is particularly valuable if topic work is to be introduced that integrates several curriculum areas.

Another example of a planning matrix is of a scheme of work for Geography for Year 8 students, again over a four-week period, and places a strong emphasis on planning by key concepts, e.g. the concepts of (a) desertification, (b) the economic

Box 32: A topic plan for a Year 6 group

Topic: Food Duration: January and February		Year Group: 6	
English AT1. Debating the location of a supermarket; should we use pesticides? drama on angry customers returning purchases; writing advertisements; should we all be vegetarians? AT2 evaluating evidence – the Kava story; language modelling – making a fish and potato pie; topic books on food; reading work sheets and information sheets; reading indexes to fruit and vegetables (non-fiction); AT3 writing recipes, letters of support/opposition to supermarket proposal; narratives, diaries; devising a questionnaire to gather local opinion on supermarket; narrative/poetry – when I was left to make the dinner; writing a report on the survey made.		Mathematics AT1, AT2. Comparing prices for different amounts of food; giving change; calculating averages; percentages and fractions (link to pie charts); comparing prices; AT4 pictograms, histograms, line graphs of likes and dislikes in food; actual food eaten (by type); Venn diagrams of food types in bought products; estimation of seed density in fruits; handling data – gathering, processing and presenting data about supermarket; considering national trends in growth of fast food outlets; problem solving – the milk bottle and crates problem; time lines of when food is eaten.	
Science AT1, AT2. Purposes of different food types – growth, repair, protection, energy, digestion, chemical balance; ways of preserving food; healthy and unhealthy foods; nutritional and energy values; dissecting and labelling fruits; AT3. Heating and cooking food – changes (sugar, eggs, margarine, custard, milk, potatoes) – permanent and impermanent changes; making butter; decaying food; yeast and bread making.	Design & Technology Making and calibrating a weighing machine; design and test a machine to test the ‘crispiness’ of crisps; making model shops and market stalls; making a ‘good food’ board game; making a food dominoes game.	Information and Communication Technology capability Software – balance your diet; the fishing game; what do you eat? Generate and interrogate databases on food eaten; simple statistical packages; preferences and dislikes; word processing of recipes, questionnaires; letters; accounts of how the survey was done.	
Geography Locating original sources of imported food; locating fishing grounds; primary and secondary food-related industries; siting a supermarket; effects of climate on vegetation and crops; a survey of types of shops in the locality and why out-of-town shopping is growing.	History Voyages to the Spice Islands and food on board ship; typical foods in Tudor times (using facsimile first-hand documentary resources); preserving food in history.	Music Food songs with accompaniments – ostinati and pitched percussion.	
Art and Design Posters to indicate healthy and unhealthy foods; vegetable and fruit prints; observational drawing of still life fruits; market scenes.	RE Foods and festivals – Chinese new year, Divali, Easter and Christmas, Hannukah, wedding ceremonies.	PE Emphasis on keeping healthy through exercise and diet (ref. the Happy Hearts project).	
Personal, Social and Health Education Uses and abuses of alcohol; healthy and unhealthy diets; the need for exercise; nutritional value of foods; obesity and diet; safety in handling foods; dangerous effects of some foods – e.g. additives, sugar. Arranging a tea party for a group of elderly residents – who to invite; source of finance for project; expenses and costing; supermarket packing problem.		Citizenship Legal protections for products bought; how to complain; protecting shop workers’ rights and work routines; should shops open on Sundays? Types of jobs done by women and men in shops – managers, supervisors, senior executives, cleaners, shop assistants, checkout operators; pay differentials; employment and unemployment for ethnic minorities in the food trade; making shops accessible to those unable to walk.	

Box 33: A flow chart for planning

imperatives of the developed world that lead to the economic exploitation of the third world, and (c) the concept of deforestation. In conceptual terms the plan is represented in Box 33 and, in essence, falls into a four-week teaching practice thus:

Week 1: The poverty of the rainforest dwellers, coupled with the need for the developed countries to have wood for pulp and furniture and beef for food, create a situation where income for the rainforest dwellers can be gained by deforesting the rainforests in order to sell the wood and to clear land for grazing cattle and growing crops.

Week 2: As deforestation increases (because of the need for new grazing and for more wood) the 'slash and burn' principle for clearing the forest is difficult to halt because of the income that it generates.

Week 3: The burning of the forest permanently upsets the climate and contributes to the greenhouse effect whilst the soil, now lacking any tree roots to hold it together, is eroded by the rain. This problem is compounded by overgrazing.

Week 4: A dust-bowl effect is caused, resulting in loss of medicines from plants, the diminution of bio-diversity, permanent climatic change, yet it still continues because of the exploitation of the underdeveloped world by the developed world. Considerations of how to remedy this complete the four-week practice.

As it stands this scheme of work is incomplete, being *conceptual* only. It requires amplification by detailing aims and objectives; how it builds on previous work (i.e. progression); how it relates to the relevant areas of the programmes of study and the levels within the National Curriculum; resources; specific content that will be approached to address the concepts listed here; teaching and learning styles; intended learning outcomes; progression and differentiation; and assessment criteria and methods. Though the scheme sets out its priorities at present – the key concepts to be addressed – it needs much greater detail.

This second example is of one scheme of work for one secondary class. Typically the student teacher will be teaching several classes, hence several schemes of work will be required, one for

each class/set/group (falling in with the organisation of students in the school). Again a matrix approach to planning can be useful for the student teacher, to chart the commitments and preparations that will be needed over the teaching practice.

Stage 3: making weekly and daily plans

Stages three and four of the four-stage model concern short-term planning – the tactical level of planning rather than the strategic levels of medium-term planning, clarifying specific learning objectives and intended outcomes. It was stated earlier that schemes of work are to be considered as *planned possibilities*, i.e. there is some potential for lessons not to go as originally planned; classroom processes are non-linear. Hence whilst the devising of schemes of work is a necessary feature of planning it is also necessary to review what takes place over a day or week, and from that review springs refinement of the scheme or lesson. This repeats the significance of action planning that takes place as a result of a careful review of what has taken place. There is a danger of student teachers being so over-prepared in their planning that the plans are cast in tablets of stone, unable to be altered as a result of what happens in the day-to-day activities in class. For example, it is inadvisable to draw up specific lesson plans for more than two or three days in advance in primary schools or for more than two or three lessons in a subject in secondary schools.

At the end of each lesson, day and week careful stock has to be taken of what happened in the classroom. For example, was too much or too little planned? Did the students grasp the teaching points clearly or do they need further work in the area? Did some children fail to grasp the points whilst others found them very simple, i.e. is there a need for better matching and differentiation? Had the students in fact covered some of the work prior to your teaching, and if so, what are the implications for motivation, curriculum content, teaching and learning styles, extension activities, progression and continuity? What needs to be reinforced and with whom? Did it turn out that what was planned to be straightforward turned out to be very complex and confusing? How did relationships and groupings facilitate or impede learning?

What we are arguing, of course, is for evaluation to take place at the end of each lesson, day and week, and for the implications of the outcomes of the evaluations to be fed into subsequent modifications and coverage of the scheme of work. This is not to relegate the importance of a scheme of work. On the contrary, it is to reaffirm its central role in planning. Without it teaching and learning are literally aimless. What is being advocated here is that the students themselves have a part to play in the teaching and learning; they can cause student teachers to modify their original plans. Whilst that is to be desired, enabling students to enter the planning process, it means that a scheme of work is mutable, its timing is mutable, its sequence is mutable, its contents are mutable, its planned processes are mutable. It provides a framework rather than a blueprint. This echoes the early work of Stenhouse⁵² when he describes the curriculum as a *proposal* and a *basis* for planning that is refined by, and grounded in, practice and the everyday realities of classrooms.

The implications of this view of a scheme of work render it essential that shorter term action planning for teaching takes place as a result of reviewing events and learning in schools and lessons. This is the stuff of weekly, daily and lesson-by-lesson planning. For primary student teachers a weekly plan will be useful because of the extended contacts that they have with a single class of students. For some secondary student teachers a weekly plan may be useful provided that they see the students for more than one or two occasions per week (as is the case for core subjects – mathematics, English and science). For other secondary student teachers a weekly plan may not be so useful because of the limited contact that they have with students. For example, many secondary school students will only have maybe one lesson of each of the foundation subjects per week – geography, history, art, music, technology, PE, a modern foreign language, RE.

Alternative examples of planning are presented in Box 34,⁵³ and Box 35⁵⁴ for a primary school and Box 36⁵⁵ and Box 37⁵⁶ for the foundation stage.

The weekly planning sheets provide a useful summary of what will be attempted. They enable student teachers to see at a glance what is happening, when it is happening, with whom, what

precedes it and what proceeds from it. Because of the limited space in a weekly matrix plan student teachers, in a sense, are compelled to identify priorities. A daily plan can adopt the same format as a weekly plan, identifying priorities and the sequence of events, be it for specific students, groups or classes, depending on whether it is referring to a primary school or a secondary school. It must be noted here that increasingly in primary schools teachers teach classes other than their 'own'; the daily plan should indicate the class that the student teacher will be teaching, i.e. it is a plan of the student teacher's programme rather than a single class's programme. A small planning matrix can act as an *aide-memoire*, reminding the student teacher of specific points, for example in connection with preparing resources, meeting others, major teaching or organisational points.

One possibility is to divide the daily planner into four teaching sessions with morning, lunch-time and afternoon break. Many schools do not adhere to this plan, reducing the time of lunch breaks (often in an attempt to avert troublesome behaviour) and not having an afternoon break. In some regions of the UK this decision is also based on finances, as it means that school heating costs can be reduced in the colder months of the year if schools finish in the mid-afternoon each day. It may be also that in any single 'session' there is more than one lesson, or there is a school assembly followed by one or more lessons before the first break. Clearly this might mean that the format of the daily planner might have to be altered to accommodate these.

Stage 4: individual lesson plans

The lesson plan is the clearest example of short-term planning. There is no single format for a lesson plan. The format of a lesson plan is contingent upon a number of factors, for example: the school's pro-formas for lesson planning, the students, the curriculum area, the type of lesson, the individual preferences of each student teacher, the level of detail required, the level of detail that is useful. Some lessons are *introductory*, some *continue* work from a previous lesson, some *build on* and develop the work from a previous lesson, some practise skills learnt in previous lessons,

Box 34: A weekly timetable for a primary school

	Monday	Tuesday	Wednesday	Thursday	Friday
8.55	REGISTRATION				
9.00	Literacy hour (60 minutes)	Daily mathematics lesson (60 minutes)	Assembly (20 minutes)	Daily mathematics lesson (60 minutes)	Assembly (20 minutes)
			Daily mathematics lesson (60 minutes)		Science (60 minutes)
	Assembly (20 minutes)	Assembly (20 minutes)	Assembly (60 minutes)	Assembly (20 minutes)	
10.20	BREAK				
10.35	PE (45 minutes)	Science (45 minutes)	Music (30 minutes)	Music (45 minutes)	PE (45 minutes)
			Sustained reading/'catch up' groups (15 minutes)		
	Daily mathematics lesson (60 minutes)	Sustained reading/'catch up' groups (30 minutes)	Literacy hour (60 minutes)	Literacy hour (60 minutes)	Daily mathematics lesson (60 minutes)
		ICT (30 minutes)			
12.20	LUNCH AND REGISTRATION				
13.15	Sustained reading/'catch up' groups (30 minutes)	Literacy – sustained writing (75 minutes)	Art and Design (75 minutes)	D & T (75 minutes)	Sustained reading/'catch up' groups (15 minutes)
	ICT (45 minutes)				Literacy hour (60 minutes)
14.30	BREAK				
14.45	Geography (45 minutes)	PE (45 minutes)	Geography (45 minutes)	Sustained reading/'catch up' groups (15 minutes)	RE (45 minutes)
				PSHE (30 minutes)	
15.30	FINISH				

Box 35: An alternative weekly timetable for a primary school

		Monday	Tuesday	Wednesday	Thursday	Friday
	8.50	REGISTRATION				
60 mins	9.00	Science	English	Mathematics	PE	English
50 mins	10.00	Mathematics	Mathematics	English	Mathematics	Mathematics
	10.50	BREAK				
70 mins	11.05	English	RE	Science	English	Drama
	12.15	LUNCH				
	13.15	REGISTRATION (5 mins) and quiet mathematics or reading – pupil target-setting conferences on Mon, Wed and Thurs when support available.				
50 mins	13.25	History/ICT	Music	English	Geography	Art & Design/ICT
50 mins	14.15	History/ICT	PE	English	Geography	Art & Design/ICT
	15.05	Junior assembly	Junior assembly	Class assembly	Year group assembly	Whole-school assembly
	15.20	FINISH				

some are designed to enrich and extend – laterally – points made and concepts studied in previous lessons, some *complete* a blocked unit or module of work, some lessons are overtly diagnostic (see the discussion of assessment in Part IV), some are directly concerned with ‘input’. Some student teachers keep slight lesson plans, releasing them to think creatively; others find that having to include much detail in a lesson plan helps them to think creatively, clearing their mind.

Despite these variations there are some constants that student teachers are advised to include in their lesson plans. These include:

- *a statement of objectives* (a statement of aims may not be appropriate here because, as the earlier discussion indicated, aims are long-term, generalised and infinite, whereas objectives are short-term, specific, concrete and finite); objectives might refer to the knowledge, concepts, skills and attitudes that will feature in the lesson;
- *an indication of the subject/curriculum area* (in the terms of the National Curriculum, or a topic

that straddles the National Curriculum subjects or works within one National Curriculum subject);

- *an indication of the attainment targets, programmes of study and level descriptions* (where appropriate, defined as where they are mentioned in the National Curriculum itself and whether the lesson seeks to address the National Curriculum subject matter or whether it moves outside it);
- *an indication of resources to be used* (which need to be assembled and tried out by student teachers before the lesson);
- *an indication of the time available and timing of the different stages of the lesson*, e.g. introduction, development, conclusion (to address the items from the OFSTED criteria (Box 30) mentioned earlier, in particular the items included in the *quality of learning, the quality of teaching and resources and their management*);
- *an indication of the intended learning outcomes* (for the students and the student teachers – student teachers experience a teaching practice in order to learn how to teach);

Box 36: A weekly plan for the foundation stage

Theme: Fruit	Date: 3–7 July
Personal, social and emotional development Encourage children to listen to others' questions and take turns. Choose own utensils. Safety reminders: prickly branches, use of knives, hygiene.	Knowledge and understanding of the world How gooseberries grow, conditions of growth, sun, rain, soil. Use magnifying glass to look at the inside and outside of gooseberries. Allow to see, feel, smell, taste.
Communication, language and literacy Listen to explanations. Make list of fruit growing in the garden. Vocabulary: parts of plants: root, branch, stem, leaf, flower, fruit, seed.	Physical development Keep to the narrow path around the garden/ climb steps. Fine motor skills: use of knives/magnifying glass.
Mathematical development Compare size of gooseberries and count them. Order sizes. Vocabulary: bigger than, more than, less than, how many (take turns).	Creative development Colours of leaves and ripening berries. Textures: smooth, rough, prickly. Paint pictures of the garden.
Notes: Only allow children to feel, smell and taste gooseberries under supervision. Katy explained to Jess that we have to be careful with knives because they can cut you. Dan brought a book on fruit and vegetables from home that had a picture of gooseberries in it – could also be useful for learning about vegetables/seasons. Next time we go shopping, look at the different fruits in the shop and discuss where they come from. Use photos to introduce ideas and encourage discussion.	

- *an indication of the organisation of the lesson* – its sequence, use of resources, pedagogical intentions, groupings of students (where relevant);
 - *an indication of the specific teaching points in the lesson; these might be framed in terms of key concepts, knowledge, skills and attitudes;*
 - *an indication of the precise activities that will be taking place in the lesson and the times at which they will be taking place;*
 - *an indication of how continuity/progression/differentiation are addressed;*
 - *an indication of what the student teacher will be doing at the various stages of the lesson, with particular groups and individuals, and what her priorities are for the lesson;*
 - *an indication (if not already covered in the preceding points) of criteria for evaluation of the lesson and self-evaluation of the student teacher;*
 - *anticipated difficulties* (e.g. in behaviour, cognitive content, teaching points) *and how they will be addressed;*
 - *an indication of assessment evidence* that the lesson will provide (so that the student teacher can complete formal assessment requirements and informal – often diagnostic – assessments).
- We are suggesting here that if student teachers provide clear details of intentions for the lesson, for learning, organisation and outcomes, this facilitates evaluation and self-evaluation because the criteria for evaluation and self-evaluation have been clarified. The student teacher can then evaluate the extent to which the objectives for all aspects of the lesson have been achieved and why that was or was not the case. This brings us back to the notion of action planning in order to facilitate review and subsequent action planning.

Box 37: A plan for one week in the foundation stage

Week commencing 26 February 2001	Monday	Tuesday	Wednesday	Thursday	Friday
Activities/resources					
Themed activity	Walk to local church using maps made by the children KUW5, CLL1, PSED4	Making pancakes for Shrove Tuesday KUW6, PSED5, CLL1,	Walk to local shops using maps made by the children KUW5, CLL1, PSED4	Investigate remote control cars with large sized maps PD4, CLL1, KUW1	Mini treasure hunt in the sand tray CLL2, CD4, MD3
PSED activity	Introducing our own objects of interest PSED, CLL, KUW, CD	Circle time – sharing news PSED, CLL, CD	Sharing items collected on our walk PSED, KUW, CD, CLL	Creating an interest table showing maps and treasure PSED, CLL, KUW, CD	Exploring our treasure box and talking about our own treasure PSED, CLL, CD, KUW
Reading/writing	Looking at a selection of maps CLL, KUW	Creating our own maps CLL, KUW	→	→	→
Maths	Completing colour and shape puzzles MD, PSED, PD	Completing number puzzles MD, PSED, PD	Sorting shapes MD, PD, PSED	Matching shape and colour game MD, PD, PSED	Matching and grid game MD, CLL, PSED
Science	Looking through a microscope at slides KUW, PSED, PD	Exploring slopes using tractors, lorries and cars KUW, PD, PSED	Looking through magnifying glass at items found on our walk KUW, CLL, PSED	Exploring magnets and things they stick to PD, KUW, PSED	Looking through magnifying glasses at our treasure KUW, CLL, PSED
ICT and computers	Playing mouse control games PD, CD, CLL	→	Exploring our touch game (mapping) PD, PSED, KUW	→	Listening to guess the sound game KUW, CLL, CD

Sand tray	Exploring the texture of wet and dry sand PD, CD, CLL	Using sand and blocks to create models PD, CLL, PSED	Building sand castles using buckets and spades MD, PD, PSED	Using lorries, diggers and tractors on the building site KUW, PSED, PD	Pouring and measuring with sieves, funnels and scales MD, PSED, PD
Water tray	Using whisks in different sized containers PD, CLL, MD	Imaginary cooking with a tea set, pots and pans PD, CLL, PSED	Looking at coloured water using tubes and funnels MD, KUW, CLL	Measuring using jugs and pouring equipment MD, KUW, CLL	Exploring items that float and sink KUW, MD, CLL
Physical activity (indoors/outdoors)	Blowing and chasing bubbles PD, KUW, CD	Balancing using small equipment – beanbags, balls and hoops PD, PSED	Navigating an obstacle course PSED, PD	Dancing to fast and slow music PD, PSED, CD	Music and movement – vehicles we have seen PD, CD, PSED
Creative areas	Constructing junk model buildings PD, KUS, CD	→	→	Creating junk model town PD, PSED, CD	Creating junk model town PD, PSED, CD
Sensory area	Manipulating playdough with cutters and rollers PD, CLL, CD	Handling wet and dry pasta PD, CD, KUW	Using the conveyor belt with moulded play dough objects PD, CD, CLL	Discovering properties of cornflour PD, CD, PLL	Mixing and blending paint PD, CD, PSED
Imaginative play	Navigating cars around a road map CD, KUW, PD	Connecting a train track for magnetic trains PD, CD, KUW	Building a garage for cars on a road map CD, KUW, PD	Aeroplanes and helicopters landing at the airport PD, CD, PSED	Dolls from the doll's house going to the zoo CD, KUW, CLL
Role play	Going on a bus/train journey CD, CLL, KUW	Opening our own ticket office CD, PSED, CLL	Having a picnic CD, CLL, PSED	Shopping in the supermarket CD, KUW, CLL	Booking a holiday at the travel agents CD, PSED, CLL

PSED = personal, social and emotional development; KUW = knowledge and understanding of the world; CLL = Communication, language and literacy;
MD = mathematical development; PD = physical development; CD = creative development

In most cases student teachers are well advised to include more detail than experienced teachers keep in their planning. Experienced teachers have a tacit understanding of planning, organisational and pedagogical issues that do not necessarily need to be committed to paper. Inexperienced student teachers do not have that tacit knowledge or it is embryonic, hence it is a useful principle to over-plan rather than to under-plan.

For example, many student teachers put on a lesson plan the words to the effect that 'the class will discuss such-and-such'; when they come to take the lesson they find that it goes awry quite badly, that the students are not motivated or engaged on the task, that it seems to go nowhere and that nothing useful seems to have come out of it. It could well be that this is because that section of the lesson plan that mentioned the discussion was not clear on its objectives; on what was required to come out of the discussion; on what the main features of the discussion were to be; on how the student teacher could prompt and lead the discussion; on the specific questions that the student teacher was going to ask, and why these questions were chosen. The lack of purpose in the plan was conveyed in the implementation – anything could become relevant, any direction become acceptable. The lack of focus in fact meant that very little became relevant and very little became acceptable. The free-floating nature of the discussion meant that it was at the whim of the students; it encouraged caprice rather than logic.

At its simplest, because many student teachers come to teaching practices as comparative novices in working with large numbers of students, they are unused to phrasing questions (see the discussion of *questioning* in Part III). There is a powerful case for student teachers writing down the actual words that they will use to ask questions, to prompt discussions, to clarify exactly what is required to come out of the discussion, to lead the discussion to a conclusion, to link the discussion to the contents of the lesson which precede it and the activities that follow after it. What we are advocating here is that the lesson plans are absolutely specific in their objectives and that these objectives are made clear to the school students. This rehearses the argument

that we have made throughout the book that an objectives model of planning can be a very positive organising principle.

We are not necessarily advocating that student teachers spend hour upon hour writing down every fine detail of the lesson, often as a cosmetic exercise to please a tutor or class teacher. On the contrary, we are suggesting that the student teacher will need to be explicitly clear on every aspect of the lesson and that this should be committed to paper at a level of detail and prioritisation that is useful for the professional preparation of the student teacher and useful to colleagues – for example, class teachers, mentors, tutors from the institution of higher education, visiting examiners – so that they can trace back through the teaching practice file to find out how the lesson relates to previous work and understand *at speed* what is supposed to be taking place in the lesson. Further, the delineation of detail enables self-evaluation and review to have some clear foci (see the discussions of evaluations, self-evaluations, self-assessments and review later).

We have argued that there are several constants that should appear in a lesson plan if it is to be useful. How these are set out in a lesson format is a matter of judgement. Some formats will provide much space for organisational matters and for details of how each group in a class will be working; other formats might emphasise the curriculum contents; others will emphasise particular teaching points and roles of the student teacher and so on. The formats that we provide here are examples only; clearly individual formats will depend on their appropriateness to the task in hand and the student teacher.

A lesson plan particularly designed for groups within a single class or set of students is presented in Box 38.

When planning for group work it is essential to make certain that the student teacher will be able to 'be in the right place at the right time'; she cannot see to all groups at once and she needs to be able to set a group off working in the knowledge that they will not need her attention for, say, ten minutes, so that she can be freed to see to other groups. After that ten minutes has passed the student teacher needs to

Box 38: A lesson plan for group work

Date:	Group 1	Group 2	Group 3	Group 4
09.00–9.20	Registration, news, assembly	Registration, news, assembly	Registration, news, assembly	Registration, news, assembly
09.25	Mathematics: Children's activities Teacher's tasks/teaching points	Reading and writing: Children's activities Teacher's tasks/teaching points	Painting, shop, playdough Children's activities Teacher's tasks/teaching points	Sand/water tray, home corner Children's activities Teacher's tasks/teaching points
09.45	↓	↓	Mathematics Children's activities Teacher's tasks/teaching points	Reading and writing Children's activities Teacher's tasks/teaching points
10.00–10.30	Painting, shop, playdough Children's activities Teacher's tasks/teaching points	Sand/water tray, home corner Children's activities Teacher's tasks/teaching points	↓	↓
10.45	Measuring and recording Children's activities Teacher's tasks/teaching points	Mathematics Children's activities Teacher's tasks/teaching points	Reading and writing Children's activities Teacher's tasks/teaching points	Painting, shop, playdough Children's activities Teacher's tasks/teaching points
11.15–11.55	Sand tray, water tray, home corner Children's activities Teacher's tasks/teaching points	Painting, shop, playdough Children's activities Teacher's tasks/teaching points	Model making Children's activities Teacher's tasks/teaching points	Mathematics Children's activities Teacher's tasks/teaching points
13.00	Music corner/cassette work Children's activities Teacher's tasks/teaching points	Library corner Children's activities Teacher's tasks/teaching points	Model making (from morning) Children's activities Teacher's tasks/teaching points	Measuring and recording Children's activities Teacher's tasks/teaching points
13.50–14.30	Physical Education			
14.45	Complete audio cassette work Children's activities Teacher's tasks/teaching points	Complete Lego models from previous day, jigsaws Children's activities Teacher's tasks/teaching points	Continue model making, tidy up Children's activities Teacher's tasks/teaching points	Finishing the measuring and recording, tidying up Children's activities Teacher's tasks/teaching points
15.05–15.30	Story			

have planned to be free to return to the first group. Further, the tasks set must be such that the student teacher can be reasonably certain that despite unpredicted events occurring in the normal course of the day:

- the students will finish together (if that is desired); or
- that students who have completed the task before the end of the lesson are able to be gainfully employed in another activity – maybe an extension activity, or completing a previous piece of work from another occasion, or undertaking a ‘holding’ activity that does not require the student teacher’s attention but is educationally worthwhile; or

- that the stage of completion of an incomplete task is such that it is able to be picked up easily (with cognitive as well as practical ease) at a future occasion, i.e. that the main features of the task have been completed.

Indeed, so careful must be the planning that it may be necessary to have a more detailed activity plan for each activity, and we provide an example in Box 39.⁵⁷

The significance of these points is marked. They direct attention to the need to consider carefully in planning for group work: (a) the *type* and *size* of the tasks; (b) the timing and *time scales* of the tasks; (c) the *sequence* of the lesson so that the student teacher can use her own time most

Box 39: An activity sheet for the foundation stage

Activity <i>Learning to manipulate a remote control car to follow a route to the shops</i> Show the children how to use the controls, take turns to practise moving the car along different routes to the shops	
Grouping of children 3–4 children	
Main learning intentions Know how to operate simple equipment (KUW). Show an interest in why things happen and how they work (KUW). Share and take turns (PSED). Work as part of a group (PSED).	Key vocabulary Forwards/backwards Further away/nearer to Left/right Next/to – Can you make the car stop? – Can you make the car move forward?
Resources Remote control car. Materials/boxes to customise the car. Large sheet of paper with route on. Large sheet of paper for children to draw new routes on.	Adapting the activity for individual children Children sequence two or three moves together. Children teach other children how to use the remote control car. Children draw out new routes on large sheets of paper. Children manipulate the remote control car to a set of verbal instructions.
Children for whom this activity is particularly appropriate Full time Ruth, Nadid, Sam, Katy Part time Alex C (am) Luke (am) David (pm) Callum B (pm)	

efficiently and effectively. That is a tall order that requires considerable planning. It was Bernstein⁵⁸ and Sharp and Green⁵⁹ in the 1970s who alluded to the fact that the most apparently 'free' classrooms were, in fact the most planned and carefully structured; it was simply that the pedagogy was 'invisible'. That is a salutary message that teachers of very young school children know – sometimes to their cost! For lesson planning, then, a device in the format must be used that will give special attention to task type, timing and sequence. An example of this is given in Box 38 – a format that is used by many teachers of young children.

In this example the time line in the left-hand column provides the student teacher with a very clear outline of what should be taking place and when; it indicates group work and whole-class work; it indicates the sequence of activities for each group and shows that each group is receiving a spread of activities over a single day. One can see, for example, that Group 1, for whatever reason – is being given longer than Group 2 for mathematics; Group 2, in turn, is being given longer for reading and writing than Group 3; it has been recognised that model making for Group 3 requires a considerable amount of time – longer than the completion of the Lego models for Group 2; Group 4 is experiencing two types of mathematics activity – one in the morning and another in the afternoon. Group two completes a Lego model from the previous day, ensuring that a comparatively large task is completed over a two-day span, so that children do not become bored with it by making it last too long.

By looking across the rows the student teacher is able to see what activities should be taking place at any one time, so that he can make the most use of himself. For example at 11.15 he may wish to concentrate on setting away the work of Group 4 because the work of the other three groups does not necessarily require his immediate presence – as the model makers (Group 3) will be getting their resources ready and their protective clothing whilst Groups 1 and 2 have been able to observe the activities in the sand, water, home corner, painting, shop and playdough in the four groups in the first session of the morning. Then, when Group 4 has been started the teacher can then go to Groups 3, 2 and 1, probably in

that order. Once he has completed the round of these three groups, Group 4 will be ready for his attention. At a pedagogical level this plan has to be set in the context of the debate on school and teacher effectiveness that questions the efficiency of learning when multiple groups of children are working on multiple curriculum areas simultaneously; that message strikes at the very heart of learning in the early years.

Though the matrix, for the sake of clarity here, has indicated that there will be children's activities and teachers' tasks, it has not indicated what these will be. A full plan for the day will probably spread over two or more sides of paper so that space is provided for a delineation of the student teacher's and children's tasks. One can speculate in this plan that the mathematics, reading and writing are *continuing* activities whilst the model making is more of a *blocked* activity.

This type of planning could well be 'front loaded', that is, it will take a considerable amount of time to prepare for four groups but it could well last the student teacher more than one day, as children will rotate round the activities over the course of two or more days. This is an important feature of lesson planning, for it indicates that:

- each lesson draws on and relates to one or more schemes of work;
- a single *lesson* plan might last the student teacher for more than one *session*.

The folly of 'cosmetic' lesson planning is where a student teacher virtually duplicates a lesson plan from a previous day simply because the students did not complete the previous day's work. That is a sheer waste of time. Sense tells us that if a coherent lesson is planned to take two or more sessions then it is unnecessary to duplicate the lesson plan for each session. In our experience this is particularly true for mathematics lessons, as (a) the same concepts, objectives and content may take several lessons to achieve, and (b) the objectives for the mathematics may be contained in the scheme of work or the teacher's manuals for published schemes of work. This is not to invite student teachers to be lazy; it simply recognises that duplication may be needless.

Evaluation, self-evaluation and review

So far this part has been concerned with aims and objectives, the planning of curriculum content and organisation and an indication of the need to plan the teaching and learning styles that will be used (discussed in more detail in Part III), together with the planning of resource use and the sequencing of the lesson and schemes of work. The point was made earlier that action planning – at whatever level (overall curriculum strategy, schemes of work, lesson plans) – requires, at some point, a review of the extent to which the plan has been realised in practice, so that the next cycle of action planning can be undertaken.

Moreover, the *levels of planning* discussed earlier indicated that action planning could apply to: (a) an overall curriculum policy (long-term planning); (b) schemes of work (medium-term planning); (c) weekly and daily plans (short-term planning); (d) lesson planning (short-term planning). It was argued that a major component of planning at these levels was the need to set appropriate aims and objectives – objectives for the whole teaching practice, for individual schemes, for a week's work, for a day's work, and for individual lessons. Further, it was suggested that the statements of objectives should apply not only to the children and students but to the student teachers themselves because student teachers undertook teaching practice in order to learn how to teach.

The outcome of these issues is to suggest that *evaluation* must take place with regard to (a)–(d) above. The *form* of evaluation is largely an objectives model⁶⁰ that takes its lead from the work of Stake.⁶¹ Stake argues that teaching and curriculum planning begin with a statement of *intentions* (or objectives) with regard to:

- 1 *antecedents* (the putative initial conditions or state of the class, the student teacher, the students, the curriculum, the resources);
- 2 *transactions* (the proposed processes that will be experienced in achieving the objectives, with regard to, for example, the teaching and learning styles, the structuring, sequencing and organisation of the content, the organisation of classroom groups, the nature of the use of resources);

- 3 *outcomes* (the proposed outcomes with respect to the achievements of the objectives, the students' and student teacher's learning and behaviour, the curriculum knowledge, skills and attitudes that have been learnt).

The task of this objectives-based form of evaluation is to chart the extent to which the intentions (objectives and expectations) have been realised in practice, the match between *intentions* and *actuality* in respect of 1–3.

With reference to *antecedents* the student teacher, for example, might expect the students to have understood simple addition of fractions. She commences work to build on that which she has planned to find as an initial condition, only to discover that in reality several students have no understanding of the addition of fractions. The intended antecedents of another student teacher might have included, for instance, an expectation that resources for teaching the history of the Victorian age would be plentiful, only to find that the resources are very meagre. Another student teacher might expect to be teaching in a room with enough chairs and tables for every student to be able to sit and see the student teacher, only to find that the room is L-shaped and that, because of the small working areas, there are only enough chairs and tables for three-quarters of the class with the regular class teacher always planning for one group to be out of the L-shaped room and in a 'wet' area that is shared with another class. These messages suggest the pressing need for a full situational analysis of the school and the class before the teaching practice begins, including gathering information on children's abilities and prior knowledge.

With reference to *transactions* the student teacher might have planned collaborative group work, only to find that the students cannot handle the apparent freedom and opportunity to talk (often about matters unrelated to the lesson!). Another student teacher might have planned for multi-media resource-based learning, only to find that on the days on which she had planned for this to occur some of the computers were booked out for another class, some children were unsure how to operate equipment, others saw the change of student teacher's role from an instructor to a facilitator as a licence to misbehave. Clearly

the intentions for how the sessions would run would have to be rethought.

With reference to *outcomes*, these fall into a variety of fields. The student teacher may wish to know the extent to which the students have learnt the knowledge, concepts, skills and attitudes that had been intended that they should learn. This is the model of evaluation-as-assessment that underpins the formal assessment of student achievement at the end of each key stage of the National Curriculum. The student teacher might have set targets for her own learning – the achievement of specified TTA competencies that were introduced in Part I – and wishes to reflect on and evaluate her achievement of these. The student teacher may want to evaluate the extent to which her planning for flexible learning arrangements to improve students' ability to work autonomously (mentioned in Part I) and to speed up their learning progress have been successful.

With regard to the evaluation of *outcomes* a student teacher might have intended the students to have come to an understanding of the water cycle, only to find at the end of the teaching practice when a *summative* – terminal – assessment is undertaken (see Part IV on assessment) that, though they can identify different *elements* of the water cycle, say evaporation and precipitation, they have been unable to grasp the *cyclical* nature of the water cycle, i.e. they have failed to understand the key concept in question.

In all of these examples the purpose of an objectives model is to evaluate the degree of match between that which was proposed and that which occurred. This is a very powerful form of evaluation for it is ruthless. It asks what student teachers and students can do at the end of the teaching practice, week, day and lesson that they could not do at the beginning. Having made explicit what the objectives are for each level and element of planning, this model (we suggested earlier that objectives were to be very specific and concrete) assesses, maybe measures, a level of success or failure in achieving them. The objectives become the criteria for evaluation. As a result of the evaluation a new plan of campaign can be drawn up – the commencement of the next round of action planning.

This model does not look for reasons *why* the objectives were or were not achieved; instead it

confines itself to *what* was achieved – the cold, hard edge of success or failure. That is both its strength and weakness. For example, its strength may be to reveal that a clear 30 per cent of the class had understood the multi-faceted notion of social class in a sociology programme; its weakness here is to consign 70 per cent of the class to failure, with the concomitant problems of negative labelling and the lowering of self-esteem.

The argument so far points to three major difficulties in using an objectives model. First, Morrison⁶² argues that:

[w]hilst the objectives model is very useful in detailing which objectives have been achieved and their level of achievement, it does not address those types of evaluation which seek to explain why the objectives may or may not have been achieved. Hence its simplicity is bought at the price of explanatory potential. It is the model which is useful for describing rather than explaining.

The model is weak on suggesting ways forward for improvement; it has little *formative* potential. Lawton⁶³ said of this model that it is akin to undertaking intelligence after the war is over.

Second, in evaluating the achievement of the objectives the model takes little or no account of matters that were not stated in the objectives. For example, a host of unanticipated but worthwhile matters might have arisen during the course of the teaching practice that the objectives fail to catch. Further, some educationally beneficial activities (for student teachers and students) are not susceptible to formulation in neat objectives; longer term and deeper qualities that education can develop over time are not easily captured in objectives.

Third, there is a risk in an objectives model that the objectives themselves are not evaluated, their worthwhileness is not considered. This misrepresents the semantic root of evaluation, the notion of *value*. To overcome this problem the student teacher should have considered overall aims of the teaching practice and should have prefaced each scheme of work with a statement of aims. As was mentioned in the earlier discussion of aims, these indicate the main purposes, rationales, principles and values that the school

sees itself as serving – the stuff of ‘mission statements’ that appear in school prospectuses.

The implications of this discussion are to suggest that the student teacher, in undertaking evaluations and reviews for the purpose of action planning, will find it useful:

- 1 to use an objectives model at all levels (relating to schemes of work, weekly, daily and lesson-by-lesson plans);
- 2 to amplify an objectives-based evaluation with an analytical aspect, a diagnosis of *why* the objectives were or were not achieved;
- 3 to amplify an objectives-based evaluation with comments on the development of qualities and longer term, underlying matters that are not measurable;
- 4 to recognise that achievement of objectives may be partial in terms of which aspects of objectives were achieved, the levels of success in achieving of objectives;
- 5 to evaluate matters that arose in the teaching practice that were not anticipated;
- 6 to relate the evaluation of objectives to the development of the TTA competencies;
- 7 to include in evaluation the question of *value*, the *worthwhileness* of activities and plans, particularly of overall aims of the teaching practice and schemes of work;
- 8 to use evaluations *formatively*, as springboards into further action, rather than *summatively*.

We can use these points and the preceding discussion to arrive at a definition of evaluation as ‘the provision of information about specified issues upon which judgements are based and from which decisions for action are taken’.⁶⁴ Using these principles the evaluations that student teachers conduct will address their success in achieving their overall aims for the teaching practice; their schemes of work; their weekly and daily plans, and their lesson plans. These evaluations will differ in their focus, form, methods, evidence – types and sources, and outcomes. This is not the place to look at the whole range of issues in evaluation as some of these go wider than the needs of a student on teaching practice (though some of these are addressed throughout the book by way of suggesting *success criteria* in terms of content and pedagogy and others feature in Part IV

on assessment). This section concerns a student teacher’s self-evaluation.

An evaluation of successes or achievements will need to make clear what the *success criteria* are (a feature which, as Part I indicated, is a requisite for effective school development plans). If a lesson note contains clear, specific, concrete (often behavioural) objectives then these can be used as success criteria, for example learning the use of the full stop, understanding that ice has a greater volume than its equivalent weight in water. However, as indicated above, it is not always possible, or indeed desirable, to cast objectives or their outcomes in behavioural terms, or be able to conduct this tightly focused form of evaluation, because events and outcomes are not always precise and tight. This is less true of lesson plans but more true of daily and weekly plans, schemes of work and overall aims of the teaching practice. We address these in turn below.

Evaluation of achievement of overall aims for the teaching practice

The statement of aims and priorities that student teachers write as the outcome of their situational analysis and overall planning are couched in general, non-operational terms (see the earlier discussion of aims and objectives). In this sense, also, it is both invidious and impossible to discuss ‘achievement’ of the aims; because they are infinite (e.g. it is impossible to say that a person has achieved a finite state of creativity, imaginativeness, being educated) they will never be achieved finally and completely. The overall aims are qualitative; they describe qualities rather than outcomes. It is advisable, then, to address an evaluation of how, how fully and how successfully the aims have been addressed, in *qualitative* terms – words, informed opinions, judgements based on the professional insights of connoisseurs,⁶⁵ in this case experienced teachers, mentors, tutors from institutions of higher education who are examples of reflective practitioners (see the discussion in Part I of reflective practice).

This evaluation will be *summative*, that is, a retrospective, summary review of that which has taken place during the practice that is conducted at the end of the teaching practice in terms

of the match of intentions and actuality (see the discussion of Stake's 'countenance' model of evaluation above). This evaluation will address points 2–7 from the list of considerations outlined above. It will also focus on the student teachers' own development of reflective practice, e.g. the move beyond a technical, recipe-driven view of teaching to a flexible style of teaching that is underpinned by relevant theory (see the discussion of reflective practice in Part I). The evaluation will both *describe* the ways in which the aims have been addressed and *explain* (and justify) why they were addressed in that way.

Evaluation of achievements of the scheme of work

The discussion of issues in evaluating the achievement of the aims of schemes of work rehearses that of the overall aims of the teaching practice and so will not be repeated here. In judging the success of the achievement of objectives an evaluation can focus on objectives that were set out for:

- the *student teacher*, what she has learned about: students; preparation; curriculum planning, topic work and subject planning; organisation, sequencing and structure; assessment; behaviour, relationships, discipline and control; resource preparation and management (e.g. time, space, materials, staff, children, audio-visual, books, charts, displays, ICT); relationships with colleagues;
- the *students/children*, e.g. interests, motivations; behaviours; abilities, progress; achievements, independence and autonomy; self-esteem; interactions; equal opportunities;
- the *organisation of the classroom(s)*, layout, seating arrangements, resource access;
- the *curriculum*, framing (e.g. knowledge, concepts, skills, attitudes), content, coverage, breadth, balance, relevance, differentiation, progression, continuity, coherence, prioritisation, variety, organisation, structure, sequencing, resourcing;
- the *pedagogy*, e.g. structuring activities; use of first- and second-hand experiences; drawing on students' contributions; stimulating and motivating students; teaching and learning

styles and strategies; the resource access and use; the use of different types of display; timing and pacing; matching and differentiation; class, group and individual work;

- *assessment* and monitoring, opportunities for diagnostic teaching.

The breadth of the review of the achievement of the plans that were contained in the schemes of work is a function of the breadth of the schemes. Part of the summative review might consider the appropriateness of the breadth of the schemes that was addressed. As with the overall aims discussed above, the review of the success of the schemes of work will also consider their worthwhileness. Again, as with the evaluation of the overall aims and priorities, the evaluation of the success of the schemes of work will be *summative* and retrospective and qualitative (using evidence from people and student outcomes that have been recorded in the students' ongoing records, weekly, daily and lesson-by-lesson comments and students' work and results on formal and informal assessments). Additionally there may be 'marks', grades or other forms of 'hard data' that might be used in judging the success of the schemes of work. The evaluation of the scheme of work, like the evaluation of the overall aims, will describe the main features that have come out of a review of the schemes with significant adults; though this may include an analytical or explanatory element it will be slight here, being reserved largely for the shorter term weekly, daily and lesson evaluations.

Weekly and daily evaluations

These evaluations will identify *key points* that the student has learnt over the previous week or day respectively. They identify *priorities* for the student teacher in terms of (a) what she has learnt about teaching, and (b) what the implications of this are for subsequent weekly and daily planning. They are not concerned with *description*; rather they are concerned with *analysis* of and *explanations* for the incidence or importance of the major features selected. For example, they might focus on significant points that the student teacher has learned about behaviour and discipline, e.g.

promotion of positive behaviour patterns, encouraging self-esteem, a range of strategies to avert or minimise bad behaviour, managing the whole class, transitions, use of voice, praise, maintaining high expectations; students; classrooms; curriculum planning and implementation; pedagogy, e.g. successful and unsuccessful strategies, collaborative and group work and seating arrangements; problem solving and investigational work; resource access, use, organisation and storage; particular types of activity; particular successes and failures and reasons for these.

These evaluations are *formative*, that is, they suggest implications for the immediate future *during* the teaching practice. They concern day-to-day matters and *tactics* for subsequent planning. Weekly evaluations might draw on the student teacher's discussions with her mentor, other teachers and involved adults, and they might include personal, subjective comments and self-review. The purpose of these evaluations is to shape what happens next; analyses and reviews of this nature lead into action planning. It is also the case that a weekly review is an appropriate time for the student to refer to her developing abilities in the Teacher Training Agency competencies.

Evaluations of specific lessons

Though these evaluations will be very specific and focused, a student teacher who is developing as a reflective practitioner will need to be selective, to avoid *reportage* and low-level description and to be able to extract from the minutiae of classroom processes the *significant issues* for subsequent practice. The evaluation is at the level of *issues* rather than low-level accounts of what took place (except where they provide important detail to accompany the analytical commentary). A lesson evaluation will ask (and hopefully answer) *why* a specific lesson and elements of that lesson were more or less successful or unsuccessful and what the implications of this analysis are for the immediate future. This will focus on the achievement of the concrete objectives that were set out in the lesson plan and the level of success in achieving the elements of the lesson

that were included in the lesson plan (see above for the contents of a lesson plan), for example:

- the motivational, managerial and organisational factors at the introductory stages;
- the clarity of communication – questioning, responding, explaining – at the introductory, development and concluding stages of the lesson;
- the success of different stages of the lesson – introduction, development, conclusion;
- the smoothness of the transition from one stage of a lesson to another or from one activity to the next in the lesson;
- the quality of the student teacher's feedback that was given to individuals, groups and the whole class; the timing and pacing of different stages of the lesson;
- the organisation, location, access and uses of resources for the lesson;
- the success in addressing the key teaching points and key questions in the lesson;
- the degree of success of the planned matching and differentiation;
- the development of positive relationships between the student teacher and the students and between the students themselves;
- the degree of success in achieving the intended learning outcomes for the student teacher;
- the degree of success in achieving the intended learning outcomes for the students/children;
- the degree of success in gaining data for assessment purposes – formal and informal;
- the extent to which the activities drew on subjects and cross-curricular elements of the National Curriculum.

These are outline areas only. From our experience of teaching and supervision we would suggest that student teachers will find it useful to consider the following questions in evaluating lessons.

The curriculum

- *Aims and objectives.*
Are they clear, worthwhile, useful, appropriate?
- *Curriculum content.*
Is it appropriate for the objectives?
Is it appropriate for the skills to be learned or practised?

Is it appropriate for the teaching and learning styles used?

How far does the content address new knowledge?

How far does the content provide enrichment and application of existing knowledge?

How far does the content introduce new skills?

How far do the new skills reflect the students' experience and development?

How far does the content develop students' attitudes – what are they?

How interesting is the content?

How far does the content provide for breadth, balance, depth, relevance, coherence, continuity and progression?

What criteria are being used to address matching?

The teaching and learning

- *Task.*

Is the work sequenced at the optimal level?

Is the work well structured?

Is there an appropriate balance between choice and direction?

- *Time.*

Is the time used most effectively?

Is the time scale effective and appropriate?

Is time used flexibly to respond to students' learning styles?

- *Space.*

Is space used effectively – to reflect the range and nature of the activities?

Can students move round the room easily where necessary?

Can students understand the classroom organisation?

- *The student teacher.*

Are praise and blame used appropriately and effectively?

Is discipline effective?

Are students well motivated?

Is there a good rapport between the student teacher and the students?

Is the student teacher's approach well thought-out?

Is the student teacher's approach varied and stimulating?

Does the student teacher's approach respond to the complexity of the content?

Is the voice used effectively?

Are the student teacher's gestures and movements used effectively?

Are instructions clear?

Is the pacing of the lesson clear, brisk and appropriate?

Is questioning appropriate, varied and effective?

Are the exposition, explanation, discussion, summary effective?

Is the student teacher clear at the beginning, continuation and close of the lesson in the time allotted?

- *The students.*

Can they see and hear as necessary?

Is allowance made for students' different preferred learning styles?

Is there a suitable use of group, class and individual activities?

Are the students developing socially and emotionally as a consequence of the lesson?

- *Resources.*

Do the resources reflect the range of the curriculum?

Do the resources reflect the focus of the curriculum (e.g. first-hand and second-hand experience)?

Do the resources reflect the level of the curriculum for each student?

Are they stimulating?

Are they used?

Are they well maintained?

Are they accessible?

Are they appropriate to the task?

Are they of good quality?

Are there sufficient?

Are displays attractive?

Are displays used for learning?

Are displays changed as appropriate?

- *Record keeping.*

Are records appropriate, thorough, comprehensive, useful, used?

What is recorded?

How is the progress of each student recorded and monitored?⁶⁶

Many schools and teacher education institutions devise their own evaluation pro-formas, raising questions as follows (Box 40).

Box 40: An evaluation pro-forma**Learning objectives**

Were there clear targets, consistently set?
 Did the targets show progression?
 Were the learning objectives made clear to the students?
 Were the learning objectives suitable?
 Did the learning objectives link to prior learning?

Curriculum content

Was the planning clear?
 Was the content suitable, well matched and differentiated for the students?
 Were there targets and time limits set?
 Were the appropriate resources to hand and well used?
 Were there high yet realistic expectations of the students, in terms of work and behaviour?
 Were key skills addressed?
 Did the learning build on previous learning?
 Did the tasks address and involve new learning (incremental), consolidation, practice, enrichment, application tasks?

Teaching methods and strategies, activities, timing and sequence

Did the student teacher have adequate subject knowledge and vocabulary?
 Were the exposition, activities and follow-up clear, well-timed, interesting, well-paced, focused?
 Was the time well spent?
 Were the links between the lessons clear?
 Were the beginning, middle and end of the session clear?
 Was the questioning effective?
 Was there an appropriate range of teaching and learning strategies?
 Was there formative evaluation?
 Was any assessment made clear?
 Was there differentiation?
 Was provision made for SEN/gifted and talented students?
 Did the student teacher respond appropriately to students' emergent needs?
 Was the learning active and engaging?
 Did the students apply their knowledge and learning?
 Were the methods chosen such that all students could learn effectively?

Learning

What did the students learn?
 Did the students learn what was intended?
 Did the students respond positively to the challenges set?
 Did the students understand what they learnt?
 Did the students know what was expected of them for successful performance?
 Did the students support each other?
 Did the students participate well?
 Did the students take responsibility for their learning?
 Did the students take pride in their work and present it well?
 Did the students try hard?
 Was there progress in knowledge, understanding and skills?
 Was there progress in students developing their own learning skills?
 Did the student teacher develop students' confidence, motivation and self-esteem?
 Were students encouraged and praised?
 Were the students responsive and positive/enthusiastic?

Did the students learn independently?
Did the students sustain their concentration?

Management

Was the class management effective?
Was the start of the lesson clear and orderly?
Was the class management appropriate?
Were support staff used effectively?
Was the student behaviour acceptable?
Were praise, rewards, sanctions, negative comments used appropriately?
Did the student teacher intervene effectively to deal with unacceptable behaviour?
Were all students involved in their learning?
Was the classroom environment conducive to learning?
Was there an understanding of classroom rules and routines?
Did the students listen, contribute and question?
Did the student teacher insist on high standards of behaviour?
Were the relationships good?
Was the end of the lesson orderly, e.g. collection of resources?

Homework

Was homework set?
Was homework used in the class?
Was time given for reflection on the results of the homework?
Was homework useful?
Was homework relevant?
Was homework adequately prepared for in the session?
Did the homework link well into the session?

Attainment

Was there evidence of progressive improvement in attainment?
Are different groups achieving as they should be for their age/ability?

Marking

Do the marking and feedback enable students to know how to improve?
Is marking up-to-date and regular?
Is assessment thorough and consistent?
Is feedback used constructively?
Is the feedback motivating and encouraging?

Assessment

Was the assessment formative?
Was the assessment effective, and for what?
Was there a review of learning achieved?
Did students evaluate themselves?
Did the students know how to improve?
Were students aware of their own strengths and weaknesses?
Did the students make the progress expected?
Was it made clear what the criteria for success were?

Evaluation

What session evaluation has there been?
How have the evaluations contributed to improvement in the lessons, teaching, learning, levels of achievement and attainment?
How have the evaluations led into subsequent planning?

Box 41: Evaluation of the quality of learning

The effectiveness with which children:

1 are paced through the lesson	1	2	3	4	5
2 use skills and understanding	1	2	3	4	5
3 progress appropriately in knowledge, understandings and skills	1	2	3	4	5
4 experience a variety of learning contexts	1	2	3	4	5
5 develop learning skills, including observation and information seeking, looking for patterns and deeper understanding, communicating information and ideas in various ways	1	2	3	4	5
6 are willing to ask questions, to try to find answers, to solve problems	1	2	3	4	5
7 apply what has been learned to unfamiliar situations	1	2	3	4	5
8 evaluate the work that they have done	1	2	3	4	5
9 foster and utilise enquiry skills	1	2	3	4	5
10 offer comments and explanations	1	2	3	4	5
11 demonstrate motivation, interest and the ability to concentrate, co-operate and work productively	1	2	3	4	5
12 persevere and complete tasks when difficulties arise	1	2	3	4	5
13 undertake practical activity which is purposeful and which encourages them to think about what they are doing	1	2	3	4	5
14 respond to challenge of the tasks set	1	2	3	4	5
15 are willing to concentrate	1	2	3	4	5
16 can adjust to working in different contexts	1	2	3	4	5
17 appear to be committed to and enjoying learning	1	2	3	4	5
18 experience achievement that matches their abilities	1	2	3	4	5
19 remain on task	1	2	3	4	5
20 listen attentively to the teacher	1	2	3	4	5
21 participate in the lesson	1	2	3	4	5
22 can work independently	1	2	3	4	5
23 can work co-operatively	1	2	3	4	5
24 take responsibility for their own learning	1	2	3	4	5
25 select appropriate resources	1	2	3	4	5
26 demonstrate their learning both orally and practically	1	2	3	4	5
27 understand the purposes of learning	1	2	3	4	5
28 learn from their mistakes	1	2	3	4	5
29 behave well in lessons	1	2	3	4	5

1 = very little; 2 = a little; 3 = quite a lot; 4 = a lot; 5 = a very great deal.

Another way for student teachers to evaluate their own teaching, or, indeed for them to be evaluated, is to refer to the work of the Office for Standards in Education. By going through its frameworks and handbooks for inspection it is possible to distil a series of questions for evaluating teaching and learning, based on several different sources of evidence. We present such a distillation in Boxes 41 and 42.

Below is an example of a student's self-evaluation of a lesson and a tutor's evaluation of the same lesson with a class of 28 Year 3 children. Neither evaluation is perfect! For example, the student's evaluation is descriptive, lacking in analysis, rather unselective, and unsuggestive of how it will affect future practice, even though it is clearly touched by authenticity. The tutor's evaluation, by contrast, is very long, rather pointed and maybe rather negative.

Box 42: Evaluation of the quality of teaching

The effectiveness with which:

1 teachers promote effective learning	1	2	3	4	5
2 teachers' expectations of children are high and appropriate	1	2	3	4	5
3 teachers develop skills and understanding in children	1	2	3	4	5
4 lessons are planned, their imaginativeness and links to attainment targets	1	2	3	4	5
5 progression and continuity are planned and appropriate	1	2	3	4	5
6 matching, differentiation of individual needs are addressed	1	2	3	4	5
7 the objectives of the lesson are appropriate	1	2	3	4	5
8 the objectives are clear	1	2	3	4	5
9 children are made aware of and understand the lesson objectives	1	2	3	4	5
10 expectations of the outcomes are appropriate	1	2	3	4	5
11 the approach, methods and materials match the lesson objectives	1	2	3	4	5
12 teachers have a secure command of their subject knowledge	1	2	3	4	5
13 the lesson content is appropriate and suitable	1	2	3	4	5
14 the activities are chosen to promote the learning of that content	1	2	3	4	5
15 the activities are engaging, interesting and challenging	1	2	3	4	5
16 teachers motivate children	1	2	3	4	5
17 teachers communicate their high expectations of the children	1	2	3	4	5
18 focus on high attainment and good progress is maintained	1	2	3	4	5
19 teachers support and encourage children	1	2	3	4	5
20 resources are used: their availability, accessibility, quality	1	2	3	4	5
21 teachers assess children's progress and provide constructive feedback to them	1	2	3	4	5
22 the lesson is conducted at an appropriate pace	1	2	3	4	5
23 the range of teaching techniques (e.g. individual, pairs, small group, large group, whole class) demonstrates fitness for purpose	1	2	3	4	5
24 teaching methods are varied, appropriate and promote learning	1	2	3	4	5
25 all children are encouraged to participate	1	2	3	4	5
26 positive relationships are developed with children	1	2	3	4	5
27 classroom organisation and resources (time, space, people, materials) promote learning	1	2	3	4	5
28 strategies for consolidating and accelerating learning are used	1	2	3	4	5
29 regular and positive feedback is given to children to enable them to become aware of their achievements and progress	1	2	3	4	5
30 teachers explain matters clearly	1	2	3	4	5
31 teachers use questions	1	2	3	4	5
32 teachers use instructional talk	1	2	3	4	5
33 teachers conduct discussions	1	2	3	4	5
34 teachers engage in procedural talk – the extent to which children know what they have to do	1	2	3	4	5

1 = very little; 2 = a little; 3 = quite a lot; 4 = a lot; 5 = a very great deal.

The student teacher's evaluation of an art and technology lesson

I felt fairly confident about this lesson even though I had not done this sort of thing with children before. I thought the children would like to use all different sorts of materials and beads and to stick them onto paper. James and Donna made a mess of theirs and then went round spoiling others' work; I got cross with them and made them sit in the reading corner out of the way. James, as usual, didn't stay there but got up and carried on wandering round the room. I had to get very cross with him. The children enjoyed looking at the beads and holding them up to the light. I felt very harassed in this lesson as the red group kept arguing about nothing and the group in the corner (Joanne, Billy etc.) kept shouting for me to go and look at what they were doing. I could have killed Julie when she spilled the box of small beads and everyone came to tell me. At one point I had to stop everyone as too many children were being silly. I think I should have told them about their behaviour and the way to behave in this sort of lesson rather than say how nice some of their pictures were.

This lesson seemed endless. It took them ages to get everything and then they were on the go all the time. I seemed to spend my time stopping things from being spilled and stopping the children from being noisy. I had to get cross with Sharon as she used up three bits of paper. I think I must have told them what to do about a hundred times!

Some of the children made some good pictures and were pleased with them. I let the finished pictures go home.

Points for the future: get everything ready beforehand; show them more clearly what to do; cut down the numbers of children out of their seats; put out fewer materials and spread them round the room rather than having them all in one place with children crowding round each other; stop them much sooner if the lesson is getting noisy.

I enjoyed this lesson (I think) and wouldn't mind doing it again but I need to think about my organisation of the children, materials and classroom.

The tutor's evaluation of an art and technology lesson

Whilst your weekly evaluations are fairly analytical I think your daily and lesson descriptions need a lot more detail and analysis otherwise they simply describe and comment in a way which is not very useful for yourself and future planning. Further, in lesson plans more detail is needed to expose knowledge/concepts/skills/intended learning outcomes more extensively and then to see how these are translated into practice. We need to see evidence in the file of anticipation of organisational problems and how you will deal with these. If you are moving to differentiated work then you will sometimes need to have differentiated objectives.

This is a very ambitious lesson – all doing potentially chaotic activities. Therefore ask yourself: is this the best way to get through the task or would it be better just to have one or two groups on the 'sticky' work? You have set up a situation which requires a lot of movement – are you happy with this? If you *are* happy with this you will need to talk the children through the getting of equipment far more closely, e.g. 'You have two minutes to get what you need; don't start, just get what you need and then sit still.' Then stop them all, talk about the task, then set them away on it. *Or* just have one table at a time getting the equipment. There was a time when only five children were actually sitting down, and only three of them were really doing anything.

The lesson note peters out after the introduction – what will you be doing/teaching during the lesson? We need to know!

You will have to question the wisdom of putting all the resources together, e.g. there was a constant (i.e. for ten minutes) throng round the beads – could this have been rearranged, or are you making a rule that if there are two or three children there then no one else is to go there? After five or six minutes stop them all, sit them down, calm them, talk (maybe about teaching points), then set the children away again. This sort of lesson puts you in a high-stress situation – where you are working ten times as much as the children – are you happy with this? When you

stopped all the children (after twelve minutes) the effect was positive – you were able to make teaching points – do insist on their attention – tell them to put down scissors, brushes, glue, materials. The dangers of this mass activity is that you end up by having to devote your time to instructions and behavioural points rather than to teaching points – are you happy with this? How else could the lesson have been organised? Was there a fair pay-off in children's work for all your effort? Could you have got a better pay-off by only having one or two groups at a time doing this?

Some of the children are using the materials for patterns, pictures and bas-relief 3D work (using beads for snowmen) – are you happy with this (you grew aware of this as the lesson went on – it should have been anticipated – proactive rather than reactive teaching)? There are different degrees of accuracy and precision at work here. How will you know how well each child is performing, or are there some children giving less than their best? How can you ensure that the glue keeps off the desk tops? Three desks have sizeable spillages. Are you happy that the children make up their pictures as they go along, rather than trying things out before they start gluing – arranging and rearranging and then gluing – i.e. are they planning and developing aesthetic criticism or just plonking things on uncritically? Many children were becoming increasingly frustrated because they were 'going wrong'; placing before gluing would have averted this.

How can you use this lesson and yourself to develop aesthetic awareness, criticism, awareness of media, materials, form, skills of fine motor control? This is all the stuff of a lesson plan.

It seems on rereading this that I have been rather negative about this lesson. In fact the children are getting on quite well (after 35 minutes) and the results are interesting. You have provided a good variety of materials, the children are quite absorbed in the topic; they are clearly learning about the mechanics of the activity. I am concerned that more could have come out of the activity and that your classroom organisation, organisation of the lesson, questioning of the efficacy of a whole-class activity of this sort, would have maximised the high potential of this lesson to really develop the aesthetic aspects

of children's development. Do allow a good amount of time to clear up and round off the lesson with comments.

Comment

Though the style and degree of detail are different in the two evaluations, nevertheless the two parties focus on the same issues: organisation of time, resources, children, layout of the classroom, discipline, degrees of involvement and engagement, rules and routines, anticipating problems and being proactive. The tutor was concerned not only with the 'management' aspects of the lesson but the lesson content itself and the ways in which the activity could address the curriculum objectives of the lesson. The tutor suggested that more detailed attention to the 'nuts and bolts' of the lesson would have been useful, both in the planning and implementation stages. In this former respect the tutor suggested that a more detailed lesson plan might have assisted the student in anticipating problems, rather than waiting for them to happen in the lesson. Clearly the tutor is more analytical than the student teacher and the tutor suggests ways of improving matters rather than merely describing the difficulties in the lesson. On the other hand the student's evaluation is honest and formative, suggesting 'points for the future'.

The evaluation of a lesson should be *formative*; it should shape very concretely and specifically the subsequent lessons that the student prepares – maybe to avoid certain types of activity, maybe to emphasise other types of activity, maybe to focus on organisational matters more in the lesson note and the running of the lesson *in situ*. A lesson evaluation should feed directly into the action plan for the next lesson or series of lessons. If it does not do this then its utility is limited. A summary of issues in evaluation and self-evaluation is presented in Box 43.

(See www.routledgefalmer.com/companion/0415306752, Chapter 9 Beginning curriculum planning – twelve further examples of weekly/daily lesson plans varying by age of students and degree of structure.)

Box 43: A summary of issues in evaluation and self-evaluation

ASPECTS OF EVALUATION AND SELF-EVALUATION							
	Purposes	Type	Nature	Data sources	Types of data	Focuses	Reliability
Level							
Achievement of overall aims	Review	Summative	Generalised	Significant adults and self	Qualitative, words, informed opinion	Aims	Reference to other adults
Achievement of schemes of work	Review	Summative	General and key points	Significant adults	Qualitative, words, informed opinion	Aims, objectives, student teacher, students, classroom organisation, curriculum, pedagogy, assessment	Reference to other adults and student outcomes
Achievements of weekly and daily plans	Review, analysis of main priorities	Formative	Priorities and key points	Significant adults, self, students' work	Qualitative and quantitative from informed opinion and students' work	Aims, objectives, student teacher, students, classroom organisation, curriculum, pedagogy, assessment	Reference to other adults and student outcomes
Achievement of lesson plans	Review, analyse, explain, shape future practice	Formative	Specific, detailed, concrete	Significant adults, self, students' work	Qualitative and quantitative from informed opinion and students' work	Objectives, student teacher, students, classroom organisation, curriculum, pedagogy, assessment	Reference to other adults and student outcomes

Practising teaching

Successful teaching is a composite of skills, competencies, artistry and much more besides. Some is learned by experience; some by preparation and reflection. Part III addresses a range of significant matters in practical day-to-day teaching and learning. There is a generic core of issues in considering teaching and learning, regardless of the age group with whom one is working, and regardless of their learning potential and abilities. Part III commences with a new chapter on key issues in the practice of effective learning and teaching, and these inform subsequent chapters on primary and secondary teaching. We strongly advocate that student teachers take these three chapters together, rather than only reading the chapter that might apply to the age group for which they are currently preparing to teach.

Effective teaching relies on effective communication, and the chapter on language in classrooms has been updated and extended to incorporate recent developments on direct instruction and whole-class interactive teaching. Further, with recent emphasis being placed on the identification

of, and planning for, gifted and talented students and those with a range of special educational needs, themselves part of the inclusion policy of recent governments, we indicate the issues to be faced in the teaching and learning of students with a range of needs and interests. This includes the topical matter of raising the achievements of boys in schools.

Uppermost in the minds of many student teachers on teaching practice is the concern to maintain effective discipline and positive working relationships in classrooms. This concern is not confined to novice teachers, of course, but routinely exercises the mind of the most seasoned teachers. More recently the attention given to the reduction of bullying has come to the fore. All of these issues are addressed in the chapter on managing behaviour in classrooms, expanded from the fourth edition to reflect the growing significance of this aspect of teaching. The chapter is concerned to provide sound, practicable and tested advice on managing behaviour and effective relationships in classrooms.

Learning and teaching

Schools exist to promote learning. Teachers are catalysts for learning. In promoting learning there is no single blueprint for effectiveness, though there are very many characteristics of effective teaching and effective learning. This chapter sets out some of the key principles for effective teaching and learning. At heart there is a move away from instructing and instructivism and towards constructivism. Many of the pedagogical issues that we raise in this book are premised on constructivism. We begin this chapter by looking at several principles of constructivism and then move to looking at other characteristics of effective teaching and learning. We organise our discussion of effective learning and teaching in two main areas.

First, we look at aspects of the moves to constructivism and their implications for considering learning and teaching. These include: higher order thinking; brain-based learning, deep and superficial learning; metacognition, learning styles, motivation and cooperative learning. Essentially we argue that effective learning uses higher order thinking, deep learning and metacognition, which in large part are learned socially and cooperatively. We argue that effective learning must be intrinsically motivated and draw on learners' emotions as well the purely cognitive aspects of their make-up; developing intrinsic motivation and the affective side of learning can be facilitated through higher order thinking and cooperative learning. These issues entail looking at individual learners' styles and strategies for learning, and accommodating these in

planning for learning. In short, we argue that these aspects are interrelated and mutually potentiating.

Second, we examine some issues in effective learning. This is deliberate, as it signals a significant move from attention on teaching to attention on learning; classrooms are places in which students learn rather than being mainly places in which teachers teach. Teachers are facilitators of learning. In this section we examine teaching skills, professional characteristics and classroom climate. These entail a discussion of teaching styles and strategies, non-verbal teacher behaviour, modelling, student teachers' attitudes and expectations and the influence they exert on classroom behaviour, and the organisation of learning.

What is constructivism?

Constructivism is a theory which regards learning as an active process in which learners construct and internalise new concepts, ideas and knowledge based on their own present and past knowledge and experiences. Knowledge is constructed rather than received.¹ There are two types of constructivism which we address here: cognitive constructivism and social constructivism, though they both share common characteristics such as the view that knowledge is constructed through reflective abstraction, through the learner's cognitive structures and processing, through active and participative learning, and through a recognition

Box 44: Characteristics of constructivism

- Students construct their own knowledge of the world.
- Learning is a search for meaning, looking for wholes as well as parts.
- To teach well we have to understand what students are thinking.
- Standardised curricula are antithetical to constructivism.
- Learning is self-directed and active.
- Learning derives from experiences.
- Knowledge is constructed internally by the learner rather than transmitted from an external source.
- Learning takes time.
- Learning involves language.
- Learning involves higher order thinking.
- Learners continuously organise, reorganise, structure and restructure new experiences to fit them to existing schemata, knowledge and conceptual structures through an adaptation process of assimilation (taking in knowledge and incorporating it into existing knowledge structures) and accommodation (changing ways of thinking as a result of learning and new knowledge) to accord with new views of reality, in striving for homeostasis (equilibrium) – the balance between assimilation and accommodation.
- Knowledge is uncertain, evolutionary, pragmatic and tentative.
- Knowledge and understanding are constructed by the learner rather than imparted by the teacher.
- Knowledge is socially and culturally mediated and located.
- Learning is an individual and a social activity.
- Learning is self-regulated.
- Intelligent thought involves metacognition.
- Learning is, in part, an organisational process to make sense of the world.
- What someone knows is not passively received but actively assembled by the learner.
- Knowledge is accommodated to learners' personal existing understanding, changing their frames of reference through adaptation.
- Learning is marked by the learner's capacities to explore and experiment.
- Knowledge is revisionary and multisensory.
- People generate their own mental models to make sense of their experience.
- Motivation is critical to effective learning.
- Knowledge is creative, individual and personal.
- Learning is marked by the learner's capacities to explore and experiment.

that learning is not fixed and inert, but is continually developing. Learning moves away from the stimulus-response/behaviourist paradigm to the ongoing development of conceptual structures in generative, creative and often unique ways.² The learner actively constructs meaning rather than passively accepts meaning.

Cognitive constructivism owes its genesis largely to Piaget³ and is concerned with thinking and learning. Some key characteristics of cognitive constructivism are set out above (Box 44).⁴

Social constructivism owes much of its pedigree to Vygotsky.⁵ Whilst there are considerable overlaps between Piaget and Vygotsky, the latter is differentiated by reference to the social basis of much learning, particularly higher order cognition. For Vygotsky, learning is a social, collaborative and interactional activity in which it is difficult to 'teach' specifically – the teacher sets up the learning situation and enables learning to occur, with intervention to provoke and prompt that learning through scaffolding. Vygotsky suggests

that teachers must provide the necessary 'scaffolding' in developing and accelerating students' ability to think for themselves, control and take responsibility for their own learning. Scaffolding is a necessary part of building, but the important feature is that, once the building is completed, the scaffolding is removed. In educational terms, this suggests that the teacher supports learning but also encourages the development of students as independent learners, capable of standing on their own and thinking for themselves.

Teachers can provide scaffolding in a variety of ways, for example by asking questions, by prompting and probing, by providing reminders, by giving clear step-by-step instructions, by demonstrations. Further, Glazer⁶ suggests that scaffolding requires the provision of rich feedback on learning to students.

Scaffolding is not only provided by the teacher. Small groups of children can provide scaffolding for each other. This emphasises Vygotsky's point that learning is a social as well as an individual activity. Such peer-provided scaffolding is motivating and meaningful. Collaborative learning enhances learning, as students talk about the issues involved with each other, as well as with the teacher.

The 'zone of proximal development' is used to delimit the sphere of learning. It is defined as the distance between the actual development of the child and the level of potential development as determined by adult guidance or in collaboration with more capable peers. Learning should stretch students' capabilities.

Vygotsky is suggesting that if the teacher is to provide appropriate scaffolding to fit the learner's zone of proximal development, then this requires attention to the social basis of learning. In social constructivist learning, the community (e.g. of learners, parents, teachers, other adults both in school and out of school) is important and renders much learning meaningful – a key element of the theory. The school reaches out of its confines to the outside world, and the outside world reaches into the school.

Teaching and learning have moved from instructivism to constructivism. A corollary of constructivism is the development of:

- situated learning;
- metacognition;
- higher order thinking;
- the social basis of learning;
- a move away from didactic approaches to teaching;
- an emphasis on the process of learning, not simply on the product;
- the breaking of subject boundaries and the development of project-based, real world ('authentic') learning and authentic assessment;
- student-centred learning; and
- the significance of intrinsic motivation.

Many of these issues derive from, or are related to, the work of Vygotsky.

Hokanson and Hooper⁷ suggest that there has been a change in education:

- from instructivism to constructivism;
- from teacher-centred to learner-centred education;
- from behaviourist to cognitive approaches;
- from representation (to transmit information) to generation (for knowledge construction); and
- from linear logic to nonlinear, networked logic.

Behind the move from instruction and representation to knowledge generation and growth lie different theories of learning (Hung).⁸ For example, there is a move from behaviourist, stimulus–response theories, through cognitivism, with its emphasis on information processing and transmission, to constructivism. Hung represents these as follows, Box 45.⁹

The implications of these matters are significant, for they point to the need for teachers to ensure that learning is about problem solving, communication, and the ability to evaluate and apply information, far beyond the recitation paradigm of traditional learning and an emphasis on 'correct' responses. Schools have to move away from the over-emphasis on linear logic and programmed instruction and learning, towards non-linear, networked, branching, hypertext views of learning, in which connections between knowledge are made and developed.

In this situation, argue Hokanson and Hooper,¹⁰ new conceptions of intelligence emerge: facts

Box 45: Learning theories

	Behaviourist	Cognitivist	Constructivist	Social Constructivist
Learning	Stimulus and response	Transmitting and processing of knowledge and strategies	Personal discovery and experimentations	Mediation of different perspectives through language
Type of learning	Memorising and responding	Memorising and application of rules	Problem solving in realistic and investigative situations	Collaborative learning and problem solving
Instructional strategies	Present material for practice and feedback	Plan for cognitive learning strategies	Provide for active and self-regulated learner	Provide for scaffolds in the learning process
Key concepts	Reinforcement	Reproduction and elaboration	Personal discovery generally from first principles	Discovering different perspectives and shared meanings

give way to capabilities, the ability to find and handle emerging knowledge overtakes the ability to reproduce knowledge, and memorisation of facts takes second place to knowledge of where information is stored, how it can be utilised and an understanding of what it means. Whereas traditional pedagogy emphasises remembering as much as possible, the newer forms of education emphasise knowing what to know and how to use it.¹¹ Knowledge is evolutionary, not fixed and static.

Sandholtz *et al.*¹² set out the differences between instruction and construction very clearly (Box 46).

Doherty¹³ suggests that teachers have an important role to play in structuring learning in which learners take control of the process, and indeed of the cognitive processes. Teachers help to design the environment for learning and ensure that it engages the learner, collaborating with other learners, resources and experts to construct knowledge. Doherty argues (p. 2) that learner control over his or her own experiences and the depth and range of studies, content and delivery media, enable him/her to tailor the learning experience to meet his or her specific needs and interests. These are essential features

of effective learning, not least in the self-efficacy which they promote in students and its effect on motivation and achievement (p. 4).

In terms of implications for teaching and learning, constructivism suggests radically different forms of teaching from that which takes place in conventional, traditional classrooms. There are several principles which have been identified, for example:

- encourage and accept student initiative and autonomy;
- follow students' responses to learning – be prepared to change to meet students' needs;
- check students' understanding of concepts;
- enter into dialogue with students about their learning;
- ask thought-provoking, open-ended and higher order questions;
- ask students to elaborate on their initial responses;
- challenge students' thinking, ideas and assumptions;
- promote students' curiosity and enquiry.
- engage students in meaningful and relevant problem solving;

Box 46: Differences between instruction and construction

Function	Instruction	Construction
Classroom activity	Teacher-controlled; didactic	Learner-centred, interactive
Teacher's role	Fact teller; expert	Collaborator, learner
Student role	Listener, always the learner	Collaborator, sometimes the expert
Instructional emphasis	Facts, memorisation	Relationships, inquiry and invention
Concept of knowledge	Accumulation of facts	Transformation of facts
Demonstration of success	Quantity	Quality of understanding
Assessment	Norm-referenced, multiple-choice items	Criterion-referenced, portfolios and performances
Technology use	Drill and practice	Communication, collaboration, information access and retrieval, expression

- seek out students' values and concepts;
- use diagnostic and formative assessment to guide learning;
- reduce grading and standardised testing.

Jones *et al.*¹⁴ compare traditional and restructured schools (Box 47).

Discovery, guided discovery and meaningful learning replace rote, receptive and transmissive teaching,¹⁵ and meaningful learning places relevance to real life at its heart. Education becomes 'education for capability' rather than 'education for repetition'.

It is impossible to introduce learning and its constructivist base without mentioning cognition – thinking, learning, understanding, how we perceive, learn and know something. Grabe and Grabe¹⁶ suggest that learning which is informed by constructivist principles, and which is 'situated', bears several hallmarks. They suggest that meaning must be constructed from experience and information and that the goals of learning are to create meaningful and coherent representations of knowledge, linking new knowledge to the learner's existing knowledge. Further, the task of the teacher is to develop in learners a range of thinking skills and strategies.

Underpinning such strategies is the develop-

ment of metacognition – thinking about one's own thinking, knowledge of one's own cognitive strategies and how one learns, and the ability to control or regulate this,¹⁷ the development of which improves students' learning and accomplishments.¹⁸ Indeed Scardamalia and Bereiter¹⁹ found improved student reflection and progressive thought to be increased when attention was placed on metacognition, with students taking multiple perspectives and demonstrating independent thinking.

Grabe and Grabe²⁰ suggest that metacognition is the individual's ability to evaluate, plan for and regulate and adjust his or her own learning and its characteristics. Clearly it is the partner to self-directed and student-centred learning, in which, in part, students decide on requirements, set their own goals and decide the best strategies to reach them. The development of metacognition, the authors aver, can turn passive learning into active and more efficient learning. In terms of planning for the development of metacognition the teacher has the task of ensuring that learning involves both exploration and reflection.²¹

(See www.routledgefalmer.com/companion/0415306752, Chapter 10 Learning and teaching, Implications of constructivism for teaching and learning.)

Box 47: Conventional and restructured learning settings

	Conventional settings	Restructured settings
Student role	Learn facts and skills by absorbing the content presented by teachers and media resources.	Create personal knowledge by acting on content provided by teachers, media resources and personal experiences.
Curriculum characteristics	Fragmented knowledge and disciplinary separation. Basic literacy established before higher level inquiry is encouraged. Focus on breadth of knowledge.	Multidisciplinary themes, knowledge integration and application. Emphasis on thinking skills and application. Emphasis on depth of understanding.
Social characteristics	Teacher-controlled setting with students working independently. Some competition.	Teacher functions as facilitator and learner. Students work collaboratively and make some decisions.
Assessment	Measurement of fact knowledge and discrete skills. Traditional tests.	Assessment of knowledge application. Performance of tasks to demonstrate understanding.
Teacher role	Present information and manage the classroom.	Guide student inquiry and model active learning.
Possible use of internet	Source of information for absorption.	Source of information for interpretation and knowledge creation. Outlet for original work.

Higher order thinking

A key feature of effective learning is the development of higher order thinking. Higher order thinking is not a new concept; indeed it finds voice in Bloom's *Taxonomy of Educational Objectives* in 1956.²² Higher order thinking concerns synthesis, evaluation, interpretation, hypothesising, prediction, conjecture, critical thinking and judgement. It is complex, and involves reflection, self-regulation, testing of ideas, and problem solving.²³

The highest form of 'cognitive engagement' is where learners plan and manage their own learning and exercise considerable autonomy,²⁴ together with reflection on the learning experience and the incorporation of new knowledge into existing knowledge. Hence planning, living with uncertainty, prediction, making meaning, adopting multiple perspectives on an issue are all characteristics of higher order thinking. Critical

thinking involves finding information suitable for a specified purpose, analysing and evaluating arguments, information and sources, separating fact from opinion, exposing unstated assumptions, weighing evidence, evaluating the logic of the argument and the conclusions.²⁵

This stands in stark contrast to many conventional models of learning, in which a lock-step approach is adopted (everyone proceeding uniformly at the same rate and in the same sequence), often with lower order skills preceding higher order skills. Such an approach rehearses the older, outworn models of teaching children to read, and overlooks the significant point that not only can higher order skills be taught and learned concomitantly with lower order skills, but that this actually benefits the learning of lower order skills. Learning, application, evaluation and problem solving are simultaneous.

Higher order thinking is appropriate for all ages, abilities and levels of student; it is not something

that is addressed *after* the lower order skills have been learned, but is *simultaneous* with them. Learning lower order skills and knowledge is achieved most effectively when it is in the context of learning and using higher order skills. Effective teachers use powerful teaching strategies,²⁶ e.g. those which are suitably flexible to be tailored to the needs of learners, which encourage student talk and dialogue, and which encourage divergent thinking in which there is no single right answer or solution, i.e. higher order thinking.

(See www.routledgefalmer.com/companion/0415306752, Chapter 10 Learning and teaching, Higher order thinking – constituent elements and Higher order thinking – how it is learnt.)

Brain-based learning

The brain grows and increases, and intelligence increases, through being used. Strengthening brainpower, which is physiologically rooted in stimulating and reinforcing the synapses, strengthens learning. The brain loves to learn. Further, the brain is not a passive store of information; it thrives on activity, and actively seeks out information from the environment in order to learn – that is, it is proactive. There are more neural connections *from* the brain to the ear than from the ear *to* the brain, and some 10 per cent of the fibres in the optic nerve go ‘the wrong way’.²⁷ The brain, through sense organs, does not passively receive information, it deliberately goes fishing for it. The brain thrives on feedback, and learning relies on effective and rich feedback.

Spears and Wilson²⁸ suggest several key principles of brain-based learning, for example:

- 1 Being a parallel processor, the brain can perform many activities simultaneously.
- 2 The brain perceives wholes and parts simultaneously.
- 3 Information is stored in several locations within the brain and is retrieved from multiple neural pathways.
- 4 Learning engages the whole body, e.g. food, movement, chemicals in the body all affect brain functioning.
- 5 The brain loves to learn and to seek for meaning.
- 6 Meaning is reached through patterning.
- 7 Emotions are critical to patterning, and they drive our attention, memory and learning.
- 8 Meaning is more important than simply information.
- 9 We understand best when facts are embedded in spatial memory.
- 10 The brain is social, developing at its best through contact with other brains.
- 11 Complex learning is enhanced by challenge and inhibited by stress.
- 12 Everyone’s brain is organised differently and uniquely.

In terms of implications for learning, Spears and Wilson suggest that ‘orchestrated immersion’ into rich learning environments and experiences within and outside the school are most suitable for the brain; that relaxed alertness (eliminating fear) is essential, and that active learning which is related to prior learning is most effective.²⁹ They argue that group learning is important, with a variety of learning environments (including quiet areas and personal space) and resources being provided. They indicate the need for flexibility in teaching, seizing the moment to follow up a particularly stimulating line of enquiry or topic. Indeed real-life problem solving stimulates the neural networks in the brain.³⁰ In this sense school is not a preparation for life, but life itself.

Gardner³¹ argues that brain-based research has demonstrated the massive and persistent significance of motivation for learning, a feature which is understated in behaviourism, and that such motivation must be intrinsic – learning for its own sake. Such motivation, he avers, derives from enjoyment of learning, adult approval and support, and the opportunity to explore ideas and concepts. Project work is particularly useful here.³² Positive emotions play a vital role in effective learning. Indeed emotion drives attention and retention, which, in turn, drives learning.³³ The brain³⁴ is biologically programmed to attend to information that carries a strong emotional content, hence adding an ‘emotional hook’³⁵ is a useful strategy for learning. Further, Gardner suggests that brain-based research indicates the

Box 48: Average prime time and down times in learning episodes

Episode time	Prime times		Down times	
	Total number of minutes	Percentage of total time	Number of minutes	Percentage of total time
20 mins	18	90	2	10
40 mins	30	75	10	25
80 mins	50	62	30	38

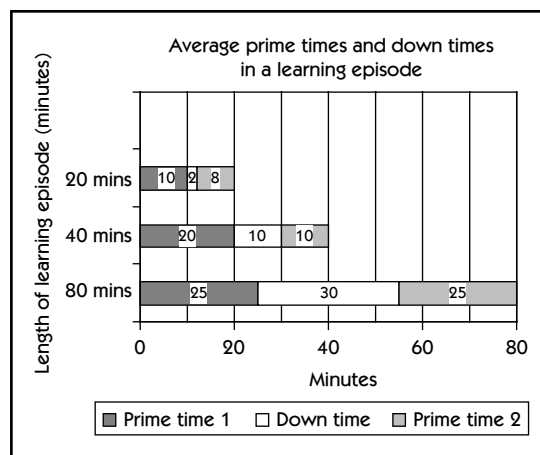
value of the dictum ‘use it or lose it’ – ideas and concepts must not be inert but must be applied and developed, away from the mere retention and memorisation of facts.

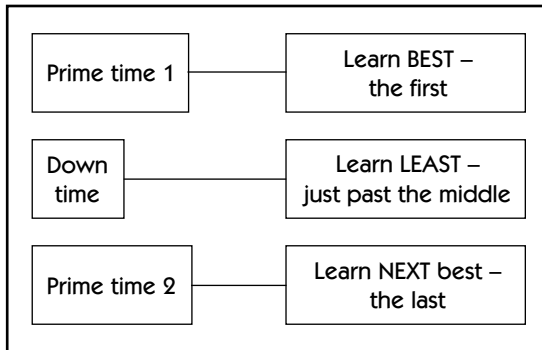
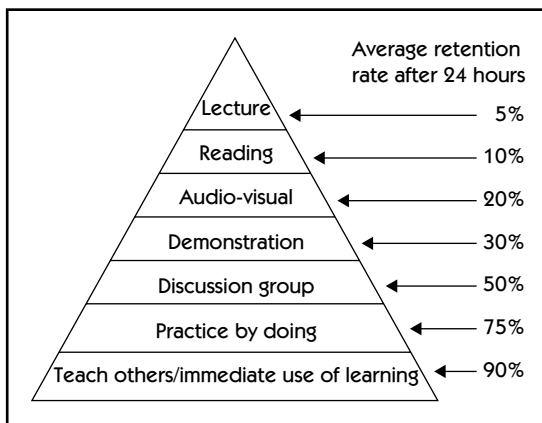
In a study by Sousa³⁶ it was shown that the brain works in ‘prime times’ and ‘down times’: prime times are when it is learning at its optimum, but the brain needs to rest, hence it has ‘down times’. In a session of 20 minutes, 90 per cent of the time (18 minutes) is prime time, the optimum time for learning, and 10 per cent of the time (two minutes) is ‘down time’, when concentration lapses. In a session of 40 minutes the proportion of down time increases: only 75 per cent of a 40-minute session (30 minutes) is prime time, and 25 per cent of the time (10 minutes) is down time. In an 80-minute session the proportion of down time increases even more: only 62 per cent of the lesson (50 minutes) is prime time and 38 per cent of the session (30 minutes) is down time. The message is very clear – the longer the session, the more the brain (and learners!) switch off! Keep sessions short and focused, or, in a longer session, change the activity during the session, so that it is like starting afresh.

Prime time does not simply occupy the first few minutes of a session, followed by gradual sinking/lowering of brain activity, running down to the end of the lesson. Rather, the brain is stimulated at first, in the first period of prime time, then it relaxes (down time), and then picks up again (prime time 2). So, in a 20-minute session the first 10 minutes are prime time, followed by a two-minute down time, and then an eight-minute prime time 2. In a 40-minute session the first 20 minutes are prime time, followed by a

10-minute down time, followed by a 10-minute prime time 2. In an 80-minute session, the first 25 minutes are prime time, followed by an even longer down time of 30 minutes, and a 25-minute prime-time 2. The message is clear again: split up the longer sessions into smaller blocks of time for maximum effect; be prepared to change the activity. This is shown in Boxes 48³⁷ and 49.³⁸

Though there are clearly variations between people, and the charts here do not mention age/ability and a whole range of factors which might cause differences in prime time and down time, nevertheless the message is clearly spelt out in the primacy–recency effect: the best learning occurs first; the second best learning occurs last,

Box 49: Graphical representation of prime times and down times

Box 50: The primacy–recency effect**Box 51: The learning pyramid**

and the least learning takes place in the middle part of a session (Box 50).

Not only does brain-based research tell us about the need for active learning, prime times and down times, and the best parts of a lesson in which to learn the most important matters, it also indicates the most suitable *kinds* or *strategies* of learning in terms of retention rates. These are set out in Box 51.³⁹

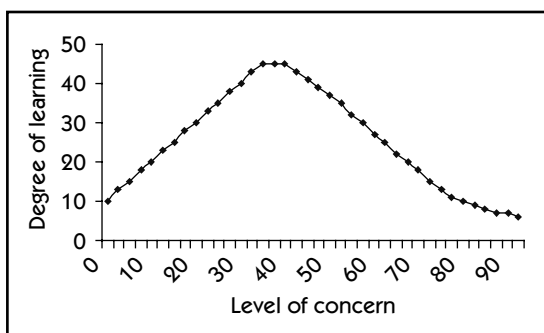
The learning pyramid is very clear: passive learning and one-way transmission, as in the lecture, is the least successful strategy. Reading is also a comparatively poor way of learning. This has significant implications for the practices in which these two strategies – listening and reading the text book – are widely used. It is important to

note that the lecture method essentially involves one sensory input: listening. Similarly, reading uses one main sensory input: vision. What we can notice is that the more sensory inputs are used, the greater is the retention. So, where the pyramid shows audio-visual learning (two sensory input channels: listening and seeing), retention improves (to 20 per cent, i.e. more than simply 10 per cent + 5 per cent; there is 'added value'). When there is active demonstration, which relies on two-way communication as well as vision and listening, the retention rate climbs to 30 per cent. When the learning becomes less teacher-directed, and involves a range of sensory inputs (listening, seeing, speaking), the retention rate jumps: a 30 per cent difference (to 50 per cent) in the case of discussion groups. When the learning involves application and doing, rather than receiving, the rate jumps even more – exponentially – to 75 per cent. When learning involves teaching others, the rate of retention is very large indeed – only a 10 per cent retention loss. The implications of the learning pyramid are several:

- reduce passive learning;
- reduce lectures;
- reduce the reliance on reading;
- increase the channels of communication and learning;
- increase multi-sensory learning;
- increase active learning;
- increase collaborative, co-operative and peer group learning;
- have learners teach each other;
- increase activities which apply the learning;
- increase student talk and interaction.

Brain-based research also indicates an important relationship between levels of concern and learning (Box 52).⁴⁰ In the early stages, just as with stress, a rising level of concern improves learning, just as a little stress improves our concentration. However, if the level of concern increases too much then the learning starts to reduce. The relationship is curvilinear. The message is very clear: too much pressure and too great a level of concern are counter-productive. In many schools this seriously questions the issue of constant testing to which students are nowadays subjected.

Box 52: The relationship between levels of concern and learning



Brain-based research also comments on children's circadian rhythms, indicating, for example, that:

- young children take up to one hour from waking before brains are at their optimum level for learning;
- adolescent children can take up to three hours from waking before their brains are at their optimum level for learning;
- at midday the learning level drops dramatically;
- young children's drop in learning around midday is more rapid than older children;
- performance in the afternoon is never as strong as performance in the morning;
- performance in the afternoon tails off during the course of the afternoon.

The principles of brain-based learning suggest several implications for teachers:

- the emphasis on variety to increase prime-time;
- the reduction of passive learning;
- the reduction of the lecture presentation time;
- the reduction of the reliance on reading;
- the increase in the channels of communication and learning;
- the use of multi-sensory learning;
- the use of active learning;
- the extended use of collaborative, co-operative and peer group learning;
- the use of learners to teach, and learn from, each other;
- the use of activities which apply the learning;

Box 53: Developing metacognition

- Require students to reflect on their own learning.
- Work through problems visually/graphically.
- Conduct debriefings.
- Use co-operative learning and feedback from, and to, students.
- Introduce, and build on, cognitive conflict (a puzzling experience which contradicts others) and constructive disagreement.
- Have students consider:
 - examining aims, goals and objectives;
 - examining all sides of an issue/argument;
 - the plus, minus and interesting points in a situation;
 - the consequences of, and sequels to, a situation.

- the use of a considerable amount of student talk and interaction.

(See www.routledgefalmer.com/companion/0415306752, Chapter 10 Learning and teaching, Deep and superficial learning *and* Improving deep learning.)

Metacognition

Metacognition has come to the fore in identifying how to improve students' learning. Metacognition means that students understand their own learning, how they learn, how they learn best, how they learn less effectively, i.e. a process of self-evaluation of their learning strategies and successes. Deep learning promotes metacognition, as do higher order thinking and collaborative learning. Metacognition can be deliberately developed through a variety of means: see Box 53.

Learning styles

There are several ways in which learning styles and strategies have been discussed. A well-known example derives from the work of Kolb:⁴¹

Divergers, who need to be personally involved in

the task, who perceive information in concrete terms and who reflect on it.

Convergers, who prefer detailed steps in learning, who perceive information abstractly and who reflect on it.

Assimilators, who thrive on problem-solving activities, and who perceive and process information abstractly and actively respectively.

Accommodators, who enjoy taking risks, who thrive on flexibility in learning activities, and who process information actively.

Kolb argues that learning follows a cyclical process of concrete experience (doing it), leading to reflective observation (reflecting on the experience), leading to abstract conceptualisation (making sense of the experience) and active experimentation (planning what to do) and then moving back to repeat the cycle. The learner can enter the cycle at any point. Within this cyclical process there are four styles of learner:

The reflector, who seeks alternatives to create options, who is prepared to wait and watch others until the time is ripe for action, and who tries to retain a sense of perspective.

The theorist, who tries to gather all the facts and who is well organised, reviewing alternatives and calculating probabilities, working well independently and learning from his or her own past experiences.

The pragmatist, who is keen to try out new ideas, techniques and theories, who evaluates options and is good at finding out information, who sets goals and takes positive action to meet them, working well independently.

The activist, who is prepared to take risks, to become involved with others and to gain new ideas and insights from them, who is active and relies on personal 'gut feeling' to drive his or her actions.

Pachler⁴² identifies ten 'types' of learner. *Focusers* 'concentrate on one aspect of a problem at a time and proceed in a step-by-step manner' through the problem, as opposed to *scanners*, who 'tackle several aspects of a problem at the same time

and allow ideas to crystallise slowly'. *Serialists* (students who 'operate with single-proposition hypotheses' are contrasted to *holists*, who operate with multiple-proposition hypotheses). Further, there are 'impulsive versus reflective thinkers', 'divergent versus convergent thinkers', *field-dependent* learners (where 'perception [is] strongly dominated by the overall organisation of the surrounding field') versus *field independent* learners (where 'parts of the field are experienced as discrete from organised ground'). Ellis⁴³ and Hartley *et al.*⁴⁴ suggest *visual learners*, *auditory learners*, *kinaesthetic learners*, *tactile learners*, those with a *concrete learning style*, *analytical learning style*, *communicative learning style*, and *authority-oriented learning style*.

The effective student teacher is one who tries to ascertain the students' learning styles and is able to work with them. At issue here is not so much the description that one places upon a learning style, but what one does when faced with a class of students whose learning styles and preferences are varied within a single class. Clearly this calls for a variety of learning and teaching strategies to be adopted.

Motivation

There are several different views of motivation. They do not necessarily conflict with each other but rather complement each other because very often they focus on different things.

Behaviourism

Behaviourism, sometimes known as the stimulus-response theory, has several characteristics:

- a particular stimulus provokes a particular response;
- behaviour that is positively reinforced is learned;
- repetition and rote lead to learning;
- learning is largely for extrinsic purposes;
- negative reinforcement leads to forgetting;
- lack of repetition leads to extinction;
- learning is conditioned behaviour;
- learning is evidenced in observable behaviour;
- learning can be programmed.

Behaviourism lays emphasis on external rewards, e.g. grades and test scores, working to avoid being told off and working to please the teacher/parents. Motivation is extrinsic and instrumental – for an end beyond personal satisfaction and gain. The theory is one of external reward for the learning and demonstration of particular desired behaviours. It can become very mechanistic learning, dehumanised and reward-oriented – we only learn in order to pass the test, to gain the marks. It leads to rote, repetition and mechanical jumping-through-hoops, and superficial rather than deep learning.

Expectancy theory

Expectancy theory suggests that the learner is motivated by the anticipated gain/benefit, the likelihood of achieving the gain/benefit and the importance of the gain to the learner. In this sense it involves some intrinsic motivation as well as some extrinsic motivation. If we are using expectancy theory in motivating students then we have to work on their expectancies and the values that they attribute to the learning – to make the learning clearly worthwhile in the learner's eyes.

In expectancy theory, motivation for learning (M) is a function of the expectancies and likelihood of success by the learner (E) and the value that the learner attributes to the goals and outcomes of the learning (V). The amount of effort people expend on an activity is a function of the degree of expectancy that they have that a particular activity will lead to better performance, rewards and meeting their own desired objectives.

Needs theories

Needs theories regard motivation for learning as rooted in a humanistic, whole-person view of learning. Learning motivation is intrinsic, and cognitive, affective and physical needs are all interlinked in this theory.

Learning is a humanistic activity, engaging all aspects of the person's make-up, and learners have needs which must be met hierarchically. Lower order needs must be satisfied before higher order needs can be met (we cannot expect people to learn well if they are hungry or cold!). Self-esteem and self-actualisation are high in the hierarchy, and physical, security and emotional needs pre-

cede cognitive needs. In Maslow's hierarchy of needs, understanding and knowledge are at the top of the hierarchy, and require self-esteem and a sense of autonomy (self-actualisation) if they are to be attained. This is important if we reconsider activities, where many of the pedagogical practices damaged self-esteem. We progress through the hierarchy, from lower to higher order fulfilments.

(See www.routledgefalmer.com/companion/0415306752, Chapter 10 Learning and teaching, Enhancing students' self-esteem.)

Self-perception and self-worth

If motivation is to be successful then it must draw on the whole person and develop his/her self-esteem and self-worth. It is important to note that self-esteem is related to control over learning. In many schools the teachers tell the students what to think, when to think it, and, through testing, how well they have thought; this is a very impoverished view of learning that damages self-esteem. Rather, needs theories, through Maslow and issues of self-worth and self-esteem, emphasise the importance of students experiencing control over their learning, success and a sense of achievement, and being given rich and positive feedback. Learning motivation must be intrinsic, not just extrinsic. Theories of motivation which emphasise self-perception and self-worth suggest that learning is effective if self-esteem and self-worth are high and deserved and that, conversely, low self-esteem and self-worth are *major* barriers to effective motivation and learning. The theory suggests that learners must be given rich and positive feedback and must be shown respect if self-esteem is to stay high.

Self-esteem is a critical factor in educational and scholastic achievement. It has been defined⁴⁵ as the individual's evaluation of the discrepancy between his/her self-image and his/her ideal self. It is a measure of the extent to which the individual cares about the discrepancy. Since high self-esteem is going to improve the emotional ambience of a classroom, it is in the student teacher's best interests to enhance and develop this factor in individual students, mainly through fostering suitable interpersonal relationships and providing opportunities for success.

Learned helplessness

Many pedagogical practices in schools promote learned helplessness and can be attributed, in part, to teachers. It is a significant problem, which, if we want powerful learning to occur, must be solved. Many students are taught to be obedient, compliant, docile and passive, often through negative behaviourist motivational strategies. They are taught not to challenge or object. Learned helplessness is related to loss of control over one's learning; it occurs when we feel there is no response that we can make to a situation to change the course of events, even if we exert maximum effort. Often learned helplessness is a consequence of taught dependency, obedience, passive learning, compliance and docility, didactic and irrelevant teaching, with an over-emphasis on rewards and punishments (behaviourism). Learned helplessness, as a motivational problem, can result from students and teachers being trained to be locked into a prescribed system viewed as beyond their control.

There are several symptoms of learned helplessness. For example, there may be lowered initiation of voluntary responses by students; they may have a negative cognitive set (self-reproach and guilt and a tendency to underestimate their effectiveness). They may demonstrate passivity, a lack of self-confidence and a feeling of hopelessness. Such students may be poor at problem solving; they may have wandering attention and poor social skills. Learned helplessness children are extrinsically motivated and not so much intrinsically motivated because of their failures. Children suffering from learned helplessness eventually give up. Indeed the only way in which they feel that they may gain attention or be noticed is if they fail.

Social theories

Social theories of learning emphasise the social learning environment. The social learning environment is highly significant for promoting learning. People are powerful teachers of each other and learners from each other, and, recalling the discussion of brain-based education, learning collaboratively is one of the most powerful ways of guaranteeing effective learning. Higher order

cognition is motivating, and is socially learned and transmitted, and indeed Vygotsky suggested that it is *only* in social groups that higher order thinking is learned and transmitted.⁴⁶ Group and collaborative work, for example, is not an arbitrary learning strategy, perhaps used for the sake of variety; rather it is a *necessary* learning strategy. So the message is simple: use collaborative and interactive learning if you want to develop learning and higher order thinking. Cognitive, behavioural and environmental factors constantly interact to promote motivation and learning in social theories of learning, not least because students model their learning on their observation of other learners.

Co-operative learning

Another important factor in helping to establish good relationships and one which lies in part within the teacher's control is that of teaching and learning styles. In this respect, the importance of *co-operative learning* must be stressed, with students working together in small groups to accomplish shared goals. Cullen *et al.*⁴⁷ suggest that constructivism spawns interactive methods and conversational methods. As Kutnick⁴⁸ explains, putting students into groups enables them to learn very effectively with collective reinforcement – more effectively than in individualistic and competitive reward situations. It is a win-win situation for all participants. He considers that co-operative learning should become a dominant learning style because of the social and emotional developments that ensue. Some of the benefits of co-operative learning are listed in Box 54.⁴⁹

In addition, students come to learn that they can only achieve if they become interdependent.⁵⁰ This, as Schmuck and Schmuck⁵¹ aver, is an increasingly important lesson in a networked and shrinking world. Co-operative learning requires the structuring of positive interdependence, such that the successful outcome is *only* achievable through such interdependence and requires face-to-face interaction with individual and group accountability. Clearly many students will need to be taught to work co-operatively, as it may not come naturally to some of them; hence

Box 54: Some benefits of co-operative learning

- 1 Inter-racial school friendships were shown to develop in heterogeneously structured groups. These friendships were generally reciprocated, and minority-group academic performance correspondingly improved.
- 2 Co-operative learning helped to overcome interactional barriers in groups including mixed-ability and physically handicapped children.
- 3 Children's self-esteem was enhanced in a majority of studies.
- 4 Children generally increased their within-classroom friendships, with corresponding increases in their feelings of altruism and social perspective taking.

interpersonal skills and behaviour may have to be deliberately taught.

Collaborative learning can take many forms,⁵² for example: team work; 'jigsaw' work, where the whole work (the jigsaw) is apportioned (the jigsaw pieces allotted to groups through a division of labour); team games; peer-group learning (e.g. dyadic learning); individual learning which in turn contributes to group learning which contributes to the whole-class project; complex instruction using discovery methods. Slavin⁵³ suggests that, regardless of the form that it takes, co-operative learning requires: group goals, individual accountability, equal opportunities for success, team competition, task specialisation, and adaptation to individual needs. One may wish to question the desirability of team competition here, as it appears to run counter to the purposes of co-operation. Summarising ninety-nine studies of co-operative learning, Slavin⁵⁴ reports that group rewards based on individual learning of all members of the group are important in producing positive achievement outcomes. Further, he suggests that students need some kind of group goal based on group members' learning if they are going to be prepared to spend large periods of time helping each other. Hence group rewards and explicit instruction in group strategy are important for co-operative learning to be effective.

Slavin writes that one of the greatest benefits from co-operative learning is the raising of self-esteem.⁵⁵ Put simply, students learn that they are valued, valuable and important. Self-esteem rises because members feel valued by their peers and because they feel that they are achieving in academic terms. Indeed Slavin reports that students

achieve more highly in co-operative classrooms than in traditional classrooms.⁵⁶ As we know from brain-based research, cognitive and non-cognitive outcomes are very closely linked. Co-operative learning produces positive results in terms of self-esteem, peer support and being liked by peers, internal locus of control, liking of the class, time on task, and, indeed, co-operativeness itself.⁵⁷

Of course, co-operative learning faces its difficulties, such as:⁵⁸

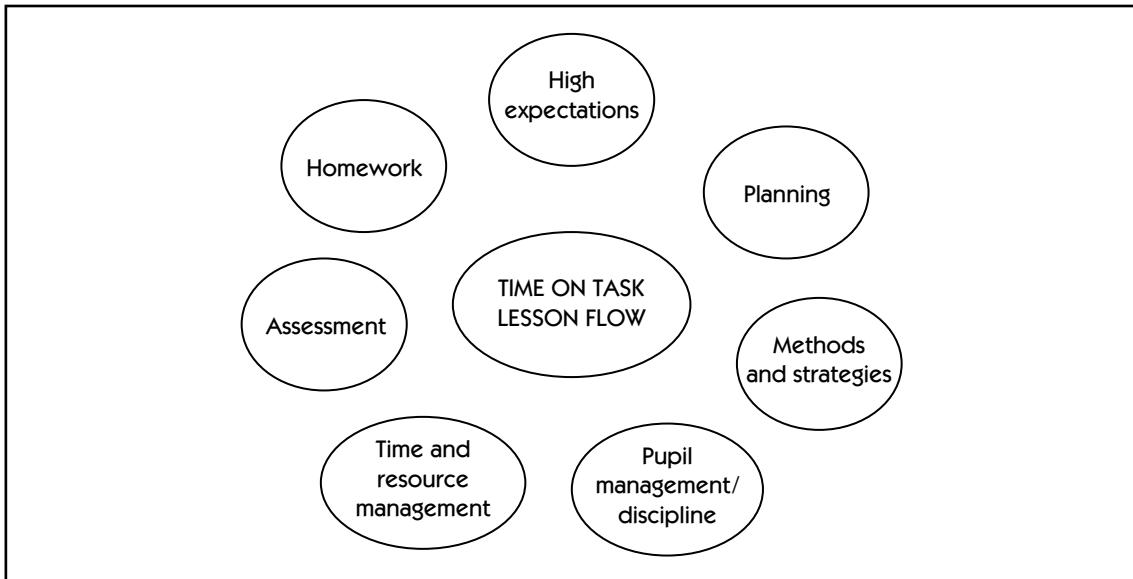
- failure to work together successfully or to 'get along';
- student misbehaviour;
- classroom noise;
- student absence;
- ineffective use of time;
- too great a range of performance levels within the group.

These may be important, but not insuperable, given preparation and thought. For further material on collaborative learning we refer readers to our discussions of group work.

(See www.routledgefalmer.com/companion/0415306752, Chapter 10 Learning and teaching, Fundamentals of effective learning.)

Key characteristics of effective teaching

What do we expect effective teachers to be like? A major study of teacher effectiveness in 2000⁵⁹ found three main factors associated with teachers' control that exert a significant influence on students' learning, making up to a 30 per cent difference in their progress:

Box 55: Time on task and lesson flow

- teaching skills;
- professional characteristics;
- classroom climate.

Teaching skills were divided into seven major areas, contributing to the time on task and lesson flow, set out in Box 55.

For each of these areas the researchers provided a series of questions which could be used to evaluate the effectiveness of the teacher.

Key questions for teaching skills

High expectations⁶⁰

- 1 Does the teacher encourage high standards of:
 - effort;
 - accuracy;
 - presentation?
- 2 Does the teacher use differentiation appropriately to challenge all pupils in the class?
- 3 Does the teacher vary motivational strategies for different individuals?
- 4 Does the teacher provide opportunities for students to take responsibility for their own learning?

- 5 Does the teacher draw on pupil experiences or ideas relevant to the lesson?

Planning

- 1 Does the teacher communicate a clear plan and objectives for the lesson at the start of the lesson?
- 2 Does the teacher have the necessary materials and resources ready for the class?
- 3 Does the teacher link lesson objectives to the prescribed curriculum?
- 4 Does the teacher review what pupils have learned at the end of the lesson?

Methods and strategies

- 1 Does the teacher involve all pupils in the lesson?
- 2 Does the teacher use a variety of activities/ learning methods?
- 3 Does the teacher apply teaching methods appropriate to the prescribed curriculum?
- 4 Does the teacher use a variety of questioning techniques to probe pupils' knowledge and understanding?

- 5 Does the teacher encourage pupils to use a variety of problem-solving techniques?
- 6 Does the teacher give clear instructions and explanations?
- 7 Does practical activity have a clear purpose in improving pupils' understanding or achievement?
- 8 Does the teacher listen and respond to pupils?

Pupil management/discipline

- 1 Does the teacher keep the pupils on task throughout the lesson?
- 2 Does the teacher correct bad behaviour immediately?
- 3 Does the teacher praise good achievement and effort?
- 4 Does the teacher treat different children fairly?
- 5 Does the teacher manage non-pupils (support teachers/staff) well?

Time and resource management

- 1 Does the teacher structure the lesson to use the time available well?
- 2 Does the lesson last for the planned time?
- 3 Are appropriate learning resources used to enhance pupils' opportunities?
- 4 Does the teacher use an appropriate pace?
- 5 Does the teacher allocate his/her time fairly amongst pupils?

Assessment

- 1 Does the teacher focus on:
 - understanding and meaning;
 - factual memory;
 - skills mastery;
 - applications in real-life settings?
- 2 Does the teacher use tests, competitions, etc. to assess understanding?
- 3 Does the teacher recognise misconceptions and clear them up?
- 4 Is there evidence of pupils' written work having been marked or otherwise assessed?
- 5 Does the teacher encourage pupils to do better next time?

Homework

- 1 Is homework set either to consolidate or extend the coverage of the lesson?
- 2 Is homework which had been previously set followed up in the lesson?
- 3 Does the teacher explain what learning objectives pupils will gain from homework?

Time on task and lesson flow

- 1 Does the teacher use the following effectively:
 - whole-class interactive teaching;
 - whole-class lecture;
 - individual work;
 - collaborative group work;
 - classroom management;
 - testing or assessment?

The *classroom climate* was divided into nine main areas; see Box 56.

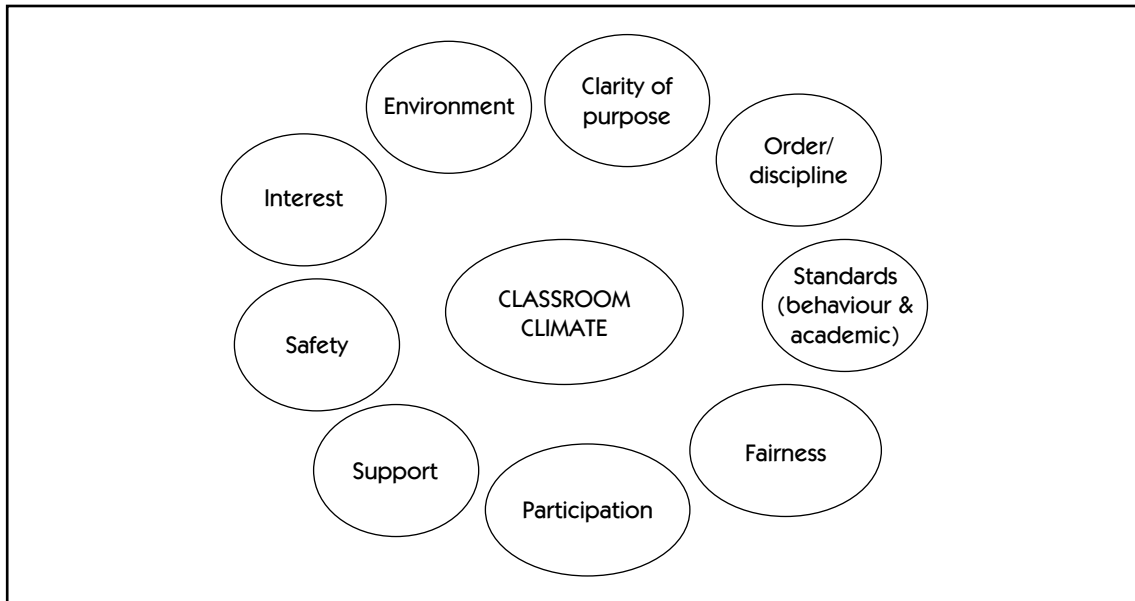
The *professional characteristics* comprised:

- planning and setting expectations (with a drive for improvement and information-seeking initiatives);
- professionalism (challenge and support, confidence and creating trust, respect for others);
- thinking (analytical and conceptual thinking);
- relating to others (impact and influence, teamwork, and understanding others);
- leading (flexibility, holding people accountable, managing students, a passion for learning).

Effective teachers, then, have a battery of competencies, they:

- have professional competence;
- plan effectively;
- have secure knowledge;
- promote a positive climate;
- monitor and assess thoroughly;
- use effective teaching strategies;
- manage discipline;
- manage time;
- set useful homework.

In their oral communication they utilise a range of language skills, for example: questioning,

Box 56: Classroom climate**Box 57: An effective lesson plan**

- Has clear learning objectives.
- Has activities that are timed.
- Has activities related to learning objectives.
- Uses subject-specific language.
- Matches provision to students' needs.
- Says how resources will be used.
- Uses prior evaluations to inform planning.
- Sets high expectations of effort, attainment, achievement, progress and behaviour.
- Uses homework to extend and apply learning.

listening, explaining, demonstrating, challenging, instructing, managing, praising and assessing.

In their planning, effective teachers address several issues; see Box 57.

Effective teachers demonstrate positive attitudes and behaviour; they:

- work safely, carefully and considerably;
- demonstrate involvement, application and enjoyment;

- have pride in their achievements;
- respect the views of others;
- work independently and collectively;
- can solve problems;
- take responsibility for their own learning;
- sustain concentration on their task.

Teaching styles and strategies

Effective teachers employ a range of teaching strategies and styles. Barnes⁶¹ reports three significantly different teaching styles, thus:

- *closed* (a formal, didactic style with little or no negotiation between teachers and students);
- *framed* (where an overall structure for a lesson was given by the teacher but within that there was room for students' own contributions);
- *negotiated* (where teachers and students largely negotiated the content and activities between themselves).

One can take from the work of Galton *et al.*⁶² in primary education an alternative tripartite classification of teaching styles. These are:

- *class enquirers* (characterised by whole-class teaching together with individuals working on their own, a high level of teacher questioning and a high degree of control exercised by the teacher);
- *individual monitors* (characterised by teachers tending to work with individuals rather than with groups or the class as a whole, and making very stressful demands on the teacher);
- *group instructors* (characterised, as its title suggests, by teachers organising students into groups and working with them in the group situation).

This third style was seen by the researchers as an organisation that minimised the potentially disruptive effect of 'attention seekers' in the class – they would disrupt a group rather than the whole class, whereas the first style – the whole-class approach that is heavily under the control of the teacher – provided a theatre for the attention seeker, with an audience of the remainder of the class.

The student teacher will draw on a range of teaching styles using the criterion of *fitness for purpose*. Some activities will require the student teacher to be very formal and didactic, with little negotiation with the students. In other activities a group- or student-driven approach might be more suitable, particularly if there is a wide spread of ability in the class; group work can be seen as a manageable means of organising mixed-ability classes that steers a course between under-differentiated, poorly matched work and work that is so differentiated that it is impossible for the teacher to keep up with each individual's demands. That said, the rise in information technology heralds new possibilities for planning and managing individualised programmes of study for some of the teaching time.

We suggest that the student teacher takes the opportunity on teaching practice to try several different styles so that she can begin to match up appropriate teaching styles with appropriate learning styles, different curricular areas, different types of activity, different students and different resources.

Flanders,⁶³ found that teachers who were *not* successful in the classroom tended surprisingly

to use many of the same instructional procedures and methods as those who were, except that they used them in more or less rigid fashion. They displayed little variation from one classroom situation to the next and seemed to lack the ability to expand or restrict the freedom of action of the children through verbal control.

The successful teachers, by contrast, reflected four elements in their teaching;

- spontaneously, they varied their classroom roles from dominative to supportive ones, and were able to secure both student co-operation and initiative as the situation demanded;
- they could switch at will from one role to another and did not blindly follow a single approach to the exclusion of others;
- they were able to move easily from their diagnosis of a classroom problem to a follow-up course of action; and
- they were both critical of their classroom pupils and sensitive to their needs as human beings.

Briefly, the study suggests that successful teachers are flexible in their teaching styles and can shift easily and naturally from the direct to the indirect, from being critical observers to sympathetic counsellors, depending on the need.

Flanders subsequently reported that when pupils' ideas are incorporated into the learning activities, they seem to learn more and to develop more positive attitudes to the teacher and the learning situation; and that teachers who are over-critical in class appear consistently to achieve less in most subject areas.

Hamacheck,⁶⁴ reports that effective teachers seem to be superior in the following ways:

- their willingness to be flexible;
- their capacity to perceive the world from the student's point of view;
- their ability to 'personalise' their teaching;
- their willingness to experiment;
- their skill in asking questions;
- their knowledge of subject matter;
- their skill in establishing definite examination procedures;
- their willingness to provide study helps;

- their capacity to reflect an appreciative attitude; and
- their conversational manner in teaching.

The perceptual differences between good and poor teachers investigated by Combs⁶⁵ suggest that good teachers can be distinguished from poor ones with respect to the following perceptions about other people. The good teacher:

- is more likely to have an internal rather than an external frame of reference. That is, she seeks to understand how things seem to others and then uses this as a guide for her own behaviour;
- is more concerned with people and their reactions than with things and events;
- is more concerned with the subjective-perceptual experience of people than with objective events. She is, again, more concerned with how things seem to people than just the so-called or alleged facts;
- seeks to understand the causes of people's behaviour in terms of their *current* thinking, feeling, beliefs, and understandings rather than in terms of forces exerted on them now or in the past;
- generally trusts other people and perceives them as having the capacity to solve their own problems;
- sees others as being friendly and enhancing rather than hostile or threatening;
- tends to see other people as being worthy rather than unworthy. That is, she sees all people as possessing a certain dignity and integrity;
- sees people and their behaviour as essentially developing from within rather than as a product of external events to be moulded or directed. In other words, she sees people as creative and dynamic rather than passive or inert.

Another indispensable feature contributing to a favourable classroom atmosphere is humour. In the well-structured, purposeful organisation of an effective classroom, there will be many opportunities for humour. Its manifold functions are more or less self-evident; it relaxes tension, helps establish natural relationships, facilitates learning and is of great value as a means of restoring

sanity to a classroom after a disciplinary incident. Students relish humour, and its use can defuse challenging situations more effectively than many harsh words. Marland's⁶⁶ advice on humour bears the stamp of experience:

A joke goes a long way. Try to be light-hearted whenever you feel up to it. Try to chivvy recalcitrant pupils jokingly rather than by being indignant . . . Be willing to make jokes at your own expense, and to laugh as your own foibles. Teachers' jokes don't have to be very good to be nevertheless highly acceptable.

He goes on to warn young teachers with high ideals and considerable theoretical understanding from taking themselves, their responsibilities and their students too seriously. Their 'humourless indignation' and 'sad intensity' may alienate their charges.

Non-verbal teacher behaviour

Many factors that contribute to effective teacher-student relationships, e.g. the personality of the students, are clearly beyond the control of the teacher and have therefore to be taken as 'given' when interactions occur. Nonetheless, effective relationships do not just 'happen'. Teachers must plan for particular relationships and not leave their occurrence to the 'hidden curriculum of everyday life in the classroom'. One factor in this respect that does lie within the student teacher's power to manipulate is what Andersen and Andersen term 'non-verbal immediacy behaviours'.⁶⁷ These signal that the initiator, namely the student teacher, is approachable and available for communication. In that they can thus communicate interpersonal closeness and warmth, they can contribute positively to relationships. Indeed, research on immediacy constructs suggests that they can be a positive force in the classroom, particularly in bringing about better teacher-pupil relationships. Andersen and Andersen review a range of non-verbal immediacy behaviours in the context of the classroom. They include the following:

Proxemics, or the use of interpersonal space and distance. There are two aspects here – physical

distance and bodily orientation. In the case of physical distance, many student teachers fail to establish interpersonal closeness with a class because they remain physically remote in the sense that they stand at the front of the classroom or sit at a desk. Confident, effective student teachers use the entire room and move among students. As regards orientation of the speaker, more 'immediacy' is communicated when the student teacher *faces* the class. As the authors say:

Many teachers do not fully face their class when teaching. They hide behind desks, podiums and tables, and often continuously write on the blackboard, with their backs to the class. Not only does this reduce the immediacy between teachers and their classes, it also removes any visual communication between them.

Kinetics, or communication by body movement. Four aspects are relevant here – smiling, head nods, bodily relaxation and gestural behaviour, though a very full analysis of this is provided by Neill and Caswell.⁶⁸

One of the most effective immediacy cues is smiling. Smiling produces substantial positive therapeutic effects in relationships, including an increase in interpersonal acceptance. As Andersen and Andersen⁶⁹ say, 'Teachers who frequently smile are communicating immediacy in one of the easiest and most powerful ways. Pupils at all levels are sensitive to smiles as a sign of positive affect and warmth.'

Head nods are another effective means of indicating immediacy, especially when used by a listener in response to a speaker. When used by a teacher to his class they provide reinforcement and indicate that the teacher is listening to and understanding what they say.

Bodily relaxation communicates immediacy by indicating freedom from stress and anxiety. It has been found that more 'immediate' teachers are more relaxed, whereas tense and anxious teachers communicate negative attitudes to their students who perceive them as cold and inaccessible.

Gestures, particularly hand and arm movements, communicate interest, warmth and involvement. In these respects they contribute positively to both interpersonal transactions and teaching.

Oculesics, or the study of messages sent by the eyes. Eye contact is an invitation to communicate and a powerful immediacy cue.⁷⁰ Student teachers who use eye contact can more easily monitor the behaviour of their classes. They can also communicate more warmth and involvement to their students. The authors advise that student teachers should position themselves so that they can and do establish eye contact with every student in the class, warning that immediacy cannot be successfully established by a student teacher in the absence of eye contact.

(See www.routledgefalmer.com/companion/0415306752, Chapter 10 Learning and teaching, Teacher-student relationships.)

Modelling

Good and Brophy⁷¹ have noted that many things may be learned in classrooms without deliberate instruction by the teacher or deliberate practice by the learner; and that such observations are supported by a growing body of experimental evidence. The learner only needs to see a particular behaviour demonstrated by another person before imitating it himself, sometimes consciously, sometimes not. The person who demonstrates the behaviour is called *the model* and the form of learning, *modelling*.

Modelling can be a most useful device for the student teacher. Many skills, for example, can be learned more easily through observation and imitation than by trying to understand and respond to only verbal explanation and instruction. This is especially true for younger children whose abilities to follow detailed verbal instructions are limited.

Modelling effects can occur at any time. In this connection, if students detect discrepancies between what the student teacher says and what she actually does, they will ignore what she says and be affected much more by what she does. Further, if they see discrepancies between what she says she expects and what she allows, they will tend to be influenced by what she allows. This aspect of modelling has important consequences for discipline, and especially so for the student teacher who, having once established a particular standard of behaviour, should insist that it is maintained.

Factors affecting what is learned from observing a model

The amount and kind of learning that results from observing others depends on a number of factors, one of the more important of which is *the situation*. Modelling effects are far more likely to occur in *new* situations where the expected behaviour of both the student teacher and learner is unclear. When such ambiguous situations occur in the classroom, the potential for modelling will be considerable, especially at the beginning of a new academic year or, in the case of the student teacher, at the start of a teaching practice spell. As a result of such early contacts with a student teacher, then, students will make inferences about her and will decide whether they like her, what kind of person she is and how they ought to respond to her. Further, the student teacher's early behaviour will contribute to establishing the emotional and intellectual climate of the classroom.

It is thus vital for student teachers to model appropriate behaviour from their first day in the school. Opportunities to teach through modelling will be greater at this time because many things will still be fluid and ambiguous. Later, when both student teacher and class settle into predictable routines, it will be more difficult to bring about changes.

A second factor affecting what is learned from modelling is *the personality of the teacher*. A warm and enthusiastic teacher whom the students like will be imitated by them. There is the possibility that some of the students will adopt, or be influenced by, his attitudes and beliefs; and they may imitate his behaviour. However, students will be less likely to imitate a student teacher whom they dislike or do not respect, particularly in the sense of adopting or conforming to his ideals.

Student teachers' attitudes and expectations and the influence they exert on classroom behaviour

The attitudes and expectations a student teacher holds with respect to the students she teaches considerably affect her behaviour towards them; and this, in turn, influences *their* responses in a

variety of ways. Studies conducted in the United States, for instance, indicate that students of differing achievement levels were treated differently by their teachers; and that there were important differences in both the *frequency* and *quality* of the contacts between them.⁷² Some of the consequences were that high achievers received more opportunity to respond than low achievers. They also tended to ask more questions. Further, teachers waited significantly longer for the more capable students to respond before giving an answer or calling on another student.

The findings disclosed, too, that teachers praised high achievers more than low achievers, the latter being more likely to be criticised for a wrong answer. Teachers also tended to 'give up' more readily with students who did not know, or who answered incorrectly, and this suggests that they expect and demand higher performance from high achievers.

Attitudes and expectations may be a teacher's allies if properly maintained and used. However, as Lawrence⁷³ has pointed out, although a teacher may influence a student to behave in ways which the teacher expects, this will only occur when the relationship between them is a close one. The expectation factor therefore does not operate in all circumstances. Nevertheless, teachers need to be aware of what is possible in this respect and act accordingly.

One further point of interest may be added which again stresses the reciprocity of the relationship in this connection and it is this: a student will tend to fulfil the positive expectations of *a teacher whom he or she respects*. It is therefore incumbent upon the student teacher to strive to earn such respect from the outset.

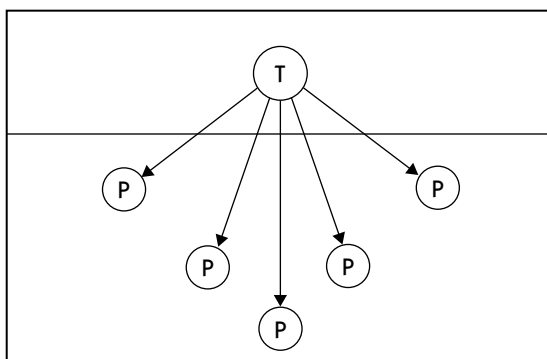
The organisation of learning

There are many ways of organising students, e.g. teaching them as a complete class or dividing the class into a number of groups. There are a number of forms of interaction between teacher and pupils and among pupils themselves which may be found in school learning situations. The particular one operating at any given moment will depend upon the objective of the lesson, the nature of the task in hand and the implied

educational philosophy. We now consider six characteristic learning situations which account for the principal patterns of interaction, both formal and informal, which may be found in the context of the school. Our analysis is based upon the work of Oeser.⁷⁴

Situation 1: the teacher-centred lesson

The principle of interaction underlying the teacher-centred situation may be illustrated as in Example 1. Although only five students are represented in the diagram, this figure may vary, with perhaps a notional 30–35 students being a more representative number in this kind of situation.



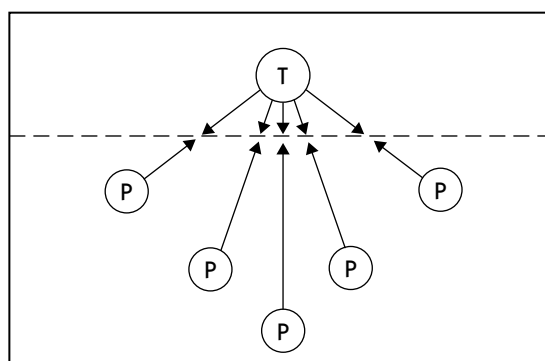
The interaction pattern here is one in which the *teacher speaks and the students listen*. Their relationship to the teacher is confined to listening, perceiving and assimilating; and there is no interaction among the students themselves.

A social structure of this kind is found in the *talk* or *lecture* where there is a sharp distinction between the teacher and the class (depicted in the diagram by a continuous horizontal line), and in which the teacher's role is authoritarian, exhortatory and directive. This kind of interaction style may also form *part* of a class lesson as, for instance, at the outset when the teacher introduces new learning, or in the course of a lesson when he demonstrates a skill, or towards the end of a lesson when he sums up what has gone before. Preparation for a formal examination would present occasions when the teacher-centred

approach would be an efficient means of teaching and learning. This model corresponds closely to the method of direct instruction and whole-class interactive teaching.

Situation 2: the lecture–discussion

The second situation may be seen as a variant of the first, being one in which the pattern of interaction is not wholly dominated by the teacher. It is represented diagrammatically in Example 2. Again, the number of students may vary, depending upon the circumstances.



This model corresponds closely to the method of whole-class interactive teaching.

Three of the most important aims of the educator are: to turn the latent leadership of a group in the direction of the educational process; to encourage the individual development of leadership; and to encourage co-operative striving towards common goals while discouraging the exercise of authoritarian leadership. The social structures evolving through Situations 2, 3, 4 and 5 provide a framework for the achievement of these aims.

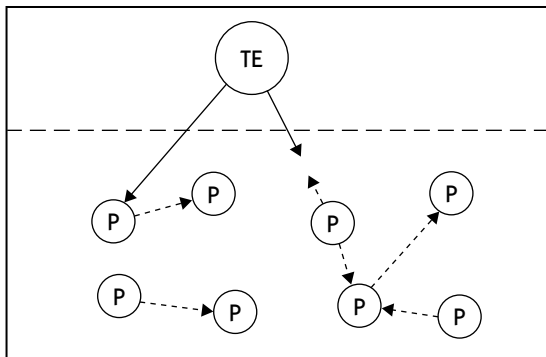
The arrowheads in the diagram indicate more or less continuous verbal interaction between teacher and students. Although, as leader, the teacher asks questions, and receives and gives answers, the initiative need not always be hers or his; and competition may develop among the students. The sharp distinction between teacher and taught which was an important feature of

the first situation and which was represented in Example 1 by means of a continuous horizontal line is now less obvious – hence the broken horizontal line in Example 2.

This kind of learning situation, the pattern of interaction depicted in Example 1, could develop into the pattern illustrated in Example 2.

Situation 3: active learning

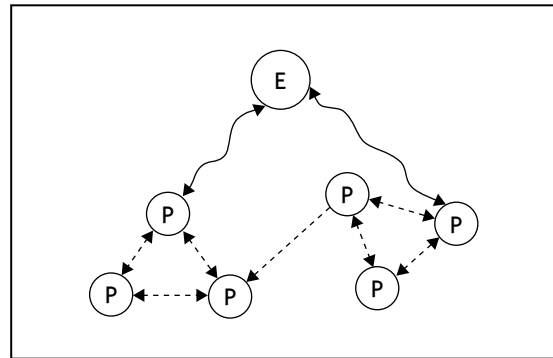
Example 3 depicts a social situation in which the teacher encourages discussion and mutual help between students. Practical work in a science lesson would be an occasion for this kind of situation. The letters TE in the diagram indicate that the teacher now begins to assume the additional role of expert. As Oeser notes: ‘He, of course, retains his other roles as well; but the emphasis in the teaching process now fluctuates between the needs established by the task and the needs of the individual pupils.’⁷⁵ For this reason, the situation may be described as *task-* and *student-centred* and as one beginning to have a co-operative structure.



Situation 4: active learning; independent planning

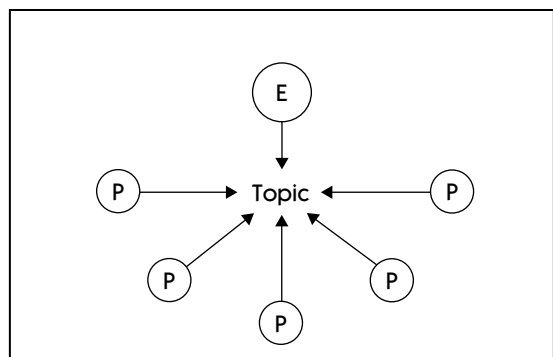
Scrutiny of Example 4 shows how this fourth situation evolves logically from the preceding one. The pupils are now active in small groups, and the teacher acts more or less exclusively as an expert-consultant (indicated in the diagram by a wavy line).

As Oeser says: ‘Groups map out their work, adapt to each other’s pace, discuss their difficulties and agree on solutions. There is independent exploration, active learning and a maximal development of a task-directed leadership in each group.’⁷⁶ The social climate is co-operative and the situation may be described as *student-* and *task-centred*.



Situation 5: group task-centred

A characteristic situation in which a smallish group of individuals is concerned with a particular topic, project or problem, is illustrated in Example 5.



A pattern of this kind may thus be found in a seminar or discussion session. The arrowheads indicate that the group as a whole is concerned with the task – its elucidation, clarification and solution.

The situation is clearly a *task-centred* one in which there is an absence of hierarchical structure. Ideally, the role of the teacher here is simply that of a wise and experienced member of the group (depicted as 'expert' in the diagram).

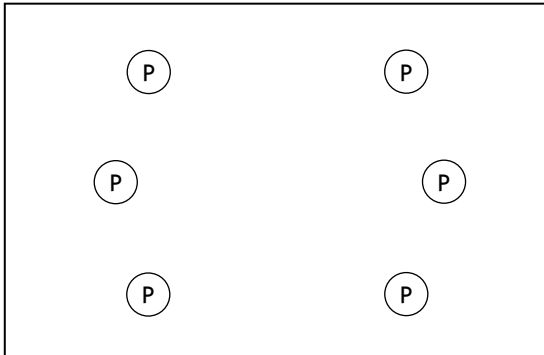
The more coercive roles traditionally associated with the teacher are out of place in this kind of social structure. The attitudes of members of the group to each other will tend to be co-operative and consultative.

Box 58: Considerations in planning worksheets

- 1 What exactly is the purpose of the worksheet? Is it to provide information, ask questions, set tasks, record information, promote new learning, revise or apply knowledge, keep students busy, or a combination of these (and others)?
- 2 Do you actually need a worksheet (e.g. if everyone is to have the worksheet could not its contents simply be written on the chalkboard)?
- 3 The worksheet must make clear exactly what the students are to do and how they are to record.
- 4 The language level must be appropriate for the students in terms of vocabulary and readability. Will the children understand the language?
- 5 How will different worksheets for different students in a single lesson be organised and introduced?
- 6 Will the worksheet become progressively harder in the knowledge that only the brighter or faster workers will reach the end of the sheet?
- 7 The worksheet must be attractive and motivating.
- 8 Will the worksheet be handwritten or word-processed/desktopped? If it is handwritten will it be written in print/'joined up' writing/capitalised/lower case/in the school's adopted handwriting style? If they are word-processed the letters may be able to be printed in an interesting font or style or in an interesting manner (e.g. a worksheet on eggs could have the words written around the perimeter of an egg, a worksheet on houses could be shaped like a house). How will the student teacher be sure that her spelling is correct?
- 9 Will the students know how to answer the questions on the sheet? If they do not, what will be the student teacher's role? How will the students find the answers to the questions?
- 10 What resources and equipment are required for the tasks on the sheets?
- 11 What prior knowledge is assumed on the sheets? Whereabouts in the programme of work will the worksheets come, e.g. to lead off a programme, to follow it up, to extend and apply knowledge? How will the worksheets be introduced? What preliminary activities are necessary?
- 12 How will students access text books for answers – is it necessary to specify to which books etc. the student is to refer?
- 13 How many activities are there on the sheet? Is that too many/too few?
- 14 Will there be many activities of the same type on the sheet or activities of a differing type on a single sheet?
- 15 How attractive is the sheet? Are there too many or too few words?
- 16 Do some tasks require the student teacher to be on hand for safety reasons, e.g. cutting, heating, handling dangerous equipment?
- 17 How will the sheets prompt and promote discussion as a whole class or group?
- 18 Are the questions an appropriate mixture of low and high order, open and closed (see Chapter 13: *Questions and questioning*)?
- 19 Have time scales been specified or anticipated for the completion of the worksheets (i.e. so that the student teacher can plan the most efficient use of herself)?
- 20 How will the worksheets be linked to displayed material for accessing information?

Situation 6: independent working; no interaction

This final situation, illustrated in Example 6, arises when pupils are working quite independently and there is no interaction.



This situation will occur when pupils are working at exercises 'on their own'.

In planning for reduced teacher direction and greater individual and group work, i.e. with the move from Example 1 to Example 6, many teachers develop worksheets. The worksheet is best seen as one of a number of teaching resources, though an unrelieved diet of worksheets is a certain recipe for boredom and indiscipline in any classroom. We indicate some considerations in planning and using worksheets in Box 58.

In summary, Oeser observes that from Situation 1 to 4 there is a progressive change from teacher-centred through task-centred to student-centred activities, from passive to active learning and from minimal to maximal participation, with a progressive diminution of the coerciveness of the teacher's roles. In Situation 5, the situation is again task-centred, but the teacher's status as such has disappeared.

The six situations outlined above will help the reader not only to understand classroom-based social and learning situations, but also patterns of interaction occurring outside the classroom.

Primary teaching

Introduction

It would be invidious to commence any outline of primary teaching and learning without an indication of some significant principles that underpin much of primary education. Drawing on a range of texts on ideological, epistemological, psychological and sociological analyses of primary education, there are several key principles that constitute primary practice:¹

- 1 A view of childhood as a state in itself as well as a preparation for adulthood.
- 2 The use of discovery methods and practical activity.
- 3 Learning by doing – practical activity.
- 4 Problem-solving approaches to teaching and learning.
- 5 The value of play and active learning.
- 6 Learning in various modes – enactive, iconic, symbolic.
- 7 Integration and unity of experiences; the integrated curriculum.
- 8 The value of teaching processes and skills as well as products and bodies of knowledge.
- 9 The value of content and process as complementary facets of curricular knowledge.
- 10 A view of educational activities and processes as being intrinsically worthwhile as well as having instrumental and utility value.
- 11 The value of an enriching social, emotional and physical environment.
- 12 The need to develop autonomy in children.

- 13 The provision of a curriculum which demonstrates and allows for breadth, balance, relevance, continuity and progression, differentiation and consistency.
- 14 The emphasis given to individual needs, abilities, interests, learning styles and rates as well as a received curriculum.
- 15 The fostering and satisfaction of curiosity.
- 16 The value of peer group support.
- 17 The value of self-expression.
- 18 The need for intrinsic as well as extrinsic motivation.
- 19 The use of the environment to promote learning.
- 20 The importance of the quality and intensity of a child's experience.
- 21 The uniqueness of each child.
- 22 A human-centred view of the world.
- 23 The view of the teacher as a catalyst for all forms of development.
- 24 An extended view of the 'basics' to comprehend all curriculum areas, not just the three Rs.
- 25 The need to develop literacy and numeracy through cross-curricular approaches.

We ought to say straight away that this view is not uncontentious. In two important books on primary education theory Alexander² argues for a much more sober examination of integrated curricula, the principle of one teacher to one class for all subjects and the notion of child-centred education. Indeed in a later work³ he argues that debates about primary education ought to be stripped of their ideological affiliations and

persuasions in order to look more closely at what primary children are actually doing and learning in classrooms and how this can be rendered more efficient and effective.⁴ We proscribe the type of education debate that crudely polarises primary education, e.g. as traditional *versus* progressive education or as child-centred *versus* subject-centred curricula, as this misrepresents the complexity of teaching in primary classrooms.

There is a need to look again at the value of topic work, extended group work, the principle of one teacher to one class, different curriculum activities taking place simultaneously in classrooms, in order to judge dispassionately the effectiveness and efficiency of children's learning in school. There is a value to subject teaching, whole-class teaching, undertaking activities in fewer curriculum areas simultaneously, more direct instruction by teachers (e.g. rather than the extended use of worksheets and resource-based learning), and a reduction of the number of teaching and learning strategies that are used in a single session. Indeed, though topic approaches can be defended if they demonstrate progression and continuity, a National Curriculum conceived in subject-specific terms flies in the face of topic-based and integrated approaches⁵ and the National Curriculum means that a substantial amount of separate subject teaching will be necessary in order to cover all the programmes of study of the National Curriculum.⁶ Lee and Croll⁷ report that streaming and subject teaching are back on the primary agenda, particularly for Key Stage 2 children. In a survey that they carried out in two local authorities they found that over a third of the headteachers involved claimed to see value in streaming and just under a third saw value in subject specialist teaching, particularly in schools of over three hundred children.

The children

An important concept to be borne in mind at all levels of teaching and learning is that of *motivation*, and its relevance to the primary classroom in particular needs to be kept well to the fore during teaching practice periods. First there is the matter of *inner need*.⁸ In addition to

basic needs for food, drink, warmth and shelter, etc., there are emotional and psychological needs such as love, self-esteem, the desire for recognition and responsibility, etc. All these are underpinned by the fundamental desire to learn.

There is also the stimulus to interest that comes from *first-hand experience*. Being involved with activities and tasks is itself highly motivating, and such involvement can be enhanced by making use of the senses – sight, sound, touch and smell in particular. Third, motivation can be generated by creating a *stimulating environment*. One of the many positive characteristics of British primary schools has been the imaginative and attractive environments created by class teachers. Decoration, lighting, room arrangement, notice boards and displays have all figured prominently in this connection. Fourth, there is the importance of *problem solving* as a means of stimulating children's interests. Fifth, there is *competition*. Where this is used sensibly it can be an effective incentive to work and to achieve. The important point here is to stress the learning aspect. Self-competition is particularly favoured in this context as the more undesirable features of competition between children are absent. Sixth and final, *self-improvement* is related to self-competition; helping a child to identify a set of short-term targets to reach may well stimulate learning.

It is important, also, to recognise the significance of the social world in shaping and supporting the young child's learning,⁹ and of real-world, authentic tasks and learning for the developing child.

Such motivational factors as these can be all the more effective when you *know your children*. In order to do this it is important to:

- 1 *Study the children's records and profiles for factual information:* Examine the evidence for general ability, high ability and low ability and especially for marked differences between ability and attainment. Look for information on any physical disabilities like poor eyesight, hearing problems, or difficulties with co-ordination. Make a note of children with learning difficulties and of home factors which may affect a child's behaviour and/or performance.

- 2 *Talk to the class teacher(s) whose class(es) you will be teaching:* Again, ask for and make a note of factual information on work done. Find out what teaching methods have been used and how effective they are. Information on particular children should be requested, e.g. very high ability, low ability, problem children, children not realising their potential, those who have special skills, etc. In this respect, children with learning difficulties should be identified. A teacher's advice on how to deal with problem cases should always be sought and heeded.
- 3 *Make the fullest use of your preliminary visits:* You should get the feel of a class or group and note how they respond *as a group*, e.g. to questions, instructions. If possible, talk to some of the children and find out what they have been doing. Examine their work. In particular, look for anything unusual, e.g. the child whose work is poor but who has good ideas, children with unusual ideas or viewpoints.

Such detailed scrutiny will enable you to identify groups of children, for example: *the most able; the main body of the class; and those with low ability or learning problems*. By keeping a file on each child when you start teaching, your detailed record of work and progress will assist you in lesson planning as well as with your theoretical studies at college.

The teachers

We look here at two aspects of the teacher in the primary school: his or her role and functions, and the knowledge and skills required. Some of the features of the role and function of the teacher in the primary classroom can be itemised thus:

- 1 *Manager:* she is there to manage the total learning environment. This involves the children as individuals and as a group, the learning programme, the environment and resources.
- 2 *Observer:* her ultimate effectiveness depends on her ability to scrutinise the children closely, their actions, reactions and interactions.
- 3 *Diagnostician:* as an integral part of observing this involves identifying the strengths and weaknesses of each child and devising programmes accordingly.
- 4 *Educator:* this involves deciding on aims and objectives, the nature and content of the curriculum and the learning programme.
- 5 *Organiser:* this entails organising the learning programme once its nature has been specified.
- 6 *Decision maker:* choosing appropriate learning materials, deciding on topics and projects, and individual programmes.
- 7 *Presenter:* this involves the teacher as expositor, narrator, questioner, explainer and instigator of discussions.
- 8 *Communicator:* implied in the role of presenter, it also involves talking to other members of staff.
- 9 *Facilitator:* an important aspect of the teacher's work, acting as a mediator between the child or class and the problem in hand.
- 10 *Motivator:* another important feature of the role, entails arousing and sustaining interest.
- 11 *Counsellor:* in this role the teacher advises on a whole range of problems and issues – educational, personal, social and emotional.
- 12 *Evaluator:* a crucially professional aspect of the teacher's job, this involves evaluating, assessing and recording children's ability, achievement and progress.

It must seem fairly straightforward drawing up a list of this nature, but the teacher's role and function are not without their difficulties. In Box 59 we list a number of dilemmas identified by Pollard and Tann¹⁰ with which teachers are often presented. They are not easily resolved and often it is a matter of trying to minimise the tension generated by them.

To perform effectively the kinds of roles just listed, the teacher needs to possess an impressive body of knowledge and a considerable range of skills. Dean¹¹ and Pollard and Tann¹² have identified the more important of these as:

- 1 *Self-knowledge:* This entails an awareness of your strengths and weaknesses. This is a particularly valuable kind of knowledge to possess when working in the primary school where teachers are expected to teach many things.

Box 59: Common dilemmas faced by teachers

Treating each child as a 'whole person'.	Treating each child primarily as a 'pupil'.
Organising the children on an individual basis.	Organising the children as a class.
Giving children a degree of control over their use of time, their activities and their work standards.	Tightening control over children's use of time, their activities and their work standards.
Seeking to motivate the children through intrinsic involvement and enjoyment of activities.	Offering reasons and rewards so that children are extrinsically motivated to tackle tasks.
Developing and negotiating the curriculum from an appreciation of children's interests.	Providing a curriculum which children are deemed to need and which 'society' expects them to receive.
Attempting to integrate various elements of the curriculum.	Dealing systematically with each discrete area of the curriculum.
Aiming for quality in schoolwork.	Aiming for quantity in schoolwork.
Focusing on basic skills or on cognitive development.	Focusing on expressive or creative areas of the curriculum.
Trying to build up co-operative and social skills.	Developing self-reliance and self-confidence in individuals.
Inducting the children into a common culture.	Accepting the variety of cultures in a multi-ethnic society.
Allocating teacher time, attention and resources equally among all the children.	Paying attention to the special needs of particular children.
Maintaining consistent rules and understandings about behaviour and schoolwork.	Being flexible and responsive to particular situations.
Presenting oneself formally to the children.	Relaxing with the children or having a laugh with them.
Working with 'professional' application and care for the children.	Working with consideration of one's personal needs.

- 2 *Open-mindedness*: This is used by Pollard and Tann in the sense of 'being willing to reflect upon ourselves and to challenge our assumptions, prejudices and ideologies as well as those of others'.
- 3 *A personal philosophy*: This can take quite a practical form. As Dean says, 'What you need are thought-out aims and objectives which you can use for assessing your work and for deciding on approach and materials.' Those who have a clear idea of their destination are more likely to arrive there.
- 4 *Child development*: A good grounding in the theories of child development is essential. These will include theories on intellectual, physical, emotional and social development, as well as on individual differences.
- 5 *How children learn*: The key concepts and topics here are motivation, theories of learning, the use of rewards and punishments, and the relation between language and experience.
- 6 *Group behaviour*: As teaching is concerned with handling groups, some awareness of group dynamics is helpful. Dean poses the following

questions in this regard: What am I doing to teach children how to work together? Have I got the balance between competition and co-operating about right? Do any of my children cheat in order to win? Is this because there is too much competition? Would rather more competition stimulate some of the most able in the class?

- 7 *Subject knowledge*: Although a teacher needs to be on top of her material, this can sometimes be difficult for the primary teacher who is expected to know a great deal. Indeed OFSTED¹³ found that a teacher's subject knowledge was very strongly associated with high standards of students' achievements. There may be some areas where her expertise is slim and this can sometimes be made worse when an individual child undertakes a topic or project in an unfamiliar area. In such circumstances, where a teacher may feel vulnerable, Dean recommends (1) identifying areas in which she feels secure and working with them; (2) using other people's expertise – colleagues, parents, perhaps outsiders like the local police officer; and (3) making use of school broadcasting.

The issue of teachers' subject knowledge is topical in the current primary debate and is coupled with the issues of curriculum leadership and teachers' roles in the school. In the section of their report that is perhaps aptly titled 'The Problem of Curricular Expertise' Alexander *et al.*¹⁴ argue that 'subject knowledge is a critical factor at every point in the teaching process: in planning, assessing and diagnosing, task setting, questioning, explaining and giving feedback. The key question to be answered is whether the class teacher system makes impossible demands on the subject knowledge of the generalist primary teacher'. Bennett *et al.*¹⁵ and Pollard *et al.*¹⁶ reported that the introduction of the National Curriculum had exacerbated teacher stress and that, in part, this was caused by teachers' insufficient subject knowledge. Morrison¹⁷ has argued that subject teaching and curriculum leadership on a subject-specific basis might be very useful because curriculum leaders possess:

- academic knowledge;
- professional and pedagogic knowledge (experience of how to teach the subject effectively,

based on knowledge of how children learn in the subject, how to diagnose children's needs and to plan subsequent curricula and learning pathways for them, how to assess children's performance, how to plan for progression and continuity in the subject);

- awareness of the latest developments and resources in the subject;
- enthusiasm for the subject.

This view was echoed by Alexander *et al.*¹⁸ when they advocated four broad teaching roles for primary teachers:

- the *generalist* who teaches most or all of the curriculum, probably specialising in age-range rather than subject, and does not profess specialist subject knowledge for consultancy;
- the *generalist/consultant* who combines a generalist role in part with cross-school co-ordination, advice and support in one or more subjects;
- the *semi-specialist* who teaches his/her subject, but who also has a generalist and/or consultancy role;
- the *specialist* who teaches his/her subject full-time.

In a follow-up report to Alexander *et al.*,¹⁹ OFSTED found that in over 80 per cent of schools the teachers were generalists, with semi-specialist teaching being undertaken in 15 per cent of schools and the only specialist teaching being undertaken by bought-in part-time teachers. The student teacher will need to find out how curriculum leadership is exercised in the school so that she can approach the most appropriate teacher(s) in the school with regard to her own planning and implementation of schemes and activities.

The curriculum

We have seen how the teacher is responsible for 'mediating the curriculum'. In the course of initial visits to the school and during teaching practice itself, the student teacher will need to find out as much as she can about the way the curriculum is organised in the school as a whole and how her particular class fits into the school

scheme. The following points may assist the student teacher in this respect:

- 1 Find out the school's approach to the curriculum. Is the emphasis on direct teaching, for example, or on discovery learning? Or is there a balance between them?
- 2 What teaching styles are used in the school and do all the teachers adopt the same approach?
- 3 Do the teachers work together at any point in the week?
- 4 How are the teaching groups organised?
- 5 What is done for children with special educational needs and for those with physical disabilities?
- 6 Do specialist teachers visit the school?
- 7 What is the school's relationship with the parents? Are they encouraged to visit the school?
- 8 What are the approaches to individual subjects?

A framework for analysing curriculum tasks is provided by perceiving them in terms of *knowledge, concepts, skills* and *attitudes*. Pollard and Tann²⁰ define these terms as follows:

- *Knowledge*: The selection of that which is worth knowing and of interest.
- *Concepts*: The generalisations and ideas which enable pupils to classify, organise and predict – to understand patterns, relationships and meanings, e.g. continuity/change, cause/consequence, interdependence/adaptation, sequence/duration, nature/purpose, authenticity, power, energy . . .
- *Skills*: The capacity or competence to perform a task, e.g. person/social (turn taking, sharing), physical/practical (fine/gross motor skills), intellectual (observing, identifying, sorting/classifying, hypothesising, reasoning, testing, imagining and evaluating), communication (oracy, literacy, numeracy, graphicacy), etc.
- *Attitudes*: The overt expression of values and personal qualities, e.g. curiosity, perseverance, initiative, open-mindedness, trust, honesty, responsibility, respect, confidence, etc.

It has been suggested²¹ that early learning focuses more on skills than on content, for example social skills, communication skills, task-related behaviours.

Classroom organisation

The way one organises one's classroom exerts a powerful influence on both teaching and learning. Furthermore, the organisation must be seen to relate to the school's/teacher's philosophy, curricular aims, teaching and learning methods and interpersonal relationships. Four features of classroom organisation are especially relevant to the student teacher on teaching practice. They are: *the organisation of the children for group work; the physical environment; the use of space; and resources.*

Organising children for group work

Hargreaves and Hargreaves²² indicate the significance of group work as an aid to effective learning and cognitive development. Taking their lead from Piaget, cognitive development, they aver, is more likely to be promoted when children work with their peers rather than, for example, older children or adults or, indeed, on their own. They argue that peer group learning is more effective than child–adult learning as, in peer groups, children are more likely to challenge and question each other than with adults, and that such challenges (cognitive conflict) promote learning. Indeed, peer group work can enable students to provide each other with effective 'scaffolding' for learning. By contrast, Vygotsky argues that child–adult relationships are very profitable, as the child enters a pre-structured world and learns from more knowledgeable people. He avers that higher order learning requires group and social interaction; higher mental functions are internalised social relationships. Structured peer group work has been shown to be associated with higher levels of achievement.²³ Structured group work brings cognitive, affective and social benefits.²⁴ It teaches students to be cooperative and to help each other.

Kutnick and Manson²⁵ indicate that different kinds of group are suitable for different purposes. For example, individual work may be best for drill and practice work, paired work for cognitive problem-solving tasks, groups of 4–6 students for application and extension tasks, and whole-class work for transmission teaching and control.

It is of great importance that the student teacher be aware of the sort of situation he wants in a lesson, or at a particular point in it. This will be chiefly determined by his lesson objectives and other factors which contribute to defining the overall situation. These include:

- high–low teacher dominance;
- large–small number of pupils;
- high–low academic level of class;
- active–passive pupil participation;
- individual–co-operative effort;
- contentious–non-contentious material;
- strong–weak needs;
- task and learning-oriented–examination-oriented; and
- directing–helping (counselling).

In writing of the whole-class approach, Pollard and Tann say:

Such opportunities may give the teacher a chance to demonstrate discussion techniques, encourage collaborative learning and stimulate children's thinking by exploring ideas, asking more questions, sharing common problems and encouraging children to join in trying to solve them. However, if classwork is used too extensively, it may pose a severe strain on both the teacher and the listener, for it is very difficult to match the instruction appropriately to each child's different needs without sufficient individual consultation.

Alexander *et al.*²⁶ argue that whole-class teaching can 'provide the order, control, purpose and concentration which many critics believe are lacking in modern primary classrooms'. This echoes the research by Galton *et al.*²⁷ in the 1980s that showed that whole-class teaching encouraged 'solitary workers' (students working largely on their own although they interact with the teacher and their peers) and 'concentration'; this type of learning style produced the highest degree of time on task in their study (77.1%). Alexander *et al.* go on to suggest that 'whole-class teaching is associated with higher-order questioning, explanations and statements, and these, in turn, correlate with higher levels of pupil perform-

ance. Teachers with a substantial commitment to whole-class teaching appear, moreover, to be particularly effective in teaching the basic subjects.'²⁸ Further, this style of teaching accords with their view that 'there are many circumstances in which it is more appropriate to tell than to ask, clearly an advocacy of a more didactic and instructional style of teaching'. This lies uneasily with the notion of differentiation that the same authors advocate and creates potential problems for teachers of children in the early years, where group work has been seen (and shown) to be a positive and valuable teaching strategy.

Group work, too, needs to be planned carefully. Even the most 'child-centred' classroom needs planning; indeed it is a truism to say that the more diverse, complex and 'devolved' onto children is the learning process, the more planned, structured and carefully organised it has to be by the teacher or else behaviour problems and inefficient learning might result. This echoes the important early study of primary schools by Sharp and Green²⁹ and the argument from Bernstein³⁰ that there are 'visible' and 'invisible' pedagogies in schools, neither of which neglect the need for planning. The freer the classroom apparently seems to be, the more carefully it has to be planned and structured.

The several claimed attractions of group work are summarised by Morrison and Ridley,³¹ Box 60.

Bennett and Dunne³² regard group work as an acceptable and manageable compromise between whole-class work and wholly individualised work; the former is seen as unacceptable because it is undifferentiated, the latter is seen as unworkable because there are insufficient resources of time, materials and teaching staff to render this practicable. Indeed Alexander *et al.*³³ argue for the need to strike a balance between whole-class and completely individualised work; they argue that children need experience of class, group and individual work. Pollard *et al.*³⁴ found that this balance was being struck in about 50 per cent of the classrooms investigated.

Group work is a pedagogical strategy and not simply a seating arrangement. In a much publicised piece of research Galton *et al.*³⁵ found that though primary children sat in groups in fact they worked on their own; there was little

Box 60: Advantages of group work

- Helps children to work co-operatively.
- Enables students to learn from one another.
- Encourages the involvement of all children.
- Removes the stigma of failure from children.
- Enables the teacher to circulate more easily round the class.
- Enables children to work at their own pace.
- Enables children to respect others' strengths and weaknesses.
- Affords children access to scarce equipment.
- Facilitates collaborative work.
- Facilitates the integrated day (see below).
- Encourages joint decision making.
- Affords children the opportunity to exercise leadership.
- Stimulates the development of autonomy, resourcefulness and self-esteem.
- Focuses on processes as well as products.
- Promotes high-order thinking.
- Is particularly effective for problem-solving activities.
- Promotes mutual integration of children from all ethnic groups.
- Encourages children to engage the problem of disagreement.
- Improves discussion and classroom talk.

collaborative work undertaken for a single, whole-group outcome. Though children sat in groups for up to 60 per cent of the time, they only worked in groups for some 5 per cent of their tasks.³⁶ One implication of this is that the student teacher must plan tasks, activities and routines that foster and promote interactive learning.³⁷ This is a significant feature if discipline and good behaviour are to be promoted in classes. Accepting that grouping is a pedagogical device requires the student teacher to be very clear on the purposes of grouping children and ensure that the children themselves understand those purposes.

There are limits to the advantages of group work. For example, putting children into groups could replace 'task-enhancing' talk with lower level 'task-related' talk.³⁸ Dunne and Bennett³⁹ found that students of all abilities improved their skills of discussion, suggesting, concluding, testing, inferring and reflecting when working in mixed-ability groups, and that they improved in terms of both co-operation and independence. Bennett and Dunne⁴⁰ found that if group work was directed towards a genuinely collaborative activity then task-related activity was very high. Muijs and Reynolds⁴¹ report that group work

risks stifling independent thinking, can produce 'group think', which may be entirely incorrect but hard to change, and can foster dependency on one or more dominant members of the group. Indeed, poorer or lazy students can 'get away' with not making a full contribution or effort.

Time will need to be spent on ensuring that children understand the 'rules of the game' in group work (e.g. about talking, moving, allotting tasks) or even on making it clear to children that co-operation is permitted. Indeed it could be that teaching time is lost to transition time in group work.⁴² Kutnick and Manson⁴³ suggest that if tasks are ambiguous or unclear for the group then they may be ineffective.

Cohen⁴⁴ argues that students need to know what is involved in co-operation, e.g. listening, explaining, supporting, summarising, sharing ideas. Indeed Hall⁴⁵ demonstrates that children need to become aware of the purposes behind different approaches to learning, particularly when they are being asked to learn through small group discussion. Without this awareness, he argues, they do not value the various approaches to learning. This is echoed by Harwood,⁴⁶ who demonstrated that the presence of the teacher correlated

with improved effectiveness of learning in group working where the teacher stimulated the students, elaborated on their ideas, and controlled group dynamics, e.g. avoiding fragmentation of groups, dominance of one student, and scapegoating.

Dunne and Bennett⁴⁷ suggest that students need to be told explicitly that they must ask each other in the group before coming to the teacher. They also suggest that teachers will have to consider carefully the type of task that groups undertake in order to anticipate the types of demands that will be made on teachers.

There is a significant body of evidence to suggest that students need to be 'trained' in group work skills, for example in sharing, participation, communication and listening skills.⁴⁸ Dunne and Bennett⁴⁹ argue that these include: knowledge of acceptable behaviour; listening; questioning; clarifying and challenging skills; posing problems and deciding what to do. Echoing Dunne and Bennett, Harwood⁵⁰ argues that teachers need to spend time in the early stages of group work on developing communication skills: listening, asking, explaining, supporting, checking for consensus, providing evidence. Indeed Muijs and Reynolds⁵¹ suggest that it might be useful to appoint students to take certain roles in the group, for example: summariser, researcher, checker, runner, observer/troubleshooter and recorder. Cohen⁵² argues that students need to review how successfully they themselves, as a group, are working co-operatively. McAllister⁵³ extends this point by suggesting that students benefit from analysing their own work and giving feedback to each other in groups. Cohen⁵² argues that teachers too need to give feedback to students on how successfully they are working together. McAllister⁵³ is unequivocal in suggesting that discussion and detailed planning are critical for successful group work, and that these should be stressed very early in implementing group work. Galvin *et al.*⁵⁴ report that, though children work well in groups when the teacher works with them, the level of activity drops to around 50 per cent when the group is working without the teacher.

Further, Mortimore *et al.*⁵⁵ found that, whilst group work might be effective if all the groups were working in one or two curriculum areas only (e.g. everyone doing mathematics that is

differentiated by task), where three or more curriculum areas were taking place simultaneously then children's learning was inefficient. This view was echoed unequivocally by Alexander *et al.*⁵⁶ Too many curriculum areas occurring simultaneously provided a level of complexity in organisation and implementation that detracted from efficient learning and efficient use of the teacher – procedural and managerial talk replaced instructional and pedagogical talk. Indeed Bennett and Dunne⁵⁷ suggest that teachers would have to ensure that they made abstract demands as well as action-oriented demands in group work, particularly in the areas of science, technology and mathematics. Pollard *et al.*⁵⁸ report that teachers who implemented group work involved themselves heavily with low-attaining children twice as much as they did with high attainers.

Actually organising the groups can be difficult – what principles or organisation does one go by? Guidance here can be found in Pollard and Tann⁵⁹ and Pollard *et al.*⁶⁰ who show how the criteria devised by Kerry and Sands⁶¹ can help to overcome some of the obstacles. The criteria in question are:

- 1 *Age groups*: These can be useful for some activities, though because of the spread of ability, achievement and interests etc., they can sometimes be counterproductive when it comes to teaching some subjects.
- 2 *Attainment groups*: These are useful for well-defined tasks that befit the ability of the children. However, Pollard and Tann consider that they can be divisive if used permanently.
- 3 *Interest groups*: Grouping children according to interest is always useful and has definite social advantages when there are differences of one sort or another between the children, e.g. race or social class.
- 4 *Friendship groups*: One of the commonest forms of grouping, these go down well with the children and are a valuable means of social education. However, the teacher must bear in mind the needs of those children who do not mix well.
- 5 *Convenience groups*: These are used for organisational rather than primarily educational purposes.
- 6 *Mixed attainment groups*.
- 7 *Gender groups* (single sex or both sexes).

Muijs and Reynolds⁶² suggest that it is important to have co-operative groups that are of heterogeneous, but not too heterogeneous, ability. Groups which each comprised (a) high- and medium-ability and (b) medium- and low-ability students gave and received more explanations than groups which included high, medium and low abilities within each group. When only high-ability groups were formed, interaction and co-operation were limited (perhaps because the students did not feel it necessary to help each other), and when only low-ability groups were formed, the students were unable to help each other, regardless of whether they wished to or not.

Pollard *et al.*⁶³ found that in 1990 and 1992 80 per cent of teachers grouped children by attainment levels, particularly in mathematics and other curricular areas where differentiation by task was required (e.g. English). Mixed attainment groups and friendship groups were employed for some of the time, particularly when differentiation by outcome was operating. They reported a decrease in mixed age groupings – even in rural schools, and a very low incidence of gender-based groups. The under-representation of gender-based groups is probably welcome, as Bennett and Dunne⁶⁴ found that if a girl was put into a group that comprised mostly boys then the amount of participation by girls was reduced and the amount of higher level talk diminished. Significantly Pollard *et al.*⁶⁵ noted the increase in the amount of grouping by attainment that had occurred since the inception of the National Curriculum.

Successful grouping occurs when ‘fitness for purpose’ is demonstrated. Bennett and Dunne⁶⁶ report that group work proceeds optimally when groups comprise no more than four children and where groups are involved in a whole-class activity that includes reporting-back sessions. They define different types of co-operative group work:

- where children work together on an element of a ‘joint’ outcome – the ‘jigsaw’ model;
- where children work together on a whole task for a whole – joint – outcome;
- where children work alone for their own individual outcomes but share resources.

The latter, of course, is a very limited view of group work. Kagan⁶⁷ suggests that having groups of odd numbers is dangerous – a group of three quickly becomes a dyad with an odd one out; a group of five again risks having an odd one out. Further, Dunne and Bennett⁶⁸ found that groups of five and six tended to splinter into smaller subgroups.

Where individual children are chosen to lead groups, as with older children, your expectations have to be explained and the requisite skills developed, for example:⁶⁹

- 1 *Getting ideas from the group:* These then need to be organised and appropriate follow-up action planned.
- 2 *Allocating tasks:* Once ideas have been shaped, tasks can be allocated. It is important to clarify who should do what.
- 3 *Pacing the work:* Monitoring progress involves helping tardy ones to catch up and redirecting early finishers.
- 4 *Providing encouragement and support:* Leaders need to be made aware of this important part of their task.
- 5 *Fitting it all together:* This involves seeing how the parts fit together and deciding on final presentation.

In approaching group work a series of questions need to be considered by the student teacher:

- 1 On what basis will the children be grouped?
- 2 How permanent is the group?
- 3 Who will or will not work efficiently with whom if placed in the same group?
- 4 How long will different groups have to complete the same/different tasks (i.e. what will the student teacher plan for those who finish quickly/slowly)?
- 5 Will there be a group leader?
- 6 Exactly what will each member of the group be required to do – are there enough tasks for each member of the group to be usefully engaged? How will each child know exactly what is expected of her/him?
- 7 How will the student teacher use herself and intervene most efficiently, providing instructional and cognitive talk as well as procedural and managerial talk?

- 8 How will group sessions begin (i.e. will some children be waiting whilst the student teacher sets others working; which children can be relied upon to wait patiently)?
- 9 How will sessions be rounded off (rather than simply stop for want of time)?
- 10 How will reporting back to the whole class be undertaken?
- 11 What will be done with children who do not wish to work together or who do not wish to work in any group?
- 12 What will be done if a child disagrees with a group decision and becomes unco-operative and uninterested?

McAllister⁷⁰ argues that in the early stages of group work students benefit from being able to work with friends of their own choice. Morrison and Ridley⁷¹ suggest a seven-stage sequence in introducing and developing group work for classes new to the idea.

Stage 1: Have only one or two groups working apart from the class at any one time while the remainder of the class is involved in class or individually based work.

Stage 2: Each group replicates the same activity.

Stage 3: Each group works on the same activity or focus in a variety of ways.

Stage 4: Each group works on a variety of aspects of a topic or focus, one aspect per group.

Stage 5: Each group works on a variety of aspects of a topic or focus, covering many key aspects; children do the planning.

Stage 6: Each group works on aspects of a variety of topics or foci.

If one stage turns out to be problematic then it is easy to revert to the previous stage, i.e. to return to a stage which had been successful. In developing group work there are a number of variables that can be progressively introduced, for example:

- *time* (progressively increase the amount of time for group activities);

- *number of different activities* taking place (from everybody doing the same in groups to each group maybe doing something different);
- *number of groups* (from maybe only one group working apart from the whole class to complete group work);
- *number of curricular areas bring addressed* (with the caveat not to have more than three or four at any one time).

If adding a variable, or increasing a variable (e.g. time) causes problems, then the advantage of staging group work over time is that it can be easily 'pulled back' to a previous stage if necessary, i.e. to reinforce a stage that was effective and successful.

Whether group work is a resounding success or a demoralising failure is often a function of planning with management issues in mind. The student teacher will have to:

- avoid being too ambitious either for herself or for the children;
- only attempt to have more than one curriculum area simultaneously if she and the children can cope with it;
- enable children to practise being in a group (i.e. not expecting wonderful results from novice groups);
- give clear instructions;
- avoid overloading children with instructions all at once, rather stage the instructions throughout the session;
- be vigilant and attend to the whole class rather than being completely absorbed in one group;
- talk to the class as a whole (e.g. about how well the work is going, how well they are managing to work in the group) as well as talking to groups, i.e. avoid *atomising* the classroom interactions;
- be prepared to stop everyone during the session to calm them down, make a teaching/procedural/managerial/behaviour point.

When it works well group work can work very well and be very satisfying for student teachers and children.⁷² In planning the classroom organisation, then, we argue that the student teacher will need to be guided by the notion

of 'fitness for purpose'. For example, Wheldall *et al.*⁷³ argue that if one wishes students to work co-operatively then a *group* seating arrangement is most appropriate, whilst *independent* work benefits from relative isolation. They argue convincingly that it amounts to cruelty to have students seated in groups and yet expect them to work independently. Further, Hastings and Schwieso⁷⁴ suggest that having students seated in rows keeps them on task effectively in individualised work by minimising the opportunities for students to have eye contact with each other and maximising the opportunities for the teacher to have eye contact with the whole class. Group seating arrangements, on the other hand, are suitable for discussions and collaborative activities.

The physical environment

Our brief comments here can be read in conjunction with the relevant section of 'The classroom environment and situational factors' later. The fundamental aim with the classroom environment is to organise it in such a way as to back up whatever your educational purposes are.⁷⁵ Relevant considerations here might be: the values of the school (e.g. social inclusion); the requirements of the National Curriculum; how children learn and develop; how and where resources are to be kept and used; the teaching and learning strategies to be used; the views of students and teachers on the classroom and what is important/desired. Kershner⁷⁶ suggests that the environment should address such issues as: fostering personal identity; promoting involvement and self-esteem through having individuals contributing to the environment (e.g. through displays); encouraging the development of competencies; promoting ease of movement and reducing disturbance; promoting a sense of trust and security; allowing for both privacy and social interaction; providing opportunities for social, physical, motor and affective as well as cognitive growth (a feature which reinforces issues of multiple intelligences).

We advise you to begin by drawing a plan of your classroom, preferably to scale. When you have got a more or less complete picture, you can

scrutinise it in the light of your own intentions. The criteria you use could include *aesthetic* ones:

- Do the design, layout, decoration and lighting contribute to a pleasing effect?
- Is the room pleasurable to be in?
- Is the room *functional*?
- Does it do what you will want it to do?
- Can practical work be undertaken efficiently?
- Is there sufficient storage?
- Can different activities take place simultaneously?
- Are there enough materials and tools?
- What are the *presentational* aspects like?
- Are the notice boards and display tables adequate to your needs?
- Do they achieve what they are supposed to achieve?
- No room is perfect, so what are the *possibilities* for further improvements?
- Can greater use be made of the windows, or the ceiling perhaps?
- Are there enough plants in the room?

A particular aspect of the classroom is the extent to which space is used effectively, and it is to this we turn.

The use of space

Kerry and Tollitt⁷⁷ describe space as essentially a learning resource and state that for the infant teacher managing space is a vital skill. Much of that management, they explain, is about five principles:

- 1 providing opportunities for a variety of child-centred but teacher-directed activities (story time);
- 2 reinforcing children's more formal work through real experience or play (e.g. through display, or in the classroom shop);
- 3 setting up opportunities for tactile or imaginative play as an aid in itself (sand, water, building blocks);
- 4 making available the essential resources that pupils need in order to learn; and
- 5 creating an environment conducive to spontaneous learning.

Box 61: Exploiting space

Floor area	Layout of tables, chairs etc. will have an effect upon kinds of activities you can employ – think of spaces for individual work, group activity, story time and so on.
Wall space	Can this be exploited for display – of children's work, of stimulus materials, of resource materials around a topic of current concern?
Notice boards	Fixing devices can be more varied here (staple guns, pins). Possible use for more long-term items, e.g. 'word ladders' of basic vocabulary, packs of stimulus cards giving tasks for pupils with 'free' moments.
Black/whiteboards	Up-dated display of day, date, season, clock-face, 'word a day' reinforcement.
Storage area	Think out problems of access, cleanliness, layout. If unsightly, how can area be disguised? E.g. doorway 'dressed' as time machine, or attractively curtained.
Horizontal surfaces	Useful for equipment (magnifying glass, Lego etc.), specimens, 3D artefacts made by children, 3D displays by teacher, plants.
Ceiling beams	In older schools it may be practical to use these as hangers for 'word trees', mobiles etc.
Bays	Can these be pressed into service as a reading corner, a group-work area, a wet area, a project base?
Windows and views	Artwork can often be displayed effectively when back-lit by window light. Window may look out on to field, with potential for watching wildlife, or onto school yard with bird-feeder.
Wet areas	As well as supporting artwork, cookery etc. these areas give potential for scientific experiments, volume and quantity work, keeping an aquarium etc.
Adjacent corridor	Can be decorated to harmonise with any theme developed in the classroom, e.g. some may lend themselves to open access bookshelves and browsing areas.
Electric points	Enable a range of audio-visual aids to be used in teaching and learning. Pupils can operate tape-recorders or simple slide viewers, so increasing potential for individual or group work, or helping non-readers.

It can be a useful exercise for the student teacher to work out how much space is required for the various activities she will be organising. This will be particularly relevant to group work. It is important to see what the differences are in this connection with respect to language skills, mathematics, science, environmental studies, art and craft, the expressive arts, play and religious education.

Space can be marked off by the appropriate use of cupboards, screens, shelves or tables. The fundamental divisions are into clean/messy activities and quiet/noisy ones. Indeed there may need to be timetabling for noisy activities, so that quieter activities are not disrupted. In Box 61 Kerry and Tollitt suggest ideas to start you thinking about 'exploiting space'.

Resources

Our last feature of classroom organisation is resources. The availability and use of resources in the primary classroom are of the greatest possible importance in the part they play in children's learning. Pollard and Tann⁷⁸ have suggested four criteria that might be borne in mind when organising and arranging resources. They are:

- 1 *Appropriateness*: What resources are suitable as an integral part of the learning activities?
- 2 *Availability*: What is available within the classroom, the school, and the wider environment?
- 3 *Storage*: How are the resources stored? What is under teacher control and what is freely avail-

able to the children? What safety factors need to be remembered?

- 4 *Maintenance*: What kind of maintenance is required and who is responsible for it?

Some organisational concepts in primary education

We have already introduced the notion of subject and subject specialist teaching in the primary school. There is no doubt that its influence is being felt, particularly with a subject-framed National Curriculum.⁷⁹

Our intention here is to trace an alternative context of primary education whose history is little shorter than the elementary tradition,⁸⁰ viz. the notion of child-centred education, for example in the work of Rousseau⁸¹ and Dewey,⁸² and enshrined in the famous phrases from the Hadow Report that argued that the curriculum should be thought of in terms of activity and experience rather than knowledge to be learned and facts to be stored.⁸³ Child-centredness has many hues⁸⁴ – from a child-chosen curriculum to the delineation of an active, experiential and concrete form of learning.

Whilst the notion of child-centred or progressive education has become almost a term of abuse or an accusation against teachers for failing to bring students to the required standards, we argue that a cooler, less fundamentalist, less pejorative and less dismissive reading of child-centred education is tenable. This respects the individuality of the child (in differentiated activities), demonstrates the value of first-hand, experiential learning (implicit in constructivist psychology) that ‘begins where the child is’, and argues for some form of negotiation with children rather than a steamroller approach with heavy prescription. This will enable teachers to replace the ideological trappings of a romantic ideology for which progressive education has unfortunately been saddled with some enduring and important teaching principles that make for good practice regardless of one’s ideological commitments.

A watershed in primary education that emphasised child-centred principles and methods

was set out in the Plowden Report.⁸⁵ This report proved to be a powerful influence in advocating open schools and open education, concepts which when translated into school practice were to result in a marked shift from the more traditional view of children as learners. The open or progressive view of education was characterised by three broad concepts – *freedom*, *activity* and *discovery* – and a concern with *process* as opposed to *content*. It was also noted for its desire to broaden concepts such as *education*, *learning* and *responsibility* and it is such concepts and ideas that were to persist and exert an important influence on the organisation of primary school practice. The emphasis on discovery learning or ‘learning to learn’, for example, and the highlighting of the needs of the individual child are instances of open education’s more lasting influence; likewise, the stress on the value of group work. The Plowden Report’s authors saw groups as a natural social unit for primary children, which were part of the process of socialisation. ‘Openness’ in terms of attitudes and sharing, and in terms of relationships between teacher and pupil, pupil and pupil, and teacher and teacher also became an increasing feature of the primary world.

The notion of ‘open education’ was reflected not only in the pedagogical styles adopted but in the physical layout of the school building as a whole and of age-related teaching areas in particular.⁸⁶ We are referring here to the notion of an open-plan or semi-open-plan school, wherein there is joint use of space and materials, concomitant with team teaching and very flexible groupings of children. In a fully open-plan school, space is divided up by low furniture, creating bays for study; in a semi-open-plan school teaching spaces are defined by walls with openings in to other areas (often shared library, art and technology areas), and flexible open-plan schools have screens and partitions that can be moved to open or close off areas at will.⁸⁷

There are several claimed attractions of open-plan arrangements. These are summarised in Box 62.

On the other hand, as with integrated teaching (discussed below), open-plan teaching is not universally popular and not always without its difficulties. These are summarised in Box 63.

Box 62: Advantages of open-plan arrangements

Open-plan arrangements can:

- develop children's autonomy and responsibility (e.g. for working without too close supervision);
- maximise space through shared areas;
- move away from whole-class instruction to differentiated activities;
- support team planning, team teaching and team assessing;
- facilitate social learning and peer group learning;
- reduce resource duplication;
- encourage co-operative work (by children and teachers);
- support flexible group size and membership;
- avoid feelings of insecurity and isolation that student teachers (and experienced teachers) may feel in more traditional 'cellular' classrooms;
- facilitate consistent and supportive handling of difficult children by more than one teacher;
- facilitate the sharing of ideas by students and teachers.

Box 63: Disadvantages of open-plan arrangements

Open-plan arrangements can:

- incur much transition time;
- let children 'slip through the net' of being monitored;
- fail with uncommitted teachers;
- lead to wasteful use of resources;
- cause much noise and distraction;
- fail to make the most of materials and resources;
- lead to over-reliance on worksheets;
- cause discipline problems;
- cause problems of cover if staff are absent;
- cause congestion as children circulate round areas;
- provide inadequate display space;
- make personality clashes amongst teachers very visible;
- require much time for team planning;
- cause problems of supervision.

Open-plan teaching makes heavy demands on teachers and planning, echoing the issue raised by Mortimore⁸⁸ and Alexander *et al.*⁸⁹ that having too many groups doing too many different activities in too many curriculum areas is inefficient.

Two key concepts at the heart of educational practice in open and progressive classrooms are the *integrated day* and the *integrated curriculum*, both of which play an important part in primary education today.

The *integrated day* has been described⁹⁰ as an organisational concept, implying that 'timetables or other formalised ways of changing from one activity to another are abandoned. Instead, the flow of children's learning activities is unbroken and changes informally and often individually, with a large element of the children's own choice governing the matters.' In consequence, a variety of contrasting activities are likely to be in progress simultaneously in the room or area. 'Some children may be reading or writing, others weighing

or measuring, some painting, experimenting or modelling, while yet others may be in a group being instructed or questioned by the teacher, or out of the room altogether.⁹¹

Dearden considers that at least three things may be said in favour of having an integrated day. First, it allows for more individualised learning in content and pace and this makes for more interest and involvement: 'When curricula and methods are more precisely tailored success is more likely.'⁹² Second, because the amount of time a teacher can devote to a particular child is limited, children learn how to learn on their own in those areas of work where this is possible:

At the primary stage, this principally means acquiring various information-getting skills such as are involved in using reference books, using libraries and writing to relevant people. It also involves acquiring habits of initiative and persistence, so that available opportunities to find out for oneself are not shied away from. . . .⁹³

Third, more individualised learning and developing skills of learning for oneself are closely related to the development of personal autonomy and self-direction.

Advocates of open or progressive education objected to the sharp division among subjects in traditional classrooms, arguing that learning cannot always be neatly wrapped up in separate packages. Many activities involve knowledge of, and skill in, a variety of subjects. Open educators therefore recommend an *integrated curriculum* in which subject boundaries are less distinct. Thus the work of a class could be organised around broad unified themes which encompass a number of subject areas. Skills are studied as they are needed by the activity and are practised in the course of significant tasks. In this connection, Dearden⁹⁴ writes:

Integration logically presupposes differentiation, the differentiated elements being subordinated to some unitary whole. In what might be called 'loose' integration, the subordination of elements is no more than their selection according to relevance to a topic,

theme or centre of interest. Thus geography, history, science, music and art may be selectively drawn upon for the contribution they can make to some such theme as canals, the sea, railways, flight, India or whatever. If the theme is the sea, then there may be maps of oceans, the history of voyages of discovery, experiments on floating in salt and fresh water, the painting of scenes beneath the sea, the playing of 'Fingal's Cave', the singing of sea shanties. *Treasure Island* may be read and the economic uses of the sea may be studied. No doubt the justification for such a 'loose' integration of subjects would be that it naturally follows the course of an interest without any arbitrary interruptions or divisions. And a good deal of such general knowledge is acquired in areas where it is difficult to argue that this rather than that must be known, or that this rather than that must be covered. The strongest argument for loose integration is thus motivational.

Thus the main argument in favour of an integrated curriculum is that pupils are *actively involved* in the learning experience. The teacher is the 'facilitator' who helps to create the conditions for learning, but it is the child who does the learning. Pollard and Tann⁹⁵ remind us of two other arguments in favour of the integrated curriculum. First, new subjects have been added to the curriculum which are interdisciplinary and conceptually linked. An example here is environmental studies. The very nature of the subject integrated a number of disciplines. Second, where subject boundaries are reduced, it is possible to reduce the influence of subject content. As the authors explain, 'Having lessened the emphasis on particular subject knowledge, a higher priority can be given to general processes, skills and attitudes.'

Inevitably, in most integrated days there has to be a certain amount of formal timetabling. This usually occurs where the use of common or shared resources, such as in music or television programmes, is involved. Similarly, even though an integrated curriculum may be in operation, subject teaching may be important, for example:⁹⁶ 'Physical education for practical reasons, mathematics for reasons of sequence, and language

skills because of their arbitrary social conventions all have to be differentiated out, at least for some of the time.'

From the child's perspective, integration in learning is natural during the early years of life. At this stage in her mental development, the child does not see what she learns as classifiable into distinct subject areas or isolated skills. She reads, records, calculates in pursuit of her current interests, and not until the age of 9 or so does she begin to classify what she learns into subject compartments. Integration stems from the child and from the natural ways in which she learns. It is the child who integrates, not the teacher.

Morrison and Ridley⁹⁷ identify five stages that the student teacher can follow in introducing the integrated day:⁹⁸

Stage 1: Grouping the children and training them in the access, use and return of materials; establishing discipline and control.

Stage 2: Using one hour or one block of time to do two specific tasks, the student teacher setting the tasks and the children choosing the order and timing.

Stage 3: The student teacher extending the periods of integration and number of tasks, perhaps doing this one group at a time.

Stage 4: Reducing the amount of direction by the student teacher, with the children knowing what tasks to do without being told by the teacher; lengthening the period of integration; the student teacher drawing up daily plans for the children.

Stage 5: Days of integration moving to a week of integration, perhaps one group at a time; extended use of assignment cards.

As with group work, outlined earlier, variables of time, curriculum areas, number of activities and so on are controlled. As steps to integration gather momentum so do the possible management problems. The integrated day can lead to the situation where an exhausted teacher is working much harder than the children, where noise levels rise, where lazy children 'slip through the net' (unless scrupulous records are kept and updated on an almost daily basis), where children

can move around the room being distracted and distracting others, where assignment cards suffer from the 'death by worksheet' syndrome, where some children cannot handle the freedom accorded to them, and where the degree of planning required is greater than the return on the time and effort expended.

We earlier touched upon possibilities for grouping children within a class, sometimes referred to as *intra-class grouping*. We now consider grouping children within the school, or *intra-school grouping*. This can be achieved in terms of *age* or *ability*. We begin with age. There are three options here: *same-age grouping* (sometimes called horizontal or chronological grouping), *vertical grouping* (or mixed age grouping) and *transitional grouping*.

Same-age grouping (or horizontal or chronological) refers to classes in which children are of the same age range. This may vary from three months to possibly one year depending on the size of the school. There are a number of advantages and disadvantages of horizontal grouping. The advantages are that:

- 1 the narrow age range may enable teachers to feel more secure and the narrower range of ability may appear to make their task simpler;
- 2 children and teachers are both able to make a completely new beginning with each new school year; and
- 3 classes grouped in this manner show greater social cohesion and interaction because they are at similar levels of intellectual, social and emotional development and have similar interests.

Some of the disadvantages are as follows:

- 1 as the class is new at the start of each year, there is no continuity with the previous year;
- 2 there is the possibility that children in the younger parallel classes may underachieve because they are known to be younger and appear less able;
- 3 a teacher who sees his class as a fairly homogeneous group may be in danger of not noticing the exceptions; and
- 4 teachers who tend to specialise in one age-group for a number of years will automatically restrict the range of their experience.

Vertical grouping may be defined as a method of organising children in such a manner that each class contains children from each age group in the school. At the present time, vertical grouping is found chiefly in infant schools and rural schools with several ages in a single class (due to the low number of children in the school). In such classes each child will then 'run his/her own race' in a stable community guided by one teacher.

Vertical or mixed-age grouping implies a flexible organisation which provides a wide basis for a child's emotional, social and intellectual development. The distinctive strength of this arrangement lies in its fluidity, for individual, group and class work are all possible. Indeed, it is the individual needs and interests of the children, and not their ages, which lie at the basis of group formation and re-formation.

In addition to the flexible organisational structure noted above, vertical grouping possesses a number of additional advantages (some of which it shares with horizontally grouped children being taught on an individual or group basis) that may be listed thus:

- 1 a more natural and relaxed atmosphere can result from this same flexibility;
- 2 the organisation minimises problems arising from a child's entering the infant school for the first time – moving into a stable and secure community, the new entrant is able to adjust more quickly and successfully;
- 3 the organisational flexibility relates more effectively to the children's motivation, to the content of learning, and to the integration of the curriculum than is the case with more traditional approaches;
- 4 children are better able to learn from each other as well as from the teacher;
- 5 the structure allows more effectively for variations in personal growth and development than is the case with more rigid organisational structures, fixed age groups and set instructional procedures;
- 6 the organisation increases the likelihood of children interacting with the environment;
- 7 a wider range of social experience is possible, together with resultant benefits such as a greater sense of belongingness, support and security;

- 8 should problems arise, a child can be moved to another class without much difficulty;
- 9 older children develop a sense of responsibility towards the younger ones;
- 10 the teacher is in a better position to deal with the children individually;
- 11 communication between teachers benefits, as each teacher is confronted with similar problems of the various age groups; and
- 12 teachers using vertical grouping tend to speak favourably of it.

Critics of vertical grouping, however, raise the following objections:

- 1 the duties of the teacher become excessively onerous;
- 2 personality clashes between a teacher and child may make it undesirable for a child to spend two or three years in the same class;
- 3 older children may help younger ones too much, thus hampering their own progress;
- 4 children on the point of entering the junior school may be given preferential treatment;
- 5 the noise created by the younger children may disturb the older ones (partial vertical grouping can solve this problem);
- 6 the structure presents difficulties for activities such as stories and poems, religious education, and those areas such as music and movement and physical education where skill depends on maturation;
- 7 groups whose teachers are uncommitted or weak will be disadvantaged by a vertically grouped structure; and
- 8 hostility from parents (though this often arises from misunderstandings).

There are *four basic educational principles underlying the practice of vertical grouping*. These may be briefly summarised as follows:⁹⁹

- 1 being a stable and secure community, the school embodying the principles of vertical grouping provides the continuity and coherence necessary in a child's educational life;
- 2 a vertically grouped situation caters for a wide age range in its own right, provides for individual motivation, tempo and maturation, and thus facilitates maximal individual growth;

- 3 a vertically grouped structure provides for the acceptance of the child as an agent of his own learning; and
- 4 such an organisation provides for the fullest development of the balanced personality. It meets the need for a holistic view of child development which will foster attitudes, qualities and abilities that will enable a child to live a happy, well-adjusted life in a complex and changing social environment.

Although the one essential characteristic of vertical grouping is the age grouping, some teachers identify two further characteristics. These are:

- 1 the *integrated* or *unstructured day*. This they perceive as crucial to the successful working of vertical grouping. In so far as it is possible, a school is thus stripped of all artificial divisions; and
- 2 a *structured environment*. An unstructured day is only made possible by having a highly organised classroom, and success in vertical grouping rests to a large extent on a highly structured environment. Space and opportunity to spread out are essential; and every classroom should have a good range of basic equipment.

Transitional grouping is a combination of same-age and vertical grouping. Some see it as a compromise between the two. Arrangements for transitional grouping in infant, junior and first schools are extremely flexible. One such arrangement in an infant school would be to have the 5- and 6-year-olds vertically grouped in parallel classes and single-age classes for the 7-year-olds. There are advantages and disadvantages of transitional grouping.¹⁰⁰ Advantages include:

- 1 with transitional grouping, children have the experience of changing to a single-age class within the security of the same school;
- 2 transitional grouping allows children more variety of adult contact;
- 3 separating children at 7 appears to eliminate the need to cater for physical education, story and music at a separate level for certain ages as within the vertically grouped class;

- 4 it helps with the problem of younger children trying to follow too closely the lead of the older children, and losing experience of activities such as fantasy play or the investigation of the properties of materials;
- 5 older children also benefit in that they can expect more opportunity to use materials creatively and more teacher's help with the practice of basic skills;
- 6 some teachers are happier with older children. and others are more suited to younger ones; and
- 7 the system appears to be particularly advantageous in a socially deprived school.

Three disadvantages identified may be listed thus:

- 1 where an individual child has not emotionally or intellectually reached the level of his companions, this is obviously more noticeable on transfer to a 7-year-old class or a vertically grouped 7 to 8-year-old class;
- 2 as with vertically grouped situations, there may well be misunderstandings by the parents which need sympathetic explanation by the school; and
- 3 where children have made friends with older or younger children in their vertically grouped class and are now separated, there may be distress on the part of the children which needs to be understood by the school.

Intra-school grouping according to ability offer two possibilities: *the same or similar ability groups* and *mixed-ability groups*. Schools organised on same-ability principles make use of setting. Where setting is seen as undesirable (for philosophical as well as practical reasons), the answer lies in *mixed-ability grouping*. Kerry and Tollitt¹⁰¹ remind us that at infant level, mixed-ability grouping is rarely made the issue it has become in comprehensive schools. They have identified some of the reasons why teachers in infant schools prefer mixed-ability groups:

- 1 Grading children by ability is socially divisive.
- 2 Infant school is too early to make satisfactory judgements about children's academic potential.
- 3 Children labelled as failures tend to fail.

- 4 Streaming does not correspond to the way children will live in the community.
- 5 Children of differing abilities can learn to help or be helped by classmates.

We continue by examining some of the principal teaching and learning styles to be found in primary classrooms. We concentrate on those methods that developed with the emergence of open and progressive classrooms.

Teaching and learning styles in primary classrooms

One of the most striking features of contemporary primary classrooms is the range and variety of teaching and learning styles operating in them. A teaching style is made up of a cluster of elements:

- the type of discipline;
- the relationships and interactions between teachers and children;
- teacher behaviour;
- the organisation of the class;
- the nature and extent of teacher talk;
- the degree of student choice;
- the nature and use of resources;
- the nature of assessment;
- the organisation of the curriculum;
- the style of learning;
- the atmosphere in the classroom.

A formal style will interpret these very differently from an informal style. For example, a formal style might be characterised by strict, overt discipline, a high degree of social distance between teachers and students, a 'chalk-and-talk' type of lesson with little interaction between one student and another, individual work with no talking, an emphasis on book work, the teacher acting as an expert, the curriculum organised in subjects and students being assessed by standardised tests. An informal style might be characterised by a freer discipline, less social distance between students and teachers, experiential and active learning using a variety of resources, children learning in groups, and assessment being diagnostic.

Our review of teaching and learning styles includes *individualisation*, *individual attention*, *discovery learning*, *play and talk*, and *topics and projects*. Group teaching we have already touched upon and there is enough guidance on direct, formal teaching in other parts of the book to meet the reader's need.

Individualisation

Individualisation of instruction is based on recognition of the fact that not all children can be expected to learn at the same rate. The approach is used in both traditional and open classrooms though its relationship to the content of learning is different in each case. In the traditional classroom, individualisation is achieved by varying the pace or duration of learning and by varying the mode of teaching. A consequence of this is the need for frequent evaluation and testing to check the children's progress. In open or progressive classrooms, where individualisation is a key concept, children collaborate in formulating their own curricular goals, albeit within the framework of the National Curriculum. Individualisation is sometimes misinterpreted as meaning that each child works on his own in a physical sense. But this is not the case. It simply means that his individual needs are taken into account. More often than not, these can be most effectively met by grouping – a topic we have already considered.

The key to effective individualised learning lies in the provision of adequate resources and materials, carefully structured and suitable for a child's abilities. Individualisation is but one aspect of the learning process that can benefit enormously from the technological revolution and its application to the classroom.

Individual attention

Individualisation involves encounters with the teacher, and her contribution to the teaching-learning process in the primary classroom can be considered in terms of *individual attention*. The burden of informal encounters between the teacher and child can be very onerous, sometimes totalling as many as a thousand interpersonal

contacts a day, with two groups of children frequently receiving the most attention: the active hard workers and the active miscreants. The *average* child may miss out in this respect, not through any rational policy on the part of the teacher, but because the ongoing classroom pressures limit pupil contact to the two categories identified above. For the neglected child who is also diffident and therefore unlikely to talk even to those other children in his group, the classroom becomes bereft of language, either written or spoken.

However, in dividing the pupils into three sub-groups – high achievers, medium achievers and low achievers – there may be little difference in the distribution of teacher–pupil interaction between the three groups of pupils, nor any discrimination either in favour of or against any particular group of pupils according to their achievement level.

Discovery and experiential learning

Discovery and experiential learning are concepts arising from the strategies of topic and project work in progressive environments and are of central importance to the work of the primary classroom.

By means of discovery learning we may reasonably expect children to learn something new; and to do so through some initiative of their own.¹⁰² There are three points to be borne in mind in any discussion on learning by discovery. First, what is involved primarily is the learning of facts, concepts and principles rather than skills, techniques or sensitivities; and the subjects most relevant to discovery learning are mathematics, science and environmental studies. Second, discovery learning may be contrasted with the sort of learning usually associated with the traditional classroom, i.e. learning by instruction or demonstration. And third, learning by discovery does not just happen; it comes about as a result of a particular teaching method or strategy. Numerous strategies can be distinguished in this connection; perhaps the commonest one to be found is that of *guided discovery*. By means of this, a teacher supports a child's self-chosen activity with questions, commentary and suggestions.

Another useful typology is that of *open-ended discovery learning* and *planned or structural discovery*. In the case of the former, the situation in which the child is put or which he chooses is such that the teacher does not know the outcome. A topic on some aspect of environmental studies would be an example here. *Planned or structured discovery* occurs when a teacher wants a specific aspect of learning to take place, perhaps with respect to the development or acquisition of scientific or mathematical concepts.

Play and talk

The educational significance of *play* for younger children, e.g. 4 to 7-year-olds, has been discussed in Chapter 4. The prominent role accorded it by the initiators of the progressive movement in education has now assumed one of pre-eminence in the theory and practice of infant education.¹⁰³ Broadly speaking, *play* serves a twofold purpose. First, it seems to cater for a *fairly wide range of children's needs*. These include psychological, educational, social, emotional and motor. In this sense, play can be an important source of knowledge for the child. Kerry and Tollitt¹⁰⁴ consider that in this connection there is a need for a careful balance between structured and unstructured play in the classroom and playground. The second purpose of play is for it to serve as an *integrative factor*. In this sense, it is a vital means of breaking down traditional divides. Thus play merges with, or becomes indistinguishable from, work; and the boundaries between other traditional dualisms such as doing and knowing, or intellect and emotions, are similarly blurred by the concept.

Play provides children with a mode of learning which is active, experiential, and, even though it may sound strange, real-world learning: though it is playing, it is still a serious activity for children, and one in which they can explore, develop and use their skills, problem solve, and rehearse.¹⁰⁵ Indeed it requires, and stimulates, concentration and learning. This resonates with Norman's¹⁰⁶ theory of complex learning in which learners:

- acquire new knowledge and skills (incremental knowledge);

- use their existing knowledge and skills in different and new contexts (application tasks);
- identify and solve problems (restructuring tasks);
- practise their knowledge and skills (practice tasks);
- revise what they know in order to help memorisation (revision tasks).

Importantly, in play there is room for redundancy, i.e. for trial and error learning, which, as we know from brain-based research, is a fundamental aspect of effective learning.

Talk likewise occupies a crucial position in the classroom in any consideration of principal agents of learning. It is therefore in the many discussion situations in the classroom that talk as an agent of learning operates most effectively. This means that the problem for the teacher is how to develop and improve children's skills in this respect and, indeed, her own. In the main, discussions take place either between the teacher and class or among small groups with or without the teacher.

Student teachers must think out clearly what it is they hope to get from their discussions and consider their functions. This involves identifying important questions and having the children's language skills and general experience in mind at the same time. We discuss handling discussions in a later chapter. Suffice it here to mention that important points that need to be remembered are: *how you receive the children's contributions; scanning the class to spot would-be contributors and those not involved; being able to interpret body language so as to know when children have had enough; and finally being able to summarise and structure ideas with a view to taking the discussion further.*

Pollard and Tann¹⁰⁷ have posed further questions which student teachers can reflect on, perhaps in the light of their own teaching practice experiences:

- 1 What is the range of roles participants might play?
- 2 What do the participants learn, including those that do not participate?
- 3 How do different kinds of tasks, group size and composition affect group processes?
- 4 How can we use discussion to develop and monitor the participants' discussion skills?

Topic and project work

Tann¹⁰⁸ defines topic work as 'an approach to learning which draws upon children's concerns and which actively involves them in the planning, executing, presenting and evaluating of a negotiated learning experience. In this form of topic work "control" is a shared responsibility.' The use of topics, projects, themes and centres of interest has long been an important feature of primary classrooms, especially in those where child-centred teaching prevails (not necessarily the simplistic ideologically puritan version outlined earlier but the approach that stresses first-hand, experiential learning through a negotiated order, a view that is not necessarily at odds with the National Curriculum). The reasons for our support of some form of topic work are numerous – their value in integration and discovery learning, for example, along with the social benefits that accrue from group work. Of course, the use of such approaches is not confined to the primary classroom as an examination of secondary, further and higher education will disclose. Indeed, projects play a significant role in the coursework of the GCSE. The terms topic work and project work lack precise definitions, but they do possess similarities.¹⁰⁹ They are practical in nature and attempt to break away from the conventional methods of teaching, placing more emphasis on the child than on the subject; they endeavour to allow the child to construct his or her own methods of approach to knowledge; they give him or her the opportunity to 'learn how to learn'; they break down barriers between school subjects; and they both utilise a child's own interests.

Topic work may be defined as individual and/or group investigations, recordings and presentations which children undertake when pursuing a topic. An individual topic is carried out by one child; a group topic is undertaken by a group of from four to six children; and a class topic by the whole class. An independent group is a self-sufficient unit contributing to one independent section of the topic; and a linked group collaborates with one or more other groups.

Generally speaking, topics should be chosen by the children on the basis of their own interests and commensurate with the requirements of the

Box 64: Preparing for topic work

Before the topic begins, teachers should:

1 Prepare content and teaching methods

- Make flow diagrams or outlines of anticipated directions of study.
- Divide the content into the curriculum areas to be covered.
- Decide on specific teaching activities or modes for subdivision of the content.
- Refer to the school's outline scheme of work.
- Read around the subject at their own level.
- Make a list of the skills to be taught.
- Make notes on classroom management procedures (e.g. assign pupils to working groups).
- Decide on the time scale of the topic.
- Amend flowcharts or plans in consultation with pupils.
- Plan lead lessons.

2 Prepare resources and materials

- Make a search of school and public libraries.
- Collect suitable audio-visual software.
- Arrange visits and speakers.
- Contact museums and other outside organisations.
- Prepare worksheets or assignment cards.
- Encourage pupils, colleagues or parents to collect materials.
- Consult TV and radio programme schedules.
- Write letters to supplying agencies.
- Visit the local Teachers' Centre.
- View in advance any area to be visited later by the class.

3 Prepare the classroom itself

- Make a display of related charts, reference books etc.
- Prepare a display area.
- Prepare resource collections.
- Decide on the layout of furniture.
- Check that any software or apparatus required is readily available.
- Provide suitable folders or storage for pupils' work.
- Organise outside or ancillary help.
- Explore the potential of school-based facilities (such as rain gauges).

National Curriculum. They may initially require some suggestions and the teacher can help here with a compiled list of possibilities which can serve as a basis for negotiation.

The methods of undertaking a topic vary considerably with its nature and the maturity and experience of the children. The following five-stage plan, however, may serve as an organisational basis for student teachers embarking on a topic perhaps for the first time:

- 1 The teacher's preparation of the subject (see also Box 64).
- 2 Introduction of the subject(s) to the class.
- 3 The organisation of the subject(s) with the class.
- 4 The children's research into the subject matter.
- 5 The end-product.

The teacher's functions throughout the sequence of stages are numerous. If the subject centres on a place or building, part of her own preparation

may be a visit on her own. The form her introduction takes will depend on the nature of the subject, but it should be done in such a way as to arouse strong initial motivation. She may even adopt an imaginative approach, like telling a story or having the children act out some aspect of the theme. Once the topic is under way, the teacher is then available as a consultant and resources person. She should be careful not to direct too closely or obviously the actual course of the investigation for, as far as possible, the children themselves should determine how they wish to pursue their research and presentation. From time to time the teacher will need to restimulate interest and perhaps suggest new or alternative avenues of approach and exploration to the children as they work on their topics. She must constantly be on the alert for waning interest.

The importance of having a *well-defined end-product* agreed at the organisational stage cannot be overemphasised. No matter how well motivated children are initially, they can easily lose interest as the topic gets under way. If or when this happens, the defined end-product will assist in refocusing attention and sustaining interest. What form the end-product takes will depend on a number of factors. Common forms of display and presentation include an exhibition, presentation in booklets and folders, displays and murals, recordings, mimes and plays, a talk by one or more members of the group, movies, video-recordings, models, collages, a magazine or newspaper, a festival, spoken poetry and prose, or any combination of these.¹¹⁰

In summary, the reader is reminded that the chief points to bear in mind are:

- 1 his or her own thorough preparation, and especially the preliminary reading, research and exploration he or she needs to undertake;
- 2 the organisation of the topic with the class (availability of resources and definition of end-product are important here);
- 3 making sure that the children enjoy the work; and
- 4 establishing and maintaining a reasonably high level of motivation and anticipating the points where it can be expected to flag.

For a more detailed checklist for the preparation of topic work, we refer you to Box 64, the items having been devised by Kerry and Tollitt¹¹¹ with infants in mind.

It is difficult to establish a clear-cut distinction between topic work and project work. Like the topic, a project can be the work of an individual or a group. Projects, however, do tend to be more substantial than topics, thus requiring longer to accomplish. It is possible, for example, to spend a whole term on a project.

Much of what has been said on topic work will apply to projects. Social studies, environmental studies and science lend themselves particularly well to class projects. Box 65 lists some of the advantages of enquiry-based projects in primary school science.¹¹²

An important factor needing to be confronted in project work is that of structure. In Bonnett's¹¹³ view, the challenge of project work for children

Box 65: Advantages of enquiry-based projects

- They provide a context which may help children to understand the processes of science by actually doing them.
- They may encourage children to work together, to share ideas, to challenge one another and to develop a critical awareness.
- They may change the role of the teacher from being a presenter of knowledge to that of being a resource agent and guide.
- They may encourage a degree of independence from the teacher and so begin the process of independent learning and judgement.
- They may encourage children to see science as a tentative discipline and not as an infallible one.

lies in the extent to which it enables them to explore themselves in relation to the real world through the thoughtful acknowledgement and pursuit of their concerns. This challenge, Bonnett argues, 'cannot be met by attempts to "order up" projects in advance and standardise their achievements. The structure we should be seeking is one which takes its cue from the children's own relationship with the world, their ways of revealing it to themselves.'

From his study of project work in schools, Bonnett has identified five sources of structure. These may be enshrined in the following principles:

- 1 *The teacher-centred principle*: This will derive largely from the teacher's own personal associations which in turn result from the teacher's own experiences and world view. As Bonnett says, 'As such it may well be highly subjective and greatly influenced by his or her own enthusiasm and areas of perceived expertise.'
- 2 *The knowledge-centred principle*: Where this structuring principle is paramount, the project becomes a vehicle for conveying pre-specified information, concepts, and ideas, selected, as the author says, 'on the basis that either they are of value in their own right, and/or learning them forms part of the initiation of the pupil into the

wider modes of knowledge and understanding from which they are derived.'

- 3 *The skills-centred principle*: Where this principle is operative the project is seen as a vehicle for transmitting certain skills which might be grouped under such headings as physical/manipulative, cognitive, social etc. As Bonnett explains, 'these would be pre-specified relatively independently of a particular knowledge content'.
- 4 *The problem-centred principle*: Here the structure is determined by the enquiry itself, and content and direction develop according to where that enquiry leads, and, as Bonnett adds, *wherever* it leads.
- 5 *The child-centred principle*: The structuring principle here is the child's own consciousness – his or her felt needs and concerns and the opportunities provided for choice and responsibility which the genuine exploration of these needs requires.

The criticisms sometimes levelled at projects – that they lack positive educational direction, that they result in mindless copying and futile experiment, and that they at best keep noisy children quiet and at worst lead to boredom and frustration – can be avoided where the practical suggestions offered above are put into practice.

Secondary teaching

Secondary classroom practices are the consequence of a range of local and individual variables, for example: the school ethos; the abilities of the students and the organisational arrangements to accommodate these (e.g. grouping, setting, banding, mixed-ability grouping); gender relationships; group dynamics; and characteristics of individual students and teachers. The pedagogical practices within secondary schools are, themselves, premised on conceptions of aims, theories of teaching and learning, interaction of variables, the learning environment, the task demands, personalities and social relationships; the focus on desired outcomes of learning; assessment and feedback.¹

Hallam and Ireson² summarise research on secondary school learning to indicate that individual differences in students are important in affecting learning outcomes, including, for example: prior knowledge, age and developmental factors, abilities, conceptions of learning, learning styles, cognitive styles, approaches to learning, effort, motivation and self-esteem, well-being, gender, ethnicity, culture, and socio-economic status. Similarly, teachers' behaviours, their views of teaching and learning, and their expectations of students also impact on student learning. Learning is also influenced by the time spent learning, the time arrangements to maximise learning, and the arrangements to experience success in learning.³ To address these briefly, the topics we have chosen to examine here divide into five groupings – *the requisites of a secondary school student teacher; first meeting(s) with one's*

classes; lesson phases and presentation skills; homework; and the debate about setting, grouping and mixed-ability teaching.

It is not intended that these topics should be read exclusively by intending secondary teachers, as there is a great deal in them of relevance to primary teachers and, indeed, to anyone else concerned with professional instruction.

Some requisites of a secondary school student teacher

The secondary school teacher is caught up in a web of different (and sometimes conflicting) demands. The whole field of certification, assessment and examinations has been the focus of considerable debate in the last decade, covering, for example:

- the moves to credentialise – award qualifications for – vocational education in an attempt to raise the status of this area of students' development;
- the moves to harmonise GCSE requirements with the National Curriculum requirements at Key Stage 4;
- the moves to break the academic stranglehold of the post-16 curriculum in the 'gold standard' of A levels;
- the debate about the amount and the role of course work in public examinations;
- the accreditation of experiences and activities for public examinations;

- the rationalisation of public examinations and assessments at ages 16 and beyond.

Over the last decade many moves have been made to establish links between the school, the community and local industry. Students typically undertake periods of work placement (e.g. a one-week or two-week block during Key Stage 4; one day per week for a term at age 16).

Hence to regard the secondary school teacher as solely a teacher of one or two subjects is to misconceive quite seriously the diversity of the requirements of the teacher. Dowson⁴ differentiates between the roles of a teacher as a subject specialist and the wider role of the teacher. With regard to the teacher-as-subject-specialist she argues that the teacher must be able to:

- communicate the special relevance and rewards of the subject;
- support and stretch all students in learning the knowledge, skills and processes of the subject in question;
- achieve the best possible examination results;
- contribute to the running of the department;
- sustain subject expertise and enthusiasm.

In the same volume Leask⁵ proposes that subject teachers require subject knowledge, professional judgement and professional knowledge. She argues that it is not enough for the teacher simply to possess academic knowledge; that has to be translated into effective learning by the students. This echoes Morrison⁶ where he writes that subject specialists should possess both *subject* knowledge and *pedagogical* knowledge. Indeed he goes further than this to suggest that a subject specialist should possess several areas of expertise:

- academic subject knowledge;
- pedagogical knowledge;
- effective interpersonal behaviour;
- enthusiasm and motivating skills;
- understanding of social relations in schools and classrooms;
- skills for developing curricula and schemes of work;
- organisational skills;
- understanding of how students learn;

- awareness of current trends in the content and teaching of the subject;
- management skills – leadership, communication and monitoring;
- skills in assessment, evaluation and record keeping.

The effective teacher, as we discuss in the next chapter, requires skills in the fields of organisation, presentation, analysis, synthesis, assessment, management and evaluation.⁷ Further, the ability to develop neutral and warm environments for learning relate positively to student achievement, whilst negative environments relate negatively to achievement.⁸

Effective secondary school teachers, it is argued,⁹ are businesslike; effective in interpersonal relationships (being neither too focused in relationships nor uncaring about relationships); task-oriented and academically focused; careful with respect to the quantity and pace of the lesson; effective in explaining, instructing and questioning; effective in setting and building on homework; and clear in their communication of expectations and expected learning outcomes. Such teachers are adept at motivating students, communicating objectives, providing guidance, promoting the transfer of learning, providing opportunities for students to demonstrate their learning, and giving feedback to improve learning.¹⁰ They employ a range of teaching and learning strategies, including discussion; activity-based and experiential learning; exposition and explanation; questioning, peer group teaching; ICT-based learning; games and simulations; whole-class interactive teaching; individual and co-operative group work. With the move to resource-based learning, often accompanied by internet and intranet usage, secondary school teachers have to develop their skills as facilitators, not just instructors or didacts.¹¹

By contrast, ineffective secondary school teachers are over-concerned with relationships, over-emphasise the affective side of classrooms, dislike many students, and are preoccupied with discipline matters and control.¹²

In addition to possessing subject specialist abilities Leask argues that the secondary school teacher should be able to:

- integrate cross-curricular dimensions, skills and themes into her teaching;
- become involved in the pastoral aspect of school life; and
- foster links between the school, the local community and industry.¹³

Student teachers, to become full participants in school life, will need to adopt a more synoptic, a wider view of their tasks, roles and interpersonal behaviour with staff and students alike. Most secondary school teachers will also be involved in teaching a programme of Personal, Social and Health Education; most will be involved in a tutorial role in the school; and most will have pastoral responsibility for a named group of students.

As a 'novice teacher' on school experience, then, the student teacher will have to absorb very rapidly and become part of the several aspects of teaching that are embraced both in subject teaching and the many other aspects of school life, e.g. curricular, extra-curricular, cross-curricular, pastoral, disciplinary, interpersonal, managerial. Indeed Leask¹⁴ argues that the school will have several expectations of the student teacher *qua* trainee professional and guest in the school, covering several areas.

Organisation and teaching approach

You will be expected to:

- be well organised;
- arrive in plenty of time. And that doesn't mean arriving just as the bell goes. It means arriving considerably earlier in order to arrange the classroom; check the availability of books and equipment; test out equipment new to you; talk to staff about the work and the children's progress; and clarify any safety issues;
- plan and prepare thoroughly. Be conscientious in finding out what lesson content and subject knowledge are appropriate to the class you're teaching. In many cases you will be teaching material which is new to you or which you last thought about many years ago. Staff will expect you to ask if you're not sure but to work conscientiously to improve your subject knowledge. They will not be impressed if you frequently

show you have not bothered to read around the subject matter of the lesson;

- keep good records: have your file of schemes of work and lesson plans, pupil attendance and homework records up to date. Your evaluations of your lessons are best completed on the same day as the lesson;
- know your subject;
- try out different methods of teaching. Teaching practice is your opportunity to try out different approaches without having to live with the results of failure, but you have a duty to the class teacher not to leave chaos behind you.

Professionalism

You will be expected to:

- act in a professional manner, e.g. with courtesy and tact; and to respect confidentiality of information;
- be open to new learning; seek advice and act on advice;
- be flexible;
- dress appropriately (different schools have different dress codes);
- become familiar with and work within school procedures and policies. These include record keeping, rewards and sanctions, uniform, relationships between teachers and pupils;
- accept a leadership role. You may find imposing your will on pupils uncomfortable but unless you establish your right to direct the work of the class you will not be able to teach effectively;
- recognise and understand the roles and relationships of staff responsible for your development;
- keep up to date with your subject;
- take active steps to ensure that your pupils learn;
- discuss pupil progress with parents.

Social skills

You will be expected to:

- develop good relationships with pupils and staff;
- keep a sense of humour;
- work well in teams;

- be able to communicate with children as well as adults;
- learn to defuse difficult situations.

The role of the secondary student teacher, then, is diffuse. We advise the student teacher to find out as much as possible during her preliminary visits and initial contact with the school, covering, for example: the school's expectations of her; the curricular and pedagogic aspects of the teaching; the students that she will be teaching; the staff with whom she will be working; the administrative and managerial matters in which she will be involved.

First meeting(s) with one's classes

We move on to try to establish a few points that will assist student teachers when meeting a class for the first time. We have deliberately pluralised the word *meeting(s)* in parenthesis to stress the fact that although the very first meeting between teacher and class is important, the points implemented on that occasion need to be followed up and consistently reinforced in ensuing lessons. Writing of the qualified teacher in this respect, Wragg and Wood¹⁵ say: 'The success or failure of a whole year may rest on the impression created, the ethos, rules and relationships established during the first two or three weeks in September.'

In meeting the need for more research in this aspect of teacher–pupil encounter, they observed 313 lessons given by experienced teachers and student teachers at the beginning of the school year (in the case of the teachers) and on teaching practice. Their subsequent analysis revealed a substantial combined effort by the experienced teachers in September to establish a working climate for the whole of the academic year, and the problems the student teachers had on arriving later when, as the authors put it, 'the territory had been staked out, rules and relationships had been developed and procedures established'.

As regards the experienced teachers, they had a clear idea of how they would conduct themselves before the school year began. Their intentions, expressed in interviews given to the researchers prior to the study, were more or less fulfilled when

they were observed at the beginning of the school year. The majority sought to establish a firm presence; they made up their minds about the pupils from their own experience rather than from study of the pupils' records; initial dominance and harshness was leavened by humour; and they used non-verbal means (eye movement, gesture etc.) to reinforce what they were trying to achieve. They set out to establish rules from the very first and to some of these there was a noticeable moral character.

In contrast to the experienced teachers, and as one would perhaps expect, the student teachers were less certain about their rules and what they hoped to do with their pupils. They tended to be anxious about interpersonal relationships. The research also disclosed that both the student teachers and the experienced teachers were able more often than not to establish a high level of pupil involvement with little misbehaviour in the initial lessons. The experienced teachers were considered to be more businesslike, confident, warm and friendly than the students; they made more of a point of learning the students' names; and, in the case of the male teachers, humour was employed from quite early in the year.

From this research and related studies we have set out below a number of factors which readers might reflect on with respect to their own first and early encounters with their classes.

Information prior to meeting a class

There is a certain amount of basic information you need to know before taking a class, e.g. which pupils are perennial miscreants; are there any having physical difficulties such as deafness, partial sightedness; approximately what is the range of ability; and are there any striking individual needs? Beyond these points it can sometimes be counterproductive to have too much information and too many preconceived ideas. One needs to maintain a certain amount of spontaneity and freshness.

Thinking in advance

This entails giving due thought before a lesson to such matters as content, timing, presentations,

transitions, beginnings and endings, and rules and procedures. It involves forethought on a range of issues, including, for example:¹⁶

- what to do if equipment is not in the classroom when it should have been set out by someone else, or if it does not work or breaks during the session;
- what strategies to use if students work more slowly or more quickly (and finish working) than you anticipated, and what to do if your timing is misjudged;
- handling misbehaviour;
- what to do if students do not bring the required equipment or books;
- defusing challenging situations (student to student, student to teacher, teacher to student), for example by moving on the lesson to increase the pace of the lesson and refocus the students; scanning the class; using humour to keep students on task; using non-verbal behaviour;
- retrieving a poor lesson or having a fallback plan;
- lack of personal confidence;
- controlling one's own emotions (e.g. anger);
- how to be in charge without being preoccupied with discipline (e.g. by being businesslike and task-focused).

Introductions and appearance

Who you are and how you look are matters of great importance to a new class. In another study by Wragg and Young¹⁷ which investigated pupils' appraisals of teachers it was found that the vast majority expected the teacher to introduce himself or herself with his or her name together with some personal details about interests and hobbies. It can be useful in this connection to write your name on the blackboard/whiteboard during the first meeting. Your general appearance will be a matter of curiosity and it is important that you create a favourable impression in this respect. As regards clothes, for example, either smart formal or smart casual clothes are desirable.

The first lesson, its content and introduction

Particular care needs to be given to the preparation and planning of the very first lesson you will

take. It is especially important to find out what has been done with the class before your arrival so that you can break new ground and not find yourself repeating what a class teacher has already done with the group. Such a state of affairs can be undermining, unless it is a revision lesson. The introduction to the lesson should be thought out with great care and imagination so that you can achieve maximum effectiveness. Motivation and interest are key concepts here. See also below for the suggestions given on set induction.

Ethos, image and manner

You will establish an ethos within a short space of time, so it is desirable that you create one that is favourable and to your advantage. Personality and projection are important here. Set out initially to be firm in a friendly way, achieve a degree of dominance, and avoid being soft and weak. Your manner needs to be relaxed without being too laid back, yet at the same time you need to send out the message that 'you're in charge'. Other qualities you need to display are patience, self-control, fairness and respect for pupils. Project a confident image.

Stereotypes

Related to this last point about image is the need to avoid development of stereotypical patterns of behaviour during early meetings. Allowing verbal and physical mannerisms to become part of your classroom behaviour should also be avoided. For example, prefacing all one's statements with 'er', or frequently punctuating your statements with 'OK' are examples of the kind of things that pupils can notch on to. Avoiding such pitfalls requires a degree of self-awareness and self-monitoring that can only come with experience.

Rules and procedures

We deal with the matter of rules in a later chapter and it will be helpful to read what we say there in conjunction with this brief review of them in relation to first meetings. Following Hargreaves' advice¹⁸ it is desirable that the teacher establishes a minimum number of rules during his or her

very first encounter with a class. As we say later, these may cover such areas as entering the room; movement about the room; modes of address; when to talk and when not to talk; work and homework; and the distribution of materials and equipment. Try to express them as briefly as possible and then ensure that they are adhered to.

Relationships

A teacher can begin to establish positive relationships with a class both collectively and individually from the very first meeting, in spite of the prohibitive nature of those rules that have to be established on this occasion. Students expect teachers to be firm, friendly and fair.¹⁹ Wragg and Wood²⁰ describe a variety of ways in which teachers and student teachers achieved effective relationships. Briefly, they were:

- the judicious use of praise and encouragement;
- giving attention to individual pupils;
- being prepared to apologise when a mistake is made;
- making positive offers to help individual pupils and working alongside them;
- learning and using the children's names as soon as you can – it doesn't matter if you make a mistake, at least you're seen to be trying; and finally
- the leaven of humour.

As Fontana²¹ says, children respond well to a teacher who can share a joke with them, and especially to a teacher who can see the funny side even when the laugh is on him or her. It is important for student teachers to think in advance of how they will respond to a potentially sensitive situation, for example if they can't answer a student's question; if a student swears or bullies another in the classroom; if a student asks a personal question or makes a personal comment.²²

Lesson phases and presentation skills

Many lessons at the secondary level can be divided into five phases:²³

- The entry phase (including greeting and seating, amount of student talk permitted, and distributing resources and equipment). Dean²⁴ recommends that, at the early stage of the lesson, the teacher should not be occupied with addressing individuals, but should be focusing on managing the class as a whole group, though, of course, some friendly remarks can be made.
- The settling down or preparation phase (gaining attention, with effective use of verbal and non-verbal communication; developing focus and concentration on the required task to be addressed). This requires much eye contact, the setting of a relaxed yet focused atmosphere, waiting for silence, and avoiding undue antagonism.²⁵ If some students take a long time to settle it is important not to let them dominate the classroom or interrupt the learning of the many.
- The lesson itself (introduction and exposition by the teacher during which time the students must listen; development and student activity with appropriate rules for behaviour and task focus; closure in which the lesson is rounded off). This part of the lesson also requires attention not only to content but to behaviour and relationships.
- The clearing up phase (with appropriate procedures for returning equipment; rules for talking or silence; allowing enough time to tidy up and collect books and equipment; setting homework and answering any questions from the students);
- The exit phase (with the teacher deciding how and when the students will exit).

Many lessons also involve the teacher expounding, narrating, lecturing, demonstrating, explaining and discussion. As Perrott²⁶ has said, 'Regardless of the level of the pupils, the necessity of exposing pupils to new facts, concepts and principles; of explaining difficult ideas; of clarifying issues or of exploring relationships more often than not places the teacher in a position where he has to do a great deal of presenting.' She goes on to identify *five skills* that a teacher needs to develop in order to become a successful presenter. These are:

- 1 set induction;
- 2 closure;
- 3 stimulus variation;
- 4 clarity of explanation; and
- 5 use of examples.

Let us look at each in turn.

Set induction

A 'set' has been defined as 'a temporary, but often recurrent, condition of a person that (a) orients him toward certain environmental stimuli or events rather than towards others, selectively sensitising him for apprehending them; and (b) facilitates certain activities or responses rather than others.' 'Induction' simply means 'introduction'. So we are talking about saying or doing (or both) specific things prior to a learning situation that will direct the learner's attention to the task in hand. Perrott²⁷ says that the activities preceding a learning task will have an influence on the outcomes of the task and that some sets are more successful than others in achieving planned outcomes. She identifies four functions of set induction, thus:

- 1 Focusing a learner's attention on what is to be learned by gaining their interest.
- 2 As a means of *transition* from the familiar to the new, from the known to the unknown, from material already covered to new material about to be introduced. At the beginning of a lesson, a transition set is often resorted to using a question-and-answer session on material covered

in the last lesson, thus leading on to the new learning in the current lesson. In addition, as Perrott says, a transition set may use examples from pupils' general knowledge to move to new material by use of example or analogy.

- 3 A set induction may be used to provide a *framework* or *structure* for a lesson. Perrott quotes research evidence which indicates that teachers can influence pupils' learning best when they are told in advance, or at the outset, what the teacher expects of them. This kind of set may perhaps be more general and will provide the class with a framework or schema for the lesson. A moment's thought will enable you to realise that there is a close logical connection between a set induction in this sense and the lesson objective, tying us into the objectives model that underpins much of this book.
- 4 The fourth function of set induction is to give meaning to a new concept or principle. This frequently involves the use of concrete and specific examples and analogies to assist pupils in understanding abstract ideas and concepts.

Perrott summarises the discussion of set induction in Box 66.

Closure

If set induction organises a learner's perception in a particular way at the outset of a learning session, *closure*, as Perrott explains, complements set induction by drawing attention to the end of a learning sequence or the end of an entire lesson

Box 66: The use of set induction

In addition to its use at the beginning of a lesson, set induction may also be used during the course of a lesson. Examples of the activities in which it is appropriate are:

- to begin a new unit of work;
- to initiate a discussion;
- to introduce an assignment;
- to prepare for a field excursion;
- to prepare for a practical session in the laboratory;
- to prepare for viewing a film or TV programme;
- to introduce a guest speaker.

by focusing attention on what has been learned. Indeed, this is its main function – to help the learners remember the main points for a future occasion. Perrott warns that closure needs to be carefully planned so that it is given due allocation of time. As she says, to be overtaken by the bell is a most ineffective end to a lesson. She identifies four occasions for using closure during the course of a lesson:

- 1 to end a discussion by calling on a pupil to summarise the main points covered;
- 2 to end a laboratory exercise by summarising the stages and findings of the experiment;
- 3 as a follow-up to a film, TV programme, or guest speaker; and
- 4 to follow up a piece of homework by using praise and encouragement, e.g. 'You tackled a difficult task very creditably, well done!' As Perrott says, this would be an example of social closure in contrast to cognitive closure.

Stimulus variation

The need for this skill – varying the stimulus – arises because sustained uniformity of presentation can lead to boredom and mental inactivity. Again, it is based on research evidence which indicates that changes in perceived environment attract attention and stimulate thought. Perrott identifies the chief means of varying the stimulus thus:

- 1 *Teacher movements*: Deliberate and timed shifts about the room can help to revive and/or sustain interest. However, avoid nervous, fussy and irritating movements, like obsessively pacing up and down the same part of the room.
- 2 *Focusing behaviours*: Communication can be aided by the use of *verbal focusing* (giving emphasis to particular words, statements or directions) and *gestural focusing* (using eye movements, facial expressions, and movement of head, arms and body). As Perrott says, gestures are important as means of communication between teacher and pupil, being used to gain attention and express emotions. *Verbal-gestural focusing*, which is a combination of the two, can also be useful.

- 3 *Changes in speech patterns*: This involves changing the quality, expressiveness, tone and rate of speech, all of which can increase animation. Planned silences and pauses can also be effective.
- 4 *Changing interaction*: The need here is to ring the changes on the main types of interaction – teacher and class, teacher and pupil; and pupil and pupil.
- 5 *Shifting sensory channels*: Information is processed by means of the five senses, and research suggests that pupils' ability to take in information can be increased by appealing to sight and sound alternately. Thus a teacher will follow up a verbal explanation with an accompanying diagram.

Clarity of explanation

Perrott again points out that research findings indicate that *clarity of presentation* is something that can exert considerable influence on effective teaching. She goes on to select a number of factors important in contributing to effectiveness in explanation. They are:

- *Continuity*: Maintaining a strong connecting thread through a lesson is a matter of great importance. This should be perfectly clear and diversions from it should be kept to a minimum.
- *Simplicity*: Try to use simple, intelligible, and grammatical sentences. As Perrott says, 'A common cause of failure is the inclusion of too much information in one sentence. Keep sentences short, and if relationships are complex consider communicating them by visual means.' As regards vocabulary, use simple words well within the class's own vocabulary. If specialist, subject-specific language is used, make sure the terms employed are carefully defined and understood.
- *Explicitness*: Perrott explains that one reason for ineffectiveness in presenting new material to a class is the assumption that the children understand more than is in fact the case. Where explanations are concerned, one must be as explicit as possible (see the discussion of language in Chapter 13).

Use of examples

The use of examples is a fundamental aspect of teaching and it is hardly necessary to stress their importance, particularly in the presentation of new material. Perrott offers the following guidelines for the effective use of examples.

- 1 Start with simple examples and work towards more complex ones.
- 2 Start with examples relevant to pupils' experience and level of knowledge.
- 3 Relate examples to the principles, idea or generalisation being taught.
- 4 Check to see whether you have accomplished your objectives by asking the pupils to give you examples which illustrate the point you were trying to make.

Homework

There are several different kinds of homework that can be set, for example:²⁸

- practice tasks, to build on what was learned in school;
- preparation tasks for what will be attended to subsequently in school;
- extension activities to work undertaken in class;
- private study for individual work, e.g. personal projects, exploratory inquiry.

Muijs and Reynolds²⁹ indicate that homework can be used to:

- increase student achievement;
- reinforce and strengthen topics taught in class;
- complete unfinished work;
- develop independent study skills;
- develop self-discipline;
- develop time-management skills;
- involve parents in helping their children's learning;
- allow preparation for future lessons and topics;
- develop students' research skills;
- review and practise topics taught in school;
- extend the school day.

Black³⁰ reports that homework was most effective when it reinforced the major curriculum ideas as well as being comprised of simple prac-

tice tasks. It has been found³¹ that homework can lead to improvements in several areas: cognitively and academically, it can improve retention, understanding and higher order thinking, improve study habits, and promote positive attitudes to learning; affectively it can develop student autonomy and independence, self-direction and responsibility. On the other hand, too much homework can be counter-productive, leading to boredom, saturation, negative attitude to learning. Indeed, whilst many studies have found improvements associated with homework, there are also studies which have found the opposite.³²

Homework should not be seen or used as a punishment, but as an opportunity for further learning. It should be integral to the work at school, and should be accompanied by rich feedback (see the comments on formative assessment in Chapter 16); it should be marked and returned rapidly, together with the provision of opportunities for students to act on the feedback. Indeed it has been found that giving rich instructional feedback on homework is more positive than simply assigning a grade or mark, as the former leads to intrinsic motivation whilst the latter leads to fear of failure or low marks. Reynolds and Muijs³³ also suggest that the teacher can learn as much from the homework as can the students. They reported the perhaps common-sense matter that homework which was marked and checked contributed more to student achievement than homework that went unmarked or unchecked. It is better to set less homework and mark it rather than set more homework without marking it.³⁴ Muijs and Reynolds³⁵ suggest that homework should not be used as a way of testing students, and that they should all be able to complete it successfully; this suggests the need to individualise and differentiate homework.

Homework, they argue, is a powerful means for relating school knowledge to everyday life. Schools should have homework policies, and student teachers should find out:

- what the homework policy is;
- the frequency of setting homework;
- the consequences that the school applies for students who do not complete homework (e.g. keeping them in at break times to complete

homework, negative marks, letters home in the case of persistent failure to do homework, withdrawal of privileges). Though appearing perhaps negative, allowing non-completion of homework with no negative consequences leads to students not taking homework seriously and to an escalation of non-completion;

- how long each homework should take;
- how to introduce and follow up homework in the class;
- how much time to set by to address homework issues in the class;
- what kind of homework is usually set;
- the purpose of the homework;
- how quickly it is expected that the homework is marked and returned;
- what resources the students may or may not take home from school.

Setting, grouping and mixed-ability teaching

Secondary schools adopt several practices for grouping students, for example: banding, setting for individual subjects, and mixed-ability grouping. Though banding and streaming are declining very considerably in schools, setting appears to be on the increase.³⁶ Many students are still grouped by measured ability (e.g. non-verbal and verbal reasoning) rather than by, for example, effort (as in some South-east Asian countries), areas of study, teachers and teaching.³⁷ Setting has been presumed to be the norm for grouping secondary students in recent government papers, not least because it is held to be most suitable for the most able students and because it would enable teachers to match the work more effectively to students who were within a limited, more homogeneous range of abilities than in mixed-ability groupings, thereby facilitating whole-class interactive teaching.³⁸ On the other hand there have been several concerns voiced against setting, for example:³⁹

- Students in middle ability groups were insufficiently challenged.
- Lower ability groups tended to have a predominance of boys and students with English as a second language.
- No clear link has been found between setting

in ability groups and student attainment.⁴⁰

- Statistically insignificant gains were found for students in higher ability sets, whilst statistically significant losses were found for students in lower sets.⁴¹
- Students in the higher sets suffer greater stress and hence their performance declines.⁴²
- Incorrect allocation of student to groups can seriously disadvantage them, not least because the chances of mobility from one set to another are at best heavily constrained and at worst very remote.⁴³
- Students are not always allocated on the basis of ability, but on other factors (e.g. ethnicity, social class, gender, season of birth).⁴⁴
- Higher ability students flourish in mixed-ability groups.⁴⁵
- The attainment of students in lower groups tends to deteriorate, whilst the attainment of those in upper groups tends to improve.⁴⁶
- Ability grouping *per se* is no guarantee of raising standards.⁴⁷
- Placement in lower sets negatively affects students' self-concept, self-esteem and motivation.⁴⁸
- Teachers' expectations for lower sets become deflated.
- Students in lower ability sets become more disaffected with schooling.
- 'There is little, if any, research that supports the notion that setting enhances achievement for students.'⁴⁹
- 'Setting confers small academic benefits on some high-attaining students, at the expense of large disadvantages for low attainers.'⁵⁰
- Students' motivation is damaged for students in all sets.⁵¹

In an important study Slavin⁵² found that there were no significant differences in achievement between secondary school students who were taught in homogeneous and heterogeneous groups. The results were the same for all subjects except for social studies, in which heterogeneous (mixed-ability) groupings seemed to produce better achievement for all students. Slavin argued that his findings contrast with those of other research studies that compare students' achievements in different tracks (streams or bands). These studies, he avers, show that a tracking system

operates to the advantage of bright students and to the disadvantage of lower ability students; they show that tracking has positive effects for high achievers and negative effects for low achievers.

Streaming or banding students is also problematic, for many of the same reasons as setting.⁵³ Ireson *et al.*⁵⁴ report a major study of 45 secondary comprehensive schools, indicating that setting is at its most prolific and rigorous for mathematics and at its least prolific for English. Less setting was associated with more parallel groupings.

Though many secondary schools may set students, the nature and amount of setting vary considerably.⁵⁵ Student teachers on teaching practice are advised to find out about the setting arrangements and ability groupings in the school, including, for example:

- on what basis the students are set (e.g. by tests, examinations, key stage tests, commercially produced tests, course work, teacher opinion, judgements of performance or judgements of potential, evidence or feeling, behaviour and attitude, gender, social factors (e.g. friendships)), and what are the main and subsidiary factors that are taken into consideration when allocating students to sets, how these are justified, and on what evidence;
- how and when students can move from one set to another if they are perhaps incorrectly placed;
- who takes the decision on setting and moving students (and, for example, the role of parents in this, e.g. parents who request a move of set for their child);
- the number of sets;
- the size of sets for different groups of students (e.g. smaller for the less able).⁵⁶

Mixed-ability grouping

Mixed-ability teaching seems to be in retreat in secondary schools, perhaps as a result of the National Curriculum, with which it seems to be incompatible,⁵⁷ to be replaced with setting and whole-class teaching.⁵⁸ Mixed-ability grouping is seen to be particularly problematic in 'linear' subjects such as mathematics and foreign languages, and less problematic (and hence more

widespread) in subjects like English. Whole-class teaching of students with alleged similar abilities disguises massive differences of ability within an allegedly 'homogeneous' group.

The case for mixed-ability grouping is advanced by the evidence that a streaming system can easily reproduce a social system, wherein, very crudely speaking, 'bright' streams contain students from the middle and upper classes and 'poor' streams contain students from the working classes. Streams and bands correlate highly with social situation.⁵⁹ Indeed one of the cornerstones of comprehensive schooling is that not only is a social mix desirable within a school, but a social mix is desirable within each class. Students should learn how to work with peers drawn from different social situations; indeed the school has a major function in breaking down patterns of differential status, power and class.

Given the significance of teacher expectations on students' performance⁶⁰ and of the dangers of the self-fulfilling prophecy depressing student performance⁶¹ and of the high significance that grouping of students has on their subsequent performance and achievement,⁶² moves that facilitate reduction of the negative aspects of the self-fulfilling prophecy and that raise teachers' expectations (a central feature of school effectiveness) can be encouraged through mixed-ability teaching.

That said, having mixed-ability teaching groups does not find universal support in schools – particularly in secondary education. The success of mixed-ability teaching is heavily dependent on the commitment to it by teachers. Ball⁶³ makes the perhaps sad comment that, in the school that he studied, mixed-ability teaching failed because there was little evidence of teachers moving away from a formal, didactic style of teaching. Indeed Reid *et al.*⁶⁴ comment that success of mixed-ability teaching is contingent upon the school system finding a way of coping with very many factors.

Hence, whilst this form of organisation may be desirable for a wealth of reasons (ideological, educational, academic, sociological etc.), there is clearly a need not only for teacher commitment to make this form of teaching work but also a need to solve demanding practical problems. The student teacher will need to ask her mentor

about these practical issues, the nature of setting arrangements in the school, the composition of the class or set and particular problems within these. Many attempts to overcome the practical hurdles in mixed-ability teaching are addressed by having group work in classes.

Arguably, it is at the extremes of the ability range where children have most need of individual attention. For student teachers, it is absolutely vital that they should plan for the range of abilities in preparing their teaching programmes. Kerry and Sands⁶⁵ identify some *common problems* which experienced teachers face when dealing with a range of abilities in mixed-ability classes. They concern:

- *Dead time*: This is the time between a pupil finishing one activity and starting another. Some students complete work quickly because tasks are often too easy for them. Other students can often manage only a sentence or two, and then they feel they have exhausted the topic.
- *Boredom*: This may result from spending too much time waiting for the teacher to correct work, approve progress to the next step or take remedial action.
- *Lack of motivation*: Children who are often unoccupied and bored can easily lose interest.
- *Disruption*: The creative mind continually seeks new diversions. The less able may simply be looking for something more relevant to do! The bored pupil is always a potential troublemaker.
- *Provision of special work*: The previous four problems imply that the teacher must of necessity

provide special work for pupils at both ends of the ability spectrum.

- *Increased preparation time by the teacher*: Implicitly, providing special work means spending more time in preparing lessons.
- *Linguistic and cognitive levels of worksheets and texts*: One perennial problem of mixed-ability classes is that teachers tend to 'teach to the middle'. Part of the 'special provision' for exceptional pupils is to cater for students who need to be stretched intellectually and to cope with others for whom the language of text or instructions may not be clear.
- *Emotional and pastoral problems*: Finally, both sets of pupils may (but not necessarily) have problems of a social nature, e.g. concerning peer-group relations. Bright pupils are sometimes rejected as 'teacher's pet', and slower learners are labelled 'thick'. The teacher needs to bear relationship problems in mind when organising classroom work and activities.

The student teacher is advised to find out how the students are organised in the school, together with the reasons for this, and what the implications are for his or her teaching. If the school practises mixed-ability grouping then there are several practical skills that student teachers will need to develop. We indicate these in Box 67.⁶⁶

(See www.routledgefalmer.com/companion/0415306752, Chapter 12 Secondary teaching, Advantages of mixed-ability groups and Disadvantages of mixed-ability groups.)

Box 67: Skills needed for mixed-ability group work

- 1 *Decide beforehand* how your group will be made up: self-selected, or selected by you, and if so on what criteria?
- 2 *Decide if your groups will be static* or regrouped for different activities.
- 3 *Have the lesson carefully prepared* and everything ready beforehand.
- 4 *Ensure that each group has appropriate subject material* and activities.
- 5 *Go round from group to group quickly*. Make sure you are still visible by, and still watching, other groups.
- 6 Do not forget to *look behind you* as you go round.
- 7 *Be prepared for early finishers* and have things ready for them to do.
- 8 *Watch for signs* that pupils are unoccupied – unnecessary movement and too much chat, incipient rowdiness.
- 9 Have a good way of *ending the lesson*.

Language in classrooms

Introduction

Talk occupies a crucial position in the classroom in any consideration of principal agents of learning. American and British research¹ shows that talk in classrooms frequently abides by the 'rule of two-thirds' – two-thirds of a lesson is talk; two-thirds of the talk is teacher talk; two-thirds of the teacher talk is concerned with discipline and procedural matters rather than the lesson content itself. Whether this reflects a traditional, didactic approach to teaching or a less formal style of teaching, the conventional wisdom of this saying reflects the immense significance of classroom talk, not only for instructional matters but for discipline and control. Indeed Zhang and Kortner² report that 'after a few years students will have become programmed to a kind of passive learning atmosphere – the teacher talks, the students listen and do their homework'. The negative effects of this on student motivation and achievement are legion.

Barnes³ assumes that language is a major means of learning and that students' uses of language for learning are strongly influenced by the teacher's language which, he argues, prescribes them their roles as learners. This assumption thereby involves a shift of emphasis from the more traditional view of language as a *means of teaching* to language as a *means of learning*. In operational terms, therefore, this means that we learn not only by listening passively to the teacher, but by verbalising, by talking, by discussing and arguing. By studying teacher–student interaction, one can begin to see

how classroom language offers different possibilities for student learning. Should students merely be passive listeners? Or should they be allowed to verbalise at some point? Or should active dialogue with the student teacher be encouraged? Just three ways of students' participation in learning, but all under the control of the student teacher's own speech behaviour.

Like Barnes' earlier study, Mishler's work⁴ takes extracts of classroom dialogue and subjects them to perceptive analysis. Unlike Barnes, however, he is more concerned with showing how different cognitive strategies as well as different values and norms are carried in the language used, chiefly in the structure of teachers' statements and in the types of exchange developed between them and the children. Mishler's main purpose is to show how teachers' cognitive strategies are conveyed in the warp and weft of classroom dialogue. To this end, he is concerned with how attention is focused, with how teachers orient themselves and their pupils to the problem under discussion; the procedures for information search and evaluation; and the structure of alternatives, that is, the number of types of alternative answers to a question and their relationship to each other. There is a very frequent pattern of questioning that takes the form of Initiation – Response – Follow-up, for example:

Initiation: How many bones are there in the human body?

Response: Two hundred and six.

Follow-up: Excellent.

This model typifies many classrooms where it is the teacher who is the initiator and who controls the talk. In another study, Stubbs himself described one way in which teachers in relatively traditional lessons control classroom exchanges.⁵ A characteristic of much classroom talk is the extent of the teacher's *conversational control* over the topic, over the relevance or correctness of what students say, and over when and how much students may speak. In traditional lessons, students have few conversational rights. What Stubbs shows is that a teacher is constantly monitoring the communication system in the classroom by such utterances as 'You see, we're really getting onto the topic now', or 'OK, now listen all of you', or 'Now, we don't want any silly remarks.' The teacher is thus able to check whether students are all on the same 'wavelength' and whether at least some of them follow what is being said. Commenting on unequal language rights between teachers and students in classrooms, he writes:

Use of . . . language is also highly asymmetrical: one would not expect a pupil to say to a teacher: *That's an interesting point*. Such speech acts, in which the teacher monitors and controls the classroom dialogue are, at one level, the very stuff of teaching. They are basic to the activity of teaching, since they are the acts whereby a *teacher controls the flow of information* in the classroom and defines the relevance of what is said.

Wells,⁶ comparing the child's experience of language at home and at school, found that:

- the number of child utterances to an adult was 122 at home and 45 at school;
- the proportion for the child initiating a conversation was 63.6 per cent at home and 23.0 per cent at school;
- the proportion for the child asking a question was 12.7 per cent at home and 4.0 per cent at school.

The differences are interesting: not only do children speak more at home, but their talk is more complete, more child-initiated and more

extended. At school their talk is more fragmented, more teacher-initiated and more limited in its scope. That is a salutary message for teachers!

We consider the question of classroom talk in eight main areas: characteristics of talk in classrooms, direct instruction and whole-class interactive teaching, exposition, explanation, questioning, discussion, responding, and summarising.

Characteristics of talk

In reviewing the main characteristics of classroom talk, particularly that of older children, Edwards and Furlong⁷ consider that not only is there so much of it, but that so much of what is said is both public and highly centralised. What they mean by being 'highly centralised' is that for much of the time in classrooms, there is a *single* verbal encounter in that whatever is being said demands the attention of all.

In pursuing the theme of centralised communication further, Edwards and Furlong explain that, although it plays a very important part in classroom interaction, its role should not be overstated, for considerable amounts of incidental and unofficial talk take place amid official exchanges. The authors further point out that, notwithstanding the occasions when children talk privately to other members of the class, when they offer comments and pose questions when requested to do so, or when they talk 'unofficially', their main communicative role, as far as traditional classrooms are concerned, is *to listen*. This means that the communicative rights of teacher and pupils are very unequal. In effect, the authors point out, teachers usually tell pupils when to talk, what to talk about, when to stop talking and, perhaps through informal assessment and immediate feedback, how well they talked.

The normal conversation between two equals stands in marked contrast to classroom exchanges because of this very inequality. In the former, no one has overriding claim to speak first, or more than others, or to decide unilaterally on the subject. The difference between an everyday conversation and a classroom exchange is dramatically realised when each kind is recorded and transcribed. In the case of everyday exchanges,

statements are often incomplete, they clash with the statements of others and they are interrupted. There are also frequent false starts, hesitations and repetitions.⁸

By contrast, exchanges recorded in traditional classrooms are much more orderly and systematic. Indeed, Edwards and Furlong observe that they often look like a play script. As they comment, 'Most utterances are complete, and most speakers seem to know their lines and to recognise their turn to speak. Despite the large number, the talk appears more orderly.' Thus it is that, whereas in everyday informal conversations there is always the possibility that several speakers will perversely talk against one another or that one individual will eventually appropriate a disproportionate amount of the talking time, in classroom interaction contributors to a discussion must be carefully controlled. The authors point out that this is much more easily achieved if communication rights are *not* equally shared: 'if one participant can speak whenever he chooses to do so, can normally nominate the next speaker, and can resolve any cases of confusion'.

The authors go on to explain that in so far as pupils are ready to be taught, they are likely to acknowledge that an able teacher has the right to talk first, last and most; to control the content of a lesson; and to organise that content by allocating speaking turns to the pupils. The teacher's right to decide who speaks, when, for how long and to whom, is mirrored in the small number of interactional possibilities in a typical lesson. Edwards and Furlong refer to such arrangements of speakers and listeners as *participant-structures* which they define as communicative networks linking those who are in contact with one another already, or can be if they choose. Enlarging on the nature of them, Edwards and Furlong say:⁹

What even the simplest list brings out is the limited variety of interactional patterns characteristic of lessons, and how firmly most of them are centred on the teacher. There is usually a formalised allocation of speaking and listening roles. Teachers expect both a 'proper' silence and 'proper' willingness to talk, and they manage the interaction so as to produce orderly and relevant pupil participation.

The authors go on to consider how this orderliness is achieved. In the well-ordered classroom, they explain, the teacher's turns at speaking are taken as and when she chooses, these being determined by the kinds of pupil she addresses and also the subject matter being taught. The difficulty that most teachers have is in limiting themselves to much less than two-thirds of the time available for talking. Because much of the time appropriated by teachers is taken up by giving information and instructions, censoring pupils and evaluating them, Edwards and Furlong consider that most of their talking can be described as *telling*.

In seeing teacher talk in this context as *dominant performance*, Edwards and Furlong suggest that the teacher's message is made all the more effective because of her 'front of stage' location. The traditional classroom settings serve as a means of reinforcing the centrally controlled interaction.¹⁰ As they say:

The conventional groupings of desks or tables channel communication to and from the teacher, who is the obvious focus of attention. He can direct his talk to any part of the room, while the natural flow of pupil-talk is either to him or to other pupils through him. It is a setting which makes it difficult for the teacher to avoid talking *at* pupils, or to break up the interaction into more localised encounters. In classrooms which are physically more open, no single focus of attention may be visible at all. Symbolically and practically, there is a switch of emphasis from the teacher to the learner.

But the teacher cannot monopolise the talk totally. There has to be a certain amount of pupil participation; and this presents the teacher with significant managerial problems because of the numbers of children involved. Once a teacher stops talking, Edwards and Furlong ask, how are turns taken? How is the rule of one speaker at a time maintained? Who is to answer a particular question? Normally, it is the teacher's on-the-spot decisions that solve them: 'Turns are allocated, they are not seized, and pupils have to learn to bid appropriately for the right to speak.'¹¹

We have seen how most participant-structures focus on the teacher who either does the talking or who nominates other to do it, and the significance of this for controlling the class. Watson¹² outlines six categories of teacher talk that embrace not simply introductory talk but teacher talk at the different points in a lesson. The six categories are:

- 1 Finding out about students' understanding and knowledge (45 per cent of all teacher talk).
- 2 Extending students' thinking (25 per cent of all teacher talk).
- 3 Providing general feedback, e.g. on effort, task difficulty, the need to listen and pay attention, giving rewards (16 per cent of all teacher talk).

One can see the dominance of the three categories (nearly 90 per cent of all teacher talk) and the fact that these, in turn, reflect the teacher's domination of classroom talk. This finding echoes that of Carlsen¹³ who argued that teachers' questioning may reflect and reproduce status differences in classrooms.

On a practical level one should note that most students will only be able to be involved in talk for a limited period of time (from seconds to half-hours), both as 'active listeners' and participants in talk. This is a salutary point; many student teachers devote far too long to introductory talk. Be it a one-way exposition, questioning, explaining, discussing or other forms of student participation in talk, it is a brave student teacher who will have too great an amount of introductory talk.

Talk is an oral and aural medium; many students cannot sustain oral and aural concentration for very long without a *visual* focus – be it on pictures, the chalkboard, a video, a computer screen, a piece of work etc. One can learn from the televisual medium that concentration is highest when students have both an aural and visual focus. Without a visual focus a free-floating discussion can easily drift off into irrelevance and its concomitant indiscipline in classrooms.

There is the further issue of *types* of talk. Typically a teacher will engage in *instructional* talk (e.g. cognitive curricular content), *procedural* talk (e.g. pedagogical talk – how students are to

work on the content) and *managerial* talk (e.g. how order and acceptable behaviour are promoted and sustained in a lesson). The student teacher will have to consider the emphasis that is placed on each type. Too little or too much *cognitive* talk and the lesson can become undemanding and boring or overwhelming respectively. Too little *procedural* talk and the student will not know how to work on an activity. Too much *procedural* talk and the students' autonomy and metacognitive development are eroded. Too little *managerial* talk and the lesson risks disruption. Too much *managerial* talk risks boredom, demotivating students who, in fact, might be trying hard to be successful and positive with the teacher. The Office for Standards in Education¹⁴ found that poor student achievement was often accompanied by an over-reliance on procedural and managerial talk (i.e. servicing and supervisory talk respectively) and an under-reliance on direct teaching.

Direct instruction and whole-class interactive teaching

There has been a move towards increasing and enhancing direct instruction in classrooms, through whole-class interactive teaching (where the teacher is not only involved in exposition and explanation, but constantly checks the students' understanding through questioning; the teacher addresses the whole class at once, posing questions to pupils in turn, to ensure they are following the lesson),¹⁵ as a consequence of the press from the National Curriculum to cover a certain amount of content, and also because it has been shown to increase student achievement. Direct instruction does not mean simply one-way lecturing or traditional teaching; it is more sophisticated than this. Rather, as its name suggests, it is interactive (between students and the teacher, and, less frequently, and under the close control of the teacher, between students and students), and it involves several elements:¹⁶

- clear, sequenced, structured presentations;
- effective pacing and timing;
- effective demonstrations and modelling of a particular skill or procedure;

- effective interactive structured questioning and discussion;
- student demonstration;
- paired discussion work;
- interaction and individual/group practice;
- effective summarising;
- effective consolidation.

The National Numeracy Strategy and the National Literacy Strategy are heavily premised on direct instruction.

Whole-class interactive teaching, using direct instruction, with heavy emphasis placed on exposition and frequent questioning to ensure that all the students have understood, has been reported to have several successes. For example, in the UK, the celebrated ORACLE study found considerable gains in mathematics and language (excluding reading) with teachers categorised as 'class enquirers'.¹⁷ The study of junior schools by Mortimore *et al.*¹⁸ found that effective teaching was associated with structured sessions, higher order and frequent questioning, and whole-class teaching. Similarly Muijs and Reynolds¹⁹ found that mathematics teachers who spent more time in whole-class, rather than individual teaching, were more effective. A major impetus to whole-class interactive teaching came from the comparative study by Reynolds and Farrell,²⁰ which found that those countries, many of them East Asian and South-east Asian, which used whole-class interactive teaching, achieved significantly higher results on international tests than did other countries.

Whole-class interactive teaching not only concerns questioning, as this is what teachers do when they adopt a whole range of teaching strategies, but also the *kinds* of questions that they ask, to check understanding, to ask for examples, to pursue an issue in greater depth with a particular student or group, to ask for application of the knowledge, to check understanding of a process, as well as the product or the single right answer.

Underlying whole-class interactive teaching is the fact that it enables the teacher to have more communication and communicative contact with the students, itself a critical factor in effective learning.²¹ This is perhaps unsurprising, when

we consider that whole-class teaching enables teachers to be very vigilant and to detect immediately off-task behaviour, lack of understanding and lack of concentration, and to intervene directly.

One element of whole-class interactive teaching is frequently a demonstration. Here it is important not to provide a demonstration too early in the main teaching phase, and to consider whether the student teacher demonstration should be followed by a student demonstration. If the latter is to take place then the students should be told in advance that this will be the case, maybe commencing with a more confident student, and ensuring that the whole class is following either the student teacher's or the student's demonstration. As the student is demonstrating, or immediately afterwards, it is important for constructive comments and feedback to be given and received, i.e. to further the linguistic and cognitive processes in the interaction.

It can be seen that much of direct instruction and whole-class interactive teaching comprise elements of communication such as exposition, explanation, questioning, responding and summarising, and we turn to these now.

Exposition

Several authors²² argue that exposition can serve several functions:

- introducing lessons;
- relaying information that students do not know;
- introducing and using technical language in a controlled way;
- relating to and building upon existing knowledge or understanding (e.g. refreshing students' memories of previous work);
- reinforcement and alternative representation;
- clarifying a sequence of cognitive or practical steps appropriate to learners;
- consolidation;
- defining the nature of an activity;
- informing, describing and explaining the session;
- setting appropriate expectations.

Box 68: Questions to evaluate the 'delivery' of an exposition

- Is eye contact sustained, to hold attention and give interim feedback?
- Is an interesting, lively tone of voice used?
- Is the pace varied for emphasis and interest?
- Is the exposition varied by encouraging orderly participation?
- Are pauses used to structure each part of the exposition?
- Are appropriate examples, objects or pictures used to illustrate the main points?
- Are appropriate judgements made regarding the level of cognitive demand, size of conceptual steps, and length of the concentration span required?
- Is a written or illustrated record of key points provided as a guide, if listeners need memory aids?
- Has the student teacher planned what is going to be said?
- Has the student teacher planned the outline structure of the exposition (e.g. by means of 'advance organisers' – signposts to key points that will be met)?
- Has the student teacher selected the key points – identified and made explicit the relevance of each and their relationship to each other?
- Has the student teacher sequenced the key points appropriately?
- Has the student teacher used simple, short sentences, explained specialist vocabulary, provided concrete examples and asked students to generate their own?
- Has the student teacher signalled when a new point is made, summarised the key points of the exposition, and sought feedback to check understanding?

These purposes can serve as criteria for judging the effectiveness of expositions, wherein student teachers clarify the purposes – objectives – of the expositions and then evaluate how successfully these purposes have been achieved, echoing the significance of the objectives model that runs throughout this book. The art of exposition is multifaceted, embracing not only the *content* but also the *effectiveness of 'delivery'* of the exposition. For example Pollard and Tann²³ set out a useful checklist of questions for evaluating the 'delivery' of the exposition (Box 68).

The exposition stage of classroom talk is a critical factor in judging the effectiveness of a lesson. If it is too long students 'switch off' and bad behaviour can occur. If it is too short students may fail to grasp both the significance of what is being said and what is required of them, again resulting in bad behaviour. As was mentioned earlier, talk is an important medium of control and the promoter of good discipline. Many students can only concentrate for one or two minutes (particularly young children); the best listeners can only sustain 'active concentration' for a short time – maybe twenty minutes at the very most.

In classroom talk the use of examples can root

the topic in the experiences of students and provide an important aid to exposition, explanation, questioning, discussion, responding and summarising. The use of examples is a fundamental aspect of teaching and it is hardly necessary to stress their importance, particularly in the presentation of new material. Perrott²⁴ offers the following guidelines for the effective use of examples.

- 1 Start with simple examples and work towards more complex ones.
- 2 Start with examples relevant to students' experience and level of knowledge.
- 3 Relate examples to the principles, idea or generalisation being taught.

Further, Brown and Wragg²⁵ argue that it is often useful to convert the topics of an exposition into a series of questions (see below: *questions and questioning*).

In using exposition, it is often important to take students through one or more worked examples, without interruption, to signal the different stages carefully as they are working through a particular issue, and to explain their thinking and reasoning

behind the different stages of the issue. Exposition will probably necessitate the use of specialised vocabulary, which will need to be explained and understood. Exposition, like its partner explanation, is not simply talking; it is accompanied by presentations, written guidance on layout and processes, questioning and feedback, and a clear understanding of the role of learners in the exposition – to listen, follow, understand, question and apply.

Explanation

Perrott points out that research findings indicate that *clarity of presentation* is something that can exert considerable influence on effective teaching. Wragg²⁶ adds that clarity involves a *clear structure, clear language, clear voice and fluency*. Perrott²⁷ goes on to select a number of factors important in contributing to effectiveness in explanation. They are:

- *Continuity*: Maintaining a strong connecting thread through a lesson is a matter of great importance.
- *Simplicity*: Try to use simple, intelligible, and grammatical sentences. Keep sentences short, and if relationships are complex consider communicating them by visual means. As regards vocabulary, use simple words well within the class's own vocabulary. If specialist, subject-specific language is used, make sure the terms employed are carefully defined and understood.
- *Explicitness*: One reason for ineffectiveness in presenting new material to a class is the assumption that the children understand more than is in fact the case. Where explanations are concerned, one must be as explicit as possible. The explanation must be well structured and logical.

The skills involved in explaining and giving explanations have received rather patchy attention from researchers over the years, yet their importance for the teacher in the classroom cannot be overestimated. Indeed, much of his time is devoted to explaining in one way or another. Brown and Armstrong²⁸ have pointed out that at its lowest

level the process of explaining involves presenting sets of facts or simple instructions; and that higher levels of explaining go beyond facts to consider relationships between facts and also to consider reasons, motives and causes. Wragg²⁹ adds to this the view that when concepts (medium and higher order levels of explanation) are being explained the student teacher should make sure that the *label* or *name* of the concept is introduced, its *attributes* should be identified (with examples provided), including necessary and possible attributes. He suggests that explanations can be used to enable students to understand concepts, cause and effect, procedures, purposes and objectives, relationships, processes and consequences.

For Perrott³⁰ a clear explanation depends upon (a) identifying the elements to be related, e.g. objects, events, processes, generalisations, and (b) identifying the relationships between them, e.g. causal, justifying, interpreting, mechanical. As she says, 'This identification of the components and the relationship between them is something which the teacher has to do first for himself. The teacher's failure to do this is a primary cause of confused presentation.'

She also stresses the need to make an explanation *explicit*, i.e. clearly and openly stated. The danger here is in giving information about the thing in question and leaving the explanation *implicit* in the information supplied. It would appear from research that a student teacher's ability to make her explanations *explicit* has a wholly beneficial effect on students' attainment levels. Perrott explains that the majority of sentences which make explicit a relation between two ideas or processes use words or phrases like:

because	as a result of
why	therefore
so that	in order to
by	through

In an empirical study of explaining and explanations, Brown and Armstrong³¹ adopted the following working definition; explaining is an attempt to provide understanding of a problem to others. There are three factors for the researchers to bear in mind – the explainer, the problem, and

the explainees. Thus, 'The explainer has to present or elicit a set of linked statements, each of which is understood by the explainees and which together lead to a solution of the problem for that particular set of explainees.'

At the outset of their study, they used a simple typology which consisted of:

- The interpretive:* which clarifies, exemplifies or interprets the meaning of terms (What is . . . ?)
- The descriptive:* which describes a process or structure (How is . . . ? How does . . . ?)
- The 'reason giving':* which offers reasons or causes, the occurrence of a phenomenon (Why is . . . ?)

This typology provided a basis for the analysis of explanations and for activities concerned with the preparation, design and structuring of explanations.

In the study, 27 PGCE biology students were required to teach two out of ten specified topics to groups of twelve 11- to 12-year-olds in two ten-minute lessons. Briefly summarising the results, the interpretive lessons revealed the importance of selection of appropriate content. Simple lessons with only one or two new concepts scored more highly than lessons in which the pupils were introduced to a large number of ideas, even though the new ideas were linked together. The lessons involving descriptive explanations disclosed the importance of careful planning and logical structuring as a framework for effective explanations. Finally, the reason-giving lessons underlined the importance of answering the central questions. The better lessons stated the problem and principles relatively early in the lessons and proceeded to elicit and give examples.

(See www.routledgefalmer.com/companion/0415306752, Chapter 13 Language in classrooms, Topics for explanatory lessons.)

It is important to ensure clarity in explanations, comprising, for example: a clear structure to the explanation, clear and appropriate language, clear voice and fluency. The *delivery* of the explanation is also important, taking into account, for example: the pitch, volume, speed and tone of the voice; the use of non-verbal communication;

Box 69: Criteria for evaluating questioning

Clear introduction
New terms clarified
Apt word choice
Clear sentence structure
Vagueness avoided
Adequate concrete examples
Within pupils' experience
Voice used to emphasise
Emphasis by gesture
Appropriate pauses
Direct verbal cueing
Repetition used
Many ideas paraphrased
Sound use of media, materials
Pattern of explanation clear
Parts linked to each other
Progressive summary
Pace or level altered
Opportunity for pupils' questions
Grasp of main ideas checked
Pupil commitment sought

the establishing and maintenance of eye contact; ensuring that the students are paying attention and can see and hear the student teacher (e.g. ensuring that the seating arrangements are appropriate and that the student teacher is in the most suitable part of the room whether the students are sitting in rows, in a horseshoe, a circle, or in groups of tables).

Wragg³² identified several criteria that student teachers can use to evaluate their explanations. These are summarised in Box 69.

One can see that many features of effective exposition apply to explanations, indeed notions of clarity, purpose, sequencing, non-verbal support, student involvement, exemplification, timing and pacing are factors that apply to the aspects of classroom talk in this whole section. Kyriacou³³ suggests that the effectiveness of an explanation is enhanced by attention to: clarity (and pitched at the appropriate level for the students); structure (logic, coherence and split up into meaningful units); length (neither too long nor too short, and interspersed with teachers' and students'

questions); attention (with the use of non-verbal communication); language (explaining new terms and avoiding over-complex language); exemplars (relating to students' own experiences); understanding (with the student teacher checking understanding through questioning).

Questions and questioning

Questioning is a critical skill, in the sense that, done successfully, it is amongst the most powerful tools for teaching and learning and done less successfully, it can damage learning. Successful interactive teaching, as was argued above, depends in part on the effectiveness of the teacher's questioning and feedback; indeed an important question that student teachers can ask themselves is 'How is my questioning going to improve the students' learning?' It is not only the question but what is done with the response that is important: students and student teachers can both learn something from a student's response. A student teacher can know if the work is too easy or too difficult, if her explanations have been successful, if there are groups or individuals who need additional help, and if she needs to revise and re-present her material.

Questioning can take place throughout a lesson, and it enables a student teacher to check the

students' understanding; to challenge students to think about and apply their learning; to share their ideas; and to experience success in providing the correct responses. Questioning should improve learning, not simply be a device for a student to display her knowledge.³⁴ This implies that the student teacher has to consider carefully the kind of question that is being asked. Indeed it is not only the student teacher who should be able to ask the question but also the student. As we showed at the start of this chapter, children ask far fewer questions in school than they do at home; exactly the place where they should be learning they are enquiring less. The paradox is striking.

It is often said that teachers are amongst a small group of adults who ask students questions to which they already know the answer. Anecdotally, a child did not answer a teacher who asked him what $8 + 4$ 'made', because, as he said, 'the teacher already knew, and I already knew, so I don't know why she asked the question'. This story from a 6-year-old makes the telling comment that teachers not only need to be sure of the purposes of the question but that they need to ensure that the students know what the purposes of the question are. A question can have many purposes; for example, the Leverhulme Primary Project³⁵ suggested twelve *possible* reasons why questions could be asked (Box 70).³⁶

Box 70: Purposes in asking questions

- To arouse interest and curiosity concerning a topic.
- To focus attention on a particular issue or concept.
- To develop an active approach to learning.
- To stimulate pupils to ask questions of themselves and others.
- To structure a task in such a way that learning will be maximised.
- To diagnose specific difficulties inhibiting pupil learning.
- To communicate to the group that involvement in the lesson is expected, and that overt participation by all members of the group is valued.
- To provide an opportunity for pupils to assimilate and reflect upon information.
- To involve pupils in using an inferred cognitive operation on the assumption that this will assist in developing thinking skills.
- To develop reflection and comment by pupils on the responses of other members of the group, both pupils and teachers.
- To afford an opportunity for pupils to learn vicariously through discussion.
- To express a genuine interest in the ideas and feelings of the pupil.

(See www.routledgefalmer.com/companion/0415306752, Chapter 13 Language in classrooms, Teachers' reasons for asking questions.)

One can see in these reasons that the teachers were using questions not only for *cognitive/intellectual* reasons (concerning the subject matter of the lesson) but for *emotional social* reasons (to cater for different personalities) and for *managerial* reasons (to minimise bad behaviour and to keep students on task).

So far we have discussed the *student teacher's* possible purposes in asking questions. Thompson and Feasey³⁷ argue that, in the context of science teaching, students themselves should be asking questions. Here teachers should encourage students to:

- generate a range of scientific questions;
- ask pertinent questions;
- recognise which questions can be answered;
- appreciate that different kinds of questions can be answered in different ways;
- appreciate that not every question has one correct answer;
- develop a range of strategies to deal with different questions;
- question each other and themselves in a critical manner;
- support answers to questions using data from investigations or other sources;
- question the validity of their own and other data.

Though this list was given in the context of science teaching, it is easy to appreciate that it can be applied in many other curriculum areas. Importantly Thompson and Feasey suggest several strategies to improve students' abilities to pose and answer questions through teachers' interventions. Interventions, they argue, should:

- be only occasional;
- encourage observations;
- encourage thinking;
- reflect on what has happened and what might happen next;
- help students to recognise causal links between events;
- feed into future planning.

Teachers, therefore, should:

- use many different *types* of question;

- ask *fewer* direct questions;
- use questions to *link* what children know to intended learning outcomes;
- *talk less* and *listen more*;
- *use focused questions* for diagnostic purposes;
- realise that questions have *limitations*;
- encourage *more questions* from children;
- use *silence* as thinking time; and
- support oral questioning with the same *written* question.

One function of questioning is to elicit information. Thus, it may probe the extent of children's prior learning before a new subject or area of learning is introduced; or it may help to revise earlier learning; or consolidate recent teaching and learning. More than this, however, questions should have teaching value, that is, in asking the question a teacher is helping the pupil to focus and clarify, and thus have thoughts and perceptions that he would not have had otherwise. Indeed the Office for Standards in Education³⁸ found that *questioning* (closely followed by *exposition*) was the single most important factor in students' achievements of high standards, where questions were used to assess students' knowledge and challenge their thinking.

Framing the question

The value to the student teacher of preparing questions beforehand as part of, or to accompany, a lesson plan cannot be overemphasised. There are at least three reasons for this need. First, questions should be precisely and unambiguously worded so that they elicit the answer the student teacher intends. The likelihood of misunderstandings and wrong answers is greater with unprepared, impromptu questions. Second, where a connected series of questions is required, it is difficult to organise them sequentially and logically on the spur of the moment. And third, a student teacher is better prepared to deal with the unexpected if she possesses a body of well-thought-out questions.

A related issue is the desirability of preparing some questions with particular children in mind. An apt question, for example, worded especially for a timid student or a student with learning difficulties, can help develop his/her confidence and sense of achievement.

Questions can focus on processes (to ask about procedures and ‘working out’ or explaining what one has done) and on products: the outcomes or answers to a particular problem. Process questions are essential to develop students’ problem-solving skills.³⁹ It is also particularly useful when framing questions to distinguish two broad kinds of question – questions which test knowledge and questions which create knowledge. The former are referred to as lower order cognitive questions and the latter as higher order cognitive questions (you may find it easier initially to think of them as ‘fact’ questions and ‘thought’ questions respectively to distinguish the two categories, as these are terms of approximate equivalence).

Lower order cognitive questions embrace chiefly *recall*, *comprehension* and *application*; higher order questions, by contrast, involve *analysis*, *synthesis* and *evaluation*. Low order questions tend to be *closed* questions (when a known response is sought); higher order questions tend to be *open* questions (when the type of response is known but the actual response is not, students being free to respond in their own way). With regard to the latter, it is important that students know what *type* of response is being sought so that their responses are relevant and apposite. Brown⁴⁰ elucidates the categories of lower to higher order questioning thus.

Lower order cognitive questions

- Recall:* Does the student recall what she has seen or read?
- Comprehension:* Does the student understand what she recalls?
- Application:* Can the student apply the rules and techniques to solve problems that have single correct answers?

Higher order cognitive questions

- Analysis:* Can the student identify motives and causes, make inferences and give examples to support her statements?
- Synthesis:* Can the student make predictions, solve problems or produce interesting juxtapositions of ideas and images?
- Evaluation:* Can the student judge the quality of ideas, or problem solutions, or works of art? Can she give rationally based opinions on issues or controversies?

Studies conducted in the United States indicate that many teachers’ questions fall into the recall category and that higher order cognitive questions are rarely used.⁴¹ Although recall questions are especially useful in testing learning and focusing attention, questioning sessions made up exclusively of them may become boring and place undue emphasis on rote-learning. Ideally, lower order cognitive questions should be coupled with carefully selected higher order cognitive ones so that children are led to consider the implications of the facts of the circumstances that give rise to them. It must be remembered, however, that the latter do require the skill of being able to judge the extent to which children are able to respond appropriately to the more difficult and complex examples; and such judgement must be based on knowledge of the students’ intellectual capabilities. Once a student teacher has this knowledge, she should try to get a judicious balance of both types organised in carefully planned sequences. Some questions need to be handled carefully, or, in certain circumstances, avoided altogether. These may be briefly identified as follows.

- Questions inviting a *yes* or *no* answer should not be used excessively, for a student has as much chance of being right as of being wrong if he guesses. *Yes* and *no* answers follow from binary questions of the recall type, and where such answers are unavoidable, another question, such as *how?* or *why?* should follow in order to provide explanatory or supportive evidence for the *yes* or *no*. Occasionally, a *yes* or *no* answer can be of disciplinary assistance when attentions are wandering: ‘Do you understand, John?’
- Questions having several equally good answers should be avoided if the teacher has only one answer in mind (‘What should a driver have with him?’ A map? His licence? A torch? A toolkit? A first aid box?). Formulations of this nature invite guessing. Questions having several equally good answers are permissible, however, when a teacher is building up a composite answer, e.g. when introducing a topic or project.
- Composite questions – those involving a number of interrogatives – present difficulties even with brighter children and should be avoided.

Box 71: Possible purposes of questioning in relation to the suggested class lesson plan

Stage	Questioning
Introduction	to establish human contact to assist in establishing set induction devices to discover what the class knows to revise previous work to pose problems which lead to the subject of the lesson
Presentation	to maintain interest and alertness to encourage reasoning and logical thinking to discover if pupils understand what is going on
Application	to focus and clarify to lead the children to make observations and draw inferences for themselves to clear up difficulties, misunderstandings and assist individual pupils
Conclusion	to revise the main points of the lesson to test the results of the lesson, and the extent of the pupils' understanding and assimilation to suggest further problems and related issues

- Do not use questions beginning 'Who can tell me . . . ?' or 'Does anyone know . . . ?' as these may lead to various members of the class shouting out answers.
- Questions testing powers of expression should be treated with care. Similarly, those seeking definitions of words or concepts, especially abstract ones, should be handled carefully.
- General questions that are vague and aimless should not be used ('What do you know about the French Revolution?'). Precision and clarity should be sought from the outset.
- Guessing questions are sometimes useful for stimulating a child's imagination and actively involving him in discussion. If used too often, however, they encourage thoughtless responses.
- Leading questions (those framed in such a way as to suggest or imply the desired answer – 'Wordsworth was the author of the first sonnet we read, wasn't he?') and rhetorical questions (those to which the pupil is not expected to reply – 'Do you want me to send you outside?') should be avoided because the former tend to reinforce a student's dependence on the student teacher and undermine independent thought, whereas the latter may provoke unwanted or facetious replies. Questions

should be asked only if the student teacher wants a real answer.

- Elliptical questions – those worded so that a child supplies a missing word or missing words – are of value when used to encourage students with learning or behaviour difficulties. Provided they are not used too often, they can give variety to a questioning session.

Box 71 indicates how questions may be related to a typical class.

Asking the question and receiving the answer

Questions should be asked in simple, conversational language and in a friendly and challenging manner, ensuring that the student knows what *kind* of answer is expected (i.e. there is a need to give cues to the students). Indeed it is important for the student teacher to make it clear whether the question is to the whole class, a group, or an individual. A useful procedure is as follows: put the question to the class, pause briefly, then name the child you wish to answer. A sequence of this kind encourages everyone to listen and prepare an answer in anticipation

of being asked. Respondents should be named at random rather than in a predetermined and systematic way, thus avoiding selective listening. As suggested earlier, it is to the teacher's advantage at this point to have prepared questions with particular children in mind. The more difficult questions for brighter students and easier ones for students experiencing learning difficulties help to sustain different motivational levels and maintain the flow of the lesson. It is especially important in this respect to try to draw out the more shy members of the class. The student teacher should also counter the tendency to overlook students sitting at the back or sides of the classroom when distributing questions. Similarly, student teachers should resist the temptation to ignore those students who happen to be sitting near a supervising tutor or mentor.

Once a question has been put to a student, it should be left with her long enough for an answer to emerge. An appropriate waiting time might be 3–5 seconds for a low-order or factual, closed question and up to 15 seconds for an open-ended or higher order question.⁴² Waiting longer than this might lead to other students becoming restless or impatient, though clearly some students will require longer than others. Lack of preparation on the part of the student teacher, or impatience, may lead her to follow it immediately with other questions, or to modify the original, qualify it, reword it or explain it, or even to answer it herself! Such addenda merely confuse students or, in the latter case of the student teacher answering the question herself, lead to the feeling in students that, if they wait long enough, they will not have to do anything – the answer will be provided! Indeed, British research indicates that student teachers and beginning teachers often ask more questions than they receive answers.⁴³ Their failure to obtain answers is often due to lack of pauses and no variation in the delivery of questions.

The efficacy of the student teacher sometimes accepting two or three answers before responding should also be noted. A varied pattern of this nature thus encourages volunteering, contributes to group co-operation, and achieves a more realistic social situation which can be further enhanced by allowing other members of the

class to respond to a child's answer ('John, was Peter's answer correct?').

The techniques of *prompting* and *probing* are often useful in class questioning sessions, either to an individual, group or the whole class, to pursue an issue in greater depth. Prompting involves giving hints to help a child. In addition to eliciting appropriate answers, prompts backed up with teacher encouragement help hesitant children reply more confidently. On receiving an answer, it is sometimes necessary to press a child for additional information and this may be especially the case after a factual question. Probing in this context may take the form of further information, directing the child to think more deeply about his answer, inviting a critical interpretation, focusing his response on a related issue or encouraging him to express himself more clearly. (Two illustrations of prompting and probing are given in Box 72.)⁴⁴ As Brown⁴⁵ observes, probing questions with older children tap the highest levels of their thinking.

Sometimes a correct answer needs to be repeated to make sure all have heard it. It is inadvisable to accept unsolicited answers that have been called out as such habits can lead to problems of control. Wrong answers can be of value in clearing up misunderstandings, obscurities and difficulties providing they are treated tactfully and without disrupting the lesson to any great extent (to respond to a wrong answer, for instance, with 'That's nonsense' or 'What rubbish!' is to ensure that the flow of answers from the class will quickly dry up!). Clearly, a sense of humour is an invaluable asset at this stage in a questioning session.

It is very important for students to receive information on the correctness or otherwise of their answers (see below: *responding*). This is especially the case for low achievers. Feedback from the teacher is the easiest way to maintain interest and is most effective when given after an individual response. In most instances, the feedback does not need to be long; a word or two will suffice to let a student know that she's on the right lines: 'That's right, Joanne.' Praise and censure should be used with discrimination. Praise is quickly devalued if given too readily; and undue censure can be discouraging. Excessive

Box 72: Prompting and probing**Prompting**

Teacher: Would you say that nationalism in Africa is now greater or less than it was twenty years ago?

Pupil: Greater.

Teacher: Yes. Why is that?

Pupil: Because there are more nations now.

Teacher: Yes. Mmm. There's more to it than that. Can anyone else give some reasons?

Class: (Silence)

Teacher: Well, basically it's because . . .

This is an example of what frequently happens in the first discussion lessons given by a teacher. The discussion drags and degenerates into an unprepared lecture. This can be avoided by prompting any weak answers given. In the example, the teacher could have said 'Yes. That's right. There are more nations now and there are more nations because African people wanted to be independent of the Europeans. What has happened in the past twenty years which has helped them to become independent?

Probing

Teacher: Jessica, you went to Paris this year. What did you think of it?

Jessica: Mmm. It was nice.

Teacher: What was nice about it? (Pause)

Jessica: Well, I liked walking down the avenue which had trees. I liked watching the boats on the river. I liked listening to Frenchmen. The Metro was exciting and, oh, I liked the French bread and butter.

The simple probe 'What was nice about it?' evoked from this 7-year-old girl a series of impressions which revealed her interest in sights, sounds and food.

criticism directed at weaker pupils can do nothing but harm.

One final point remains to be briefly considered: the students' questions to the teacher. As Davies and Shepherd⁴⁶ note, nothing shows more clearly that a student teacher and class are on friendly terms than evidence of students sensibly questioning her about difficult points. Desirable as this kind of relationship is, however, it can pose problems for less experienced teachers. They must, for instance, avoid having too many interruptions and being side-tracked from the main theme of their lesson. One way of dealing with difficulties of this kind is to ensure that they have anticipated the class's questions with the ones they put to them. Another way is to invite questions from the class at appropriate points in the lesson (towards the end of the *presentation stage*, for

example). Some questions may not be directly relevant to the lesson in hand, in which case the student teacher should inform the class that they will be dealt with in future lessons. If you do not know the answer to a question, don't be afraid to admit it, but say you will find out the answers as soon as you can.

For occasions when an awkward student proposes a series of difficult or even silly questions, Davies and Shepherd recommend that if the questions have no direct relationship with the topic under consideration, student teachers are fully justified in making that explanation to the students in such a way that they do not prohibit further questions.

Student teachers anxious to acquire command of this most vital skill of questioning a class should make every effort to build short

Box 73: Common errors in questioning

- Asking too many questions at once.
- Asking a question and answering yourself.
- Asking questions only of the brightest or most likeable students.
- Asking a difficult question too early.
- Asking irrelevant questions.
- Always asking the same types of questions.
- Asking questions in a threatening way.
- Not indicating a change in the type of question.
- Not using probing questions.
- Not giving pupils time to think.
- Not correcting wrong answers.
- Ignoring answers.
- Failing to see the implications of answers.
- Failing to build on answers.

questioning sessions of from five to ten minutes into their lessons. They can then get some idea of their progress by constructing a simple self-evaluation schedule based on the suggestions outlined earlier and checking their performance, say, once a week as part of their routine lesson criticisms. In evaluating student teachers' abilities to conduct effective questioning Brown and Wragg⁴⁷ set out some errors that student teachers typically make (Box 73).

As a corollary to this they set out some key factors for effective questioning:

- 1 *Structuring* (providing signposts for the sequence of questions and the topic, indicating the types of answers expected, using 'advance organisers' to clarify what the children will be doing).
- 2 *Pitching and putting clearly* (considering: how broad/narrow to make the question, the order of the question – low to high, the vocabulary to be used, the degree of openness or closure of the question, the level of difficulty of the question for the individual to whom it is being put, i.e. the cognitive level of the question and the student).
- 3 *Directing and distributing* (going around the whole class, not only accepting the answers of volunteers).
- 4 *Pausing and pacing* (allowing thinking time, particularly for more complex questions).

5 *Prompting and probing* (considering what to say in a prompt or a probe, rephrasing, reviewing).

6 *Listening and responding* (deciding the most appropriate form of response. See below: *Responding*).

7 *Sequencing* (introducing, opening out, converging, extending, lifting).

It is also important to tell the students how you expect them to answer, for example in a complete sentence, in a few words, in a longer explanation, using technical vocabulary, personal experience or whatever, so that they know what kind of an answer they should provide. These key factors reflect the fact that questioning is both an art and a skill that can be specifically rehearsed for classroom success.

Discussion

It is in the many discussion situations in the classroom that talk as an agent of learning operates most effectively. This means that the problem for the student teacher is how to develop and improve students' skills in this respect, and indeed her own. In the main, discussions take place either between the student teacher and class or among small groups with or without the student teacher. There is an important issue of the physical layout

of the classroom to be considered here, so that students have the opportunity to hear each other and feel able to contribute in a supportive environment (often facing each other rather than all facing forwards to the teacher). Tables and chairs may have to be arranged in groups.

Dean⁴⁸ advises student teachers to think out clearly what it is they hope to get from their discussions and to consider their functions. Indeed it must be made clear to students what is expected to come out of the discussions. The more clearly the purpose and the intended outcomes are communicated, the greater the likelihood is of a focused and purposeful discussion.

If the students are discussing in small groups without the teacher, then the teacher should communicate to them in advance what they will be required to do in the plenary session following the discussion, e.g. to suggest five points in favour of such-and-such and five points against such-and-such, or to identify six main issues to be addressed in building such-and-such. It is sometimes helpful here if the groups are given specific discussion points, specific tasks to come out of the discussion, specific questions to address and so on, i.e. to ensure that the discussion is focused and time-bound, and that the students know how much time they have to complete the discussion and how long they are advised to spend on each item. This may mean that the group has to produce a written summary of points which the teacher will collect, and appoint a spokesperson to report back in the plenary session.

If the discussion is teacher-focused then the teacher should indicate the purpose, focus and intended outcome of the discussion. This involves identifying important questions and having the students' language skills and general experience in mind at the same time. The issue here is that group and teacher-led discussions need very careful planning, structuring and follow-up, or else they become airings of ignorance.

It is important that the student teacher knows where she wants the discussion to go and communicates this to the students. In this way the student teacher and the students themselves know what is relevant and what is not. All too often the student teacher accepts as relevant to the discussion *anything* that the students say. This

can quickly degenerate into students calling out anything, which makes light of the discussion and leads to discipline problems. It can render discussions inconsequential, literally pointless. Student teachers should be clear on the objectives of the discussion – where they want the discussion to go, what they want from the discussion (e.g. the intended pedagogic and knowledge outcomes), and how they will use the discussion to feed into the remainder of the lesson – and they should communicate these intentions clearly to the students so that the students see the relevance of the discussions. Even with the student teacher adopting the role of the 'neutral chairperson'⁴⁹ (e.g. in discussions of values and morals) there still needs to be a direction for, and outcome of, a discussion.

The important points that need to be remembered, in Dean's⁵⁰ view, are: *how you receive the students' contributions; scanning the class to spot would-be contributors and those not involved; being able to interpret body language so as to know when children have had enough; and finally being able to summarise and structure ideas with a view to taking the discussion further.* Discussion involves speaking, listening and taking turns. The student teacher will have to consider how participation, turn taking and listening skills can be taught and learnt by students.⁵¹ Indeed Turner sets out some key points for managing a discussion (Box 74).

Pollard and Tann⁵² have posed further questions which readers can reflect on, perhaps in the light of their own teaching practice experiences:

- 1 What are the range of roles participants might play?
- 2 What do the participants learn, including those that do not participate?
- 3 How do different kinds of tasks, group size and composition affect group processes?
- 4 How can we use discussion to develop and monitor the participants' discussion skills?

Responding

In expositions, explanations, questioning and discussions an important skill to be developed is that of responding appropriately to students.

Box 74: Handling discussion**Rules and procedures**

- Choice of subject and length of discussion (young pupils without experience may not sustain lengthy discussion).
- Physical setting: room size; arrangement of furniture so that most pupils have eye contact.
- Protocols for discourse; taking turns; length of contribution; abusive language.
- Procedures for violation of protocols, e.g. racist or sexist behaviour.
- How to protect the sensitivity of individuals; pupils may reveal unexpected personal information in the course of a discussion.
- Stance of the chairperson.

Provision of evidence

- Know the age, ability and mix of abilities of the pupils.
- Know what information is needed.
- Know sources of information.
- Decide at what point the information is introduced (before, during).

Neutral chairperson*

- Authority of the opinions of the chair should not influence the outcome.
- The opinions of the pupils are to be exposed, not those of the teachers.
- The chairperson can be free to influence the quality of the understanding, the rigour of debate and appropriate exploration of the issues.
- Pupils will understand the teacher's stance if it is made clear at the start.

Possible outcomes*

- Learn by sharing and understanding the opinion of others.
- Be exposed to the nature and role of evidence.
- Realise that objective evidence is often an inadequate basis for decision making.
- Come to know that decisions often rely on subjective value judgements.
- Realise that many decisions are compromises.

* This is in the context of discussing values and morals

Brown and Wragg⁵³ indicate several types of response that can be made to students' answers and comments. Student teachers can:

- *ignore* the response, moving on to another student, topic or question;
- *acknowledge* the response, building it into the subsequent discussion;
- *repeat* the response verbatim to reinforce the point or to bring it to the attention of those that might not have heard it;
- *repeat part* of the response, to emphasise a particular element of it;
- *paraphrase* the response for clarity and emphasis, and so that it can be built into the ongoing and subsequent discussion;
- *praise* the response (either directly or by implication in extending and building on it for the subsequent part of the discussion);
- *correct* the response (a feature that student teachers are often reluctant to do, thereby sanctioning error and irrelevance);
- *prompt* the students for further information or clarification;
- *probe* the students to develop relevant points.

These features indicate the *type* of response that is possible. There are also some *procedural* matters that echo points made so far, for example: allowing thinking time (particularly for complex responses); affording students the opportunity to correct, clarify and crystallise their responses, once uttered, i.e. not 'jumping onto' a response before a student has had time to finish it; building a student's contribution into the student teacher's own plans for the sequence of the discussion; using a student's contribution to introduce another question to be put to another student. There are also *pedagogic* matters in responding to students' contributions, for example giving feedback to students on the quality, accuracy, range, relevance, amount and significance of their contribution. Students need to know both the positive and the negative aspects of their contributions; to ignore the negative aspects (based, presumably, on the notion of *extinction* in the behaviourist view of learning) might be to leave a student unsure whether everything that she has said is relevant, accurate and so on. Pointing out the negative aspects need not be done negatively but in the spirit of constructive criticism and in a supportive manner.

Summarising

That there are cognitive and affective aspects of summarising is reflected in the view of Proctor⁵⁴ *et al.* that effective summarising can 'reassure, consolidate [and] support' students. Cognitively, the student teacher needs to be able to draw together the key points of a discussion, set of questions,

explanation, series of instructions and a whole lesson so that students can differentiate between the highly relevant/important/central points and the less relevant/trivial/marginal/peripheral points. In many cases there should be a match between the contents of a summary and the intended learning outcomes and objectives of a lesson.

Summarising in talk can be undertaken through an admixture of questions, statements and restatements (by the student teacher or the students themselves), confirmations and highlighting of the most important features of the matters to be summarised. Summaries will link the several sections of a series of questions, discussions or stages of a lesson. They may also establish and clarify links between the current and previous or future lessons, making for and communicating to students the nature of the continuity, progression and relevance of the work. Summarising is a convergent exercise intended to make it clear to students what are the significant features of the work; it is a reductionist exercise that highlights key matters. Bruner⁵⁵ argues that the clarification and highlighting of key matters, concepts, issues etc. facilitates memorising and recall.

The use of language in classrooms requires the student teacher to evaluate his/her own strategies in terms of the effectiveness of: direct instruction with whole-class interactive teaching, exposition and explanation, questioning, discussion, responding and summarising. We have discussed the nature of effective practice in these areas and the criteria for evaluation and self-evaluation of the student teacher's abilities here.

Inclusion, equal opportunities and diversity

Introduction

Since the Sex Discrimination Act of 1975, the Race Relations Act of 1976 and the Warnock Report on special educational needs in 1978 the issue of equal opportunities has taken an increasingly central role in the educational and curricular debate. More recently there has been a move towards increasing inclusion in schools, whereby social exclusion for whatever reason is minimised. Inclusion concerns being educated in an ordinary school, having access to the same curriculum, and being accepted by all, regardless of gender, ethnicity, or special needs.¹ It involves being physically in the same place as other students and 'social acceptance and belonging'. Norwich argues that inclusion has come to replace integration, the latter being seen simply as physical placement in the mainstream school but having to assimilate the 'unchanged mainstream system',² the former implying that the mainstream system has to change to accommodate the learner's needs, restructuring itself in order to accomplish this.

The Qualifications and Assessment Authority³ sets out five general principles which underpin inclusion (www.qca.org.uk/ca/inclusion/key_principles.asp):

- 1 the appropriate inclusion of all learners at relevant levels of activity;
- 2 opportunities for continuity and progression for all learners;
- 3 the achievement of the highest possible standards for all learners;

- 4 the recognition of achievements of all learners;
- 5 the provision of easily accessible advice and guidance relevant to all learners.

A series of reports from the 1970s onwards⁴ makes it very plain that all students have a right to an 'entitlement' curriculum regardless of sex, race, ethnicity, class, age, ability, special educational needs, sexuality, physical impairment, religion, cultural and linguistic background, or other background aspects in which forms of discrimination might occur.

The *Framework for the Inspection of Schools* in 2003⁵ made it a requirement that schools should not only have policies for addressing equality of opportunity but that the policy should be seen to be working in practice; the government's *Special Educational Needs Code of Practice* in 2001⁶ reinforced the need for schools to respond systematically to students with special educational needs.

Equality of access and opportunity for all students to learn and to make progress should feature highly on a school's planning and should touch the school's aims, objectives, curriculum and organisation, grouping of students, role models in its teachers, support for learning, and students' achievements. The school has a duty to offer high-quality education to all, to promote, foster and fulfil the potential of every student, and to prepare students for adult life after school. Indeed the Runnymede Trust in 1993⁷ argued that these three concerns touch the issues of *quality*, *identity* (individual and cultural), and *society* respectively in addressing *equality assurance* in education.

The National Curriculum statement on inclusion⁸ sets out three principles for inclusion:

- *Setting suitable learning challenges* – giving all students access to the National Curriculum, with very considerable differentiation for those whose attainments fall significantly below or above the expected levels at a particular stage.
- *Responding to pupils' diverse learning needs* – setting high but achievable expectations of all students, meeting the specific needs of all learners in terms of (a) creating effective learning environments; (b) securing their motivation and concentration; (c) providing equality of opportunity through teaching approaches; (d) using appropriate assessment approaches; (e) setting targets for learning.
- *Overcoming potential barriers to learning and assessment for individuals and groups of pupils* – with teachers paying specific attention to supporting individual students in learning and assessment, and with attention to curriculum planning for students with special educational needs so that they can access the curriculum, for example: (a) planning for students who need help with communication, language and literacy; (b) planning to use multi-sensory approaches; (c) planning for students' full participation in learning and in physical and practical activities; (d) helping students to manage their behaviour, to take part in learning safely and effectively, and to prepare for the world of work; (e) helping students to manage their emotions, particularly trauma or stress.

The inclusion statement provides several useful examples of how these principles can be implemented, and we advise student teachers to examine these. For example, the document suggests the need to challenge stereotypes and to examine positive images of race, gender, ability and disability; to challenge bullying and harassment in all its forms; to enable students to participate in all activities with safe clothing appropriate to religious belief; to plan work that builds on their cultural experiences; to avoid gender or ethnic stereotyping in grouping procedures; to provide positive role models. The inclusion statement also makes the point that not all students

with disabilities will have special educational needs, and attention will need to be given to learners for whom English is a second language.

The language of equal opportunities and inclusion is also to be linked with discourses of diversity. The Runnymede Trust⁹ suggests that the term 'equal opportunities' has come to be associated with the legislative framework covering gender, race and disability, whereas 'diversity' is seen to be adding another dimension to equal opportunities in terms of covering all types of difference, not simply those addressed in legislation, and in terms of its focus on individuals and organisational culture. Indeed the call to diversity has been taken up by the Qualifications and Curriculum Authority in a series of publications on inclusion and in curriculum proposals to address diversity.

The Runnymede Trust comments on the positive value of using the language of equal opportunities, as its anti-discrimination focus can move organisational climates to a more optimistic tenor in terms of 'opportunities'.¹⁰ On the other hand the notion of what constitutes 'equal' is cloudy, e.g. treating people the same, positive discrimination, focusing on specific groups. Rather, the Trust suggests that 'diversity' catches an all-inclusive field, celebrating the value of differences and a 'higher value of harmony' and valuing people. Diversity, it is suggested,¹¹ concerns maximising the potential of all and including everybody, creating a culture that values all kinds of difference, e.g. age, culture, personality, ethnicity, race, behaviour, gender, abilities, disabilities, appearance, sexuality etc. The Trust suggests a synthesis, that the terms 'equal opportunities' and 'diversity' are complementary, that they can co-exist comfortably, indeed that they should. Equality and diversity are partners. It suggests that equal opportunities is an important step on the way towards, indeed a necessary condition for, valuing diversity.¹²

What is being argued here is that the issue of equal opportunities, inclusion and diversity engage very many important areas of teaching and learning, including: *teachers' expectations; students' self-esteem; labelling theory and stereotyping; the formal and hidden curriculum;*¹³ *management; resources* (including time, space, materials, teachers,

support staff); *power and empowerment*; *interactions between all parties in schools*; *discipline*; *pedagogy*; *assessment*; and a *concern for high standards in all students*. Newman and Triggs¹⁴ argue that inequality comes about through stereotyping, abuse, bias, omission (i.e. non-representation in the curriculum), discriminatory behaviour, and expectations. Clearly these impact on the full gamut of experiences that students have at school and which the student teacher will need to address. Equal opportunities, inclusion and diversity then, concern:

- treating students as individuals of equal worth – regardless of gender, race, background, special needs;
- addressing equality of access, uptake and outcome;
- countering, challenging and eliminating stereotypes, discrimination, bias and misperceptions;
- promoting a clearer understanding of equal rights and freedoms;
- pre-empting discrimination;
- celebrating the notion of difference and promoting positive images of a diverse populace;
- identifying how to break down discriminatory practices;
- developing citizenship in a non-discriminatory society.

We believe that the case for equal opportunities, inclusion and diversity needs no justification, as it is premised on the notions of justice, democracy, freedom and empowerment, i.e. the case is built on the foundations of a just society. The *practical implications* of these, however, do need some examination in order to ensure that they are addressed in their many forms. We discuss these in two ways. First, we look at some meanings of equal opportunities, inclusion and diversity. Second, we examine some implications of these meanings for practice, relating our discussions to gender, ethnicity and special educational needs and how these might be addressed in a student teacher's teaching practice.

In addressing equal opportunities it is inadequate simply to ensure that *formal* equality of opportunity is provided, i.e. that every child is entitled to a broad and balanced curriculum. Rather, teachers and schools should be concerned

with *equality of uptake*.¹⁵ This builds on the 'cultural capital' thesis from Bourdieu.¹⁶ He argues that, though formal equality of opportunity to a curriculum might be offered to all students, there will be a differential uptake because students come from a variety of backgrounds. School knowledge and culture are such that some students find in school an alien culture – and hence are not able to make the most of the education that schools offer – whilst other students find that the school culture accords with their own cultural background (e.g. in terms of acceptance of authority, valuing an academic education, adopting a particular linguistic register) so that they are able to access the curriculum more easily. Equality of *opportunity*, in this instance, does little to break down equality of *access* and *uptake*, indeed it makes for the *reproduction* of inequality in the wider society (e.g. in terms of employment, power, money, class).

Moreover, equal opportunities should concern not only *access* and *uptake*; they should also address equality of *outcome*, i.e. the promotion of freedoms, social justice, choice in lifestyles, life chances, the moves towards an egalitarian society. In this respect we are arguing that equal opportunities has a clear political agenda that promotes empowerment in individuals, groups, cultures and society at large, that reduces illegitimate differentials of power, and that breaks down illegitimate discriminatory practices in society.

What we are arguing, then, is the case that every student, regardless of differences (and we are all different) should be guaranteed equality of access, uptake and outcome, and that education should further those practices that break down discrimination, i.e. that every student is of equal *worth* as an individual and as a citizen in society. Education, therefore, is charged with the responsibility to fulfil individual potential and to prepare students for membership of an egalitarian society. We continue our discussions with some *general* questions that student teachers may find useful to address in approaching equal opportunities. These concern the formal and hidden curricula of schools.

We indicated above that *teachers' expectations* of students exerted a considerable influence on students' learning (discussed in more detail later).

Echoing the notion of the self-fulfilling prophecy,¹⁷ the literature on school effectiveness¹⁸ argues that teachers' expectations of students exert a powerful effect on their achievements. Crudely speaking, if teachers have low expectations of a student then the student's performance tends to drop; if teachers have high expectations of students and challenge and 'stretch' them, then their performance rises. In looking at equal opportunities, then, student teachers ought to be asking themselves about their expectations of students and whether these expectations might be affected by gender, race, class, abilities, behaviour, linguistic abilities etc. For example, do all students have their fair share of the student teacher's time and high-quality attention; do all students have equal access to resources; does the student teacher make it clear that she values all of the students equally; does the student teacher hold appropriate expectations regardless of the race, class, sex, special needs etc. of each student (i.e. to what extent is the student teacher aware of her own stereotyping)?

One can see that this simple introduction reinforces our earlier point that addressing equal opportunities, inclusion and diversity takes place in every aspect of a student's experience in school – the formal and the hidden curriculum. The field is vast and we cannot hope to do full justice to it in the space available here. However, we want to raise some issues that impinge on the student teacher in her planning, implementation and evaluation of teaching practice. By concerning ourselves with three areas of equal opportunities, inclusion and diversity – sex, ethnicity and special educational needs – we hope to use these as vehicles for exposing a range of issues in equal opportunities that go beyond simply these three cognate areas. In doing so we shall be attempting to address several issues as they are experienced by teachers and students in schools. There is clearly a difficulty in separating out these three areas as, in practice, for example, sex interacts with and is influenced by race, special needs with race, sex with special needs. Indeed all three areas are interpenetrated with and mediated by the central issue of differentials of power – structurally, interpersonally and personally. One central purpose should be the empowerment of

students (and student teachers) to fulfil their own potentials within a just society.

Gender

Student teachers will encounter a variety of situations where sexist behaviour occurs and where they need to plan to challenge this. Discrimination is to be countered wherever it is met. The Sex Discrimination Act 1975 identifies two kinds of discrimination: (a) treating someone unfairly because of their sex; (b) indirect discrimination, which involves setting unjustifiable conditions that appear to apply to everyone but which, in fact, discriminate against one sex.

We identify above three levels at which this might occur – structurally, interpersonally and personally. We deal with each of these in turn.

The structural level

At a *structural* level the student teacher will need to plan how to ensure equality of access, uptake and outcome of the curriculum; how the curriculum content and resources not only avoid sex stereotyping but actively promote sexual emancipation; how the curriculum breaks down sex stereotyping in students. Some of this will have been undertaken before the student teacher arrives in school (e.g. the subject options that students choose, the vocational options that students follow, the work experience placement that students undertake). In practical terms this might require the student teacher to consider the possible sex bias in the curriculum content (maybe addressing this *per se* with the students, for example, the under-representation of women in history ('invisible women')¹⁹ and the ascription of women to domesticity in certain historical periods or in certain geographical areas of the world or in certain faiths in religious education).

The student teacher will also need to consider, for example, whether equal numbers of women and men are portrayed in resource materials, what they are doing, where they are, what they say, how much control they have over their own lives. Clearly the student teacher needs to review materials before they are used in order to spot

any sexist language, so that this issue can be tackled in the classroom. This could be taken further, where the student teacher deliberately selects resources that 'counter-teach', i.e. that raise students' awareness of sexist matters and challenge sexism, for example:

- using books, workcards and media that are written by women;
- using books, workcards and media that portray women in powerful and strong roles;
- using books, workcards and media that portray men in gentler roles;
- using books, workcards and media that present women and men in non-traditional roles;
- books, workcards and media that raise gender issues.²⁰

Delamont²¹ and Spender²² suggest that in several respects schools are more sexist than the 'real' world, segregating the sexes too rigidly (e.g. in cloakrooms, in play areas, on registers, for sports, in uniforms, on records, when lining up), steering boys and girls to different areas (thereby pre-empting future career choices),²³ offering outdated role models, failing to challenge students' own sex-role stereotypes, enforcing exaggeratedly different clothes, demeanours and language.

To counter structural gender stereotyping the student teacher may decide that it is worth attempting a topic on sex stereotyping itself,²⁴ and the structural causes of sexual inequality in society. The student teacher will have to consider carefully whether this is appropriate, as the handling of such sensitive issues by a relative outsider (the student who arrives at a few weeks' notice and only stays for a few weeks) may require a measure of mutual understanding, mutual confidence, mutual ease, mutual trust and mutual respect that the situation cannot guarantee.

There is increasing evidence that girls are outperforming boys in school attainment. The Department for Education and Skills²⁵ provides data that show a consistent pattern across calendar years from 1999–2002 and across Key Stages 1–4 to indicate that girls are outperforming boys. For example, for 2001 students in Year 5, girls consistently outperformed boys in spelling,

reading and writing (in terms of the percentage achieving levels 4 and 5 on the National Curriculum). For 2002 the results are as follows:

- At Key Stage 1 girls outperform boys in English, science and mathematics by 7 percentage points, 2 percentage points and 3 percentage points respectively.
- At Key Stage 3 girls outperform boys in English and mathematics by 13 percentage points and 4 percentage points respectively.
- At Key Stage 4, girls achieve 11 per cent more than boys in terms of 5+ GCSEs graded A*–C.

Girls are also shown to have greater concentration than boys even at the start of schooling.²⁶

Further, there may be structural forces at work in school exclusions, where, year on year, boys are permanently excluded in proportions up to five times more than girls, and boys are more likely to be excluded from a younger age than girls.²⁷ Ways of working which will secure the uptake of education by boys have to be addressed.

It seems as though there may be structural factors, in addition to possibly personal factors, that may lead to the situation described here. Cultural factors have their part to play, and there is concern about 'laddishness' that causes boys to adopt a stance against learning and academic achievement. The DfES issued a 'toolkit' of ways to raise boys' achievement (Box 75).²⁸

The interpersonal level

At an *interpersonal* level the student teacher will need to examine how teaching and learning styles, groupings and interactions can be planned that will address and break down discrimination, prejudice, harassment, verbal and physical abuse, and abuse of power. This level addresses pedagogical and organisational issues. In practical terms this might require the student teacher initially to look at the seating arrangements in the classroom (where students sit and with whom), access to resources, and access to the teacher. Serbin²⁹ argues that boys receive more attention even if they are not close to the teacher, whereas girls have to stay close to the

Box 75: A toolkit to raise boys' achievement

- Develop policies that will address the negative aspects of boy culture including bullying, name calling and sexual harassment.
- Involve pupils in policy development and review.
- Begin lessons with a clear statement of learning outcomes.
- Analyse resources for gender bias.
- Investigate preferred learning styles.
- Deliver work in time-limited, bite size chunks.
- Provide challenge, competition and short-term goals.
- Give regular positive feedback and rewards.
- Allow time for reflection and review.
- Use peer support for learning.
- Develop a whole-school seating policy.
- Regard an anti-swot culture as a major threat to equal opportunities.
- Challenge stereotypes.
- Consult pupils on a wide range of issues: curricular, extra-curricular and pastoral.
- Establish a school council.
- Provide academic mentoring in a range of ways and at various stages of school life.
- Provide counselling on the same basis, including peer counselling.
- Give pupils pastoral support roles.
- Explore teachers' understanding of issues related to boys' underachievement.
- Draw up a parents' skill register.
- Map out individual pupil assessment statistics against previous data.
- Negotiate targets with pupils individually.
- Tie targets to strategies.

Deal explicitly with gender issues in PSHE, including peer pressure and sexual harassment as well as developing personal skills such as co-operation and negotiation.

teacher in order to receive attention. Stanworth³⁰ demonstrates that boys are likely to receive twice as much attention as girls if the teacher is a woman and ten times as much attention if the teacher is a man – reinforcing the notion of 'invisible women' mentioned above.

In terms of classroom processes the student teacher will need to consider her linguistic strategies, e.g. to whom she asks questions, the frequency with which males and females are asked questions,³¹ what kinds of questions are put to males and females – for example whether males are asked cognitively higher order questions and females asked cognitively lower order questions, whether males are asked open questions and females asked closed questions (see the discussion earlier about language in classrooms) – and how the responses are handled.³² Moreover, the

student teacher will need to ensure that she is asking equally challenging questions, offering equally challenging activities, and engaging in equally demanding instruction with males and females, i.e. differentiation by input, process and outcome (discussed in Part II). It will also mean giving equal discussion rights and opportunities to males and females (see the discussion earlier on language in classrooms).

In terms of teaching and learning strategies Arnot³³ reports that in secondary schools girls tend to be more attentive and more motivated to learn. They outperform boys on tasks that require sustained concentration and which are open-ended and process-based, which are related to realistic matters and which require that they think for themselves. However, girls are less comfortable with summative examinations preferring course

work assessment, though Arnot also suggests that the selection of syllabuses may be a factor here.

On the other hand boys take to memorisation, abstractions and facts more than girls, and are more willing to opt for quick and correct answers than for deep understanding. Further, boys outperform girls on multiple-choice questions. The point here is that offering a gender-blind curriculum may not be acceptable, as it neither suits boys nor girls entirely.

Gender is mediated by ethnicity. Arnot, for example, indicates that some Asian boys will outperform some equivalent groups of Asian girls, and white boys and girls outperform African Caribbean boys and girls. Indeed she argues that 'gender never works in isolation; it both affects and is affected by ethnic patterns of performance'.³⁴ She also presents evidence that gender is mediated by social-class, e.g. working-class boys and girls do less well than other groups.

The student teacher will also need to consider how she will respond to sexist incidents in the classroom, for example name-calling, physical abuse, males dominating certain activities or resources (e.g. computers, constructional³⁵ and building apparatus in primary schools) and females dominating other activities or resources

(e.g. the home corner in the infant school).³⁶ Domination is not simply in terms of *time spent* but also in terms of the *quality* of teaching, learning and activity that occurs.

Moreover the student teacher will need to consider the balance of activities, for example whether males have more boisterous activities than females, whether males engage in more group activities than females (or *vice versa*), whether females engage in more individual activities than males (or *vice versa*), whether females have more sedentary and quieter activities than males.³⁷ In connection with this the student teacher will need to look carefully at how she plans what she will be doing, with whom she will be working (also when and for how long), what sanctions and rewards she uses and whether these are unacceptably differentiated by sex. This might extend further into the student teacher reviewing the seating and grouping arrangements, the nature of and 'responsibilities' for 'jobs' undertaken by males and females,³⁸ the motivational strategies that she uses for males and females, and the size and constitution of the groups in the classroom. McFarlane and Sinclair³⁹ provide a useful checklist that student teachers can use to sensitise themselves to gender issues in the classroom (Box 76).

Box 76: Gender in practice – a checklist

- How much time do we spend responding to disruptive behaviour by boys and girls?
- How do we evaluate the time we spend with boys and girls in the classroom?
- Do we expect girls to be quieter and better behaved?
- Do we expect boys to be more imaginative, creative and resourceful?
- Do we expect girls to be more sensible and responsible?
- Do we expect boys to be stronger and more aggressive?
- Do we expect girls to be better at language work and boys to be better at maths and science?
- Do we find ourselves commenting more on girls' physical appearance?
- Do we ever refer to children by gender groupings, e.g. 'girls line up here'?
- Are we conscious of the language we use and do we actively try and avoid sexist terms or references?
- Are all classroom jobs done by both boys and girls?
- Are boys and girls ever grouped separately for different activities? If so, what questions should we ask to review the practice?
- What behaviour do we reward and punish in boys and girls?
- How do we encourage other patterns of behaviour, for instance helping girls to participate or boys to listen?

The personal level

At a *personal* level the student teacher will need to examine how she can promote in students their self-advocacy, appropriate assertiveness and empowerment – setting their own realistic goals; raising their own expectations of themselves; taking control of their own lives; raising their own self-esteem; knowing how to behave appropriately in a group; what is and what is not acceptable to peers; how to respond to inappropriate behaviour; how to handle sexist incidents, comments and behaviour (not necessarily on their own but with the support of others); gaining insights into how they can prepare themselves to be active and authentic citizens. This rather high-sounding agenda implies that the student teacher should attempt to develop in students a self-awareness of their own life situations through an analysis of their own backgrounds and the socio-cultural, economic and perhaps political causes of their situations. This is perhaps a high-flown way of saying that the student teacher should attempt to enable all students to reach their full potential.

The notion of furthering student empowerment – teaching students to value themselves – implies, perhaps, a negotiated approach to teaching and learning, where students take a degree of responsibility for their own learning, echoing Rogers' view that 'I know I cannot teach anyone anything. I can only provide an environment in which he (*sic*) can learn'.⁴⁰ This is a view that is reinforced by Brandes and Ginnis⁴¹ in their view that learning has to be 'owned' by the student and that such ownership is a combination of possession and responsibility. Clearly some students (and indeed some student teachers) may feel uncomfortable with this notion, particularly in the context of a prescribed National Curriculum. It may be the case that a step-by-step approach to such a degree of ownership is required, particularly if this has not been the custom and practice in the class(es) that the student teacher inherits. Many students will not relish the idea of ownership as it means a degree of commitment that they may not wish to give.

The student teacher will need to consider carefully how she assesses each student; what is assessed (e.g. personality characteristics?); how a

student's progress is recorded (particularly in words as words can convey hidden, stereotyped messages about teachers' expectations); how feedback is given to students; what is entered onto a Record of Achievement (e.g. whether females are 'steered' to enter different achievements from boys). What we are arguing in this section is that the framework of the curriculum, the pedagogical strategies associated with it, and assessment contained within it should be empowering and enabling rather than constraining; a ladder rather than a cage.

Ethnicity

Immigration to Britain in the last half of the twentieth century brought about fundamental changes in our society. In 1991, 7 per cent of the population were from ethnic minorities; by 1995 some 50 per cent of the minority ethnic population had been born in the UK, and some 5 per cent of pre-school children in 2003 were from interracial parents. We are now an ethnically mixed and a culturally varied nation. In 1998 the group 'other Asian' (i.e. excluding Indian, Pakistani and Bangladeshi) achieved proportionally more in terms of academic attainment (5+ grades A*–C at GCSE level) than the other ethnic groups and whites in Britain, and the group 'Black' achieved, proportionally, the lowest level of attainment (in terms of 5+ grades A*–C). Britain is both a culturally diverse society but one in which some groups seem to achieve better than others. The Runnymede Trust indicates that in 1996 45 per cent of white students achieved five or more GCSE grades A–C, compared to 38 per cent of Asian and 23 per cent of black students.⁴² Further, African Caribbean boys were more likely than any other ethnic groups to be placed into lower ability groups, to leave school with few or no formal qualifications, and to be seen as having behavioural problems.⁴³ This latter is reflected in statistics on school exclusions, and incidents of challenging and confrontational behaviour. For example, in 1997, African Caribbean pupils were up to six times more likely to be excluded than their white peers, and, of course, this directly affects their levels of achievement and their access to education.⁴⁴

One consequence of this is that our institutions are having to adapt in order to reflect and to cater for the many mixed communities that now exist throughout the country. Schools must accommodate the needs of students from many different backgrounds.⁴⁵ Whether or not schools are prepared to make sufficient changes and modifications in their organisational policies and practices to meet the needs and aspirations of all their members is a matter of current concern, for, as one study shows, many teachers appear to hold what can be described as an *assimilationist* viewpoint with respect to many students from minority backgrounds and their needs. (Indeed it could be argued that many schools cling to the view that there is a white majority when, for example, globally speaking there is a white *minority* rather than a white *majority*.)

The term *assimilationist* refers to a point of view that dominated official and educational policy in the early days of immigration in the 1960s. This sought to help immigrants accommodate to the host society by giving them a working knowledge of the English language and of the indigenous culture, and was based on the belief that once English language proficiency had been acquired, all other problems would diminish.

It is our firm belief that an *assimilationist* viewpoint is both condescending and dismissive of other cultures and lifestyles. All over the world minority groups now actively assert their determination to maintain cultural continuity and to preserve their religious, linguistic and cultural differences. Increasingly, therefore, the host society turned its attention to the concept of *cultural pluralism*. What exactly does this term imply? Simply that second and third generation (43 per cent and 95 per cent of black/Asian people respectively born in Britain)⁴⁶ British-born Sikhs, Hindus and Muslims, while sharing many of the same interests and aspirations of white students, are at the same time determined to retain their involvement in the richness of their own minority cultures. *Cultural pluralism*, then, implies a system that accepts and celebrates the fact that people's lifestyles and customs are different and operates so as to allow equality of opportunity for all to play a full part in society. The partner of cultural pluralism is *cultural diversity*.

The concept of *cultural pluralism* represents a decisive departure from assimilationist and integrationist viewpoints with their common focus on the perceived *problems* of ethnic minority pupils and their proposed *remedies* by way of *compensating* for those students' *disabilities*. Nevertheless, cultural pluralism has come in for strong and sustained criticism. One major objection to the cultural pluralist perspective is its almost exclusive emphasis on *culture*, a vague, ill-defined concept that is open to many interpretations.

Preoccupation with culture, it is said, tends to obscure or to avoid the more fundamental issues to do with *race*, *power* and *prejudice*, i.e. it fails to address the dynamics of culture. In other words, it fails to address questions⁴⁷ in connection with:

- 1 the economic position of black people in relation to white people;
- 2 differences in access to resources and in power to affect events;
- 3 discrimination in employment, housing and education;
- 4 relations with the police.

A second criticism of the cultural pluralist position is that it fails to confront what is regarded as the cardinal influence on the life situations of ethnic minority groups in Britain, that is, *racism*. In this respect, racism is not simply prejudiced attitudes held by unenlightened white people; more fundamentally, it refers to the *structural* aspects of racism as manifested both in the education system and in society at large.

The cultural pluralist response is at best regarded as tokenist, at worst as little better than a form of subtle racism. Rather, an *anti-racist* stance *exposes* inequalities and discrimination in society, for example in employment, in housing, in education, in careers, in 'life chances' and in income, and argues that *positive discrimination* is required to redress the structural inequalities and discrimination in society. The focus is also on countering discrimination and institutional racism at a structural level. In educational terms this argues for the need to raise equality, inequality, discrimination and racism *per se* as

issues for students to study in school, directly teaching about these matters, fostering anti-racist attitudes and teaching about anti-discrimination. Negative discrimination can take many forms,⁴⁸ for example:

- illegitimately regarding others as inferior;
- treating people, on racial grounds (e.g. race, colour, nationality, ethnic origin), less favourably than others;
- restricting opportunities to certain sections of the community or society;
- exclusive or near-exclusive focus on a particular ethnic group (i.e. avoiding the practice of inclusiveness that values everybody's ethnic and cultural background);
- adopting an ethnocentric (often a European or nationalistic) view of society and culture;
- uncritically accepting the views of one culture or group alone;
- holding prejudiced views of others;
- acting prejudicially.

The Race Relations Acts of 1976 and the Race Relations Act (Amendment) of 2000 make it unlawful to discriminate against anyone on grounds of race, colour, nationality (including citizenship), or ethnic or national origins. Direct discrimination occurs when someone is treated less favourably than others on grounds of race. Similarly racial abuse and harassment constitute unlawful direct discrimination. Indirect discrimination occurs when a condition or requirement is applied equally to people of all racial groups but fewer people from a particular group are able to comply with it.

The debate on multicultural education has shifted considerably during the last few years and is now beginning to reflect greater concern for the role that education can play in countering the pernicious effects of racism both within schools and in society at large. *All* teachers have a vital role to play in the responsible task of preparing *all* students for life in multiracial Britain.

The Qualifications and Curriculum Authority⁴⁹ makes it clear that 'stereotypes, prejudice and discrimination are often as implicit as they are explicit'. If an open and understanding society

is to be promoted, diversity must be valued and racism must be challenged, and that means raising awareness of these issues in students' and teachers' minds and behaviour. Indeed the Qualifications and Curriculum Authority specifically identifies, for each National Curriculum subject, how lesson planning, class management and learning activities can be addressed in order to integrate mutual understanding and positive action straightforwardly into programmes of learning. Such examples include:

- for design and technology, work on fruit and vegetables, at Key Stage 1;
- for design and technology, masks and batik work, at Key Stage 2;
- for English, resolving conflicts (drama work), at Key Stage 2;
- for English, Anne Frank's diary, at Key Stage 3;
- for history, 'who are the British?', at Key Stage 3;
- for ICT, 'who are immigrants?', at Key Stage 3;
- for physical education, challenging stereotypes in football, at Key Stages 2 to 4;
- for religious education, white swans and black swans, at Key Stage 3.

For example, in ICT, students are taught to find, select and manipulate information that is appropriate for their work; to use the internet to access information that reflects diverse opinions and cultural representations; to challenge stereotypes and narrow-minded perspectives; to be discriminating in their use of information, questioning the plausibility and value of the information that they retrieve, identifying bias and prejudice in information; and to be sensitive to the interests, needs and cultural diversity of all.⁵⁰

Respect for all requires all students, regardless of their cultural heritage, to value cultural diversity and to challenge racism. The Qualifications and Curriculum Authority⁵¹ comments that, whilst schools had been adopting multicultural or anti-racist policies, current practice deals with the strengths and weaknesses of both approaches in an approach termed 'critical multiculturalism'. This term regards multiculturalism and anti-racism not in opposition to each other, but as connected. It recognises that there are different kinds and forms of racism in society (e.g. institutional

racism, cultural racism), and that both multiculturalism and anti-racism can be used to tackle these problems where they occur.

Critical multiculturalism identifies the limitations of each approach (multiculturalism and anti-racism) where they apply to education. For example, it criticises multicultural education for reducing the representation of black and minority ethnic cultures to stereotyped customs, traditions and artefacts that are associated with their country of origin (e.g. steel bands in the Caribbean, and samosas in Indian culture). These, it argues, are reductionist for students living in the present-day UK.

Further, it was argued that multicultural and anti-racist education were either only for non-white students or students from ethnic minorities. Not only does this fail to address the issue that multiculturalism and anti-racism apply everywhere and to everyone, but it overlooks white immigrants and the white cultural diversity that has existed in Britain for centuries (e.g. with Irish, European, Welsh, Scottish). It argues that 'ethnic problems' are not confined to non-white groups or to immigrants but they exist everywhere in the UK (e.g. in the streets of Northern Ireland, the working-class areas of Manchester, the varied communities in the East End of London, and so on); it is not only a matter of skin colour. For some time it had been held that multiculturalism and anti-racist education were only applicable in schools with a largely non-white population; now they are seen to apply to all schools – indeed they are a very pressing concern in all-white schools.⁵²

The National Curriculum had enacted a colour-blind policy in the face of a multicultural society, a policy which was called into question following the murder of the black teenager Stephen Lawrence.⁵³ The recommendations of the Stephen Lawrence inquiry pressed the government to install a national curriculum that was aimed at valuing cultural diversity, preventing racism, and challenging stereotypes.

A response to this has been a series of reforms to the curriculum by the Qualifications and Curriculum Authority in which respect for all, cultural diversity and challenging racism are high on the agenda, and the straitjacket of eurocentrism is released.⁵⁴ Indeed the curriculum

must equip students with the skills to pre-empt and challenge racism.⁵⁵ The issue here is that students' curricula must move beyond simply *understanding* stereotypes, racism, bullying, discrimination, harassment and multiculturalism to exercising rights, responsibilities and roles in a multicultural society, including challenging and pre-empting racism, discrimination, stereotyping and harassment.⁵⁶

A curriculum for cultural diversity

Jeffcoate⁵⁷ defines a suitable curriculum as one in which choice of content reflects the cultural diversity of British society and the world and draws significantly on the experiences of British ethnic minorities and cultures overseas. He justifies such a curriculum for the following reasons. First, there is what Jeffcoate calls a 'pathological' justification for developing a curriculum arising out of the pernicious and pervasive racism in British society. Schools, Jeffcoate believes, have a clear duty to make a concerted response to the evil of racism by promoting racial and ethnic self-respect and interracial understanding. Second, such a curriculum can be justified on the notion of minority group rights. That is to say, ethnic minorities are entitled to expect that their cultures will be positively and prominently represented in the school curriculum. Third, if it is a fundamental task of the school to present an accurate picture of society to its pupils then it follows that other races and cultures are important elements in that picture. Fourth, a cultural diversity curriculum involves pupils in more interesting, stimulating and challenging experiences than one which is not.

Having set out a justification for a suitable curriculum, how does one go about selecting learning experiences that might be incorporated within it? As with the issue of gender in the previous section, we argue that decisions for teaching can be made at three levels – the *structural*, the *interpersonal* and the *personal*.

The structural level

We suggest that at the *structural* level the student teacher will need to plan (i) how equality of

access, uptake and outcome of the curriculum will be ensured; (ii) how the curriculum content and resources will not only avoid racial and ethnic stereotyping but actively promote emancipation of all groups and cultures in a culturally diverse society; (iii) how the curriculum will break down racial and ethnic stereotyping in students. For example, we need to question why African Caribbean, Bangladeshi and Pakistani boys underperform in schools, asking whether the curriculum that is prescribed is one with which they cannot identify and engage.

One approach is to construct a learning programme around regular themes drawing on a variety of cultures for source materials with which all pupils can identify.⁵⁸ That said, there is still the need for some kind of overt, systematic study since themes of themselves cannot provide pupils with an appreciative understanding of the logic and integrity of a way of life different from their own. The humanities curriculum should divide its attention evenly between local and international studies, these serving to complement one another in the process whereby children make sense of their world. One can add to this the suggestion that positive role models from members of all ethnic groups should be incorporated into the curriculum, taking examples of the achievements of all ethnic and racial groups, i.e. 'counter-teaching'.

Having decided to incorporate minority cultures into their curricula, schools should avoid defining these cultures solely in terms of patterns of life and experience in countries and continents of origin. It may be far more pertinent for children to look at these minority cultures as they are currently evolving and taking shape here in Britain.⁵⁹ The curriculum involves a change in perspective as well as a change in content, an end, in effect, to ethnocentrism and eurocentrism which views other cultures in a disparaging, or at best condescending way.

In respect of the latter point McFarlane⁶⁰ exposes the bias in many non-fiction and textbooks about other countries and cultures. The writers argue, for example, that famine is seen as unavoidable; that reliance of the third world on the first world replaces self-help and the questioning of the legitimacy of the developed

countries' exploitation of developing countries, i.e. where a climate and culture of dependency is legitimated. The writers go on to suggest that many text books regard the local culture as somehow 'deficient', 'defective', possibly corrupt and not measuring up to the standards of the west. These books communicate hidden messages about an inevitability of power and wealth differentials that go unquestioned, i.e. where an ethnocentric (and eurocentric) set of criteria is used to judge other cultures and societies.

Curriculum content, therefore, needs to ensure that not only does it draw on a diversity of cultures but that it fairly represents these cultures *in their own terms*, i.e. adopting an anthropological view. An anthropological view defines culture non-judgmentally. For example, Tylor⁶¹ saw culture as 'that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by [a person] as a member of society'; Linton⁶² defined culture as 'the sum total of the knowledge, attitudes and habitual behaviour patterns shared and communicated by the members of a particular society'.

Clearly the approach concentrates on how respect for self and for others should be the cornerstone of a non-prejudiced society (but *only* from the point of view of the dominant community, notes Gundura).⁶³ Gundura has criticised such an approach for its essentially neutral stance. He points to a lack of stress on socio-political aspects of multicultural education and cites a typology for the multicultural curriculum which includes, *inter alia*, a socio-political perspective which asserts that what passes for knowledge is no more than the dominant ideology of a particular society. There is a need for a multicultural curriculum which challenges the value consensus in British society and thereby leaves open the possibility of a diverse society consisting of relatively separate but equal groups with equal rights and, importantly, equal powers and representation. Such an approach might focus upon the history and the literature of this country, using historical experiences and literary responses as a key to understanding the effects of colonialism upon our society. One can further suggest that a multicultural curriculum should

teach about race relations and should explore the reasons for migration, government legislation and other controversial issues.

Saunders⁶⁴ suggests ways of helping students explore the cultural diversity existing in classrooms, including *similarity and difference, individual differences, identity, derivation of names, culturally important categories, and who is ideal*.

The former National Curriculum Council⁶⁵ argued for the need to study the origins and effects of racial prejudice in Britain and other societies. In fact this echoed the view of the Swann Report which argued that there was a need for all students to understand how racism can operate so that they can influence and be part of positive changes in society in order to reflect more fully the values of a pluralist society. This implies very strongly that multicultural and anti-racist education is not simply the task of teachers in schools that draw on ethnically diverse communities (or, for example, that draw largely on only Asian or African Caribbean or Arabic communities), but it is a task for all-white schools. Britain is a multicultural and multi-ethnic society; we regard it as a dereliction of duty if students in all-white areas are denied access to knowledge of and preparation for membership and practices of these diverse communities. This has implications for the images and texts that are used with all children. Materials should reflect the multi-cultural and multi-ethnic diversity of the UK and the rest of the world.⁶⁶

Hence we suggest that the student teacher may decide to attempt a topic on racism itself and the structural, interpersonal and personal causes of this. However, just as we advocated some caution in handling issues of sex stereotyping, the student teacher will have to consider carefully whether planning a topic *per se* on racism is entirely appropriate, as the handling of this sensitive issue by a newcomer (and the comparatively short time that the student stays in the school) may make it difficult for the establishment of a degree of mutual trust, respect, understanding and confidence that are often the critical factors in making for the success of handling sensitive issues.

Lest we think that structural racism is not still with us, it appears that there may be structural

forces at work in school exclusions, where, year on year, black Caribbean students were permanently excluded in proportions up to four times more than white students in 1999/2000 and up to three times more than white students in 2000/01, and 93 per cent of permanently excluded Asian students were boys, whilst only 7 per cent of permanently excluded Asian students were girls. Of course, it may reflect the true incidence of challenging behaviour, though the statistics are unsettling. What are schools, society and culture doing to create such disparities?⁶⁷

The interpersonal level

The *interpersonal* level concerns pedagogy. The student teacher will need to be able to draw on the experiences of students from a variety of backgrounds, to have high expectations of all students, developing high standards of achievement in all students. In particular – and this is not exclusive to teaching for ethnic diversity – the student teacher will need to consider how she can promote motivation, self-esteem, confidence and tolerance in students (see below: the *personal* level) and how mutual trust and respect can be built up in relationships between students and student teachers. Further, the Runnymede Trust⁶⁸ raises the concern that teachers themselves will need further development in pedagogies that have been identified as being successful with black and minority ethnic students.

The development of interpersonal trust, tolerance and respect has implications for the use of workshop approaches, group work and peer group learning. The student teacher will need to consider, for example, the ethnic and cultural constitution of each group as well as the ethnic and cultural content of the knowledge on which the students are working. The use of discussion-based activities can explore different aspects of the communities and cultures from which students are drawn and, in so doing, can foster tolerance, mutual respect and co-operation amongst students from diverse backgrounds.

Further, the attention to pedagogy will require the student teacher to consider the languages, dialect, accent, oral and written traditions of the students in exploring the communities from

which they are drawn. This might be approached through oral and written media, discussions and drama. The Runnymede Trust⁶⁹ suggests that some practical activities can be designed so that students' learning does not depend solely on their abilities in English. The use of English can be furthered through the use of support teachers and adults who are able to work in community languages as well as English. Indeed bilingual and trilingual children should have the opportunity to learn *concepts* in their first language as well as learning them in their second or third language. Small group learning of English can be an effective strategy also.

The issue of pedagogy also requires attention to the learning environment that teachers and students create. For example, it means that classroom displays (a) reflect cultural diversity, (b) break down stereotyping, and (c) promote positive role models in relation to cultural identity and ethnicity. At a practical level it will mean that several community languages and scripts might be represented in the displayed materials.

The National Curriculum places emphasis on the links between schools and the community. In planning for these aspects of the National Curriculum a prime opportunity is afforded for the student teacher to involve a diversity of community representatives, both by taking students out into the community and bringing people from the community into the school. The opportunity for members of the community to discuss with students several aspects of their community is one which is too good to neglect. This is not confined to schools that draw on a diverse catchment area; it applies also to all-white schools; indeed it could be argued that it is more important that all-white schools should become involved in finding out about other communities. Some all-white schools,⁷⁰ for example, run exchanges with schools whose students are drawn from culturally and ethnically diverse backgrounds.

As with sexist comments and incidents, discussed in the previous section, the student teacher will need to consider how she will respond to racist, discriminatory and prejudiced comments and incidents within and outside the classroom (e.g. verbal and physical abuse and bullying,

name-calling, antagonistic remarks). As all schools should have a policy on equal opportunities it may be useful for the student teacher to examine these policies and to take other steps in order to find out what the strategies are that the school employs to deal with racist language, assumptions, behaviour and incidents.

The personal level

At a *personal* level the student teacher will need to plan how to ensure that *all* students, regardless of ethnicity, develop self-confidence, self-esteem and tolerance. Indeed the Runnymede Trust⁷¹ suggests that all students should become confident and self-affirming rather than insecure and ashamed of their culture; they should develop an openness to change and a willingness to listen to and learn from others. The student teacher has a significant role to play in this during teaching practice as she will be the planner and provider of opportunities for students to experience success, to have a sense of personal achievement and to value their own communities and traditions. The student teacher, as the provider of opportunities, experiences and feedback on achievement, shares the important responsibility with other teachers in the school of ensuring that each student fulfils her or his own potentials and ambitions, and develops as a responsible member of a democratic society.

Hence the student teacher will need to plan opportunities for students to develop autonomy and personal worth; to resist being stereotyped and stereotyping others; to believe in their own capabilities; to learn how to handle racist comments, incidents and behaviour (not necessarily by themselves but with the support of others); to gain insights into how to work towards countering racism in its several forms; to be able to stand up for themselves; and to appreciate the value of community and cultural solidarity.

Because the issues of ethnicity and multicultural education are contentious, the student teacher will find it essential to discuss her planning and experiences with the class teacher or mentor in the school. This not only ensures that the student teacher is operating within the parameters of the school but that she has addressed

the sensitivities involved in dealing with these delicate issues.

Special educational needs

Introduction

We regard as self-evident and incontestable the view that students with special educational needs should receive as broad and balanced an entitlement curriculum as any other students, and the same degree of choice and consultation about options as any other students (rather than, for instance, a stripped down narrow diet of 'basics', programmed reading, repetitive teaching styles and simple job training).⁷² The National Curriculum should be taught to as many students as possible in ways appropriate to their abilities. Moreover, the Office for Standards in Education in a series of publications in 1995⁷³ made explicit its view that schools should ensure that:

- provision for special educational needs permeates the school's organisation and curricular structures and the practice in the school;
- all staff work closely with the special educational needs co-ordinator;
- parents know who is their main point of contact (normally the special educational needs co-ordinator) and who is the school's 'responsible person';
- resources, including staffing, are managed effectively and efficiently to support special educational needs policies and pupils' identified needs;
- all staff are sufficiently aware of procedures for identifying, assessing and providing for pupils with special educational needs;
- pupils' progress is monitored, especially in relation to annual reviews and individual education plans;
- assessment, recording and reporting satisfy statutory requirements;
- the use of specialist support from outside agencies is well managed within the school.

The Special Educational Needs and Disability Act 2001⁷⁴ makes it clear that

it is unlawful for the body responsible for a school to discriminate against a disabled person:

- (a) in the arrangements it makes for determining admission to the school as a pupil;
- (b) in the terms on which it offers to admit him to the school as a pupil; or
- (c) by refusing or deliberately omitting to accept an application for his admission to the school as a pupil.

It is unlawful for the body responsible for a school to discriminate against a disabled pupil in the education or associated services provided for, or offered to, pupils at the school by that body . . . It is unlawful for the body responsible for a school to discriminate against a disabled pupil by excluding him from the school, whether permanently or temporarily.

For the purposes of the Act, a responsible body discriminates against a disabled person if:

- (a) for a reason which relates to his disability, it treats him less favourably than it treats or would treat others to whom that reason does not or would not apply; and
- (b) it cannot show that the treatment in question is justified.

Unjustified discrimination is outlawed. Yet, despite this, the levels of exclusions for pupils with a statement of special educational needs is extremely high, and seven times higher than for students without such a statement.⁷⁵ It seems that structural and unconscious discrimination may still be occurring.

A student teacher on teacher practice must take responsibility for finding out

- how students with special educational needs are identified and assessed;
- how provision for students' special educational needs is addressed and managed;
- who is the special educational needs co-ordinator and 'responsible person';
- what resources are available to support students with special educational needs (e.g. materials, teaching and ancillary staff, specialist support);

- which students have a statement of special educational needs;
- what the students' needs and difficulties are;
- how recording and reporting is addressed for students with special educational needs;
- how progress is planned and monitored for students with special educational needs.

Proper provision is not cheap; indeed the Audit Commission⁷⁶ found that up to 15 per cent of the education budget could be accounted for in special needs provision.

The Department for Education and Skills⁷⁷ defines special educational needs thus:

A child is defined as having special educational needs if he or she has a learning difficulty which needs special teaching. A learning difficulty means that the child has significantly greater difficulty in learning than most children of the same age. Or, it means that a child has a disability which needs different educational facilities from those that schools generally provide for children of the same age in the area.

The children who need special educational provision are not only those with obvious learning difficulties, such as those who are physically disabled, deaf or blind. They include those whose learning difficulties are less apparent, such as slow learners and emotionally vulnerable children. It is estimated that up to 20 per cent of school children may need special educational help at some stage in their school careers.

The revised *Special Educational Needs Code of Practice* defines special educational needs thus:⁷⁸

Children have special educational needs if they have a *learning difficulty* which calls for *special educational provision* to be made for them. Children have a *learning difficulty* if they:

- (a) have a significantly greater difficulty in learning than the majority of children of the same age; or
- (b) have a disability which prevents or hinders them from making use of educational

facilities of a kind generally provided for children of the same age in schools within the area of the local education authority; or

- (c) are under the age of compulsory school age and fall within the definition at (a) or (b) above or would do so if special educational provision was not made for them.

Children must not be regarded as having a learning difficulty solely because the language or form of language of their home is different from the language in which they will be taught.

Croll and Moses⁷⁹ report that learning difficulties, as perceived by teachers, were seen as 'all-round difficulties', and comprised general learning difficulties, such as dyslexia, and specific learning difficulties such as reading, spelling, writing, mathematics, speech and language, and underachievement. They also describe physical health, visual and hearing difficulties. Their study is important in that it shows that the categories of special educational need are mediated by gender and ethnicity.

The Children Act of 1989 indicates that 'a child is disabled if he is blind, deaf or dumb or suffers from a mental disorder of any kind or is substantially and permanently handicapped by illness, injury or congenital deformity or such other disability as may be prescribed',⁸⁰ and the Disability Discrimination Act of 1995 indicates that 'a person has a disability for the purposes of the Act if he has a physical or mental impairment which has a substantial and long-term adverse effect on his ability to carry out normal day-to-day activities'.⁸¹

Fundamental to the *Code of Practice*⁸² are five principles:

- children with special educational needs should have their needs met;
- the special educational needs of children will normally be met in mainstream schools or settings;
- the views of the child should be sought and taken into account;
- parents have a vital role to play in supporting their child's education;

- children with special educational needs should be offered full access to a broad, balanced and relevant curriculum, including an appropriate curriculum for the foundation stage and the National Curriculum.

Supporting the view that equal opportunities should be provided for all students has certain corollaries for students with special educational needs. For example, equality of *access* to a wide curriculum will be a challenging task for many students and teachers.⁸³

One of the most startling statistics to emerge from the Warnock Committee's celebrated and watershed report is that at some time during their school career *one in five children* will require some form of special educational provision. Clearly, the Warnock Committee has widened the definition of special education to include students needing relatively mild educational support, and it follows that special provision for this proportion of the school population means *provision in ordinary schools* as well as special schools. Research⁸⁴ surveyed by the Committee revealed that childhood disabilities giving rise to special educational needs are found in a much larger proportion of the school population than has commonly been assumed. One of the conclusions of the report, therefore, is that the tendency to equate special education with special schooling is inappropriate, given the large number of children with special educational needs in ordinary schools. Indeed the notion of special educational needs itself should avoid a 'deficiency' or 'pathology' view that confines itself to students with learning difficulties and consider, for example, the special needs and backgrounds of students:

- who are able and gifted;
- with linguistic diversity;
- with ethnic and cultural diversity;
- with specific learning needs;
- with short-term emotional and behavioural difficulties.⁸⁵

We shall also consider later the gifted and talented. It is probable that many very capable students deliberately underachieve in order not to stand out as being too different from their

peers. The *Code of Practice 2001* regards any student as having a special educational need if any *special educational provision* is necessary. This includes students with special educational needs in relation to:

- academic attainment;
- learning difficulties;
- specific learning difficulties (e.g. dyslexia);
- emotional and behavioural difficulties;
- physical disabilities;
- sensory impairment (e.g. hearing or visual difficulties);
- speech and language difficulties;
- medical conditions.

One must be cautious, of course, in labelling students as this can lead to the problem of teachers having low expectations of students that we mentioned earlier. It could be argued, for instance, that *category labels* should be replaced by an engagement with the *quality* of the educational experience that students have, as this recognises the complexity of the issue and the need to act positively.

What does all of this mean for the student teacher? Simply this. A student teacher in a mixed-ability class of thirty in an *ordinary school* should be aware that as many as six students might require some form of special provision at some time, and about four or five students will need special provision at any given time. Such students, the Warnock Report refers to as *children with learning difficulties*, a term it recommends should be employed to embrace students with emotional and behavioural difficulties and those receiving educational support from specialist teachers.

While special schools will continue to be providers of special education for students with severe or complex physical, sensory or intellectual difficulties, those with behavioural or emotional disorders that are so extreme that they disrupt ordinary school classes, and those with less severe difficulties who even with special help do not perform well in ordinary schools, it follows that the task of recognising early signs of possible special educational need and, where appropriate, coping with them in ordinary classrooms, will increasingly be the responsibility of

teachers in ordinary schools. Indeed, the *Code of Practice*⁸⁶ is unequivocal in stating that 'for the vast majority of children their mainstream setting will meet all their special educational needs . . . A very small minority of children will have SEN of a severity or complexity that requires the LEA to determine and arrange the special educational provision their learning difficulties call for.'

Is this really feasible, readers may well ask? The answer suggested by the findings of a three-year study⁸⁷ is a resounding *yes*. To a far greater extent than is currently practised, the authors conclude, special educational needs can be met in ordinary schools, providing, of course, that there are the requisite commitment and resources. Hegarty, Pocklington and Lucas⁸⁸ undertook a detailed examination of 17 integration programmes in 14 LEAs, the programmes themselves varying enormously in terms of the types of special needs that were catered for and in respect of the ages and the numbers of students involved. The range and the scope of the investigation covered: *developmentally delayed, communication disordered, visually impaired, hearing impaired, physically impaired and special educational needs*, with needs being met by links between special schools and mainstream schools, special centres, and individual programmes for integration.

What the study clearly revealed was that integrating students with special needs into mainstream schools requires new ways of working on the part of the various professionals involved. There is, the researchers report, a need to collaborate with colleagues, share information, view students' problems in a comprehensive light, disseminate skills and generally move toward interdisciplinary and collaborative, collegial working. This is very difficult to achieve in light of such obstacles as territoriality and traditions of isolated professionalism among teachers.

In the primary sector Croll and Moses⁸⁹ found that 69.4 per cent of teachers thought that special schools were needed for students with emotional and behavioural difficulties, 58.2 per cent thought that special schools were needed for students with severe learning difficulties, 20.4 per cent thought that special schools were needed for students with physical difficulties, and 2.4 per cent

thought that special schools were needed for students with sensory difficulties. Indeed this study reported that 98.3 per cent of teachers thought that there was a continuing role for special schools, with 33.3 per cent of them thinking that more, rather than fewer, students should attend special schools. The same study reported⁹⁰ that 52.2 per cent of teachers thought home and family were the main cause of students' emotional and behavioural difficulties, more than ten times the number voting for any other category except for the residual category of 'don't know' from a list of nine provided categories.

That said, the UK government is clear in its statutory guidance on inclusive schooling⁹¹ that mainstream education is the aim for students with special educational needs.

The curriculum and education programmes

Moves towards inclusion, and moves against negative labelling and stigmatisation, have placed integration and inclusion as central issues in schools. At one pole of the debate are those who argue that a child's special needs are best catered for in special, non-mainstream schools or units,⁹² as the special facilities, smaller classes and removal from an environment in which they may already have failed might be beneficial for them. They maintain that children's self-esteem is more likely to be promoted in such environments than in mainstream schools and that they can experience success in such environments rather than failure in mainstream education (i.e. that segregation protects them and fits their all-round needs well). Indeed it is argued⁹³ that mainstream schools simply do not have adequate material and human resources to be able to cope with children with special educational needs. At the other pole of the debate are those who argue that segregation leads to stigmatisation, negative labelling, a lack of academic press in such children's education, lack of higher order thinking and skills, and social isolation from their peers, lack of access to the stimulation of high achievers, and little direct teaching. That said, there is evidence of increased mainstreaming and reduced segregation over a twenty-year period until 2000.⁹⁴

A compromise position argues that children with special needs can, and should, be part of mainstream education, with withdrawal from classrooms for some time each day to follow lessons in special classrooms or units, or to receive specific attention in smaller classes, though such a compromise has been contested, arguing that the lack of co-ordination between the work done in such withdrawal classes and the work done in the mainstream class leads to the special needs child missing important parts of the curriculum.⁹⁵

The evidence about whether children with special needs in mainstream classes achieved as well as their peers, or whether children with special needs achieved as well as their peers in 'pull-out' programmes (withdrawal during the day, whilst maintaining mainstream education) is somewhat equivocal.⁹⁶ That said, there is a slight indication of the positive effects of mainstreaming in comparison to full-time or part-time placement in special units. Of course, the success of any of these programmes is frequently a function of the resources and the expertise available, be it in mainstream or withdrawal units, and of the nature and degree of disability. What is clear here is that the debate operates at more than one level, for example the levels of values (e.g. of inclusion) as well as empirically (whether integration works).

Reynolds and Muijs⁹⁷ argue that, for inclusion to be successful, several conditions have to be ensured, for example:

- the students in the class have to be prepared to accept the disabled student and must understand the needs of the student;
- the teacher must believe that the student can succeed in the inclusive classroom;
- the classroom and resources must be prepared and must be adequate;
- staff must be properly prepared and capable in order to be able to work with the student;
- there must be good communication between all involved parties.

What of the curriculum in such programmes of integration? What is actually being offered to students with special needs in ordinary schools? The study revealed considerable diversity in

practice. Wade and Moore⁹⁸ suggest that the range of special educational provision can be conceived of as a continuum ranging from segregated special schooling to full attendance in a normal class, different forms of provision being seen as different points along the continuum. They argue that one can move from total segregation to *locational*, *social*, *curricular* and *pedagogic* integration that moves towards *functional* integration where all aspects of the development of students with special needs are both catered for and built into mainstream education, e.g. social, emotional, physical as well as academic and intellectual needs. Hegarty *et al.*⁹⁹ found a broad consensus among teachers, parents and the students themselves that students with special needs benefit greatly from being placed in integration programmes. There were gains in self-confidence and independence, and in the realistic acceptance of an individual's challenging condition. Friendly relationships between students with special needs and their peers did occur but they tended to be limited and often involved outgroups in the school. Negative relationships such as teasing were reported to be comparatively rare. Particularly encouraging was the teachers' thoroughgoing endorsement of the integration programme in their schools.

How does this impact on the work of the student teacher? As with the discussions of sex and ethnicity earlier, we organise our suggestions into three levels, the *structural*, *interpersonal* and *personal*.

The structural level

At a *structural* level the student teacher will need to consult with the teachers and the school mentor in order to find out which students have special educational needs (and which students are 'statemented' (i.e. have a formal – legal – statement of their needs and proposals for how these are to be met), which are in the process of being statemented,¹⁰⁰ and which students may have special needs though they are not statemented. Further, the student teacher will need to find out what the needs and difficulties are of the students in question and how they are being addressed (i.e. to find out about how equality of *access* and

uptake are addressed). This latter will include where and how support staff are used (and when, e.g. twice a week on a withdrawal basis, three days a week with a support teacher working alongside the class teacher in the class with all of the other students etc.), details of special resources and equipment available, and particulars of individualised education plans (IEPs).

An individual education plan, a requirement of the *Code of Practice*, is a document, frequently drawn up each term for a student, indicating:

- the short-term, specific targets (perhaps cast in terms of SMART objectives: specific, measurable, achievable, realistic and with set time scales),¹⁰¹ comprising no more than around four, set for, or by, the child;
- teaching strategies;
- resources and provision;
- when the plan is to be reviewed,
- including success criteria, exit criteria and evidence;
- outcomes (to be recorded when the IEP is reviewed).

Target setting is in accordance with the view that students with statements of special educational needs can have targets set under the 'P scales'.¹⁰²

Under the *Code of Practice* each school must keep a special needs register, which indicates all the children who are subject to a formal statement of special educational needs, and what stage of the formal process each has reached.

The Special Educational Needs Co-ordinator (SENCO) in the school, a member of the teaching staff, is an important figure, and the student teacher should expect to meet her/him, to discuss specific students, their formal requirements, statement, and provision, and the implications of these for teaching the student in question during teaching practice. The *Code of Practice* states that the SENCO has responsibility for:¹⁰³

- ensuring liaison with parents and other professionals in respect of children with special educational needs;
- advising and supporting other practitioners in the setting;

- ensuring that appropriate Individual Education Plans are in place;
- ensuring that the relevant background information about individual children with special educational needs is collected, recorded and updated.

At the primary phase the SENCO and the class teacher should:¹⁰⁴

- use information arising from the child's previous educational experience to provide starting points for the development of an appropriate curriculum for the child;
- identify and focus attention on the child's skills and highlight areas for early action to support the child within the class;
- use the curricular and baseline assessment processes to allow the child to show what they know, understand and can do, as well as to identify any learning difficulties;
- ensure that ongoing observation and assessment provide regular feedback to teachers and parents about the child's achievements and experiences and that the outcomes of such assessment form the basis for planning the next steps of the child's learning;
- involve parents in developing and implementing a joint learning approach at home and in school.

At the secondary phase the SENCO, the literacy and numeracy co-ordinators, departmental and pastoral colleagues should:¹⁰⁵

- use information from the pupil's primary school to provide starting points for the development of an appropriate curriculum for the pupil;
- identify and focus attention on the pupil's skills and highlight areas for early action to support the pupil within the class;
- ensure that ongoing observation and assessment provide regular feedback to all teachers and parents about the pupil's achievements and experiences, and that the outcomes of such assessment form the basis for planning the next steps of the pupil's learning;
- ensure that appropriate informal opportunities for the pupil to show what (s)he know,

understand and can do are maximised through the pastoral programme;

- involve the pupil in planning and agreeing targets to meet his/her needs;
- involve parents in developing and implementing a joint learning approach at home and in school.

Simply focusing on the student with special educational needs in a mainstream class can lead to the stigmatisation (perhaps unwittingly and not deliberately) of that student. Rather, we suggest that the notion of special educational needs is a *societal* rather than an *individual* issue. This implies that the students' peers should have their awareness raised of special educational needs and how to respond to and work with students with such needs. This has to be handled very sensitively, for indelicate handling can cause further stigmatisation rather than help to reduce it. With this caution, however, the student teacher can plan programmes and resources for the whole class or particular teaching groups that address special needs.

At the simplest level, perhaps, a review of texts, pictures and materials can be undertaken to ensure that there is appropriate representation of students with special needs and that that inclusion is presented positively. At another level the student teacher may wish to ensure that a 'special needs dimension' features in the curriculum content that is addressed (taking care to avoid the risk of stigmatisation).

At a more developed level the student teacher will need to be aware of IEPs in which activities 'can be broken down into small and achievable steps for pupils who have marked learning difficulties.'¹⁰⁶ It may well be the case, for instance, that a student may take several years to complete Level 1 of the National Curriculum. Further, opportunities for students with special needs to *achieve* visibly a particular task and to *experience success* should be planned, as the curriculum guidance document from the former National Curriculum Council¹⁰⁷ says: 'Pupils learn best when they feel valued and their achievements are recognised.'

At a structural level the Qualifications and Curriculum Authority¹⁰⁸ produced an important

document that provides guidance on curriculum planning, recognising progress and achievement, and planning for change at a whole-school level in order to meet the needs of students with learning difficulties. It suggests a series of curriculum aims:

- to enable students to interact and communicate with a wide range of people;
- to enable students to express their preferences, to communicate their needs, to make choices, decisions and options, on which others will act and which they will respect;
- to promote either self-advocacy or the use of mechanisms for supported advocacy;
- to prepare students for adult life in which they can exercise the greatest possible degree of autonomy and to support them in relationships which develop mutual respect and interdependence;
- to increase students' understanding and awareness of their environment and the wider world;
- to encourage students to explore, question and challenge;
- to provide a wide range of appropriate learning experiences for all students.

The guidelines suggest that progression can be addressed through, for example:¹⁰⁹ skill development; breadth of curriculum content; a range of contexts for learning and a range of teaching methods; a variety of support equipment; negotiated learning; application of knowledge, understandings and skills in new settings; strategies for independence.

In meeting these aims, within the context of individual support programmes, it is suggested that schools need to take into account:

- students' support needs (staffing, resources, equipment);
- the management of medical and paramedical care;
- personal care routines;
- ways to minimise the impact of sensory and physical impairments (e.g. through lighting and positioning of equipment);
- individual counselling and the management of emotions and behaviour;
- continuity of therapies.

Box 77: Guidance on recognising progress in children with special educational needs

- Develop ways to communicate from the use of concrete ways (e.g. body movement) towards the abstract (e.g. speech).
- Develop a range of responses to social interaction, from passivity and defensiveness to tolerance and active participation in a range of social situations.
- Demonstrate a range of responses to experiences, events and actions, even if no new knowledge is observed.
- Demonstrate a repeated achievement in different circumstances.
- An increase in knowledge and understanding.
- An ability to maintain, refine and combine skills over time and in increasing contexts.
- Move from dependence and predictability to autonomy, risk taking and confidence.
- A reduced need for support.
- A wider range of regular use of learning situations, reducing the need to personalise approaches.
- Reduction in the severity of the behaviour that inhibits learning.
- An increasing ability to cope with emotions and tasks.
- Deciding not to participate.

Progress in learning with some children with special educational needs can sometimes be difficult to spot. The Qualifications and Curriculum Agency provide guidance on recognising progress (Box 77).¹¹⁰

The interpersonal level

The *interpersonal* level concerns pedagogy. This, perhaps, lies at the heart of the notions of *access* and *uptake* of a curriculum that is formally available to all, regardless of special need. The debate continues about whether students with special educational needs should receive different pedagogical treatment from other students. In summarising a wealth of research in this area, Lewis and Norwich¹¹¹ suggest that there has been a move away from considering students with special educational needs as requiring specific and separate pedagogies, and towards a range of pedagogies that are common to all students. Planning for students' access to the curriculum can be a challenging and daunting task for the student teacher,¹¹² and clearly she must seek advice and support on this. In connection with providing access it is important to note that each National Curriculum subject document includes in its *common requirements* the statement that 'appropriate provision' should be made for pupils who need to use:

- means of communication other than speech, including computers, technological aids, signing, symbols or lip-reading;
- non-sighted methods of reading, such as Braille, or non-visual or non-aural ways of acquiring information;
- technological aids in practical and written work;
- aids or adapted equipment to allow access to practical activities within and beyond school.¹¹³

There will be occasions where an 'emphasis on oral rather than written work will help some pupils with learning difficulties' and a range of communication methods should be used that make the best use of students' strengths.¹¹⁴ There should be access to large print books and texts where necessary and also to audio-cassettes and adapted word processors to facilitate learning. At another level the student teacher will need to plan for a multi-sensory approach to learning for some students. Further, if the abilities to communicate, and to be communicated with, are to be addressed then the student teacher will need to provide many opportunities for this to occur. This moves teaching away from the formal, didactic and individual styles and towards group work.

Planning to develop communicative competence has significant implications for the use

of extended group work, collaborative and co-operative work, in pairs, small groups and larger groups.¹¹⁵ We suggest that, though many students with special educational needs might find it difficult to develop, meet and practise the social, emotional, linguistic and communicative challenges and demands of being a member of a communicative situation, nevertheless, if that is how students need to develop then student teachers should be planning for such opportunities to occur. The isolates, the marginalised, the stigmatised, the emotionally and behaviourally disturbed students in the classroom are the very ones who need this situation most, even though they are often the very ones that operate worst in this situation, presenting disruptive and difficult behaviour. The student teacher will, of course, have to plan the size and constitution of each group very carefully in order to minimise difficulties in the students and to maximise their social, emotional, cognitive and behavioural development.

The expansion of technological aids in classrooms has a vital part to play in enabling students to learn and to communicate. The use of technology, including concept keyboards and various overlays for computers and word-processing packages, can 'facilitate and encourage sensory development, . . . increase the range of materials that can be accessed across the curriculum . . . [and] encourage pupil interaction'.¹¹⁶ For example, technology can enable students with severe learning difficulties to generate visual and aural patterns using switches, allow choice and decision making through 'yes' and 'no' switches, and increase sensory control skills, attending skills and co-operative skills.¹¹⁷

At another level the student teacher will need to consider 'environmental factors', for example whether students are seated so that they can hear and see properly; whether the lighting is adequate for visually impaired students; whether acoustic conditions (and aids) are appropriate for students with hearing impairments; whether the furniture is arranged for easy movement of students with physical impairments.

Reynolds and Muijs¹¹⁸ suggest that students with learning difficulties may require additional amounts of direct instruction; use of mnemonic

strategies; breaking down tasks into smaller units and then combining them into a whole; providing regular and frequent prompts; increased use of drill and practice (as appropriate); very careful questioning; small group instruction of around three to five (rather than whole-class instruction); peer tutoring; and appropriate use of technology, particularly in reading, mathematics and social skills. They suggest that very careful attention needs to be given to the level of difficulty of the work, moving in very small, teacher-directed steps.

A problem for many students with special needs is a negative self-concept. Hence it is important for the student teacher to ensure that the child is provided with the opportunity to experience success in the full range of learning, and they argue that collaborative work is a useful tool here.

Reynolds and Muijs¹¹⁹ and the Department for Education and Skills¹²⁰ synthesise several studies on strategies for keeping the attention of children for whom this is a problem, or who are unable to sit still (see Box 78).

The authors also add the significant point that teachers should not think that there will be wonder cures or overnight success!

For children with Attention Deficit/Hyperactivity Disorder, the authors recommend the need to ensure consistency. They also suggest that such children should be placed in a position in the class so that they have the least opportunity to observe other children or to be distracted, provided that this does not provide them with a ready-made audience in the theatre of the classroom! Such students, the authors aver, should also have the opportunity to see positive behaviour models in other children. Further, it is suggested that dietary changes may need to be introduced¹²¹ and that drug therapy may be useful (e.g. Ritalin and Dexadrine), though this is controversial.

Most teachers and student teachers will encounter emotionally and behaviourally disturbed and disturbing students. Though we deal with management and control in the next section, we ought to signal here the need for the student teacher to discuss with the class teacher the agreed and most appropriate ways of handling

Box 78: Suggestions for keeping the attention of students with attention deficit

- Increasing the number of ways of initially gaining the student's attention.
- Ensuring that the topic has relevance to the student's daily life.
- Presenting tasks in small steps, coupled with clear explanations of each step and its relevance along the way.
- Active involvement of the student in her/his learning.
- Setting short-term, achievable goals and having students themselves set such goals.
- Encouraging students to learn from their mistakes.
- Using a quick succession of tasks and activities in order to avoid boredom.
- Varying tasks so that there is not reliance on pencil and paper activities.
- Provide opportunities at the end of a task for the student to move around.
- Using a variety of teaching methods.
- Ensuring peer support, for example by enlisting a group of friends who identify and use strategies to help the student to sustain concentration.
- Keeping the students organised and aware of what has to be done, when it has to be done, what resources they need and when, how to organise their work, how to plan their tasks, how to store their work and resources, ensuring tidiness.
- The value of routines.
- The use of simple, direct and very clear instructions, ensuring that the student understands these (e.g. by having the student repeat them).
- Making activities and assignments very clear, and avoiding superfluous information (e.g. on handout material).
- Ensuring that students are given praise for achievements, even if they appear slight.
- Showing students how they can improve their organisation, and ensuring that they carry this out.
- Minimising distractions.
- Rewarding effort as well as achievement.
- Giving immediate feedback and feedforward that is connected to the task in hand.
- Avoid much use of extrinsic motivation (e.g. rewards).
- Providing opportunities for students to experience success (e.g. in classroom tasks, such as tidying up).
- Giving frequent reminders.
- Establish rules.

children whose problems cause them to present challenges to the smooth running of the classroom, who disrupt the learning of others and who disrupt their own learning by violent or disturbed behaviour. It is vital that the novice student teacher holds these discussions in order to avoid provoking the disturbed behaviour, to promote the emotional and behavioural well-being of the student, and to know how best to respond to behavioural challenges and emotionally charged behaviour.

Reynolds and Muijs¹²² suggest that, for students with behavioural disorders, it is important to

establish the cause and the trigger of the problem, what needs to be done to improve the behaviour, and how to reach that goal. They suggest that attention has to be shifted from a focus on the undesirable behaviours to the desired behaviours, though, as seasoned teachers know, this is frequently extremely difficult. It may be that the work is too difficult, too boring, or too demanding.

The Department for Education and Skills¹²³ in its guidance on inclusion suggests a range of strategies for ensuring that including students with learning difficulties is compatible with the efficient education of other children:

- praising the pupil's strengths and areas of success so that self-esteem is maintained and enhanced;
- using flexible grouping arrangements including ones where the pupil can work with more able peers;
- providing for all pupils experiences which will be of benefit to most pupils, particularly to the pupil with learning difficulties;
- considering carefully the use of language in the classroom and strategies to promote the learning of need vocabulary;
- setting appropriate targets so that personal progress can be tracked as well as progress towards externally determined goals;
- considering carefully the pupil's learning styles and ensuring that this is reflected in the styles of teaching; and
- developing a partnership with the parents to support the pupil and the curriculum.

The DfES and OFSTED provide particular guidelines on both primary and secondary students who have temper tantrums and we refer readers to these references.^{124,125} Where necessary the law gives teachers the power to restrain pupils in particular circumstances.

'A member of the staff of a school may use, in relation to any pupil at the school, such force as is reasonable in the circumstances for the purpose of preventing the pupil from doing (or continuing to do) any of the following, namely:

- (a) committing any offence;
- (b) causing personal injury to, or damage to the property of, any person (including the pupil himself); or
- (c) engaging in any behaviour prejudicial to the maintenance of good order and discipline at the school or among any of its pupils, whether that behaviour occurs during a teaching session or otherwise.'

Let us not understate the enormity of the task here. Students with emotional and behavioural difficulties are very draining on the capabilities of teachers to cope with routine stress, to start each day afresh and to be prepared to try to be positive over and over again with difficult students.

It is likely that, in many cases, the student teacher will have to handle a student who presents a combination of emotional, behavioural and learning difficulties. Indeed some of the behavioural difficulties might stem from frustration caused by learning difficulties and the teacher's poor matching of work, e.g. overestimating the student's abilities. It is comparatively common to see in a single student a conjunction of learning and behavioural difficulties.

The same situation arises, of course, in connection with students with other special educational needs. For example, a hearing-impaired student may have difficulty in learning and this might produce difficult behaviour (e.g. out of frustration). Often it is necessary to understand and try to address the complexity of the interplay between learning difficulties, physical, emotional, behavioural and sensory difficulties.

This implies that planning to meet the needs of the student will have to take place on a variety of fronts – emotional, social, behavioural, cognitive – simultaneously. For the novice student teacher this is a daunting task in which she will need to seek and be given guidance and support from teachers with experience of handling difficult students as well as knowledge of particular individuals and how best to work with them.

Many schools will have both formal and informal strategies that are agreed for handling specific individuals and their presenting disruptive behaviour in the class, e.g. organisation for learning (maybe the use of group work); the use of practical activity; the cognitive demand, pacing and organisation of tasks; negotiation; confrontation avoidance; withdrawal; involvement of other staff; involvement of parents; the setting of individualised work and agreed contracts for work and behaviour; the use of sanctions, punishments and rewards etc. The student teacher needs to be apprised of these agreed strategies so that her actions are consistent with them. Further, many teachers (perhaps who are in the process of statementing a student) will require incidents and examples of emotional and behavioural disturbance to be formally recorded so that, if a case conference is held, evidence rather than subjective prejudice and preference will be available to support the discussions. The students

with moderate or severe learning difficulties will tax the ingenuity and creativity of student teachers quite heavily, as the student teacher will have to devise several ways of addressing, introducing and cementing concepts and areas of knowledge. There will need to be multiple routes to the formation of single and several concepts in students.

As with sexist and racist comments and incidents discussed previously, the student teacher will need to consider how to respond to discriminatory comments and incidents within and outside the classroom (e.g. verbal and physical abuse to students, name calling, bullying, violent and aggressive language, violent and aggressive non-verbal communication, antagonistic remarks). This should be considered in relation to the strategies that the teacher adopts in handling such incidents generally and with particular individuals.

The personal level

Many students with special educational needs have fragile, damaged or low self-esteem and self-concepts. This is one of the most powerful arguments for taking students out of mainstream education and placing them in schools for students with moderate or severe learning difficulties or with emotional and behavioural difficulties, as mainstream education has often not only failed these students but has caused them to fail and to regard themselves as failures. The low expectations that some mainstream teachers may have of students can cause the most seriously depressing and damaging effects on students' self-esteem and motivation to learn. The reduction of threat in some form of special education is invaluable in rebuilding damaged self-concepts.

Many students, for whatever reason, need others to speak and act for them for their greatest benefit, i.e. to act as advocates for their welfare. Though *advocacy* on behalf of students with special needs is important, it is only one side of the coin; the other side is to develop in students their abilities in *self-advocacy*.¹²⁶ This is an important issue if students are to be able to have genuine control over their own lives and power to take decisions in their own best interests. Students should be enabled to find, develop and

exercise their own autonomy, their 'voice'.¹²⁷ It is no accident, perhaps, that a low-ability student is called 'dumb'; it is indicative of their own inabilities and their teachers' inabilities to foster the development of their own 'voice'.

The development of self-advocacy resonates with the points made in discussing sex and ethnicity earlier, that students should be supported in their moves to become as autonomous and fulfilled as possible, and that this process can be facilitated in student-centred, negotiated and flexible learning. This need not be confined to older students; for example the High Scope curriculum accords considerable autonomy, supported decision making and responsible decision making in children from the nursery years upwards.¹²⁸ Further, Zimiles¹²⁹ demonstrates that students brought up on progressive education were able to engage weighty moral issues – punishment, goodness, wrongdoing – more effectively than students whose pedagogical and curricular diet was more formal. At a simple level this might mean that students face up to the consequences of their behaviour and take responsibility for making it more acceptable.

The great difficulty for many student teachers is coping with emotionally and behaviourally disturbed students who are severely disruptive in class. The student teacher wishes, perhaps, that they would cease to advocate themselves in the classroom! There is no simple solution to such behavioural problems; if there were it would have been discovered years ago. There is no simple solution because there is no simple problem. Many disturbed students' behaviour is the outcome of a complex interplay of many contributing factors, e.g. home circumstances and relationships; parental problems; parenting difficulties; relationships with peers; physical and mental illness; early childhood experiences; an inability to cope; difficulty in self-restraint or controlling emotions; and school matters (for example limited academic abilities).

This does not mean that nothing can be done for these students; in fact, just the opposite. It suggests that teachers, if no one else in the students' world, should be able to provide a stable, respectful and supportive environment for these students that affords them some opportunities to

develop appropriate self-management skills. It also means that teachers will have to come to know and understand the biography and social and emotional make-up of the students. It involves the teacher understanding and communicating with the parties that are involved with the student, for example parents, welfare workers etc. Such intimate knowledge takes time to acquire; a student teacher who does not have that time needs, therefore, to try to gain that knowledge rapidly from the class teacher (respecting confidentiality where appropriate) and to use this to try to build up relationships with students.

Many students with special educational needs are the butt of verbal insults, taunts and abuse. Indeed the notion of having a special educational need is often used as an insult in itself amongst students who are not themselves disadvantaged. Students with special educational needs are surrounded by messages, images and behaviour that indicate that having a special educational need renders them somehow a lesser person or a failure; this can reinforce their low self-esteem.

Given this situation it is hardly surprising that for some students with special educational needs the only way in which they can gain some positive recognition is by aggressive physical and verbal behaviour – that is all that is left open to them. The student teacher needs to discuss with the teacher(s) with whom she is working the strategies that are being used to boost self-esteem and to develop in students with special educational needs their abilities to handle themselves with self-control, avoidance of violence and violent confrontations, avoidance of acting abusively themselves, and preserving their dignity when they are the butt of abuse. That is a difficult lesson for many students to learn; it is a lesson that perhaps needs to be addressed *per se* as part of the curricular experience of students; developing responsibility for actions in students is an important matter, though clearly it is difficult and long term.

Gifted and talented students

Included in equal opportunities, inclusion and diversity is the group of students classed as

‘gifted’ or ‘talented’. Recent attention has been focused on provision and appropriate teaching for gifted and talented students. We need to clarify the difference: whereas ‘gifted’ is used to denote learners with distinct abilities in one or more subjects in the National Curriculum other than in art and design, music and PE, ‘talented’ is used to describe those learners who have abilities in art and design, music, PE, or performing arts such as dance and drama.¹³⁰ The Qualifications and Curriculum Authority suggest that gifted and talented students work at the top 5–10 per cent of students in any school, regardless of the overall ability profile of the students, though other studies set the boundary at the top 3–5 per cent.¹³¹ In such circumstances it is suggested that there may be generic characteristics of gifted and talented students, for example Box 79.¹³²

The Qualifications and Curriculum Authority advocates caution in applying these criteria, as some gifted and talented students do not fit the criteria. Indeed it specifically suggests the need to look for giftedness and talent outside the regular curriculum.

Many gifted and talented students demonstrate their abilities in National Curriculum subjects and well above average assessment results, indeed they are entered for world class tests. They may also demonstrate extraordinary creative, leadership or practical abilities. Other gifted and talented students may deliberately conceal their potential, perhaps in order to avoid being singled out, being the subject of name-calling, or, indeed, to avoid being given additional work to do. Yet others may not demonstrate their abilities because of frustration, poor self-esteem, lack of challenge, or low teacher and parent expectations.¹³³ Indeed in the USA, one report indicates that up to 50 per cent of gifted and talented students may be underachieving, and up to 20 per cent of high school dropouts are from this pool of students.¹³⁴ This suggests that there are issues of identification, provision and assessment for such students, and that motivation is a critical factor in the development of the learning of gifted and talented students.

To address the matter of identification the Qualifications and Curriculum Authority suggests

Box 79: Generic characteristics of gifted and talented students

Gifted and talented students:

- think quickly and accurately;
- work systematically;
- generate creative working solutions;
- work flexibly, processing unfamiliar information and applying knowledge, experience and insight to unfamiliar situations;
- communicate their thoughts and ideas well;
- [are] determined, diligent and interested in uncovering patterns;
- achieve, or show potential, in a wide range of contexts;
- [are] particularly creative;
- show great sensitivity or empathy;
- demonstrate particular physical dexterity or skill;
- make sound judgements;
- [are] outstanding leaders or team members;
- [are] fascinated by, or passionate about, a particular subject or aspect of the curriculum;
- demonstrate high levels of attainment across a range of subjects within a particular subject, or aspects of work.

a range of ways in which teachers may become aware of gifted and talented students, for example:¹³⁵

- how they approach routine work in class and activities outside the classroom (some learners behave quite differently in the two situations);
- observing them systematically in a range of learning contexts;
- their responses to work and talking with them about what they like, dislike and what enables them to learn best;
- inviting them to reflect on and talk about their own strengths, interests and aspirations, perhaps in the context of personal target-setting;
- their initiative in tackling tasks or in adapting conditions to suit circumstances;
- the progress they make and judging whether they achieve beyond the level of attainment expected for their age;
- their performance in national curriculum and other standardised tests, for example non-verbal reasoning tests and cognitive ability tests (CATs), or national tests and qualifications.

The same document also counsels against stereotyping, for example to suggest that black students will have sports talents but not in other

areas, or that students from privileged backgrounds are brighter than those who are not from such backgrounds.

Providing a suitable teaching and learning environment for gifted and talented students involves establishing a context in which their abilities are identified, addressed, developed and applied. Such an environment should:¹³⁶

- value learners' own interests and learning styles;
- encourage independence and autonomy, and support learners in using their initiative;
- encourage learners to be open to ideas and initiatives presented by others;
- encourage connections across subjects or aspects of the learning programme;
- link learning to wider applications;
- encourage the use of a variety of resources, ideas, methods and tasks;
- involve learners in working in a range of settings and contexts – as individuals, in pairs, in groups, as a class, cross-year, cross-institution and inter-institution;
- encourage learners to reflect on the process of their own learning and to understand the factors that help them to make progress.

Box 80: Self-evaluation questions for planning and resourcing teaching of gifted and talented students

- How often do you encourage creative thinking by asking open-ended questions to which there are no right answers?
- How often are learners encouraged to consider the nature of a question and its possible answers?
- How often do you encourage learners to ask questions of themselves, each other and other adults in the classroom?
- How are learners involved in self-assessment and/or peer assessment?
- How effectively are the processes of formative assessment developed?
- How do you ensure that examples of gifted and talented work are on display or readily available, to raise the expectations of both learners and teachers?
- How effectively are you engaging learners in recognising and responding to challenge and taking initiative in their learning?
- How thoroughly have you checked learning activities to make sure that they offer challenges that match:
 - higher level descriptions than expected for the key stage and/or the exceptional performance criteria of the national curriculum?
 - the higher tier requirements of GCSE specifications?
 - the specifications for advanced level qualifications, including the advanced extension award?
- How effectively are you involving teaching assistants, supply teachers or workplace supervisors in the identification of, and provision for, the gifted and talented?
- How effectively are you liaising with the school's library service or other local resource support services?
- How are you developing a resource collection, including lists of web resources for young people and staff in classrooms, departments, the staff room, library or resource centre? How are you making sure that resources are being used?

Indeed in the same document the Qualifications and Curriculum Authority suggests that there are several questions that teachers could ask themselves in planning for teaching and resourcing teaching (Box 80).¹³⁷

Essentially what is being argued for here is for differentiated, suitably challenging teaching and learning. This may include, for example, accelerating learning and enrichment programmes;¹³⁸ although the terms overlap, the difference between these two is that acceleration implies faster movement through content (e.g. skipping a level or year group), whilst enrichment implies greater depth and breadth through content – greater variety, whilst not necessarily meaning gaining advanced placement.¹³⁹ Indeed a case could be made for withdrawal programmes for gifted and talented students.

Differentiation may also include: being clear on the constituent elements of higher order thinking and applying these; promoting different ways of working with and exploring curriculum content; encouraging increasingly analytical and complex work; introducing more self-determined work (perhaps of an enquiry nature); moving beyond the given curriculum. Differentiation is maximised when teaching and learning are concept-based, exploratory and active, use formative assessment and encourage increasing independence of thought. Related to this is the need to consider progression in many forms, for example:¹⁴⁰

- concrete to abstract;
- simple to complex;
- specific to general;
- general to specific;

- low order to high order;
- unique instance to overarching principle;
- overarching principle to unique instance;
- familiar to unfamiliar;
- unfamiliar to familiar;
- present to future;
- future to present
- near to distant;
- distant to near;
- basic to transformational;
- single tasks to multifaceted or multidimensional tasks;
- structured tasks to more open-ended tasks;
- less independence to greater independence in planning, implementing and evaluating learning;
- small steps to larger steps;
- slow to fast;
- fast to slow.

To provide for gifted and talented students in class may involve setting different or 'stepped' work, i.e. activities that become increasingly

demanding. The Qualifications and Curriculum Authority suggests that negotiated target setting with students, linked to action planning, can be a useful means of developing their full potential. An emphasis is placed on higher order, open-ended, autonomous thinking and exploratory activities, with a heavy emphasis placed on formative assessment, including peer assessment.¹⁴¹

To support the learning of the gifted and talented, first, teachers must help students to develop appropriate study skills. *Inter alia*, this will involve producing genuinely graded worksheets and instructing such students in methods of self-testing. Second, teachers need to encourage students to develop skills of higher order thinking. This will involve teachers in looking critically at classroom interaction and at their own questioning skills.¹⁴² Third, teachers must come to accept the 'normality' of students, particularly on the emotional level, even though they may seem 'old for their age'; they need to be rewarded for scholastic achievement and at the same time to retain their identities with the class group.

Managing behaviour in the classroom

Introduction

This section is concerned with managing behaviour in the classroom. It does not pretend to offer a panacea for all the manifold challenges and difficulties that are potentially present in the modern classroom, nor does it attempt to deal with the more problematic aspects of behaviour like violence and truancy. To do so would be to swing the balance of the pages that follow in the direction of juvenile delinquency and so distort the overall picture of classroom behaviour. In any case, should these and comparable incidents arise in the course of a student teacher's school experience, they should be referred to a senior member of staff as soon as is practically possible. What we do aim to do in this section is to offer the reader a framework for securing and maintaining the co-operation of students in classroom activities. To this end, it attempts to bring together a range of ideas, perspectives and concepts that will provide the student teacher with an operational base for achieving a positive, humane and constructive approach to management and control in the classroom.

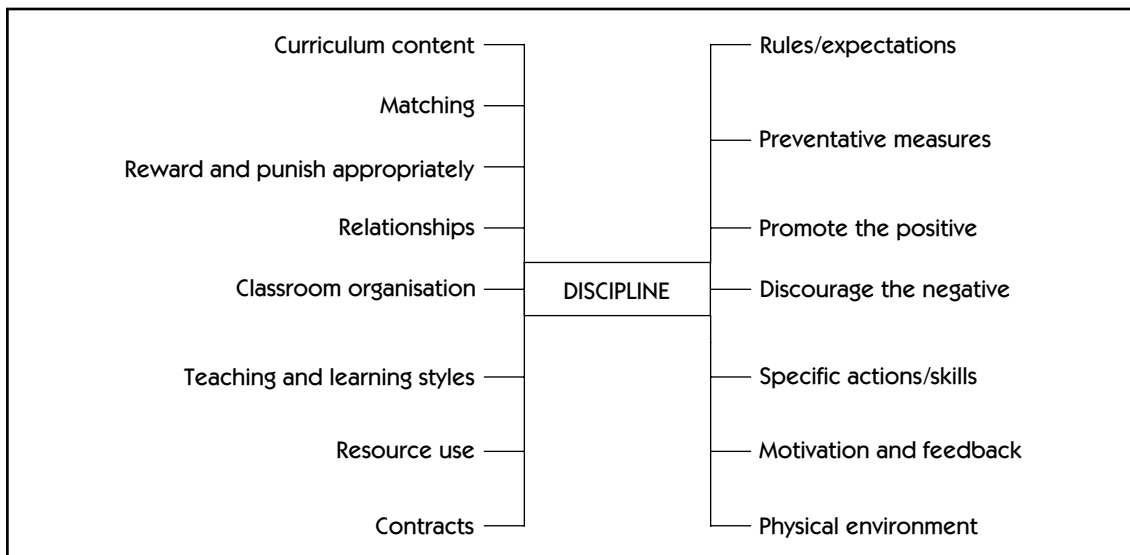
Schools are required to have a behaviour policy,¹ and schools also set out clear indications of rewards, sanctions, punishments and procedures for handling misbehaviour. In the best schools these are found to be applied consistently, fairly and clearly.² Indeed, positive strategies are found to include:

- a clear statement of values to be adopted by staff and pupils;
- a concise and clear code of behaviour;
- well-defined basic routines;
- a strong emphasis on praise and rewards;
- clear explanation of the systems of rewards and sanctions.

Student teachers are advised to find out from the school not only its behaviour policy, but the required procedures to follow with rewards, sanctions, handling misbehaviour at all levels of disruption.

It is important for the reader to consider carefully and collectively the points raised in this chapter, particularly if she is concerned to achieve good standards of teaching; they cannot be viewed in isolation. This is to say, they tie in with a whole range of contextual factors, some of which are touched upon elsewhere in the book, such as preparation and planning, suitability of material, teaching methods, teacher-pupil relationships and so on. If, for example, the work you give to your class tends consistently to be too difficult, or if your relations with the class are permanently abrasive, then no amount of reading or rereading of this section will help you resolve the difficulties that will inevitably follow. The connections between the factors about to be discussed and the broader issues of pedagogy must be made by the reader.

The point that we wish to emphasise is that management and control is a multifaceted matter,

Box 81: Key elements of good discipline

concerning all aspects of life in schools and all aspects of a student's personality and a teacher's craft. Some key elements of good discipline and management are shown in Box 81.

This moves away from regarding 'discipline' as an extra to teaching, for example in the widespread view amongst many student teachers that discipline comes *after* curricular and pedagogic matters, summed up in the practice whereby a student teacher sets students some work and then the discipline comes when the student teacher spends the remainder of the lesson ensuring that students are kept 'on task' and working. Rather, the view that we espouse here is that discipline is a 'built-in' element of teaching rather than a 'bolt-on' extra – it touches every aspect of a school. This view finds support from the influential Elton Report³ on discipline in schools, which suggested that a whole-school policy was vital for effective discipline, ensuring consistency of vision and practice in the school. Further, the Elton Report suggested that this whole-school policy should include:

- systems of incentives, sanction and support;
- shared understanding and mutual support among members of a school staff;

- ways of talking matters over with students;
- curriculum content and teaching styles;
- home/school relationships.

The attractions of the Elton Report are a realisation that a behaviour policy is not just about behaviour but that it touches every aspect of the formal and hidden curriculum of schools and their relationships with the wider community. Good behaviour and good teaching cannot be separated. A student teacher can reasonably expect to be able to look at a school's behaviour and discipline policy as a preparation for teaching practice. A school discipline policy, however, is not guaranteed to reduce misbehaviour. Hart *et al.*⁴ demonstrate that there is little relationship between the school's construction and implementation of a discipline policy and the levels of students' misbehaviour or the level of teacher stress caused by misbehaviour. Rather, they aver, it is better to create a supportive atmosphere that helps teachers to cope with the misbehaviour that they have to face.

A range of recent studies⁵ all point in the same direction in suggesting that the promotion of good behaviour is founded on several fundamental key principles:

- the need to 'promote the positive' and to build self-esteem in students;
- the centrality of motivation, interest in and enjoyment of all aspects of school life;
- the promotion of empowerment, autonomy and responsibility in students;
- the need for consistency;
- the *inclusive* nature of a policy, involving and addressing all aspects of school life and curricula, all relevant parties (within and outside the school), and all aspects of the student (e.g. psychological and emotional well-being), i.e. a concern for total quality;
- the need to be proactive, considering preventative measures and measures to de-escalate trouble quickly;
- the need for negotiated and agreed rules, rewards and sanctions;
- the need for communication, e.g. of expectations, boundaries, acceptability, responsibilities, rules, praise, feedback.

The Office for Standards in Education⁶ reported that a major goal of education was to enable – and teach – students to take responsibility for their own behaviour. In this respect they provided some important guidelines:

- A minimal number of school rules governing behaviour are clearly explained and are available (often displayed) to pupils so that they understand there are good reasons for such rules to be in place and upheld by all.
- Every opportunity is taken to give pupils serious responsibility for aspects of school work and for the day-to-day running of the school, for example by running school councils, or by being permitted to work independently in the library and also to assist with the loan service at lunch-time.
- Humour is used by staff with good effect often to diffuse the build up of tensions. Sarcasm and cynicism, on the other hand, are generally loathed by pupils and are strenuously avoided by staff in the most effective schools.
- The key principle of 'fairness', which is readily understood by pupils and causes great resentment if not observed, is consistently upheld by staff.

- Rewards and praise are used effectively to acknowledge success and to reinforce positive behaviour, but not indiscriminately.
- Sanctions fit the offence with all pupils being aware of the consequences of offending behaviour.
- Genuine mistakes are not reckoned as failure so much as experiences from which to learn.

It is clear from this summary list that attention is focused on *people*, on *intervention* and on *accentuating the positive*. This accords with the findings of several studies⁷ that punitive schools appeared to promote poor behaviour. The student teacher concerned to demonstrate effective class management and control will need to consider, amongst other things:

- 1 how to promote positive environments;
- 2 how to be proactive and fair;
- 3 how to plan and implement the formal curriculum to support good discipline;
- 4 how and when to involve other parties;
- 5 how to make plans for management and discipline effective in practice.

With regard to 1 – how to promote positive environments – the student teacher will need to consider:⁸

Promoting the positive

- an emphasis on accentuating the positive rather than focusing on the negative;
- encouraging, teaching and rewarding good behaviour and positive relationships.

Motivations, praise and enjoyment

- making school and learning interesting;
- reinforcing the positive, extinguishing the negative;
- providing earned and appropriate verbal and non-verbal praise;
- recognising relative as well as absolute success;
- publicly applauding achievement and effort (e.g. in class, assemblies).

Self-esteem and success

- promoting student autonomy, empowerment and 'voice';

- avoiding labelling;
- avoiding humiliation, sarcasm, insult and ridicule;
- asking for students' views/accounts and taking them seriously;
- recognising non-academic achievements.

Ethos and climate

- an open, welcoming, stimulating, caring and supportive climate within the classroom environment (however defined).

Equal opportunities

- addressing gender, race, class, abilities, special needs: an equal opportunity to contribute and to learn;
- intervening to reduce stereotyping and stereotyped behaviour;
- responding quickly to incidents and behaviour which violate equal opportunities;
- being alert to racial and sexual harassment and bullying;
- being aware of statemented students and those with special needs.

Roles and relationships

- the promotion of positive role models;
- being friendly and 'human';
- knowing students as individuals.

Responsibility, self-reliance and respect

- developing autonomy and responsibility in students, e.g. for their work, behaviour, learning;
- being polite and respectful, expecting politeness and respect;
- providing opportunities for self-discipline.

The physical environment

- a stimulating, clean and welcoming environment;
- classroom display;
- arrangements for moving round the classroom/teaching spaces, avoiding circulation bottlenecks;
- monitoring entrance/egress of students and monitoring students outside the classroom, e.g. in corridors and play spaces;

- involving students in keeping the physical environment attractive and free from graffiti, litter etc.

With regard to 2 – how to be proactive and fair – the student teacher will need to consider:⁹

Expectations and communication

- being overt, clear and precise over expectations;
- communicating the criteria for acceptable behaviour;
- defusing confrontations and challenging behaviour;
- having high but realistic expectations in a variety of fields and communicating them;
- avoiding the negative self-fulfilling prophecy;
- making criticism constructive.

Being proactive and taking preventative measures

- anticipating problems and adjusting demands;
- stopping unacceptable behaviour before it escalates. Spotting incidents in the making;
- de-escalating unacceptable and challenging behaviour;
- avoiding 'boxing students into a corner' where staff and students will lose face;
- staying calm and 'taking the heat' out of situations.

Setting and communicating boundaries

- developing routines, e.g. for accessing and returning resources, giving in work, going to the toilet, moving round the classroom, starting sessions, entrance and egress, establishing attention;
- maintaining eye contact;
- avoiding 'bargaining', arguing with students and being pressurised by students.

Consistency, fairness and whole-school practice

- adhering to the whole-school policy;
- ensuring consistent application of rules, rewards, sanctions, responding to specific presenting behaviours and students;
- sharing individual experiences and supporting individuals;

- avoiding punishing whole groups if some individuals do not deserve it;
- ensuring appropriate differentiation of application with respect to different students and situations;
- ensuring fairness in administering incentives for good behaviour.

With regard to 3 – how to plan and implement the formal curriculum to support good discipline – the student teacher will need to consider:¹⁰

Curriculum matters

- matching, differentiation, stimulation, motivation and sustaining interest;
- making demands realistic, meaningful and achievable;
- marking work promptly;
- communicating the purposes of the lesson and the criteria for success/achieving the purposes;
- providing extension and reinforcement material;
- planning curricula and activities with discipline considerations in mind;
- avoiding 'slack' time (i.e. time where students can avoid being occupied) and increasing learning/teaching time.

Teaching and learning

- task orientation and a purposeful, brisk rate;
- using group work for social and emotional development;
- finding out about and building on students' preferred learning styles;
- providing opportunities for student-centred and student-initiated/self-assessed learning;
- attending to specific classroom teaching skills: beginnings, transitions, conclusions; questioning/explaining/giving instructions/listening and responding/building on students' contributions/checking understanding and working/summarising; vigilance and communicating vigilance; use of voice – volume/speed/pitch/conviction; planning and preparation; timing; accessing and returning resources; being mobile;
- taking care with worksheets – avoiding 'teaching by proxy' – rather going for the human factor in teaching.

With regard to 4 – how and when to involve other parties – the student teacher will need to consider:¹¹

Home, school and community

- peer group support/pressure;
- two-way communication with home and school;
- where relevant, involving parents early in many aspects of education and behaviour, not just as a last resort.

Non-teaching staff

- keeping all adults involved in school informed of relevant policy matters and how they impact on practice and working with students;
- involving non-teaching staff in decision making;
- providing support for non-teaching staff in their interactions with students.

Lunch times and breaks

- supervision by teaching and non-teaching staff;
- making lunch times and playtimes interesting and constructive, e.g. with equipment, appropriate supervision, activities;
- clarity on which students may/may not go into designated areas;
- supervision of students who have been kept in at break times/lunch times;
- rules on kinds of activities permitted and forbidden (and reasons for these).

Rules and student involvement

- involving students in devising school and classroom rules;
- developing a limited number of agreed, explicit and memorable rules, e.g. on movement and speed, calling out, listening, going out of the classroom;
- Reinforcing rules frequently.

With regard to 5 – making plans for management and discipline effective in practice – the student teacher will need to consider:¹²

Rewards, sanctions and protocols

- purposes, scope and rationales of rules and their enforcement;

- appropriate rewards and punishments (to fit the behaviour and the student);
- grading behaviour, rewards and sanctions to fit the incident, e.g. talking out of turn → hindering others → making unnecessary noise → work avoidance → unruly behaviour while waiting → rowdiness and verbal abuse → being cheeky → physical aggression, taking into account possible reasons for the behaviour;
- avoiding over-reacting;
- using a range of individual extrinsic rewards, e.g. individual and public praise, showing work to other students/adults, tokens, points, 'stickers' and badges, certificates, privileges;
- using a range of group/class extrinsic rewards, e.g. points, certificates, plaques, trophies.
- rewarding/punishing the behaviour, not the student (and making this clear to the students);
- responding quickly;
- avoiding 'blanket' punishments which involve non-offenders;
- recording incidents and events;
- arrangements for students who abscond.

Bullying

- the school's position on bullying and dealing with it (in all its forms);
- protocols for dealing with incidents of bullying, bullies and victims at the time and follow-up times; recording and reporting incidents, events and follow-up action.
- Involving parents openly and having a constructive plan to offer to all parties.

Contracts

- contracts to promote the positive and to negotiate with students;
- reporting on students on a frequent basis where appropriate;
- contracts for returning to the class after a period of exclusion;
- individual programmes of behaviour where appropriate.

The vast set of considerations set out above reflects the complexity of issues in establishing and maintaining effective management and discipline. No aspect of school and classroom life

is untouched by management and discipline matters. The major implication of this for the student teacher is that all her planning needs to be addressed with management and discipline in mind, i.e. how it will promote effective discipline and diminish discipline problems. In the following pages the several matters outlined above will be addressed in more detail.

Schools of thought on classroom management

Wragg¹³ has identified thirteen commonly held views in this respect. In describing them, he warns the reader that the list is not exhaustive and that teachers should not necessarily be assigned to one category exclusively: they may change their view (and behaviour) according to the occasion. Briefly, they are as follows.

1 Authoritarian

According to this view, teachers are held to be in charge and that it is their responsibility to establish and maintain order in the school. They make the decisions and give the orders within a well-defined and fairly rigid system of roles. The justification for a teacher assuming this stance resides in his greater knowledge and experience. Opponents of this view argue that it can become repressive and that it is not appropriate to an age in which students need to learn independence if society is to become really democratic.

2 Permissive

Usually contrasted with the preceding view, the permissive school emphasises individual freedom and choice. Traditional constraints on behaviour are thus kept to a minimum. The aim is to develop pupil autonomy so that pupils can make their own decisions and be responsible for their own behaviour. The critics of permissiveness contend that it all too often degenerates into a kind of *laissez-faire* situation having little or no real educational significance for those participating.

3 Behaviour modification

This school holds to the views of behaviourist psychology which stresses the roles of rewards and punishments in the control of behaviour. Behaviour is controlled by the responses it receives and its consequences. Hence positive consequences follow desired behaviour and negative consequences follow undesired behaviour; the strength of the consequence depends on the behaviour exhibited. Thus the teacher's job is to encourage desirable behaviour and stamp out undesirable behaviour by administering or withholding suitable reinforcements. It is objected to on the grounds that the treatment is mechanistic and that this implies that the people so treated are regarded as machines and not humans.

4 Interpersonal relationships

The aim of this school of thought is to produce good, positive relationships between the teacher and students and among the students themselves. Emphasis on negotiation and suggestion will result in a healthy classroom climate in which learning will occur automatically. If the trick works, then problems of management will not arise. Critics of this view, however, content that

good personal relationships become an end in themselves and that the real purpose of the classroom enterprise, namely the acquisition of knowledge and skills, takes second place.

5 Scientific

According to this view (which, incidentally, is one held by the present authors – though not exclusively), teaching is an activity which can be studied and analysed. It can be described as being scientific in the sense of being an objective and systematic analysis and later synthesis of the more important components of teaching and learning. It is also scientific in the sense that it draws on the findings of empirical studies as a means of establishing a body of theory on which practice can be based. Four examples are given here that draw on empirical evidence.¹⁴ Using data from school inspections the Scottish Department of Education¹⁵ suggested that good lesson organisation and discipline could be developed in a variety of ways, listed in Box 82.

This is paralleled by the former Department of Education and Science¹⁶ where it gives a shorter list of recommendations for good behaviour, set out in Box 83.

One can see that there are many areas of overlap between the two studies; the extent of

Box 82: Promoting good discipline in school

- Classwork marked regularly and thoroughly.
- Materials and equipment readily available.
- Teachers anticipate difficulties and react positively to them.
- Teachers are seen to be 'fair' by pupils.
- Teachers show an interest in their children and work.
- Teachers arrive at class punctually.
- Pupils come into class in an orderly fashion.
- The objectives of the lesson are clear and stated in the early part.
- Lessons get off to an interesting and brisk start.
- Teachers speak clearly and are audible at all times.
- The language is simple, clear and unambiguous.
- Brief, snappy questions are used to check children's comprehension.
- Teachers avoid slowing down the pace of the lesson.
- A constant overview of the class is kept.
- Teachers are aware of what individuals are doing.
- Interventions are prompt when passions rise.

Box 83: Factors promoting good discipline

- Nurturing of genuine involvement based on understanding of the concepts which underlie those tasks and examples particular to a given lesson.
- Materials and preparation to ensure differentiation within tasks for pupils of different abilities.
- Sustained hard work on the part of the pupils as well as the teacher.
- Specific help for individual pupils without losing sight of the reactions of the whole group.
- The encouragement of pupils to contribute ideas.
- Careful attention to their contributions, with encouragement to refine their ideas in discussion.
- Flexibility in adapting a lesson plan to take account of pupils' contributions and of the mood of the group.
- Variation of the pace of a lesson to keep interest and momentum.
- Wit and humour, which help pupils to enjoy a lesson and can defuse potential problems, without recourse to sarcasm.
- Infectious enthusiasm for the subject, and for pupils and their response to it.

that congruence enables student teachers to be reasonably certain that they too can have a degree of confidence in the suggestions reported.

A third example can be given of empirical research that contains an important message for discipline. Galton *et al.*¹⁷ showed that the impact of a student who was labelled (perhaps euphemistically!) an 'attention seeker' was greater if a whole-class teaching style were adopted in a lesson, where the attention seeker had, as it were, a theatre to attract the attention of the whole class and the teacher, than in a situation where group work was being adopted, where the attention seeker was reduced to gaining the attention of only a group, thereby diluting her/his impact – a particularly valuable point for student teachers who are faced with a disruptive attention seeker.

A fourth and longer example derives from our own experience of supervising students on teaching practice. Here we set out a series of 'tips' which, like the 'folklore' discussed later, are drawn from our observations of and recommendations for effective teaching practice. They are set out under four main headings: talk, classroom management, timing and organisation.

Talk

- Vary the voice – its pitch, tone, volume, speed.
- Avoid rhetorical questions, e.g. 'Do you know what sitting down means?' – rather give a direct order.
- Avoid general exhortations, e.g. 'Come on now' – be specific and concrete.
- Do not bargain with students, e.g. 'If you're good we will watch this programme.'
- Do not rely on students' good behaviour, e.g. 'You will be good, won't you?'
- Do not allow students to argue with you.
- Do not accept anything that students say if it is ridiculous.
- Avoid only speaking with volunteers.
- If students are supposed to have listened to an instruction and then they ask what to do, tell them off for not listening.
- Do not speak too quickly for long; it whips up an excited atmosphere in the classroom.
- Do not bombard students with instructions; stage them through the lesson.
- Do not talk over students if you are insisting on silence – it gives a mixed message that, in fact, you will tolerate noise whilst asking for silence.
- Comment on what students have done and how well they have done it.
- Speak firmly and with conviction.
- Give explicit instructions that students will understand.
- Explain how to commence work.
- Be firm without shouting or being unfriendly; maybe use humour to defuse situations.
- Do not accept students shouting out – deal with it.
- Convey a realistic sense of urgency in your voice; mean what you say.

- Avoid asking students to tell you what they were supposed to do – it is a rhetorical question.
- Avoid going to extremes too rapidly, or from extreme to extreme, e.g. flattery to crossness.

Classroom management

- Make very explicit and communicate exactly what the 'ground rules' are – what is acceptable and unacceptable.
- Monitor the whole class, even when they are working in groups, stopping regularly if necessary.
- Do not become absorbed with individuals or groups at organisationally critical times, e.g. transitions, ending a lesson.
- Be in the classroom before the students, organise their entrance and egress.
- Avoid being pinned to your desk or being the 'pied piper' with a queue of students behind you – restrict numbers moving round the classroom and in a queue at any one time. Move to the students rather than the students moving to you.
- Stop an activity if necessary, sacrificing content to control rather than *vice versa*.
- Insist on acceptable standards of presentation, concentration, behaviour.
- Use written work to quieten students if necessary.
- When you stop the whole class insist on complete attention.
- Anticipate trouble and 'nip it in the bud'.
- Avoid being too friendly with the class and then suddenly fierce or *vice versa* – be consistent.
- Be prepared to 'police' a situation at times (even if it is out of your character).
- Insist on total concentration at times, even silent working.
- Avoid saying something and then not following it through.
- Reduce students' fidgeting if they are listening.
- Veiled – unspecified – threats, e.g. 'There will be trouble if I have to come over to you again,' may be more useful than specific threats; if a specific threat is given it must be carried out if the infraction continues.
- Avoid students pressuring you into repeating something that they should have listened to earlier; it is 'their fault'.
- Repeatedly calling out students' names suffers from the law of diminishing returns.
- Avoid joking in a serious activity.
- If a student repeatedly misbehaves avoid treating each incident in isolation; deal with the cumulative effect.
- Do not accept everything that the student cares to do.
- Be vigilant, developing 'the all-seeing eye'.
- Be dynamic.
- Allow thinking time in questions; do not always provide answers to students – you may be too helpful for their own good (see earlier: *questioning* and *responding*).
- Move round the class.
- Initiate good behaviour to replace responding to unacceptable behaviour.
- Avoid letting a worksheet replace all of your teaching.
- Do not be flustered by several students suddenly requiring help.
- Shortly after students have been set to work check that they are, in fact, working.
- Do not be fooled by a quiet student or class – it may be a screen for daydreaming.
- Arrange optimum seating arrangements.
- Avoid confrontations wherever possible – though some students will not allow you to do this.

Timing

- Allow time to commence and round off sessions.
- Set finite time limits, e.g. 'You have ten minutes to do such-and-such', communicating these limits to the students.
- Do not spend too long on easy or trivial points, keep a brisk pace.
- Try to ensure that work is completed by the lunch break/end of the afternoon (for primary school student teachers).
- Allow reasonable time for students to work – set realistic expectations.

Organisation

- Be thoroughly prepared.
- Be very vigilant at transition points – come out of the 'teacher-as-instructor' mode and into the 'teacher-as classroom manager' mode.

- Anticipate problems and plan how they will be addressed.
- Use a visual focus to support an aural focus (e.g. using 'jotters', the chalkboard, flip chart etc.).

This list of points might appear unduly antagonistic in its tone at first sight. This is not intended; rather the aim here is to signal that the student teacher needs to be proactive, clear and communicative in her work and relations with her class(es).

A key factor is vigilance in the classroom, and its associated issue of eye contact. Wragg¹⁸ makes the point that, even though we only have a narrow field of vision in sharp focus, about two or three degrees, we have a reasonably sharp field of vision of between thirty and forty degrees, and a less sharp field of vision of up to 180 degrees. One can draw several implications from this:

- Teachers who only remain in one position (e.g. at their desk, near the whiteboard) may direct their attention to a limited, centrally placed group of students, to the neglect of others on the periphery.
- Sitting near the periphery may enable students to do very little and to remain unnoticed.
- Teachers should deliberately move their physical location and their field of vision to encompass all students, taking care not to turn their back on students.
- Teachers should involve all learners, and take special care to involve those at the extremities of the classroom (e.g. at the back, at the sides).
- Some students, perhaps disruptive students, deliberately occupy central positions in order to command the theatre of the classroom.
- Some disruptive students deliberately occupy peripheral positions in order to make themselves less accessible and thereby less easy to control.

The seating arrangements are a matter for the teacher; seating is decided by the teacher in order to maximise learning, albeit hopefully, but not necessarily, with the students' assent. Choice of seating by the student, as Kyriacou¹⁹ remarks, is a privilege, not a right. Student teachers may need to rearrange the seating arrangements for specific lessons or during the teaching practice, in order to facilitate vigilance and learning.

Evertson and Emmer²⁰ suggest a sequence of actions to be taken to de-escalate undesirable behaviour:

- 1 Whilst maintaining eye contact, ask the student to stop the undesirable behaviour, and maintain the eye contact until the behaviour has stopped.
- 2 Keep eye contact until the student settles back into the desired behaviour.
- 3 Keep reminding the student of what the desired behaviour is.
- 4 Ask the student to explain the desired behaviour.
- 5 Impose a penalty for breaking the rules. Repeat a procedure until it is performed correctly and acceptably. If the student deliberately does not perform the desired behaviour then impose a sanction or punishment.
- 6 Ensure that students have enough variety to avert boredom.

This is echoed by Arends,²¹ who suggests the use of the LEAST model as a mnemonic:

Leave it alone, i.e. ignore it if it is not going to escalate or is trivial.

End the action immediately, e.g. by direct command or distraction.

Attend more fully to the students and know them and their background in depth.

Spell out directions for what should be done and what should not be done, including the implications or consequences of not carrying out the required instructions.

Track the behaviour to see if it recurs, to record evidence of the behaviour, and to follow it up if necessary.

What we are arguing here is that regarding teaching as a *science* enables us to identify particular teaching skills for effective management that can be developed, for example: beginnings, questioning, explaining, handling transitions, concluding, responding, being vigilant, being prepared, timing and pacing lessons, using eye contact, anticipating what might happen and how difficult situations should and should not be handled. Opponents of this perspective of teaching as a scientific activity argue that teaching

is *an art* and cannot therefore be subjected to such an analysis. For them, teaching – and this includes class management – is intuitive and can depend upon personality.

6 Social systems

The 'social systems' view contends that the school and its inmates constitute a sub-system of a wider social system, influences from which affect the group's behaviour. These include political, social, financial, emotional emanations. The teacher thus needs to understand and be aware of these influences in order to work effectively in school, although learning is in essence an individual process. Many school problems thus need to be seen in relation to these wider contextual

factors. Critics respond by arguing that teachers have little or no control over these factors and must, therefore, function within the framework of the school.

7 Folklore

If the new teacher can assimilate the received wisdom of the profession, the 'tips for teachers' and 'tricks of the trade', then he will be suitably equipped to deal with most contingencies. As Wragg²² explains, critics consider that tips are lacking in any theoretical basis, are random and unrelated to each other, and may suit the person who proffers them but not the recipient. Box 84 contains a number of common tips identified by Wragg in his project.

Box 84: Folklore in the classroom

As part of the Teacher Education Project, Wragg collected from student teachers tips or 'tricks of the trade' given them that they had found most useful. The 25 most common are given below in descending order of frequency. Go through the list and consider their value.

- 1 Start by being firm with pupils: you can relax later.
- 2 Get silence before you start speaking to the class.
- 3 Control the pupils' entry to the classroom.
- 4 Know and use the pupils' names.
- 5 Prepare lessons thoroughly and structure them firmly.
- 6 Arrive at the classroom before the pupils.
- 7 Prepare furniture and apparatus before the pupils arrive.
- 8 Know how to use apparatus, and be familiar with experiments before you use them in class.
- 9 Be mobile: walk around the class.
- 10 Start the lesson with a 'bang' and sustain interest and curiosity.
- 11 Give clear instructions.
- 12 Learn voice control.
- 13 Have additional material prepared to cope with, e.g., bright and slow pupils' needs.
- 14 Look at the class when speaking, and learn how to scan.
- 15 Make written work appropriate (e.g. to the age, ability, cultural background of pupils).
- 16 Develop an effective question technique.
- 17 Develop the art of timing your lessons to fit the available period.
- 18 Vary your teaching techniques.
- 19 Anticipate discipline problems and act quickly.
- 20 Be firm and consistent in giving punishments.
- 21 Avoid confrontation.
- 22 Clarify and insist on YOUR standards.
- 23 Show yourself as a helper or facilitator to the pupils.
- 24 Do not patronise pupils, treat them as responsible beings.
- 25 Use humour constructively.

Box 85: Differences between experienced and student teachers**Experienced teachers:**

- were usually very clear about their classroom rules;
- did not hesitate to describe what they thought was 'right' and 'proper';
- were conscious of the massive effort needed to establish relationships with a new class;
- used their eyes a great deal to scan the class or look at individuals;
- were quick to deal publicly with infraction of their rules;
- were more 'formal' than usual;
- were especially brisk and businesslike;
- established their presence in the corridor before the class even entered the room;
- introduced themselves formally.

Student teachers:

- were not so clear about classroom rules, either their own or those of other teachers in the school;
- did not use terms such as 'right' and 'proper' when talking about rules;
- were unaware of the massive collective effort the school and individual teachers had put into starting off the school year;
- made less use of eye contact and were very conscious of themselves being looked at;
- often neglected early infringements of classroom rules which then escalated into larger problems;
- concentrated in their preparation on lesson *content* rather than rules and relationships.

Indeed in the same project Wragg outlines several differences between experienced and student teachers. These are shown in Box 85.

One can add other approaches to those from Wragg, for example:²³

8 Limit-setting approaches

Here the assertive teacher encourages co-operation and develops relationships with students, setting clearly defined limits on what is acceptable and what is not. Rules are made explicit so that relationships can work well, within the rule system. Positive recognition and incentives build co-operation and effective relationships, and such incentives are graded into degrees; consequences for disruption are also graded. We discuss this later in the section on Assertive Discipline.

9 Cognitive behaviourism

Cognitive approaches seek to promote students' desirable behaviour through regarding behaviour in a problem-solving approach, so that students, autonomously, can exercise self-control. This is facilitated by counselling and discussions between

the students and the teacher about ways of handling situations and their behaviour in particular circumstances and environments.

10 Humanistic approaches

In this school of thought effective behaviour is encouraged by adopting a person-centred, emotional approach to their needs and learning. Such an approach is facilitated by democratic relationships in classrooms, with the teacher as a facilitator rather than simply as a director. Hence unacceptable behaviour is discussed in a problem-solving approach rather than a punitive approach, with the deployment of effective counselling and communication skills.

11 Solution-focused approaches

Solution-focused approaches strive to solve problems rather than simply to identify, understand or punish them. They identify goals (end-states) to be reached, strategies for achieving them, and identification of intermediate goals that can be reached, identification of positive exceptions to the problems, and how to reinforce and sustain

the solutions and exceptions to the problems. In solution-focused approaches the teacher asks the student what life would be like if such-and-such were not a problem (i.e. if the exceptions became the norm), and then, together, identifying ways of achieving this situation.²⁴ In many respects solution-focused approaches resonate with the setting of SMART objectives (**S**pecific, **M**easurable, **A**chievable, **R**ealistic and **T**ime-bound objectives).

12 Approaches from pioneers of discipline

Many of the approaches outlined above are related to particular seminal writers. For example²⁵ Glasser²⁶ suggested that:

- students are rational and choose to behave in particular ways; the teacher's task is to enable beneficial choices to be made;
- every class should have some explicit and agreed-upon rules;
- no excuses should be accepted for student misbehaviour;
- appropriate consequences must follow particular behaviour (be it good or bad behaviour).

Kounin²⁷ suggested that effective behaviour is contingent on several factors:

- *withitness*: teachers need to be aware of what is happening in the classroom;
- *momentum*: lessons with a good momentum keep students on track;
- *smoothness*: student involvement is increased if lessons run smoothly, particularly in the presentation stages;
- *group alerting*: there are particular strategies for gaining and sustaining student attention, and for clarifying intentions;
- *student accountability*: students are kept actively and attentively involved;
- *overlapping*: teachers attend to more than one aspect of the lesson at a time;
- *satiation*: teachers know when to stop – when a topic or lesson is saturating students.

Ginott²⁸ suggested that effective behaviour abides by several key principles:

- ineffective teachers label and belittle students;
- effective teachers invite co-operation and act as facilitators;
- short reprimands and language can be effective;
- evaluative praise (e.g. 'good boy for raising your hand to speak') can be worse than no praise at all, as it can be demeaning;
- appreciative praise (positive feedback, and building on what students have done) is useful in responding to effort or achievement;
- it is sometimes useful to avoid using 'why' questions in relation to misbehaviour (e.g. 'Why did you hit Susan?'), as it only makes people feel guilty or elicits a shrug of the shoulders, but no solutions;
- sarcasm is to be avoided;
- classroom discipline has to be constantly negotiated and reinforced.

Dreikur²⁹ suggested several principles that underpin effective discipline:

- discipline is best construed as self-discipline;
- effective discipline is best practised in democratic classrooms, and rarely occurs in autocratic or over-permissive classrooms;
- students want to feel valued, and if they do not, or if they feel isolated from the class, may resort to attention-seeking behaviour.

Finally, Charles³⁰ identifies a range of key principles that underpin effective synergistic discipline:

- students are motivated by security, hope, dignity, empowerment, competence and enjoyment. Effective teachers address all of these points;
- co-operation is more effective than force;
- students usually co-operate with teachers whom they trust;
- teacher charisma, interest and communication are important elements of a synergistic approach;
- confrontations should be avoided if possible, replacing them with support;
- improving behaviour should look at causes, not just symptoms;
- try to avoid taking misbehaviour personally; that may be incorrect.

13 Specific approaches

It is beyond the scope of this book to go into specific approaches to discipline, though we address behaviour modification and assertive discipline in a little detail towards the end of this chapter, as we regard them as important approaches. However, there is a battery of named approaches and projects to promote effective discipline. Amongst these are included:³¹

- assertive discipline;
- behaviour modification;
- building a better behaved school;
- circle time;
- positive discipline;
- co-operative discipline;
- discipline as self-control;
- positive discipline in the classroom;
- non-coercive discipline;
- discipline with dignity;
- inner discipline;
- social discipline;
- win-win discipline;
- beyond discipline;
- synergetic discipline.

We refer readers to Wolfgang³² and Charles³³ for an exposition of these. All of these approaches have received both praise and criticism.³⁴ For example, the work of Kounin and Jones (positive discipline) is criticised for being, at heart, a model of compliance and teacher control, and for offering simplistic recipes for a complex phenomenon. The work of Dreikur is criticised for assuming that students appreciate the links between punishments and the activities that lead to them, for being tacitly coercive (based on power), and for having adults inflict suffering on students, for promoting anger in students and for operating a counter-intuitive model of democracy as disguised autocracy and compliance. Reward-based approaches have been criticised as being simplistic, short-term and incapable of solving problems. The assertive discipline approach has been criticised for producing robotic, mechanistic students who lack compassion, principles or feelings, for using suffering to teach someone a lesson, for an essentially manipulative and competitive approach to behaviour, for teaching conformity, and for simply not working!

Clearly there are many, many approaches to discipline. In this chapter we draw on these theories and approaches and attempt to glean from them key features of effective discipline in schools. Our own approach, then, is eclectic and is a synthesis of several principles and practices. Indeed teachers in schools are eclectic, using a synthesis of approaches to fit the situation in hand. This makes sense.

Students' expectations of teachers

Wragg³⁵ notes that students are only rarely brought into the act of thinking about classroom processes. For example, most rules are decided by adults, the content of lessons is frequently chosen by the teacher, and it is assumed that students must know how to learn on their own or in groups. Wragg then refers to examples of proposals that have been put forward for involving students more in this matter of classroom processes.

Glasser,³⁶ for example, has suggested that students should be involved in discussion about rules and procedures during lessons. He suggests that class time should be used for the teacher to explain about classroom rules and that discussion should take place about these during which they could be adjusted, new rules could be negotiated and problems discussed.

Wragg³⁷ also refers to ideas put forward by Gordon. He contends that to solve a problem one must decide who 'owns it'. Is it the teacher, the students or is it shared? He recommends a six-step approach:

- 1 define the problem;
- 2 generate possible solutions;
- 3 evaluate these solutions;
- 4 decide which solutions seem best;
- 5 decide how to implement the chosen solutions; and
- 6 assess the effectiveness of the solutions chosen.

Both Glasser's and Gordon's approaches demand greater responsibility on the part of the pupils than is normally the case.

Another view of how students see effective teachers is to be found in Gannaway's study.³⁸

On the basis of interviews and observation, he constructed a dynamic model by proposing that teachers are progressively typified by pupils in a given sequence. The teachers are, in effect, subjected to a systematic series of tests by students, the first of which is 'can the teacher keep order?' The next test is 'can he "have a laugh"?' And the final test to which the teacher is subjected is 'does he understand pupils?' Gannaway suggests that providing the answer to each of these is *yes*, and provided the teacher can put over something of interest in the lesson, then he 'has it made'. The implications of these questions are of particular interest. The first test, for instance, 'can the teacher keep order?', implies that the students expect him to do just that, to keep order. Of equal importance is the second challenge, 'can he "have a laugh"?' What is implied here is that in expecting the teacher to keep order, they do not expect him to be *too* strict, to impose a regime so harsh that the pupils will eventually rebel (we touch on this as a possible cause of misbehaviour in the next section). What is called for is a 'nice strictness' in preference to a 'nasty strictness'.³⁹

The final test, 'does he understand students?', is in some ways the most interesting of the three for it implies an understanding of the class, *as a class, as a group*, in contrast to understanding *individual* students, or a group of students on an individual basis. The difference is significant for it means that understanding a group is of a different order to understanding the individual: a different standpoint is required and different knowledge and skills.

Some factors affecting behaviour in classrooms

As part of his concern to understand the reasons behind students' behaviour, Fontana⁴⁰ has identified some of the differences among students which influenced how they behave. Briefly, these include the following.

1 Age-related differences in behaviour

The effective teacher is aware of the need to adjust the way that motives are imputed to students'

behaviour as they grow older. There are also other reasons why age should be regarded as an important factor in dealing with problems of class control. Briefly, these are as follows: the nature of students' demands and expectations of the teacher change as they grow older; the nature of students' relationships with each other changes as they grow older; students grow bigger and stronger as they get older; generally students are more critical of adult behaviour the older they become; older students are often readier to blame adults for their own failures and shortcomings; and students' concentration span and their ability to do theoretical work increases as they develop intellectually.

2 Ability-related differences in behaviour

Differences in behaviour stemming from variations in ability which Fontana considers important may be briefly stated as follows: motivation for schoolwork will differ markedly from high ability to low ability; different ability levels in students make different demands upon the teacher in terms of personal qualities such as patience and sympathy; the criteria for success and failure differ from one ability level to the next; and the facilities and equipment available for students at different ability levels may differ markedly.

3 Sex-related differences in behaviour

Fontana considers that the abilities and potential that boys and girls have in common are more important from an educational point of view than any differences. Those differences that do exist are often the result of expectations. Boys are expected to be rowdy and girls more emotional, and in practice each group tends to meet such expectations.

In the primary classroom there may be clear social and academic differences. Girls are more helpful and co-operative, whereas boys show greater interest in sports and practical activities. Boys are more drawn to mathematics, while girls are attracted to reading and writing. Ideally, however, the good teacher will endeavour to minimise differences and provide the sort of learning environment that offers both boys and girls the same kind of opportunities.

The same impartiality should be evident in matters of class control. The good teacher, for example, will give praise to categories of behaviour that are the same for both boys and girls and will thus avoid the kind of situation where boys are praised for good classwork and girls for good social behaviour.

4 Socio-economic related differences in behaviour

Fontana argues that with the spread of comprehensive schools the differences in the socio-economic character of schools is not as great as it used to be, though it still exists. He identifies the following differences between upper socio-economic status (SES) pupils and lower socio-economic status pupils. In terms of their relevance to class control, they are: students from lower SES backgrounds tend to be lower in self-esteem, perhaps because of their underprivileged environment, than those from upper SES backgrounds; the values and standards taught in schools tend to accord more with those taught in upper SES homes than with those taught in lower SES homes; students from lower SES homes are more likely to find themselves in low-ability groups than students from upper SES homes; and upper SES students are more likely than lower SES students to practise and understand the importance of deferral of satisfaction.

5 Culturally related differences in behaviour

By culture, Fontana refers not only to sub-cultural variations arising from socio-economic factors, but to variables associated with a child's ethnic group. As he explains, cultural variables may overlap with socio-economic ones, but at the same time they introduce a number of factors potentially important with regard to class control. The more important of these can be summarised thus: religious and moral codes of behaviour may be more strict in certain cultural groups; religious observances and rituals may influence the school behaviours of some students; rivalry and hostility may develop between different cultural groups; students from other ethnic groups may experience language problems in the classroom; and the

degree to which students from different cultural groups are taught emotional and social restraint may vary.

We shall have more to say about behavioural problems with some ethnic minority students at the end of this section.

What makes students misbehave?

To answer this question comprehensively would require the wisdom of Solomon and more. Fortunately, our intentions in posing it are more modest. Briefly, they are designed to identify broad types of disruptive behaviour so that the beginning teacher can know what to look for, have some idea of the cause(s), and decide what action (which may sometimes mean inaction) is called for on his part.

On a practical level Kyriacou⁴¹ suggests that classroom misbehaviour has eight main causes:

- *boredom* (including if the task is too easy or uninteresting);
- *prolonged mental effort*;
- *inability to do the work* (e.g. frustration or if they are not sure what is required);
- *being sociable* (where students' social lives and relationships 'spill over' into the lesson itself);
- *low academic self-esteem* (e.g. having experienced failure, lack of confidence and learned helplessness);
- *emotional difficulties* (which may be out-of-school or in-school, for example bullying, which leads to attention-seeking behaviour);
- *poor attitudes* (according low value to school work and school life);
- *lack of negative consequences* for disruptive behaviour.

Saunders⁴² has identified four main patterns of disruptive behaviour arising from social causes. These are:

1 Antipathy to school

For such students, school is seen as having no place or purpose in their lives. It is an irrelevance for them and consequently they dismiss both

school and teachers. The teacher's task in such circumstances is to know how to make school-work more relevant and meaningful. Related to this factor of antipathy is what has been termed *conflicts of interest*. This embraces differences in needs, values and goals between the student and the system as embodied in the teacher and usually results in a show of non-conformity by the students in question. Resolving conflicts of this kind involves *negotiation*. This will concern the pupil and teacher working out a mutually acceptable settlement.

2 Social dominance

Saunders regards this as an extension of the antipathetic syndrome. He writes:

Some physically and socially mature pupils seem to have a need for frequent reinforcement in the form of attention from their peers. This is often achieved at school by challenging the authority of the teacher. If the challenge is not met it can be taken up by other pupils and the lesson ruined, and as a result the assertion of the teacher's authority becomes more difficult in future lessons.

How one counters the sort of machismo posturing that this particular problem often assumes is a perennial problem for teachers in present-day classrooms.

3 Social isolation

Some students have strong acceptance needs and a strong yearning to be wanted by their peers. However, they tend to be on the periphery of the group instead of being fully integrated into it. To achieve a sort of affiliation, therefore, they adopt the group's behaviour, though often in extreme form.

4 Inconsequential behaviour

Saunders here refers to those students who seem unable or unwilling to anticipate the consequences of their actions. Such a student, Saunders suggests, 'behaves impulsively instead

of reflecting on the courses of action which are open to him and of the possible consequences of each; or he may be unable to inhibit the urge to meet a challenge'. Anticipating an action requires a degree of reflection that, judging from the frequency of this kind of problem in the classroom, many students are incapable of achieving.

To these patterns of disruptive behaviour we can add the following causes of misbehaviour set out by Gnagey.⁴³ One or other of them will have been experienced already by the student teacher. Thus:

5 Ignorance of the rules

Ignorance of the rules of classroom behaviour is a common cause of misbehaviour. This is particularly the case during a teacher's early contacts with a class. As we shall see in the next section, it takes time to implement a rule, for it has to be learned over a period of time by interpreting it in relation to specific concrete situations. In this respect, Gnagey distinguishes between *verbal* and *actual* rules, that is, rules that are acted upon and those that are not. As he says, 'Even if a pupil is presented with a neatly organised set of by-laws, he never really knows which statutes are operational and which are just on paper. As every seasoned teacher knows, classes have a very practical way of solving this problem. They simply proceed to try the teacher out, to see what they can get away with.'

6 Conflicting rules

Difficulties can sometimes arise for the teacher when a student is presented with two sets of conflicting rules – those of the classroom and those of his home. What is permissible in one situation is frowned upon in the other. Invariably it is the home that is the more permissive environment in this respect. Alternatively, the clash may occur between classroom norms and those of the peer group culture outside school. Where the clash is a marked one, the teacher would be best advised to seek a negotiated settlement with the student in question if lasting peace is to be achieved.

7 Displacement

As we have just seen, inappropriate behaviour may occur in the classroom because it is perfectly acceptable in another context, like the home or neighbourhood. A similar situation may occur with respect to *feelings*; inappropriate feelings are often displaced on the people and objects in the school. Thus, a student's hatred for his father may be transferred to his male form teacher. In an age where there is increased social dislocation through divorce, separation and one-parent families, displacement as a cause of disruptive behaviour might be more widespread than ever before.

8 Anxiety

A great deal of misbehaviour in the classroom is caused by anxious reactions to features in the educational environment – examinations, having to speak in class, being judged publicly etc. Earlier research by Gnagey⁴⁴ disclosed that disruptive students tended to be more afraid than their well-behaved classmates.

9 Leadership styles as causes of misbehaviour

Finally, Gnagey identifies a number of leadership styles on the part of teachers that can incite disciplinary problems rather than solve them. These include the *despot* and the *nonentity*. The despot, as he explains, embraces a *custodial* view of student control and his main concern is with keeping order. He tends to view students in negative and stereotypical terms. Student response to a lasting tyrannical style of this kind is invariably anger, which can manifest itself in a variety of ways, often indirectly as with vandalism or bullying or, in more extreme cases, arson. In a word, *displacement* is operating.

The nonentity, as the name suggests, is totally ineffectual. His generally over-permissive, non-interventionist approach, combined with an unwillingness to utilise such fundamental psychological principles as motivation and rewards, is likely to generate feelings of restlessness on the part of pupils and a tendency to be easily distracted.

In a study by Dierenfield⁴⁵ (quoted in Watkins and Wagner),⁴⁶ teachers in a sample of English comprehensive schools were asked to rate ten provided causes of disruptive behaviour. The proportion who rated each item as 'an important cause' was as follows:

Unsettled home environment	49.6%
Peer pressure	35.6%
Lack of interest in subject	30.7%
General disinterest in school	30.5%
Pupil psychological or emotional instability	29.4%
Inability to do classwork	21.9%
Revolt against adult authority	20.8%
Lack of self-esteem	13.7%
Dislike of teacher	12.7%
Use of drugs	4.9%

School processes can clearly be seen as a source of problems resulting in disruptive behaviour. The questionnaire also revealed that heads and deputy heads endorsed extra-school factors, i.e. home, peers and instability, as significant causes more than teachers.

When it came to the kinds of response teachers should make to such causes, the ten most frequently rated were:

Positive teacher personality	89.7%
Effective teaching methods	87.6%
Establishing and maintaining behaviour standards early on	86.3%
Firm support of teacher discipline measures by head	70.8%
Consistent application of behaviour standards to all pupils	69.3%
Support of school by parents	68.7%
Treating causes of behaviour problems	66.6%
Influence of head	56.0%
Pastoral care programme	40.3%
Strict disciplinary measures by teacher	39.9%

The teacher and school aspects feature strongly here. Measures such as exclusion, special classes, streaming and the school social worker received less support, though they were still seen as useful possibilities. Head teachers and their deputies gave

above-average support to those factors involving parents and the pastoral care programme.

One way of preventing behaviour problems arising in the first place is to have adequate rules as means of controlling student behaviour. It is to a consideration of this topic that we now address ourselves.

Rules and routines in the classroom

Hargreaves⁴⁷ reminds us that rules specify acceptable forms of classroom conduct and that they are either laid down by the teacher or arrived at by agreement between him and the students. Rules play an important part in helping to define the classroom situation. Although each teacher makes a somewhat different list, most rules are based on *moral, personal, legal, safety* and *educational* considerations.

Educational settings have traditionally featured too many rules, especially punitive ones,⁴⁸ and it is important that such a list be kept to a minimum for at least three reasons: (1) the number of disciplinary actions a teacher takes is kept to a minimum also; (2) rules contribute to stultifying the atmosphere of school and classroom; and (3) there is some evidence from research⁴⁹ that rules by *themselves* exert little influence on classroom behaviour; in other words, they need to be seen in relation to other factors in the classroom situation. The criteria for helping to achieve such a minimum list are *relevance, meaningfulness* and *positiveness*, thus:

Relevance

Making one's list relevant requires that a teacher has a clear idea of the objectives of a particular lesson or course of lessons. The list may be flexible and may vary from lesson to lesson, though not to the extent that would confuse students or give them the opportunity to justify misbehaviour.

Meaningfulness

Rules that are seen to derive logically from the nature of the task are more acceptable to students than ones that are imposed arbitrarily by the

teacher and are not easily seen to relate to the task or context. What seems to be required here is a degree of negotiation between the teacher and his pupils.

Positiveness

Where possible, rules should be expressed positively since a positive statement offers a goal to work towards rather than something to avoid. Thus, 'work quietly' is preferable to 'do not talk'. A list of *don'ts* can have an inhibiting effect on classroom behaviour.

Hargreaves⁵⁰ suggests that the teacher should attempt to lay down her/his minimum list during the very first encounter with a class. This may cover such areas as entering the room, movement about the room, modes of address, when to talk and when not to talk, work and homework attitudes, and the distribution and use of materials and equipment. He also recommends that these should be fairly comprehensive, though not so general as to offer little guidance in specific situations; and that during subsequent meetings with the class the teacher ensures that the rules are understood, learned and conformed to, often with relation to concrete situations that arise in the class.

As well as establishing rules, the student teacher should also make explicit to the students during his early contact with them just what they can take for granted, e.g. can they use the pencil sharpener without asking permission? Clarification of this kind serves a dual purpose – it keeps formal rules to a minimum and cuts out undue fussiness.

Wragg and Wood (1984)⁵¹ identified 11 classroom rules in secondary schools (Box 86).

Indeed Wragg⁵² suggests that there will need to be rules for several areas: movement, talking (e.g. not to talk when the teacher or somebody else is talking; raising a hand to speak; no calling out), work-related matters (e.g. how to ask for help; what to do if you don't understand what to do or how to do it), presentation, safety, space, materials, social behaviour and clothing/appearance. The school may well have such rules, about which the student teacher should enquire. If these do not exist, or are selective, then

Box 86: Rules in secondary school

- 1 There must be no talking when the teacher is talking.
- 2 There must be no disruptive noises.
- 3 There must be rules for entering, leaving and moving in classrooms.
- 4 There must be no interference with the work of others.
- 5 Work must be completed in a specified way.
- 6 Pupils must raise their hand to answer, not shout out.
- 7 Pupils must make a positive effort in their work.
- 8 Pupils must not challenge the authority of the teacher.
- 9 Respect must be shown for property and equipment.
- 10 There must be rules to do with safety.
- 11 Pupils must ask if they do not understand.

it may be important for the student teacher to develop these with, and for, the students.

Other procedures (if not already established), though not strictly codifiable as rules, should likewise be made explicit early on, certainly during the first few contacts, e.g. do you require all the students' written work to be headed with the date? If so, make it clear to them when the first occasion for written work occurs and specify how you want it presented. A new line? On the left-hand side? Underlined? No abbreviations . . . or whatever.

In addition to rules formally laid down by the teacher or school, there are often supplementary rules of a more informal nature. Writing of such, Denscombe⁵³ says:

In one sense these informal rules are much more localised than general school rules. They operate in particular classrooms, at particular times and with particular people: they are 'context specific'. So, for example, rules about the amount of noise which is permissible will depend on the kind of lesson being taught, on the teacher in charge, on the kinds of pupils, on

the phase of the lesson, and on the day/week/term. Even then, these rules can be altered, suspended or renegotiated depending on the circumstances.

Indeed, as the author later points out, rules are not always imposed on students but are often the result of negotiation and renegotiation – 'the end product of a subtle bargaining procedure between teacher and students in which disagreement and resistance need to be overcome'.

In summary, good classroom management involves establishing clear rules where rules are needed, avoiding unnecessary ones, eliminating punitive ones, reviewing them periodically, and changing or dropping them when appropriate. Additionally, greater flexibility may be introduced by having recourse to more informal arrangements, frequently arrived at by negotiations and bargaining.

The partner to rules is routines. There is a certain security in routines that can promote good behaviour. So, for example, the student teacher would be well advised to assimilate the existing routines of the class(es) and, if there are none, generate some of her own and communicate these to the students, covering, for example:

- entering and leaving the classroom;
- accessing, giving out, sharing and putting away materials;
- having work marked;
- leaving their seats and moving around the classroom;
- attracting and maintaining the attention of the class;
- changing activities;
- catching up on incomplete work;
- occupying students who complete work quickly;
- going to the toilet;
- using resources from other rooms;
- preparing for registration/assemblies/dismissal.

We continue by identifying some of the well-tried techniques used by experienced teachers for dealing with unacceptable behaviour in the classroom.

Suggestions for handling minor misbehaviour problems

The techniques reviewed below may be of some assistance to student teachers when dealing with minor misbehaviour problems of a passing kind such as inattention, distraction or mischievousness. When faced with infringements of this nature, the aim of the teacher should be *to cut short the incipient misbehaviour before it develops and spreads, without interrupting the flow of the lesson or distracting other students unnecessarily*. In many cases the secret is to pre-empt misbehaviour, rather than waiting for it to occur. Such pre-emptive strategies include:⁵⁴

- Scan the classroom to identify difficulties, e.g. learning problems.
- Circulate round the room to identify learning problems.
- Make eye contact, particularly with a student whom you suspect of misbehaviour.
- Target your questions, including to those whom you think may be losing concentration and possibly about to misbehave, i.e. to reinvolve them.
- Use proximity: moving towards the student, not necessarily speaking, can be enough to prevent misbehaviour.
- Give academic help.
- Change activities or pace, e.g. if the students are having too many problems, becoming bored or frustrated, or if they are ready to move on.
- Notice misbehaviour, maybe through eye contact and your consequent facial expression, which can be more powerful than a verbal reprimand.
- Notice disrespect, e.g. if a student has a discourteous, poor attitude to you or to others.
- Move pupils, separating them and seating them as you require. Remember that your task as a teacher is to promote learning, so that if students' voluntary seating arrangements are not promoting learning then you have a duty to intervene. Students' seating arrangements are not an automatic right for students, but a constrained privilege.

Constant monitoring of the class

Good and Brophy⁵⁵ have emphasised the need for monitoring or scanning as an important factor in successful classroom management. By this they mean keeping the class and its individual members constantly under observation. Kounin,⁵⁶ likewise, stresses the value of this technique, noting that teachers possessing it show *with-it-ness*, that is, an awareness of what is happening in class. And Peters⁵⁷ says, 'The good teacher is always, as it were, "out there" in the classroom, not wrapped up in his own involuted musings. He is aware of everything that is going on and the students sense vividly his perception of them as well as his grasp of his subject matter.' A teacher with this kind of awareness can respond immediately to a minor problem before it has time to develop into something more disruptive.

Brown⁵⁸ summarises the main signals to look for when monitoring a class in this way. Briefly, these are:

- 1 *Posture*: Are the students turned towards or away from the object of the lesson?
- 2 *Head orientation*: Are the students looking at or away from the object of the lesson?
- 3 *Face*: Do the students look sleepy or awake? Do they look withdrawn or involved? Do they look interested or uninterested?
- 4 *Activities*: Are the students working on something related to the lesson, or are they attending to something else? Where they are talking to their fellow pupils are their discussions task-oriented or not?
- 5 *Responses*: Are the students making appropriate or inappropriate responses to your questions?

The vital need, then, is for the student teacher constantly to scan her group in an active, alert and expectant manner. Not only is she thus in a position to check or deter incipient disturbances, she also shows the class that she is in the frame of mind to know what is going on. There are some classroom situations where the student teacher is restricted in this respect – when she is writing on the whiteboard, sitting at her desk or at a piano, or when dealing with an individual student or small group. On such

Box 87: Noise in the classroom

Denscombe's case studies of three schools disclosed the following broad categories of noise:

Allowable noise: This came from such lessons as PE, drama and music where it was recognised that the normal rules could not reasonably operate and where, within bounds, more noise could be tolerated without impugning the competence of the teacher in charge.

Unavoidable noise: Although the blaring of a tape-recorder or the rasping noise of classroom furniture being scraped across a floor may be a nuisance that interferes with an adjacent lesson, such noise does not immediately signify poor control.

Acceptable occasional noise: From time to time a teacher may have a lively class and a lively lesson where the presence of noise would be interpreted as a sign of action and enthusiasm rather than apathy or poor control.

Unacceptable noise: Here, pupil-initiated noise, created by pupils and/or their teacher's responses, is taken to be an indication of a lack of control in the classroom. The cacophony of talking students interspersed with the raised voice of a teacher invariably carries all the connotation of a control problem. However, noise appears to be excusable when emanating from groups that all teachers find difficult to control.

occasions, not only must she be extra vigilant, she must be seen to be so.

On a more positive note, lively and interested classes, as Brown notes, usually sit with their heads slightly forward, their eyes wide open and a few eagerly waiting for a chance to speak.

Ignoring minor misbehaviour

Good and Brophy⁵⁹ consider that it is not necessary for a teacher to intervene in a direct way every time he or she notices a minor control problem. Muijs and Reynolds⁶⁰ also indicate the need to avoid over-reacting when faced with misbehaviour. Research evidence⁶¹ suggests that the combination of ignoring inappropriate behaviour and showing approval for desirable behaviour can sometimes be a more effective way of achieving better classroom behaviour. Further, the disruptive effect of the teacher's intervention, as Good and Brophy point out, can sometimes create a greater problem than the one the teacher is attempting to solve.

Having made the above recommendation, however, we need to file a caveat in the case of the student teacher experiencing his or her first teaching practice. The overlooking of a minor discipline problem by a *student* teacher, especially

where the class knows the person teaching them is a student, could easily be misconstrued by students as either weakness or lack of awareness. They may even seize the opportunity to test the teacher out in his or her newness – 'We've got away with it once, let's go one better!' As the outcomes of a student teacher's first few encounters with the students are vital to her in defining the situation and establishing the power structure she wants, it is advisable that all early challenges to her authority be checked and that she explores the more subtle technique of 'turning a blind eye' *later* in her practice, when she has the measure of the group.

This is perhaps a suitable juncture for the reader to give some consideration to what is often the bane of some student teachers' lives – noise. In Box 87 we summarise some of the findings of case studies of three schools by Denscombe.⁶² Review the points made in relation to yourself and your own subject specialism(s).

Dealing with repeated minor misbehaviour

There are several techniques available to student teachers for intervening in cases of *repeated* minor misbehaviour when it threatens to disrupt

a lesson or spread to other students in the class. These should be used in preference to more dramatic procedures whenever the student teacher wishes to check, for example, persistent inattentiveness or restlessness without distracting others. The more obviously useful of these techniques include the following.

Eye contact

One of the most effective ways of checking a minor infraction is simply to look at the offender and establish eye contact with her. A cold, glassy stare has an eloquence of its own. An accompanying nod or gesture will assist in refocusing the student's attention on the task in hand.

Touch and gesture

A particularly useful technique in small group situations is the use of touch and gesture. A misbehaving student near at hand can easily be checked by touching his head or shoulder lightly (obviously taking care to avoid any behaviour that could be construed as assault), or by gesturing. The non-verbal nature of this approach ensures that others are not distracted, that is, Kounin's⁶³ notion of *smoothness* is preserved.

Physical closeness

Minor misbehaviour can also be eliminated or inhibited by moving towards the offender. This is especially useful with older students. If they know what they should be doing, the mere act of moving in their direction will assist in re-directing their attention to their work.

Inviting a response

Another effective means of summoning a student's wandering attention is to ask her a question. The utility of questioning for control purposes is often overlooked. It would seem reasonable to relate a question used for this end to the content of the lesson at the time of the incident, that is, to make it 'task-centred', not 'teacher-centred'. Thus, 'What would you have

done in such a situation, John?' is preferable to 'What did I just say, John?'

Other non-verbal gestures

In addition to the ones noted above, there are other non-verbal means of expressing disapproval or checking an infraction. Common examples would include frowning, raising the eyebrows, wagging or 'clicking' a finger or shaking the head negatively.

The advantages of these and similar techniques are that they enable the teacher to eliminate minor problems without disrupting the activity or calling attention to the misdeed. Eye contact, touch and gesture, physical propinquity and other non-verbal gestures are the simplest since no verbalisation is involved.

Dealing with persistent disruptive misbehaviour

The techniques described so far will assist the student teacher in solving relatively minor problems of control and management. For more serious disruptions, we make the following additional suggestions.

Direct intervention

Good and Brophy⁶⁴ note that the direct intervention required for more serious misbehaviour may take two forms. First, a student teacher can command an end to the behaviour and follow this up by indicating what alternative behaviour would be appropriate. In such a situation, intervention should be short, direct and to the point. It should thus *name the student, identify the misbehaviour and indicate what should be done instead*. When a student knows she is misbehaving, a brief directive indicating what she should be doing should be sufficient: 'Janet, finish the exercise I gave you.'

The second direct intervention technique which Good and Brophy suggest is simply to remind the students of relevant rules and expected behaviour. As suggested earlier, clear-cut rules defining acceptable classroom behaviour should be

Box 88: Investigative interviews

Investigative interviews may be summarised as follows:

- try not to become emotionally involved;
- if possible exclude anyone not involved in the incident;
- each student should be required to give his/her own version of what happened;
- the teacher should clarify the facts and differentiate them from opinion;
- try to recognise the use of defence mechanisms;
- if possible, explain their use to the student;
- take further appropriate action;
- remember your actions may serve as models for other students.

formulated early on in the practice (or revised if you take over the class teacher's existing rules), possibly after explanation and discussion with the students if they are old enough. Where this has been done, all the student teacher has to do is to remind the class or student of them as soon as a problem manifests itself.

A third means is through the use of reprimands, and we deal with this later in this chapter.

Interview techniques

In his discussion of management techniques in the classroom, Saunders⁶⁵ outlines two forms of interview that may be used for achieving workable arrangements with those students presenting lasting behaviour problems for the teacher. The *investigative interview* is a useful strategy where the more serious forms of misbehaviour are present and may be used where one or more students are involved. Saunders recommends that the interview should concern only the student or students involved in the incident for, as he explains, this reduces the possibility of 'acting up' and bias resulting from group pressures. Ideally, the student or students should be given time to 'cool off'. Where more than one is involved, each should be allowed to give his version of what took place, the student teacher only interrupting to clarify questions of fact and to distinguish fact from opinion. Discrepancies in the story line should be resolved and a final account established that is acceptable to all. Saunders is of the opinion that defence mechanisms or strategies are often used by students when giving explanations

in order to protect them from anxiety regarding the consequences of their behaviour. Those commonly used are *denial*, *projection* and *rationalisation*. Where possible these should be identified and brought out into the open. The interview will eventually lead to appropriate action which may take the form of striking a deal with the students, punishment or referral to a higher authority. Box 88 summarises the main points.

The second form of interview discussed by Saunders is the *reality interview*. This depends for its effectiveness on good personal relations between the student teacher and student and on the knowledge that neither will be intimidated by the other. Given these conditions, the student teacher should get the pupil to admit the misbehaviour. This achieved, the discussion should move on to an evaluation of the behaviour in question. Cause and effect links should be established. Finally, Saunders considers that the student should be encouraged to discuss a more effective course of action for the future, with the teacher impressing on her that she is responsible for her own behaviour and will subsequently be accountable for it. The main steps in this process are summarised in Box 89.

Conflict-resolving strategies and techniques

Saunders further discusses the strategies and techniques that student teachers sometimes resort to in order to resolve conflict situations. These he considers in three broad categories – avoidance strategies, diffusion strategies and confrontation strategies.

Box 89: Reality interviews

The principal guidelines to reality interviewing are:

- discuss in private;
- with no hint of intimidation from either side;
- start from an existing relationship, if possible;
- establish the need for frankness;
- evaluate the misdeed;
- link cause and effect;
- establish other causes of action and their consequences;
- discuss the most effective action for the future.

First, *avoidance strategies*. Saunders identifies strategies here which include high tolerance, feigned illness and engaging in banter. If a student teacher can build up high tolerance, she will be in a position to ignore much of the conflict in which she is involved until a breakdown point is reached. Retreating from a conflict situation under the guise of illness is another technique sometimes employed. And engaging in banter with pupils is yet another means of side-stepping conflict. As Saunders says, 'Avoidance strategies may have some survival value, but they are maladaptive in so far as the individual teacher does not receive any measure of professional satisfaction and the conflict is not resolved.'

Second, *diffusion strategies*. These include delaying action, tangential responses, evasion and appeals to generalisability. Delaying action, as it suggests, involves putting off a decision to avoid precipitating a crisis. A tangential response is one that deals with peripheral issues, thus leaving the main source of conflict unresolved. Evasion is resorted to when a student teacher is called on to justify her position and side-steps the issue. And an appeal to generalisability is resorted to when a student teacher concedes that a demand is reasonable when it is made by one person, but not if others make a similar request. Like avoidance strategies, diffusion strategies are generally unsatisfactory.

Finally, *confrontation strategies*. These include the use of power and negotiation strategies. A

student teacher resorts to power strategies when she uses the divide-and-rule approach; when she resorts to pseudo-power by threatening sanctions she knows she cannot implement; by manipulating rewards; and by resorting to school tradition – 'This isn't the way we do it here.' Negotiation strategies are invoked when there is the possibility of a rational solution to the difficulty. Saunders identifies three approaches in this respect – compromise, affiliative appeal and pseudo-compromise.

Watkins and Wagner⁶⁶ suggest a number of principles which would serve to de-escalate a developing confrontation. These have much in common with Saunders' strategies as a comparison between the two approaches will show:

- Avoid public arenas in which people may crystallise their position in front of an audience.
- 'Is what has led to this really so important as to justify this escalation?'
- Avoid threats of any sort, especially those which could be perceived as physical.
- Look for an alternative which is presently not being explored in which *both* can 'win'.
- Encourage the student to say more about his/her perception of what is going on.
- Explain your own view of things clearly, and in a way which is not simplified.

With practice, Watkins and Wagner suggest that

these principles can be applied in such a way that student teachers' common reactions about feelings of 'condoning' or 'climbing down' are not precipitated, and teachers can agree that desired behaviour from pupils is not brought about by confrontation.

Kyriacou⁶⁷ indicates six principles for handling confrontations:

- *Stay calm*. This may help the student to calm down.
- *Defuse the situation*, maybe by backing off temporarily and picking up the matter when everyone has cooled down. (The student teacher can do this without loss of face, simply by saying that the student is not calm enough for

the matter to be dealt with at the moment, so he/she will wait until the student has calmed down.)

- *Be aware of the heat of the moment*, and don't do something that you may later regret.
- *Use your social skills* to avoid the student losing face, as this may pay dividends in relationships later.
- *Design a mutual face-saver* with words and actions.
- *Get help if necessary* (the school should have policies and procedures on this).

In summary, then, whereas the conflict-avoidance strategies may have a certain survival value to all teachers at some stage in their careers, as permanent features of one's professional behavioural repertoire they need to be regarded with suspicion because they offer neither long-term solutions nor personal satisfaction.

We next consider how a reprimand from a teacher can influence the response of the rest of the class.

The ripple effect

Research by Kounin⁶⁸ revealed that a reprimand from a teacher to a student misbehaving in his class may influence the rest of the group although they are not actually party to the misdemeanour. Kounin labelled this *the ripple effect* and as such it may have either positive or negative influences from the student teacher's point of view. When, for instance, a student being reprimanded is of high standing in the structure of the group, the ripple effect from an encounter with the student teacher is usually strong. If the student teacher succeeds in checking the misbehaviour, the effect on the rest of the class from the student teacher's perspective is positive in that they will tend to accept the reprimand as fair and think of the student teacher as an effective disciplinarian. In practical terms, it means that they will either improve their behaviour or be less likely to behave unsatisfactorily. If, however, the high-prestige student rebels at the student teacher's efforts to control him, this feeling may spread to his classmates, who may then consider the teacher's

handling of the situation as unsatisfactory and consequently perceive him as weak and ineffectual. The practical consequences could be an escalation of the problem, with the rest of the class expressing resentment or generally creating an atmosphere not conducive to meaningful work.

Since it is therefore important to produce a positive ripple effect, that is, an improvement or inhibition of the behaviour of other pupils, certain characteristics of control need to be borne in mind. Gnagey⁶⁹ identified a number of such factors including *clarity*, *firmness*, *task-centred techniques*, *high-prestige pupils* and *roughness*. Each will be considered briefly.

Clarity

What Gnagey describes as a clear control technique, one embodying *clarity*, is one that specifies the defiant, the deviancy and the preferred alternative behaviour. Thus, 'John, stop talking and finish your essay' is preferable to 'Cut out the talking at the back there', for it is a clear command and therefore can be expected to have two beneficial effects on the rest of the class; *they will be less likely to talk themselves* and *less likely to be disrupted in their own work than would probably be the case with a command lacking clarity*.

Firmness

Firm control techniques prevent disruption more effectively than tentative ones. Gnagey recommends that they can best be implemented by moving towards the offender, issuing the command in an 'I-mean-it' tone, and following through by seeing the command is obeyed before continuing with the lesson. Kounin and Gump⁷⁰ found that students responded to rules that were actually enforced ('followed through') but ignored those lacking conviction and enforcement ('follow-through').

Task-centred techniques

A *task-centred approach* produces a more desirable ripple effect than one that is teacher-centred. By this is meant the need to stress the task in hand, or the effects of the deviancy on the task,

rather than on the student teacher or the student teacher's relationship with the pupil. Thus, 'John, stop whispering and watch the demonstration, or else you won't understand when you have to do it yourself later' is better than 'Pay attention and listen to me.'

High-prestige students

Gnagey recommends that *high-prestige students* be identified and studied. He writes, 'As their responses to your influence have such a strong ripple effect on others, it will pay to find out which control techniques cause them to respond submissively with the least amount of belligerence.'

Roughness

Gnagey explains that *roughness* refers to the use of threatening or violent control techniques on the part of the teacher that in turn are likely to produce negative ripples – anger, resentment, feelings of injustice or displacement, as well as being illegal. Kounin *et al.*⁷¹ found that such techniques produced a considerable amount of disruptive behaviour among students who were not originally misbehaving themselves. A further consequence was that they also held the student teacher in lower esteem because of his manner.

In summary, the beginning teacher should seek positive ripples through clarity, firmness, task-centred techniques, capitalising on high-prestige students and the avoidance of roughness. We continue by taking the important skill of giving orders and instructions a little further.

Issuing orders and instructions

Although some teachers are more effective at it than others, giving instructions to an individual, group or class is a skill that can be learned and improved with practice. Like other techniques, issuing instructions, orders and commands can be broken down into their basic components such as content, phrasing, manner of delivery and context.

The prevailing conditions play a part in the overall effectiveness of instructions; the class must

be *still and silent*, ideally before an instruction is given. Thus, 'Stop whatever you are doing, please; no more talking, stop writing.' Then give your instruction.

The manner of delivery is also important. You have to avoid being too stern and imperious on the one hand, yet too diffident and unconvincing on the other. The one approach can induce fear (which is not desirable); the other, an ineffectualness on the teacher's part. A firm but pleasant manner is required. Marland's⁷² advice in this connection is eminently practical: 'It is worth practising instructions on your own. Then listen to yourself as you give them in school and observe the response. *Develop a firm warmth, or a warm firmness.*'

Generally speaking, instructions tend to be more effective and to be accepted more gracefully when phrased in a positive, rather than a negative, manner. Accordingly, 'Be early for the practical lesson on Monday' in preference to 'Don't be late for Monday's lesson.' Or, 'Leave the room as tidy as you found it' rather than 'Don't leave the room in such a mess this week.'

Marland warns against framing an instruction in the form of a question. For example, the organisational and management problems encouraged by 'Anyone need paper?' will be minimised by expressing the point thus: 'Put your hands up if you're without paper.'

You should not give a second instruction until the first one has been obeyed. Take time to glance round the room and check that everyone has understood and carried out your order.

Finally, the following points may be useful to readers in their consideration of the use of commands as a technique of control.

- Task-oriented commands are often preferable to status-oriented ones. As Peters⁷³ observes, 'If commands are task-oriented rather than status-oriented they are a thoroughly rational device for controlling and directing situations where unambiguous directions or prohibitions are obviously necessary.'
- Generally speaking, the reason for a command should not be given, as this introduces an element of doubt or suggests that it may not or need not be obeyed. In any case, if the system

of rules operating in the classroom has been explained to the group at an earlier stage, there should be no need for elaboration.

- A command should not be coupled with a statement of grievance, as this may arouse hostility towards, or induce disrespect for, the person issuing the command. For example, avoid this sort of utterance: 'Stop moving the chairs to the back of the room. I'm tired of telling you. You do it every time you come into the room.'
- Similarly, a command couched in the language of a whine 'operates powerfully to bring about its own frustration'.⁷⁴
- Once you have got to know your class, requests – a more polite form of command – may be all that you need to structure the situation.
- The voice issuing the command should be strong, decisive and warm.
- The student teacher's own expectations play a part, too. Students will tend to conform not so much to what she says in words but to what she actually *expects*. She must therefore *expect* more or less instant obedience to her commands as a matter of course.
- The verbal context of the message is also important. It is vital that it stands out in relief from what the teacher has said immediately preceding its issue and, especially, from what he says subsequently. A directive can easily lose much of its force by becoming indistinguishable from its context in terms of timbre, tone, dynamics, manner and speed of delivery. Timing, the judicious use of pauses and silence, social dynamics, facial expressions and a touch of drama will all assist in achieving greater salience.
- A student teacher may further enhance the effectiveness of her commands by having the class come to associate them with certain additional non-verbal features such as clapping the hands, snapping the fingers, staring, gesturing or moving to a focal point in the room.

Issuing reprimands

It will sometimes be necessary to issue reprimands, either in private or, if deemed appropri-

ate, in public. A reprimand is an explicit verbal comment or, indeed, a warning, and is designed to cause a behaviour to cease at very short notice, if not immediately. It cuts through the time and trouble taken to investigate, discuss, counsel and negotiate, and can be effective when used infrequently. Issuing too many reprimands suffers from the law of diminishing returns, indeed it can cause even more disruptive behaviour as students respond with increasing frustration to a 'nagging' teacher. In using reprimands student teachers should consider several important issues:⁷⁵

- *Target correctly* (to the correct student).
- *Be firm* (in tone, expression and content).
- *Express concern* (e.g. that the student and others are suffering because of the misbehaviour).
- *Avoid anger* (i.e. avoid losing your temper, as some students will enjoy provoking you to this).
- *Emphasise what is required*, so that the student knows what to do.
- *Maintain psychological impact*, e.g. by eye contact before, during and after the reprimand.
- *Avoid confrontations*, even if this means following it up at the end of the lesson (and telling the student that you will follow it up with her/him at the end of the lesson).
- *Criticise the behaviour, not the student*, as this signals that you still care for the student (e.g. avoid insulting a student: 'George, you're behaving stupidly' can be replaced with 'George, it's time to get on with your work now', or 'George, is there a problem with your work?');
- *Use private rather than public reprimands* as this saves embarrassment for the student; if the student is embarrassed this could escalate the problem. A public reprimand may be necessary if you intend the message to have a 'knock-on' effect for the whole class (see the earlier discussion of the ripple effect).
- *Be pre-emptive*.
- *State rules and rationale* – the reason for the rule and the reason for the reprimand.
- *Avoid making hostile remarks*, e.g. sarcasm and ridicule, as this often exacerbates relationships.
- *Avoid unfair comparisons*, e.g. to other students or siblings.

- *Be consistent* in your use of reprimands and the rules/rationales that underpin them.
- *Do not make empty threats*, which means that you must carry out the threat if you make it. The threat must be appropriate, realistic and meaningful. Sometimes a veiled threat (e.g. 'if you don't stop interrupting then you will be in serious trouble') is as effective as an explicit threat (e.g. 'if you don't stop interrupting then I will contact your parents'), as it keeps the choice open to you, and, indeed, the punishment may be so awful as to defy being made explicit!
- *Avoid reprimanding the whole class* unless it is really necessary and deserved. A class discussion rather than a class threat may be more effective in reducing misbehaviour.
- *Make an example*, if deserved, to dissuade other ('pour encourager les autres'), a strategy that more experienced teachers sometimes use deliberately in their early meetings with a class, as it sets the rules for classroom behaviour very explicitly. Use this with caution; it may backfire as it may cause the other students to take the side of the student rather than the teacher.

Another useful guide in this context is suggested by the work of O'Leary *et al.*,⁷⁶ who studied the effects of loud and soft reprimands on the behaviour of disruptive students. Briefly, two students in each of five classes were selected for a four-month study because of their high rates of disruptive behaviour. In the first phase of the study, almost all reprimands were found to be of a loud nature and could be heard by many other students in the class. During the second phase, however, the teachers were asked to use mainly soft reprimands which were audible only to the students being reprimanded. With the institution of soft reprimands, the frequency of disruptive behaviour declined in most of the students. This sequence was repeated with the same results.

Here is a finding, then, which could play an important part in class management yet which is at variance with the more traditional approach that recommends addressing the culprit in a loud voice.

Rewards and punishments

Older books on the psychology of education make great play of the concepts of *extrinsic* and *intrinsic* rewards as aids to motivation and to a lesser extent classroom management and control. Indeed their validity and usefulness in these respects still hold good. Extrinsic rewards such as marks, grades, stars, prizes and public commendation are stock examples in this context and are there for the student teacher to exploit. Intrinsic rewards, like the warm feeling from a job well done, or satisfying one's innate curiosity, or the kick one gets from solving a problem or achieving a standard one has set oneself, belong to an individual's subjective world and are as such beyond the student teacher's direct control. But she can influence them *indirectly* through the use of extrinsic rewards. The connection between the two is often overlooked, for the skilful manipulation of extrinsic rewards over a period of time can lead to the more desirable intrinsic kind. Contrasting perspectives on rewards in the classroom by pupils and teachers respectively are indicated in Box 90.⁷⁷

In general praise is more effective than punishment, for several reasons.⁷⁸ Punishment:

- does not tend to generalise across teachers, i.e. a punishment may work in stopping a student from performing an undesirable behaviour for teacher A, who administered the punishment, but not for teacher B, who did not;
- is no guarantee that the desired behaviour will ensue; it may only prevent the undesired behaviour from occurring;
- does not address the causes of misbehaviour, only the symptoms.

The advice, therefore, is to use it very sparingly, and to ensure that it is linked to promoting the desired behaviour, not only to punishing the undesired behaviour.

The Office for Standards in Education found the following to be rewards that were valued by secondary school students:⁷⁹

- privileges such as use of school equipment (IT) or rooms (music);

Box 90: Pupil and teacher perspectives on rewards

In a study on the relative effectiveness of various incentives and deterrents as judged by pupils and teachers, it was found that:

Pupils preferred:

- favourable home report;
- to do well in a test;
- to be given a prize;
- to receive good marks for written work.

Whereas the staff thought the most effective rewards were:

- to be praised in the presence of others;
- good marks for written work;
- elected to leadership by fellow pupils;
- teacher expressing quiet appreciation.

- mention at public meetings (assembly);
- certificates of merit;
- being given more responsibility;
- work displayed (particularly art and good stories);
- parents being informed;
- being allowed out to the shops;
- an outing at the end of term;
- joining members of staff for a meal in a restaurant.

It was reported also⁸⁰ that ‘the withdrawal of previously earned rewards is a practice particularly despised by pupils and can itself create a flash-point’.

Rewards

Merrett and Jones⁸¹ classified three ‘grades’ of extrinsic rewards. Lower order rewards include: praise, points, credits and tokens. Medium order rewards include: certificates, badges, being allowed privileges, comments put on reports, a letter home.⁸² Higher order rewards include prizes and very public credit. Rewards can be very motivating for students. Capel⁸³ indicates that students can be very motivated by achievement, enjoyment of a task, satisfaction (the feeling that one is improving) and success (e.g. in an examination). She outlines four types of reward:

- *social rewards* (social contact and pleasant interaction with other people);
- *token rewards* (house points, certificates);
- *material rewards* (tangible, usable items);
- *activity rewards* (opportunities for enjoyable activities).

Perhaps the most immediately accessible means of reward for the student teacher is the *use of praise*, and its value in the classroom should not be overlooked. It has been demonstrated by Madsen, Becker and Thomas⁸⁴ that showing approval for appropriate behaviour is probably the key to effective classroom management. Much of this kind of approval will take the form of *verbal praise*, so it is important for the teacher to understand both the constructive and damaging effects of its classroom use. Waller’s⁸⁵ comments are apposite here:

The whole matter of control by praise is puzzling and a bit paradoxical. Where it is wisely carried on, it may result in the most happy relations between students and teachers. Where it is unwisely applied it is absurdly ineffective and ultimately very damaging to the child. Praise must always be merited, and it must always be discreet, else all standards disappear. Cheap praise both offends and disappoints, and it breaks down the distinction between good

and bad performances. Praise must always be measured; it must not resort to superlatives, for superlatives give the comfortable but deadening sense of a goal attained. Such praise as is used must open the way to development and not close it. Praise must always be sincere, for otherwise it is very difficult to make it sincere, and if it does not seem sincere it fails to hearten. Praise as a means of control must be adapted to particular students. It is a device to be used frequently but only on a fitting occasion rather than an unvaried policy.

Everyone enjoys praise and you should try to direct it at both the individual and the class as a whole, as well as to a range of classroom behaviours – work, good behaviour, helpfulness, a quick answer. Nor should personal praise be overlooked. It is not always necessary to select the *best* work and behaviour, as one is not seeking absolute performance. Nor should you invariably praise only those who ‘shine’ naturally, as the idea is to get over to the child that praise is accessible to all and can be earned by them with striving. In some instances, especially where slower students are involved, it is more desirable to praise *effort* rather than the finished product.

There are two main ways of praising an individual student – either publicly or in private. Public praise in front of the rest of the class (or at morning assembly, in some circumstances) can be effective and appreciated providing it is not overdone or too effusive. The quiet private word of praise with a student is an approach which student teachers tend to overlook. In a large survey of over 1,700 8 to 11-year-olds Merrett and Man Tang⁸⁶ reported that younger children found praise more acceptable if it was given quietly. The Office for Standards in Education⁸⁷ reported that secondary school students rarely like public praise, as this causes embarrassment, but that rewards and praise, often private or within a restricted audience, were effective.

There is a whole range of non-verbal signals that can be used to indicate approval; these can be used to reinforce verbal praise or else independently. For example, a smile, an affirmative nod of the head, or a pat on the back all indicate acceptance of student behaviour. Similarly,

the use and display of students’ ideas, like writing comments on the board, holding up a student’s work for the class to see or displaying it on a display board, can also be regarded as non-verbal expressions of approval. And merely showing interest in student behaviour and presence by establishing and maintaining eye contact is yet another rewarding (from the student’s point of view) use of non-verbal signals.

Some American research findings⁸⁸ are worth mentioning in this context. Teachers use praise sparingly in standard classrooms. Further, teachers give more praise to high-achieving pupils; pupils to whom they feel more attached, or less indifferent; pupils whom they say they favour; and pupils for whom they have expectations of high future occupational status. The researches also indicate that boys receive more praise than girls and that praise varies with the social class status of the school’s location. However, Bourne⁸⁹ argues that praise is not enough. She suggests that students need cognitive feedback as well as praise if their motivation (linked to successful achievements) is to be raised. She demonstrates that teachers give more feedback to high achievers so that they know how to improve, whereas teachers give only praise to low achievers, without indicating to them how they could improve their work.

Merrett and Jones⁹⁰ indicate a significant discrepancy in teachers’ behaviour, wherein teachers rewarded students’ academic achievements more than their achievements in terms of behaviour. In primary schools they noted that 50 per cent of teachers’ comments on students’ academic achievements were positive and 16 per cent were negative; only 6 per cent of teachers’ comments on behaviour were positive, whilst 28 per cent were negative. In secondary schools the researchers noted that 45 per cent of teachers’ comments on students’ academic achievements were positive and 15 per cent were negative; only 10 per cent of teachers’ comments on behaviour were positive and 30 per cent were negative. Not only does this show that more rewards were given for academic attainments rather than behaviour, but teachers were much more negative about behaviour than they were about academic matters. A curious anomaly is shown here, for,

if a positive approach seems to be successful in the academic area, it is surprising that the same teachers did not use this approach for promoting good behaviour. This echoes the opening comments on class management – that it is essential to work on the positive rather than focus on the negative. In academic terms a teacher's first reaction to students making a mistake is usually to teach them; it is paradoxical that when students make a mistake in their behaviour a teacher's first reaction is to criticise or punish them.

Punishment

We consider now the subject of punishment. Discipline in a classroom is often achieved by the successful exercise of conformity to the established rules. It is when there is a serious breach of the rules, a breakdown of discipline, that the need for punishment may arise. The Elton Report⁹¹ was careful to endorse the view that 'the punishment should fit the crime', i.e. that student teachers should avoid over-reacting and under-reacting; misbehaviour was 'graded' from the trivial to the serious in the sequence that follows:

- talking out of turn;
- preventing others from working;
- making unnecessary noise (not just talking but, e.g., by scraping chairs);
- leaving a seat/room without permission;
- calculated idleness or avoidance of work;
- general rowdiness;
- verbal abuse to other students;
- physical aggression to other students;
- lateness or unauthorised absence;
- persistence in infringement of class and school rules;
- cheekiness to teachers;
- physical destructiveness;
- verbal abuse of teachers;
- physical aggression to teachers.

The Elton Report indicated that there was a high incidence of low-level stress from low-level disruptions, a feature indicated by Wheldall and Merrett⁹² and reinforced in comparative studies, e.g. one piece of research by Johnson *et al.*⁹³ in South Australia that was deliberately designed to

replicate Elton's methodology and instrumentation, and a study of first and middle schools in St Helena in which, for example, the researchers reported that talking out of turn was the most commonly occurring problem⁹⁴ (43 per cent of all cases reported). Charlton and David⁹⁵ comment that the incidence of low-level behaviour infractions and irritants is responsive to relatively simple methods (outlined below).

In response to 'graded' degrees of seriousness the Elton Report indicated that several strategies were used that, themselves, were graded in order of 'seriousness', the least to the most serious in the sequence that follows:

- reasoning with a student within the classroom;
- reasoning with a student outside the classroom;
- setting extra work;
- deliberately ignoring minor infractions;
- keeping students in during and after school;
- discussing with the whole class why things are going wrong;
- temporarily withdrawing a student from the class;
- referring a student to another teacher;
- removing privileges;
- sending a student to a senior figure in the school;
- involving parents;
- suspension from the school.

In an important study Merrett and Jones⁹⁶ classified three gradations of sanctions:

Low-order sanctions included: telling off (publicly and privately); detention; lines or tables; comments on reports; confiscation of property; short exclusion from the lesson. *Middle-order sanctions* included: those that involved another member of the management staff; placing a student 'on report'; sending a letter home; denying the student certain activities; meeting with parents. *Higher order sanctions* included: exclusion; suspension; expulsion and other actions that involved an outside authority.

Johnson *et al.*⁹⁷ set out a list of the most to the least effective strategies for handling unacceptable behaviour in the primary school. These are shown in Box 91. The further one goes down the list the less effective is the strategy.

Box 91: Strategies for handling unacceptable behaviour

- Discuss the problem with the student in the class.
- Have the student leave the class.
- Reason with the student outside the class.
- Remove privileges.
- Seek parental involvement.
- Have a conference with the student and the parent(s).
- Set extra work.
- Ignore minor disruptions.
- Detention.
- Refer the student to another teacher.
- Send the student to the head teacher.
- Remove the student from the school.

This list is similar to the Elton Report's suggestions for secondary school students, with the exception that detentions are seen as being more effective. The Elton Report comments that for both primary and secondary school students it is important not to ignore minor infractions that might easily escalate into major problems.

Peters⁹⁸ points out that punishment is a much more specific notion than discipline and that at least three criteria must be met if we are to call something a case of punishment. These are (1) intentional infliction of pain or unpleasantness (2) by someone in authority (3) on a person as a consequence of a breach of rules on his part. Although some actions in the school situation are loosely referred to as cases of 'punishment' without meeting all these criteria, e.g. asking a student to do a piece of work again, they do nevertheless provide us with a useful frame of reference for our brief consideration of this important subject.

Although perhaps distasteful, punishment may very well have a part to play in the development and control of students. Of course, a teacher who comes to rely heavily on punishment cannot hope to succeed except in a narrow and temporary sense. Whatever he achieves will be at the cost of undue negative emotional reactions such as anxiety and frustration and a permanent impairing of relationships. Nevertheless, a teacher

should not hesitate to resort to punishment when the occasion demands for, when properly used, it is a legitimate and helpful means of dealing with certain disciplinary problems.

We now consider the forms which punishment in the classroom might take, the occasions for punishment and ways of administering it.

Forms of punishment

Punishment can be used for retribution, deterrence and/or rehabilitation. Before deciding the forms of punishment you intend to use during your teaching practice, should the need for them arise, there are two points worth bearing in mind. First, you are not starting from square one: most schools will have an established system of punishment as part of their tradition and no doubt the forms it takes will be related to the rules that are operative in the school. You should thus find out what alternatives exist within the tradition so that you can use them when necessary. Do not use corporal punishment – you could be prosecuted for assault. It is illegal. Second, it is better whenever possible to anticipate and thereby avoid incidents likely to culminate in the need for punishment. As Peters⁹⁹ says, 'Under normal conditions enthusiasm for the enterprise, combined with imaginative techniques of presentation and efficient class management will avert the need for punishment. Boredom is one of the most potent causes of disorder.'

Keeping a class in after school can be an effective deterrent and a particularly useful one for the student teacher, but it must be handled within the legal requirements set out in Chapter 6: schools must give students at least twenty-four hours' notice of the detention, and this can weaken the connection between the offence and the punishment.

A useful form of punishment for the individual offender is that of isolation. It is important for the student teacher to remember that it is not necessary to send a student out of the room to achieve isolation. Setting him apart from the rest of the class *within* the classroom can be just as effective and may be achieved by having him stand in a corner, or, better still, sit at a desk away from the others. This kind of psychological

Box 92: Forms of punishment

Reasonable punishment can take many forms, but some account must be taken of the forms customarily used in your school with the age range in question. Some common practices are:

- keeping a student behind for a few minutes' discussion after the rest of the class have left, so that he is last in the queue for lunch, or it causes his friends to wait for him;
- formal detention with some task to do that is not directly connected with the lesson so that his antipathy for the lesson is not increased by the punishment;
- detention to finish work deliberately not completed in lesson time, within the legal requirements of issuing twenty-four hours' notice of such a detention;
- withdrawal of privileges, such as the use of a tuck shop at break, or access to a common room or classroom other than when essential;
- isolation or exclusion with work, either in a corner of the classroom or in another part of the school;
- if property is damaged the student may be required to repair the article, if such action is appropriate; or to do a socially useful task such as tidying the classroom or picking up paper in the playground;
- as a response to unacceptable language the pupil might be required to write out the offending words several times.

banishment can be especially effective providing it does not last too long. Offenders who have been particularly disruptive may be isolated with their work, but again the isolation should not last too long. No matter how naughty a child has been he should be given innumerable 'fresh starts', for students have a strong corporate feeling so that isolation counts as a severe punishment.

Negative utilitarian controls are frequently used by teachers. These may take the form of *behaviour restrictions* and *limitations of privilege* and may thus include missing part of a favourite lesson, a desired recreational activity, play time, or not being allowed to sit near the back of the class. You will quickly discover additional means of controlling misbehaviour along similar lines. Forms of punishment are outlined in Box 92.¹⁰⁰

Punishments may include:¹⁰¹

- writing tasks such as essays on how and why to improve behaviour (though it may carry the very real risk of making writing a negative activity; we discuss this below);
- detention (the school should have a policy on this);
- loss of privileges (e.g. for social interaction, outings);
- exclusion from the classroom for defined periods of time, which is subject to the school policy and supervision requirements;
- verbal interaction, e.g. a very severe reprimand from a senior member of the school;
- informing significant others, for example parents, the headteacher;
- symbolic punishment, e.g. a marks system which is included in the school report;
- exclusion from the school, which is a matter of legal regulation.

Some kinds of punishments are better avoided and may be itemised as follows:

- School work should not be used as a punishment. A child kept in from play or games, for instance, should not be given additional school work such as writing or mathematics. These should be associated with enjoyment.
- Avoid collective punishments, such as keeping a whole class in, when only one or two individuals are culpable. Such action will provoke unnecessary resentment from the innocent members.

- Forms of mental punishment such as severe personal criticism, ridicule, sarcasm and so on are not recommended.
- Coercive sanctions, those involving a physical component such as caning, strapping, striking or shaking, should not be used; these forms of punishment are illegal.
- Only send a child to the headteacher as a last resort, or when you are confronted with a particularly serious case of misbehaviour. Such an action can be seen as weakening the teacher's authority (though in some schools it is seen very positively as the teacher simply not putting up with bad behaviour at any price). However, do not hesitate to seek advice privately from other members of staff when you need help.
- Avoid banishing a student from the classroom if possible. Where you feel isolation is warranted, try to let it be within the classroom.

Schools have policies and procedures for handling misbehaviour and sanctions, and the student teacher will need to find out what these are.

The 'when' and the 'how' of punishment

Good and Brophy,¹⁰² in their analysis of punishment, suggest that punishment is appropriate only in dealing with *repeated* misbehaviour, not for single, isolated incidents, no matter how serious. It is a measure to be taken when a student persists in the same kinds of misbehaviour in spite of continued expressions of concern and disapproval from the student teacher. Resorting to punishment is not a step to be taken lightly since it signifies that neither the student teacher nor the student can handle the situation. One other point: punishment should not be administered if it is apparent that the student is trying to improve. She should be given the benefit of the doubt and, where possible, rewarded for attempts at improvement.

Punishment should be *systematic* and consistent in its application. So once again the efficacy of having agreed on a few basic classroom rules is brought home to us, for in providing us with an impartial frame of reference for student teacher and students alike, not only do they ensure we

will achieve the consistency we seek, they also guarantee that the recipients, in recognising the logic and fairness of the punishment, will be less likely to respond emotionally.

Another factor in the punishing situation concerns the nature and extent of the talk the teacher engages in. Wright¹⁰³ explains that this can serve a number of functions, one of which helps the student 'to construe his actions in a certain way, to structure them cognitively and relate them to general rules'. In thus justifying the punishment to the student, the student teacher's explanatory talk will clarify the nature of the offence, will provide reasons for judging it wrong, will explain its effects on others and will relate it to future occasions. A consistent *modus operandi* of this nature will give the student the necessary criteria for making her own judgements.

A third factor concerns the temporal relationship between the offence and the punishment. Wright¹⁰⁴ has pointed out that punishment placing restrictions on a student will be most effective if they are related to the offence, if they follow closely after it, and if removal of the restrictions is conditional upon improvement of behaviour. Punishment being thus logically related to the offence is more easily perceived as fair. A sanction should therefore be immediate and inevitable so that the cause and effect relationship is apparent. If it is prolonged to the point where the relationship becomes tenuous, the offender may become resentful.

Behaviour modification and assertive discipline

Much behaviour is affected by its consequences. These consequences may be seen as rewarding or reinforcing if, as a result, the behaviour persists or increases, and punishing if the behaviour ceases or decreases. In some circumstances behaviour may be extinguished if there is no consequence.

Behaviour modification

The principles set out above lie at the heart of the approach to dealing with undesirable or

maladaptive classroom behaviour known as *behaviour modification*, the techniques of which are used to change specific patterns of inappropriate behaviour, e.g. hyperactivity in the classroom, excessive movement about the room, talking too much or disobedience. This method of handling behaviour problems is preferred by those who find the use of punishment in the classroom distasteful and who seek a non-punitive, positive approach as an alternative.

The behaviour modification approach in its most basic form consists of three components:

- 1 specification of the undesirable behaviour to be extinguished or minimised and the preferred desirable behaviour that is to replace it;
- 2 identification, first, of the rewards and reinforcements sustaining the unwanted behaviour so that they may be avoided, and second, identification of the rewards and reinforcements that will increase the frequency of the preferred alternative behaviour; and
- 3 the consistent and systematic avoidance and application of these respective rewards and reinforcements over a period of time, together with a systematic record of changes in behaviour.

A reinforcer in this context is defined by its ability to accelerate, or increase, the rate at which a behaviour will occur, or, more simply, its effect on the learner.

There are a number of types of reinforcer that may be used in this context. The most natural and effective for teachers are *social reinforcers*. Student teacher attention, student teacher praise, student teacher approval and disapproval are powerful factors affecting students' behaviour, and they can be systematically varied to produce the sort of behaviour desired by the student teacher. When employing these techniques, however, the student teacher must be sure to reinforce the desirable behaviour as well as ignore the undesirable if she is to achieve her objective of creating the most favourable conditions for learning.

A particular instance of the application of behaviour modification techniques may concern some form of consistent anti-social behaviour on the part of a student in class. This kind of

behaviour may often be sustained by reinforcements in the form of student teacher attention and often by the approval or perhaps disapproval of the rest of the class. If this is the case, the behaviour modification approach would recommend ignoring the attention-seeking behaviour (e.g. a student constantly moving out of his seat) and making sure that the sought-after alternative behaviour (e.g. the student remaining in his place) is rewarded or reinforced with appropriate action (attention, praise or some kind of non-verbal approval like smiling) on the part of the student teacher.

Such techniques may also be useful in the following situations providing they are employed systematically, consistently and over a period of time: failure to pay attention; day-dreaming; failure to show interest in work; not meeting work requirements; being uncommunicative and withdrawn; breaking class rules; over-reacting to stressful conditions; insensitivity to other people; anti-social behaviours; hyperactivity; attention-seeking; disobedience and disrespect.

The results of experimental studies in behaviour modification are encouraging. A study by Thomas, Becker and Armstrong,¹⁰⁵ for example, demonstrates the possibilities of the approach. They showed that approving teacher responses served a positive reinforcing function in maintaining appropriate classroom behaviours. Disruptive behaviours increased each time approving teaching behaviour (praise, smiles, contacts etc.) was withdrawn. When the teacher's disapproving behaviours (verbal reprimands, physical restraints etc.) were tripled, there was much greater disruption, i.e. an increase in noise and movement about the room. The findings, therefore, emphasise the important role of the teacher in producing, maintaining and eliminating both desirable and disruptive classroom behaviour.

Of course, from the student teacher's point of view, teaching practice is not the most ideal context for putting the techniques of behaviour modification to the test because of its length – a few weeks at most. Nevertheless, she may be in a position to select some consistently manifested behaviour problem and attempt to remedy it along the lines suggested above. She could then at least satisfy herself that the principles are

sufficiently sound to warrant further investigation at a later date.

In this regard we refer to a project by Lawrence, Steed and Young,¹⁰⁶ the implications of which have immediate relevance for student teachers on teaching practice in that while on the surface the approach appears to be basic common sense, it does encapsulate positive behaviour modification techniques. The project concerned a group of teachers working with a problematic class in a difficult school. The techniques the teachers used were controlled systematic rewards (praise, attention and encouragement) for appropriate behaviour, and ignoring unwanted behaviour, except when it was dangerous. 'Encouragement' with respect to this particular project included:

- praise of all kinds, for the student's work and behaviour;
- attention to the student;
- interest in the student;
- help to the student;
- increasing the student's self respect, or self-esteem.

The class in question was a third year boys' class, with 32 on the roll. All recorded IQs were low average. There were no parental occupations in social class I or II and the class was racially mixed. Six had appeared at least once before a Juvenile Court. Some of the principles emerging from the study, and which hold good for both sexes, are as follows:

- 'Encouragement' is a very powerful means of improving both a student's behaviour and the work he does.
- The *more* encouragement for appropriate behaviour and work she receives, the *better* she will behave and work.
- A teacher may *think* she is encouraging a student a great deal but in practice she does not, e.g. what she considers encouraging may not appear so to the student, or the encouragement may not be expressed in a way clear to the student, or it may not be enough to influence her.
- Misbehaviour can often be cancelled out if, when it is observed, the teacher ignores the

student but simultaneously praises another who is behaving correctly. The teacher then returns to encourage the first student *as soon as* she is behaving appropriately (e.g. by saying 'That's more like it!' or 'I'm pleased to see you're behaving like an adult now').

- Another way of handling inappropriate behaviour is simply to ignore it, but to praise as soon as appropriate behaviour occurs.

Practical implications following from the project can be summarised:

- Moving quickly around the class saying 'that's right' or 'good' is a way of settling the class down and getting it to work speedily.
- Small groups can be similarly encouraged.
- Encouraging a student can include having a word with him before or after a lesson.
- Students at this age like to be treated as adults.
- All work discussed in a lesson, including homework, can be used for encouragement purposes.
- 'Spell out' your praise even at the risk of overdoing it.
- Use the student's own words when praising, or make your meaning quite clear.
- Displaying a student's work is a visible sign of praise.
- A person-to-person chat at an adult level is often appreciated, e.g. especially on a topic of adult interest.

Assertive discipline

Assertive discipline¹⁰⁷ is premised on five key principles:

- Clear expectations for the required behaviour are set out by the teacher.
- Specific, concrete and verbal praise and rewards are given for the behaviour.
- There is a graded sequence of negative consequences of undesirable behaviour.
- The teacher is assertive in insisting on the application of the rewards and sanctions.
- Power resides with the teacher whilst informed choice of whether to follow a path that leads to rewards or sanctions resides with the student.

The approach is sometimes termed a 'limit-setting' approach.¹⁰⁸ In this approach a student who is misbehaving is told to stop and told explicitly what will happen if she does not stop. The student can choose to comply with the teacher's orders, i.e. to choose to stop, or not to comply, i.e. to demonstrate the undesirable behaviour and, thereby, to incur the negative sanctions. If the unacceptable behaviour persists then stronger sanctions are imposed. There is a discipline hierarchy, with stronger sanctions applying to repeated undesirable behaviour, with suitable warnings of consequences indicated. Nicholls and Houghton¹⁰⁹ report that, overall, using the methods saw significant increase in teacher approval, decrease in teacher disapproval, increase in students' 'on-task' behaviour and decrease in disruptive behaviour.

On the other hand very severe questions have been put against this approach. In a hard-hitting paper Robinson and Maines¹¹⁰ argue that the approach is not only under-researched but that it embodies many of the negative features of behaviourism, for example: students are passive receivers to be trained in predetermined behaviours; it demonstrates a crude instrumentalism and technicism; it replaces understanding with knee-jerk reactions; it trivialises education to the observable. Robinson and Maines argue forcefully

- that assertive discipline confuses consequences with punishments;
- that it is demeaning, humiliating and insulting to students;
- that it neglects the circumstances that lead to the behaviour (resulting in a student's sense of injustice);
- that difficult students need a flexible approach with the use of encouragement rather than a rigid approach that deploys punishment;
- that the public humiliation of an offender is itself 'an offence against confidentiality'; and
- that it denies basic agency and freedoms because students and teachers have unequal rights to be listened to and powers to create a negotiated environment.

This litany of concerns is not empty argument. Martin¹¹¹ argues that the approach can easily

fail because it needs whole staff commitment and training but that the issues and methods are so contentious that such agreement and commitment are almost impossible to secure.

Hence, though this approach is popular, the student teacher will need to consider carefully the merits and demerits of this approach. If she is in a school where it is practised, careful observation of its efficacy and its problems will repay the student teacher's time spent in evaluating its operation.

Anticipating management and control problems in the classroom

There are certain aspects and structural features of one's lesson that need handling with particular care and foresight because potentially they can be the cause of quite serious problems of management and control. The beginning of a lesson, for example, requires special thought because it sets the tone for the rest of the lesson. Similarly, transitions, that is occasions for a change of activity during the lesson, can also be vulnerable in their potential for disruption. As we have already considered these features of the lesson, it is sufficient for us at this point to suggest that you revise the appropriate sections.

Another important point for student teachers to bear in mind concerns their first meeting with a new class. As Wragg¹¹² has observed, the very first lesson with a class can go a long way towards establishing the kind of climate that will prevail for the rest of the practice or term. In the Teacher Education project, he and his colleagues observed a hundred lessons given by 13 experienced teachers at the beginning of the school year, and two hundred given by student teachers at the beginning of teaching practice. The differences between the two groups are listed in Box 85, and we refer readers back to this.

The importance of the first meeting with a class is also stressed by Robertson,¹¹³ who argues that teachers who want to establish their authority should behave as if they were already in authority. Among factors highlighted by Robertson as being of crucial importance in conveying this status, especially during initial meetings, are:

1 Firmness and confidence

When a student teacher feels confident and assured, the students are consequently more responsive and this in turn reinforces his or her own confidence. If, on the other hand, the student teacher is lacking in confidence, the reverse can occur and he or she goes to pieces.

2 Bodily behaviour

There is an important aspect of non-verbal behaviour and two factors apply here: *immediacy* between a teacher and class which is achieved by a sensitive awareness of such factors as posture, positioning, bodily orientation, eye contact, gesture and touching. These, Robertson explains, focus or intensify communication between people; so too *relaxation*, by which Robertson means an asymmetrical positioning of the limbs, openness of arm position, a sideways lean and tilt of the head or, if seated, a more reclined position. A higher status person assumes a more relaxed posture than a lower status one.

Behavioural problems with some ethnic minority students

That there are differences in the incidence, form and extent of behavioural problems among students differentiated in terms of their ethnicity is clear. Moreover, a review of the research literature on multicultural classrooms suggests that references to 'behavioural problems with *some* ethnic minority students' almost invariably is concerned with students of African Caribbean origin. The research literature points to some issues that are of crucial importance to beginning (and, indeed, experienced) teachers alike. We deal with two vital areas.

Earlier in the chapter we made reference to the work of Fontana and Saunders, both of whom sought to relate socio-economic and cultural differences to the incidence of classroom misbehaviour. Saunders' concern, for example, was with *antipathy to school*, displayed by those students for whom school seemed irrelevant in terms of their future life chances.

Fontana's focus, *inter alia*, was directed towards socio-economic factors that relate to poor attitudes and to student underachievement. An appraisal¹¹⁴ of Department of Social Security data, exploring the relationship between poverty and inequality and using indices such as population density, overcrowding, non-white children, levels of benefit payments and infant mortality, concluded that 'inequality in our society is clearly growing . . . In terms of real income, the poor have got relatively poorer and the rich have got relatively richer'. To *structural factors* that point to associations between, on the one hand, poor attitudes, poor behaviour and poor achievement in school and, on the other, worsening socio-economic circumstances must be added *interpersonal factors* that impinge directly on teacher-student relationships in schools.

Carrington's¹¹⁵ case study of Hillview Comprehensive pulls no punches in its dissection of the channelling processes initiated by teachers that directed students of African Caribbean origin away from academic pursuits and towards sporting activities, 'twentieth century gladiators for white Britain', as Carrington observes. Teachers were ingenuously open about their differential treatment of black students:

'I'm reluctant to push black kids too hard . . . I frequently indulge them . . .'
'Inevitably, I'm more lenient towards blacks . . . I try to avoid confrontation.'

Some Hillview teachers, moreover, operated with well-documented pejorative stereotypes of African Caribbean students whose behaviour, academic abilities and parent cultures they viewed in a negative manner. There were several occasions in interview when teachers referred to the students as 'lacking in ability', 'unable to concentrate', 'indolent', 'insolent', 'aggressive' and 'disrespectful of authority'.

Green's study¹¹⁶ is more disturbing still. After 3,000 observations of teacher-student interactions were recorded in *each classroom*, Green then invited the 70 participating teachers to complete an attitude inventory in which a 25-item prejudice scale had been 'buried'. Only after identifying 12 highly intolerant teachers did

Green return to examine the interaction data. He found that *highly intolerant teachers*:

- gave significantly *less time to accepting the feelings* of children of African Caribbean origin;
- gave *only minimal praise* to children of African Caribbean origin;
- gave significantly *less attention to the ideas* of children of African Caribbean origin;
- gave significantly *more authoritative directions* to children of African Caribbean origin;
- gave significantly *less time* to children of African Caribbean origin *to initiate contributions to class discussions*.

The Carrington and Green studies reveal teacher behaviour that is highly injurious to the personalities, the self-esteem and the life chances of the students involved. Whereas, perhaps, the Hillview data reflect an 'unintentional racism'¹¹⁷ on the part of some members of staff, the evidence from Green's study is unequivocal in its systematic mapping of racist behaviour on the part of certain teachers. Whatever its origin, such unjust behaviour towards any student is totally unacceptable in today's classrooms. It is worthwhile, at this point, to reiterate some 'ethical absolutes' that have already appeared in our earlier discussions of equal opportunities and classroom management and control.

It is a requirement of student teachers to:

- support and stretch *all* students in the learning process;
- remove the stigma of failure from students;
- treat students as individuals of equal worth regardless of gender, race or background;
- celebrate the notion of difference and promote positive images of a diverse populace;
- counter stereotypes, discrimination, bias and misperceptions;
- identify how to break down discriminatory practices.

Class management on teaching practice

We close this section on management and control with reference to a study by Wragg and Dooley¹¹⁸ into student teachers' class manage-

ment. The research was undertaken in two parts. The first part, a pilot study, involved 56 case studies of student teachers thought to be good or poor at handling classes. The subsequent main enquiry involved 204 lessons given by 34 PGCE students at six comprehensive schools, three in a city and three in other parts of the county.¹¹⁹

With regard to the pilot study, the tentative conclusions indicated that effective managers were seen as those who were well prepared, anticipated difficulties, and reacted quickly to disruption rather than allowed it to escalate. Good management was often executed with a briskness and verbal deftness. It was also noted that successful student teachers usually arrived at the classroom before the students, personally admitted them into the room, established a presence, and were seen to be in charge in an unobtrusive way. Conversely, unsuccessful managers tried to start their lessons before attention had been secured, and were unable to deal effectively with concomitant distractions like late arrivals.

With regard to the main study, analysis of the 204 lessons taught by the 34 PGCE students revealed that most acts of deviance occurring in their lessons were of a minor nature, as the authors say, 'typically the buzz of chatter punctuated by requests or commands to desist'. Few of the student teachers observed had serious discipline problems, and hardly any examples of serious disruption occurred, although many lessons became mildly chaotic and suffered from sustained mild deviance. Deviance most often occurred with 13- and 14-year-old students and then during transitions or changes of activity, particularly when movement was involved.

(See www.routledgefalmer.com/companion/0415306752, Chapter 15 Managing behaviour in the classroom, Common forms of misbehaviour and Student teachers' reactions to misbehaviour.)

Bullying

Bullying is too important an issue to leave untouched, and we make some comments on it here. Much bullying goes unreported and unnoticed by teachers; indeed more than two-thirds of secondary school students would not find it easy to tell a teacher if they were being bullied, because

they fear it would not be taken seriously or because it would be seen as 'telling', or because they fear reprisals.¹²⁰ Bullying is often perpetrated in places where it will not be discovered, being frequently a surreptitious activity, therefore no action can be taken as nobody knows about it.¹²¹

That said, successive governments have taken steps to address the issue of bullying, as it cannot be condoned in any form, be it by teachers towards students, students towards each other, or students towards teachers. Indeed a specific set of materials and websites has been set up by the government in order to tackle the problem.¹²²

Being bullied can lead to lowering of self-esteem, anxiety, depression, lack of concentration, truancy and even suicide (annual figures suggest that sixteen students per year commit suicide in the UK because of being bullied).¹²³ More girls are reported to be involved in sustained bullying than boys, who more often resort to actual violence, and more often it is group-to-one rather than one-to-one bullying that occurs.¹²⁴ Secondary school girls reported sexual bullying by boys.¹²⁵ Bullying can take place against academically motivated students, it can be racially and ethnically motivated, and can take a variety of forms. By law schools have to have an anti-bullying policy, and student teachers are advised to find out what it is, and what procedures the school has for addressing bullying if it is discovered or reported. At the least, this will probably involve completing an incident form as the precursor to further action. Bullying is defined as:¹²⁶

long-standing violence, physical or psychological, conducted by an individual or group and directed against an individual who is not able to defend himself in the actual situation with a conscious desire to hurt, threaten or frighten that individual or put him under stress.

Bullying is deliberately hurtful, repeated over time and in circumstances that make it difficult for victims to defend themselves.¹²⁷ It has the following characteristics:¹²⁸

- The behaviour is persistent and systematic (i.e. the same people behave in the same way in repeated situations).

- The behaviour induces fear in the victim.
- The behaviour is based on an imbalance of power.
- The behaviour usually takes place in a group context.

Bullying can take many forms. A study of 145 students reported in 2002 that bullying included:¹²⁹

- direct physical aggression (40 per cent of responses);
- group versus single person (30 per cent of responses);
- taunting (making fun/teasing/swearing/asking rude or personal questions (14 per cent of responses);
- picking on someone (14 per cent of responses);
- threats of physical aggression (13 per cent of responses);
- attempt to elicit a fight (7 per cent of responses);
- allegations about self/family (7 per cent of responses);
- taking possessions (6 per cent of responses);
- older versus younger (>1 per cent of responses).

Bullying can be:¹³⁰

- *physical*: hitting, kicking, pushing, pinching, pulling, taking or damaging belongings, using weapons;
- *verbal*: name-calling, insulting, repeated teasing, sarcasm, threats, remarks and jokes, coercing into acts of stealing or bullying against others or doing things that they don't want to do, sending abusive e-mails or text messages, spreading nasty rumours;
- *non-verbal*: gesturing, grimacing, sticking up one/two fingers, making fists, giving somebody bad looks;
- *emotional*: excluding someone from social groups;
- *spoiling bullying*: writing on school work or homework, damaging property, destroying a game;
- *sexual*: lifting skirts or pulling trousers down, abusive name-calling, comments about looks and attractiveness, inappropriate touching, sexual innuendoes and propositions, possessing pornography, sexual assault;

- *racist*: name-calling, racist jokes, offensive mimicry, making fun of others, inciting others to behave in a racist way, refusing to co-operate with those of another race or ethnicity, wearing provocative badges, possessing racist written materials;
- *extortion bullying*: forcing someone to hand over money, sweets, mobile phones, property, valuables;
- *hiding bullying*: hiding clothes, shoes, bags, valuables, books, property.

Bullies are characterised as having had limited love and care as children, too much freedom, and having been exposed to power-coercive strategies of child rearing such as physical force and violent emotional outbursts.¹³¹ Profiles of bullies indicate that they:

- are frequently aggressive, physically strong and enjoy tormenting others;
- have poor communication skills and lack empathy;
- thrive on control and domination;
- are attention seeking, immature and needing to impress;
- are disruptive, uncaring and manipulative;
- are liars;
- refuse to take responsibility and are exploitative.¹³²

Victims are often characterised as having 'unusual' features, such as hair colour, weight problems, shape, speech problems (e.g. a stammer, an unusual accent), physical features such as acne, spectacles, ability in school, to suffer from low self-esteem and to be unlikely to react positively to being bullied (such that they may not report incidents). Further, racist, sexist and homophobic bullying has been reported, as have attacks because of religion, disability, gender, where students live.¹³³ Victims are also reported to be those children who lack close friends, who are shy, may be physically weak, do not like or use violence, are over-protected at home; they may be nuisances (e.g. who may provoke bullying), those who want to try hard at school, those who come from privileged homes, and those who are materially indulged by parents.¹³⁴

Bullies and victims are widespread, and no respecters of age, gender, race, or socio-economic

status. Bullying can start as an individual activity, but others join in and assist the bully by watching, laughing, encouraging or, indeed, doing nothing to stop it.¹³⁵ A study by the Department for Education and Employment in 1994¹³⁶ reported that 27 per cent of primary school students and 10 per cent of secondary school students had experienced being bullied. In 1997 a study of over 2,300 primary and secondary students revealed that 44.5 per cent of school children had been bullied, 4.1 per cent reporting being bullied several times per week.¹³⁷ More striking, perhaps, 26.6 per cent of primary and secondary students in the study reported bullying others. In 2003 more than half of primary school children and a quarter of secondary school children involved in a research study by Childline indicated that they had been bullied in the present school term.¹³⁸ There is some evidence that the incidence of bullying reduces in the upper end of the secondary school (as students develop coping skills and become physically stronger),¹³⁹ though physical bullying may reduce with age, indirect bullying increases.

Signs of being bullied include:¹⁴⁰

- becoming frightened of walking to or from school;
- expressing reluctance to go to school each day;
- truanting;
- avoiding specific lessons or days (e.g. games, swimming);
- schoolwork starting to suffer;
- coming home from school with torn clothes or damaged books;
- coming home from school hungry (someone has taken dinner money);
- missing items from school bag;
- bed wetting, nail biting, sleep walking or becoming withdrawn;
- fear of the dark or having nightmares;
- psychosomatic illnesses particularly in the morning, because s/he is scared to go to school;
- stopping eating;
- presenting with unexplained cuts and bruises;
- beginning to bully others;
- falling out with friends and family;
- becoming angry or unreasonable for no particular reason;
- giving improbable excuses for any of the above.

Handling incidents of bullying is problematic. Common sense might tell us that it needs simply to be punished, but common sense may not be a good guide here, as punishment may neither reduce bullying nor increase desirable non-bullying behaviour.¹⁴¹ Indeed it may cause revenge attacks. Sometimes bringing the bully and the victim together in a safe environment is one treatment that can be effective, as can discussing it in classes and on a one-to-one counselling basis, or having the teacher explain what it feels like for the victim and asking for comments from others on this, followed by one-to-one counselling. Young¹⁴² suggests that this approach had an immediate success rate of 80 per cent, with a further 14 per cent improvement to a similar level after three to five weeks. This said, clearly some sanctions must be in place, for example: removal from the group (in class); withdrawal of break and lunchtime privileges; detention; withholding participation in special events and trips; exclusion; involvement of social services and the police.¹⁴³

The Office for Standards in Education¹⁴⁴ reports that engaging students in discussions of bullying can be effective in reducing it, as can having older students being vigilant throughout the school and reporting incidents. No single approach to tackling bullying will be entirely successful as the problem itself is complex; rather success in tackling it is an eclectic process. It may involve, for example, five key points:¹⁴⁵

- 1 Never ignore suspected bullying.
- 2 Don't make premature assumptions.
- 3 Listen carefully to all accounts – several pupils saying the same does not necessarily mean they are telling the truth.
- 4 Adopt a problem-solving approach which moves pupils on from justifying themselves.
- 5 Follow up repeatedly, checking bullying has not resumed.

Additional strategies include, for example:¹⁴⁶

- asking a friend or a sibling to report bullying (70 per cent of students said they would talk to a friend if they were being bullied);
- encouraging victims not to suffer in silence;
- acting and reacting rapidly and consistently;
- communicating disapproval unequivocally;
- ensuring that the school's anti-bullying policy is operating fully;
- minimising the risks to students who report bullying;
- initiating consultations and discussions of bullying within schools and classrooms;
- reporting bullying and action to be taken;
- recognising that bullying often occurs in groups;
- setting up peer support schemes;
- organising anti-bullying projects;
- making bullying and anti-bullying a curricular matter;
- working in school on how to manage relationships with each other;
- developing befriending schemes;
- developing co-operative group work;
- circle time (a time to discuss issues arising in the week);
- consultations with parents;
- counselling for bullies and victims;
- supervision practices within school;
- implementing 'schoolwatch' initiatives (to patrol the school, including students, teachers, and maybe the police);
- identifying how other children can prevent and report bullying;
- staff development on identifying and handling bullying;
- identifying trouble spots and trouble times;
- challenging bullying behaviour and language;
- adopting a whole-school approach to tackling bullying;
- listening services in school;
- making clear what alternative desirable behaviours are;
- assertiveness training for victims;
- teaching children how to react (e.g. avoiding fighting back or answering provocatively, shouting 'no' very loudly, getting away quickly, telling an adult immediately);
- recognising that bullying does not end at the school gates (though schools are not directly responsible for bullying that takes place off the premises);
- involving parents of bullies and victims, and outside agencies;
- training lunchtime supervisors.

For further advice we refer the reader to the work by the government's *Connexions* agency.¹⁴⁷

The UK government has set out specific guidelines for mediation by adults and mediation by peers.¹⁴⁸ Mediation by adults includes the following:¹⁴⁹

- Hold brief, non-confrontational, individual 'chats' with each pupil in a quiet room without interruptions – the bullying pupils first.
- Get agreement from each that the bullied pupil is unhappy and that they will help improve the situation – if they cannot suggest ways to do this, be prescriptive.
- Chat supportively with the bullied pupil – helping them to understand how to change if thought to have 'provoked' the bullying.
- Check progress a week later, then meet all involved to reach agreement on reasonable long-term behaviour – at this stage participants usually cease bullying.
- Check whether the bullying starts again or targets another pupil.
- If bullying persists, combine the method with some other action targeted specifically at that child, such as parental involvement or a change of class.

Mediation by peers includes the following.¹⁵⁰

- *Define the problem*: in turn, participants describe their perspectives – without interruption, but within set time limits. The mediator clarifies the feelings of each participant and then summarises what has been said.
- *Identify key issues*: listed on paper, divided into conflict and non-conflict issues.
- *Brainstorm possible options*: both parties suggest solutions, which are written down. They consider the implications, for themselves and each other.
- *Negotiate a plan of action and agreement*: the mediator asks which solutions will most satisfy both parties. One solution is identified and a written agreement is made and signed by all participants. Both parties shake hands.
- *Follow-up*: evaluate outcomes.

Clearly a problem-solving approach is being adopted here. Student teachers must be alert to bullying and must take action if it is reported or discovered. Many schools have formal procedures for doing this, and the student teacher must be aware of these.

Assessment, record keeping and progress files

The rise of assessment appears unstoppable and, given the attention devoted to it by governments across the world, its significance in education appears unassailable. Assessment and its related aspects of recording and reporting is vast and potentially bewildering to student teachers. Part IV sets out clearly the different purposes, types and conducts of assessment. Particular emphasis is placed on formative assessment, not only because it is this which will probably engage student teachers the most on teaching practice, but because of its potential for raising student achievement. In this respect we also include an important new section on marking work.

Many student teachers will be required to test their students, and new material on test construction is included in this part. Assessments and tests are never 100 per cent reliable or valid, and,

indeed, the rise of testing itself may be ill-judged in educational terms. Reliability, validity and utility are significant matters, and we address them here. Assessment must be educational rather than simply following the dictates of politicians. In Part IV we strive to ensure that assessment is of educational merit. In this respect the final chapter of the book, on progress files (the relaunched version of records of achievement), is also relevant.

Much has been written about the recording and reporting of assessments and we update our chapter on record keeping. We provide several examples of record keeping which strives to maintain a balance between too little and too much record keeping, and to be useful and informative. Record keeping, assessment, and progress files must be springboards for the improvement of learning and achievement.

Assessment

Introduction

As a student teacher it is inevitable that you will be involved in assessment during your teaching practice. Assessment is a major contributor to raising standards in schools¹ in terms of teaching, learning and student achievement. Properly handled, with consistency, reliability, validity and rigour, it can have a major positive effect on learning and can improve students' own understanding of how they can learn more effectively and improve. It provides information to all stakeholders – parents, teachers, learners, on learning, performance and improvement. All those involved in education are learners – students, student teachers, teachers, parents – and assessment is a powerful tool for all parties to learn in order to improve teaching, learning and achievement. OFSTED² argues that 'the quality of assessment has had a significant impact on attitudes to learning and on attainment in the schools by stimulating and challenging pupils to work hard and by encouraging teachers to focus on how to improve the learning of individual pupils'. Assessment is 'the process of gathering, interpreting, recording and using information about pupils' responses to educational tasks';³ teachers have to respond to, and use, the data acquired for assessment, to make judgements, for planning, for selection, for decision making, and other matters. It comprises formal assessments, as in tests and examinations, and informal assessments, including ongoing observations, questioning, marking work and listening to students.

Its scope is vast and this part addresses some of the key features of assessment.

This chapter sets out a range of issues and practices in assessment and indicates how student teachers might approach assessment on their teaching practice. It will be argued that, though assessment opportunities should be found in everyday teaching, a degree of rigour should be shown in planning, conducting, recording and reporting assessments. It is useful, first, to know the context of assessment and to find out why and how it has come to gain the centre ground in education and educational policy making. Then a series of key issues for planning assessments is outlined, including the purposes of assessment; the types of assessment; reliability and validity in assessments; methods of gathering assessment data; providing opportunities for assessment to take place; and when to assess, and the chapter part closes with some guidelines for planning assessments and marking work.

The context of assessment

The attention given to assessment is huge and world-wide. Assessment is being used on the one hand for educational improvement, increased school effectiveness and curriculum reform and, on the other, for political control of teachers, students and curricula,⁴ centralised policy making,⁴ narrow accountability,⁵ credentialism,⁶ educational selection,⁷ and the determination of life chances in competitive markets.⁸

Furthermore, assessment is becoming redefined internationally as testing;⁹ diagnostic and formative assessment are being overtaken by summative examinations. One can detect increasing national control of assessment, an increasing uniformity of styles and practices of assessment, an increasing importance of assessment, an increasing amount of assessment activity, an increasing scope of assessment, and a uniformity of purposes of assessment. Harlen *et al.*¹⁰ argue that when 'the stakes are high', e.g. when assessment is used for certification, selection, job opportunities, further and higher education, and accountability, as in the publication of 'league tables' of results of schools' examination successes, or when assessment features highly on a political agenda, then assessment takes the form of public examinations.

In the United Kingdom students are compulsorily examined at four points in their school careers – at ages 7, 11, 14 and 16 – with the examination being a composite of national tests and teachers' assessments. In this context procedures for moderation are vital¹¹ if parity across teachers, schools and regions is to be established. Informally, teachers are continuously assessing students, diagnostically, summatively and formatively, by tests or by informal means such as questioning, observation and marking of work.

An international perspective on assessment reveals that at one extreme is the burgeoning rise of the closed multiple-choice, cloze procedure style and 'tick-box' forms of assessment which focus on low-level recall of factual knowledge, where content is elevated over skills and where assessment is largely undertaken by written examination. At the other extreme is the open-ended profile of achievements which teachers and students keep and which draws on a variety of assessment evidence – written or otherwise – and which is used to record the whole gamut of achievements of a student (e.g. academic, social, extra-curricular).

The negative aspects of some examination-based forms of assessment are legion: the diminishing of education to training and drilling students to perform certain prescribed behaviours;¹² the emphasis on outcomes rather than processes; the passive nature of learning; the damage to self-esteem and learning; the elevation of

trivial,¹³ observable, measurable, short-term behaviours over serious, high-order, unmeasurable, creative, person-oriented, open-ended, holistic, lifelong aspects of education; the move to creating a culture of gaining and second-guessing the 'right answer'; the fragmentation and atomisation of knowledge; the creation of a nation of 'standardised minds'.¹⁴ The move towards criterion-referenced assessments, whilst it addresses validity in requiring specific, detailed 'evidence' to inform teachers' assessments (rather than their intuitions or hunches), does not herald a move away from behaviourism; rather it provides teachers with more to measure, more to assess.

At the opposite pole of behaviourism is the open-ended profile of students' achievements which is evidenced in records of achievement (ROAs) in the United Kingdom.¹⁵ Here assessments include the 'non-cognitive' qualities of students,¹⁶ grades awarded in formal examination, and a whole profile of a student's achievements and awards – curricular and extra-curricular, personal, social, community-based and academic. The relaunched National Record of Achievement,¹⁷ for example, sets out the following categories: qualifications and credits, employment history, school achievements (subject by subject), other achievements and experiences (e.g. sporting, clubs, community work, voluntary work). Whilst these have the attraction of being a personalised portfolio which motivates their owners,¹⁸ they carry the risk of building in the prejudices and biases of teachers, of including illegitimate, value-laden and generalised statements¹⁹ and of being insufficiently discriminating in their coverage of the significant and the trivial. Furthermore, completing this open-ended record is time-consuming.

What is being striven for is a balance between using insufficient and thereby invalid evidence formatively and so much assessment that it becomes 'interrogation without end'²⁰ and a means of providing material to hold teachers accountable for aspects of students' development over which they exercise little or no control.

In the United Kingdom assessment results (e.g. the results of students' test scores) are being used to serve the issue of *accountability*. The statutory publication of schools' results in league tables

is seen as a way of ensuring that schools are accountable to the ‘consumers’ of education, principally parents. In this context assessment is but one of a battery of managerialist measures that have been introduced to serve accountability, e.g. teacher appraisal, the inspection and ‘league tables’ of school performance.

The compilation of ‘value-added’ indices of schools enhances accountability. Here, levels of success can be ascertained, using test scores, at every level – individual pupil, department, school, local authority, even country-wide. Schools in similar circumstances (e.g. socio-economic status, catchment area, home background, provision of free school meals, incidence of school exclusions and truancy) can be compared with each other – like with like – to see which are providing the greatest amount of added value to their students. With the rise of baseline assessment²¹ the process can include the overall value-added component of specific schools – how much each school has added value to the students, compared to their starting positions, and, indeed to identify pupil progress.²² These are important data. For example, a school in a multiply-deprived area might be achieving, overall, a lower standard than the national average, but in fact be giving vastly more added value than a school whose students are already at a higher starting point. The school in the deprived area takes students whose starting points are low and ‘brings them on’ enormously, whereas the school in the privileged area might have students whose starting points are high but who ‘rest on their laurels’ and whose rates of progress are slower.

The debate is hot: does one judge the quality of a school by an *absolute* standard (as in ‘league tables’) or in *relative* terms (the value-added component)? Should one be comparing like with like, which is arguably a fairer comparison than the alternative, which is to compile a rank order listing of schools, regardless of their specific circumstances and situations? The accountability issue links with the certification function of schools – a quick index of a school’s success is often taken to be the number of students gaining such-and-such a number of awards at such-and-such a level. Whether this is a just or adequate basis of comparison is contested.

Assessment for certification and accountability require a degree of transparency through being related to shared, consistent, understood criteria and standards, and communicated in consistent forms so that everyone understands them in the same way. Assessment is a single device or mechanism which serves accountability, credentialism, political agendas and educational reform and improvement. Little wonder it receives so much attention.

Students are assessed at ages 7, 11, 14 and 16 in order to determine where their achievements place them on an eight-level standard. At age 7 the ‘average’ child should have reached or nearly reached Level 2; at age 11 the ‘average’ child should be working in Level 4; at age 14 the ‘average’ student should have cleared Level 5; at age 16 the ‘average’ student should have cleared Level 6.²³ Notionally, then, each level takes the ‘average’ student two years to complete. That this exemplifies a norm-referenced approach using ‘average’ students betrays the spirit of the original intentions for assessment which were that they were to be criterion-referenced. That these two types of assessment exist in a relationship of tension with each other is discussed later.

To inform the assessment of students at the end of the key stages, the National Curriculum provides *level descriptions*, though some misalignment has been reported between these and the *programmes of study*. Formal assessments are, for the end of key stages, based upon a combination of teacher assessments and standard, objective assessments, though the teacher assessments have a lower status than the Standardised Assessment Tests and Tasks.²⁴

In the UK there are several systems of assessment,²⁵ for example:

- diagnostic and standardised tests produced by commercial companies;
- national assessments at ages 7, 11, and 14;
- examinations by examination boards, typically for students at age 16 and above (e.g. GCSE, A levels);
- vocational and occupational examinations (e.g. NVQ, GNVQ, vocational A levels, awards from Edexcel and AQA – see Part I);

- teacher assessments – either for formal requirements (e.g. at ages 7, 11, 14) or as part of everyday teaching and learning.

The original proposals for national assessment²⁶ suggested that it should be:

- 1 formative (diagnostic);
- 2 criterion-referenced;
- 3 moderated;
- 4 related to progression.

However, these quickly ran into difficulties. With regard to 1, formative, diagnostic assessments – where specific information could be gathered to diagnose a student's strengths and weaknesses such that effective planning for future teaching and development could take place – were seen to place an enormous burden on teachers of extensive record keeping and time to actually undertake the diagnoses.²⁷ This resulted in many teachers having to set 'holding' tasks for students in the class who were not being assessed, thereby reducing the speed of their learning and risking a lowering of their standards.²⁸

With regard to 2, criterion-referenced assessments – where the achievements of a student are assessed relative to predetermined specific criteria²⁹ – were subverted, in effect, by using the results normatively to compare students and schools (through the publication of 'league tables'). The reliability of the results could be questioned – how could students' achievement of a criterion be assured; what if they achieved the criterion on the day of the assessment and subsequently were unable to achieve it? Moreover, the intention of criterion-referencing was to provide specific and focused information; however, the data from the assessments were aggregated to give an overall score for each student on each subject – the specificity and utility were lost.³⁰

With regard to 3, moderation turned out to be a very costly exercise because of the inclusion of teachers' assessments of students. Ensuring parity of standards of teachers' assessments initially required teachers to be taken out of school for training and agreement trials, though agreement trials now take place in schools.³¹

With regard to 4, progression was to be judged in terms of the National Curriculum levels, which, as was argued in Parts I and II, misrepresented the nature of students' learning and falsely assumed that each of the levels of the National Curriculum was objectively more difficult than the previous one.

Lest we be accused of adopting a solely negative stance to the assessment arrangements of students we ought to record the positive advances claimed for the increased assessment activity in schools. For example, assessments were to be based on *evidence* rather than intuition or hunch,³² they would foster *diagnostic teaching* and increased diagnosis of *students* and that, in turn, would promote greater levels of *match* in the work set (see the discussion of differentiation in Part II).³³ Further, it was claimed that there would be a positive backwash effect, in that having to assess and report on students' achievements of all aspects of the curriculum would have consequences such that the *full* National Curriculum would be taught.³⁴ Indeed the evidence from the initial introduction of formal assessment indicated that many students positively enjoyed the increased individual attention³⁵ that they received from the teacher during the periods of assessment.

The contexts of assessment reveal it to be a politically and educationally highly charged activity. That level of attention suggests to us that the several elements of assessment need to be addressed and understood. This will be undertaken below and will lead into a discussion of how student teachers can plan, implement, record and report assessments and the results of assessments.

The context of assessment should also observe the significance of standards and the long-running debates on whether standards are rising or falling. In fact it is probably chimerical to try to answer this as there is little agreement on what constitutes a standard and how to hold the evidence consistent and steady when the educational, social and cultural situation is in constant flux. For example, what may constitute valid evidence of a standard in one year, culture or place may not be the same in another year, culture or place; if one holds the nature of the evidence (e.g. the test items) constant over time, culture and place whilst all around is changing,

then the validity of the notion of the 'standard' is lost; if one changes the nature of the evidence (e.g. the test items) in order to take account of the changing situation then one is not comparing like with like, so it becomes impossible to ascertain whether standards have risen or fallen; they have simply changed.

The situation is compounded by the further effects of the National Curriculum, in which, for example, it is specified that the 'average' child will reach Level 4 in public assessments. This has led to a shift in perception,³⁶ from a mean to a benchmark or minimum for all, so that, if not all or most of the students achieve Level 4, then the individual school may be deemed by the public to be problematic. The issue is particularly potent in relation to the 'standards debate', where there is difficulty in identifying what is meant by a standard, as it might be seen as comparatively arbitrary. Does a high standard of achievement, for example, mean the number of students passing at a high grade, or the criteria required to meet that grade? If it is the former then simply adjusting the quotas for the higher grades can inflate standards; if it means the latter then raising the cut-off point for each grade will raise the standard. The term is replete with ambiguity.

This introduction serves, perhaps, to raise some cautions about assessment, its purposes and uses, the perceptions that people have of it, the power of assessment, the kind of assessment, and the effects of assessment.

The purposes of assessment

There is a range of purposes of assessment that fairly capture the flavour and discussions of the purposes of assessment.³⁷ Assessments serve a series of *primary functions*, being used for:

- *certification*, qualifying students for their lives beyond school by awarding passes, fails, grades and marks;
- *diagnosis*, identifying a student's particular strengths, weaknesses, difficulties and needs in order that an appropriate curriculum can be planned;

- *improvement of learning and teaching*, providing feedback to students and teachers respectively so that action can be planned.

Assessments can serve a series of *secondary functions*, being used for:

- *accountability* of teachers and students to interested parties – to report on standards;
- *evaluation* of the quality of teaching, learning, curricula, teachers, schools and providers of education;
- *motivating students and teachers*,³⁸ though this is dependent upon the type of assessments adopted.

One can add to the secondary suggestions the *control of the curriculum*, for the 'backwash effect' on the curriculum is strong in 'high stakes' – external – assessment.³⁹ It is important to be clear on one's purposes in assessment, for, as will be argued later, the choice of method of assessment, follow-up to assessment, types of data sought, types of assessment are all governed by the notion of *fitness for purpose*.⁴⁰ We suggest that several of the purposes set out above are in a relation of tension to each other.⁴¹ For example, using assessments for the purposes of selection and certification might be intensely demotivating for many students and may prevent them from improving; the award of a grade or mark has very limited formative potential, even though it would be politically attractive; internally conducted assessment has greater educational validity than externally conducted assessment. Using a diagnostic form of assessment is very different in purpose, detail, contents and implementation from assessment by an end-of-course GCSE examination. Using assessment results as performance indicators can detract from improvement and providing formative feedback to improve learning. The notion of *fitness for purpose* returns us to a central principle of this book, *viz.* the need to clarify and address the objectives of the exercise. We support the view that student teachers should be concerned with diagnostic and formative assessments that are steered to improvements in teaching and learning, as these are more educationally worthwhile and practicable over the period of a teaching practice. The purposes of

assessment here are educative rather than political or managerial.

Assessment can have a *backwash* effect, for example to influence the contents and pedagogy of schools leading up to public examinations (e.g. at ages 7, 11, 14, 16, university entrance), and a *forward* effect to support learning aims.⁴²

The types of assessment

There are several types of assessment, for example:

- norm-referenced assessment;
- criterion-referenced assessment;
- domain-referenced assessment;
- diagnostic assessment;
- formative assessment;
- summative assessment;
- ipsative assessment;
- authentic assessment;
- performance assessment.

We address these below.

(See www.routledgefalmer.com/companion/0415306752, Chapter 16 Assessment, Norm-referenced assessment, Criterion-referenced assessment and Performance assessment.)

Norm-referenced assessment

A norm-referenced assessment measures a student's achievements compared to other students, for example a commercially produced intelligence test or national test of reading ability that has been standardised so that, for instance, we can understand that a score of 100 is of a notional 'average' student and that a score of 120 describes a student who is notionally above average. The concept of 'average' only makes sense when it is derived from or used for a comparison of students. A norm-referenced assessment enables the teacher to put students in a rank order of achievement.⁴³ That is both its greatest strength and its greatest weakness. Whilst it enables comparisons of students to be made it can risk negative labelling and the operation of the self-fulfilling prophecy.⁴⁴

Just as a norm-referenced system guarantees a certain proportion of high grades, e.g. A and B, so, by definition, it also guarantees a proportion

of low grades and failures, regardless of actual performance. The educational defensibility or desirability of this may be questionable: a 'good' student may end up failing or scoring poorly if the class or group of student with whom she/he is being compared is even better. Norm-referencing may be useful for selection, but it may not be equitable.

Criterion-referenced assessment

Criterion-referenced assessment was brought into the educational arena by Glaser⁴⁵ in 1963. Here the specific criteria for success are set out in advance and students are assessed on the extent to which they have achieved them, without any reference being made to the achievements of other students (which is norm-referencing). There are minimum competency cut-off levels, below which students are deemed not to have achieved the criteria, and above which different grades or levels can be awarded for the achievement of criteria – for example a grade A, B, C etc. for a criterion-referenced piece of course work at GCSE level. A criterion-referenced test does not compare student with student but, rather, requires the student to fulfil a given set of criteria, a pre-defined and absolute standard or outcome.⁴⁶

In a criterion-referenced assessment, unlike in a norm-referenced assessment, there are no ceilings to the numbers of students who might be awarded a particular grade. Whereas in a norm-referenced system there might be only a small percentage who are able to achieve a grade A because of the imposed quota (the 'norming' of the test), in a criterion-referenced assessment, if everyone meets the criterion for a grade A then everyone is awarded a grade A, and if everyone should fail then everyone fails.

Norm-referenced and criterion-referenced tests at first sight appear to be mutually exclusive and, indeed, in many contexts they are. However, we should not overlook the fact that implicit in criteria are norms of what we might expect a student achieving a grade A to be able to do, and how this is different from a student achieving a grade B, and so on. Further, using criterion-referenced tests still enables students' performance to be compared, e.g. comparing the grades of groups of students in a class,

school, local education authority and so on.

In devising assessment, student teachers will need to be clear on whether they are going to operate a norm-referenced system of grades and marks (with quotas for each grade or mark range) or a criterion-referenced system, with everyone being able to score highly.

Domain-referenced assessment

An outgrowth of criterion-referenced testing has been the rise of domain-referenced tests.⁴⁷ Here considerable significance is accorded to the careful and detailed specification of the content or the domain which will be assessed. The domain is the particular field or area of the subject that is being tested, for example, light in science, two-part counterpoint in music, parts of speech in English language. The domain is set out very clearly and very fully, such that the full depth and breadth of the content is established. Test items are then selected from this very full field, with careful attention to sampling procedures so that representativeness of the wider field is ensured in the test items. The student's achievements on that test are computed to yield a proportion of the maximum score possible, and this, in turn, is used as an index of the proportion of the overall domain that she has grasped. So, for example, if a domain has 1,000 items and the test has 50 items, and the student scores 30 marks from the possible 50 then it is inferred that she has grasped 60 per cent ($\{30 \div 50\} \times 100$) of the domain of 1,000 items. Here inferences are being made from a limited number of items to the student's achievements in the whole domain; this requires careful and representative sampling procedures for test items.

Diagnostic assessment

Diagnostic assessment is designed to identify particular strengths, weaknesses and problems in students' learning. Though it is often reserved for specialists (e.g. educational psychologists), this is by no means always the case, as teachers are constantly diagnosing students' needs and problems. Diagnostic assessment is the foundation for formative assessment and planning, informing what a teacher should do next.

Formative assessment

Formative assessment suggests and shapes the contents and processes of future plans for teaching and learning. Formative assessment – assessment *for* learning – provides feedback to teachers and students on their current performances, achievements, strengths and weaknesses in such a form that it is clear what the student or the teacher can do next either to improve, enhance or extend learning and achievement. Formative assessment can be frequent and informal, thereby really assisting teachers and students in the day-to-day business of improvement. It is designed to figure highly in planning for learning.

Formative assessment should lead to rich, formative feedback to students, i.e. feedback on which they can know how to act to improve their learning and achievements, something which a mark or a grade simply does not have the power to do.

Formative feedback is feedback that relates intention to actuality – how far a student achieved his or her intentions, and what the gap was between what was desired and what was required, and the reasons for this gap, and what the gap was between ideal and actual performance. The best feedback is very specific,⁴⁸ comments on what was actually done, is clear to the student, relates to targets, goals and standards, and indicates specifically what has to be done to improve.

It can be seen that formative assessment is closely linked to principles of constructivism, which is a central theme of this book.

Summative assessment

Formative assessment contrasts with *summative* assessment both in timing and purpose. Summative assessment – assessment *of* learning – is terminal; it comes at the end of a programme and assesses, for example, students' achievements in the programme and of overall knowledge acquisition and practice. It is the stuff of the GCSE formal examination, the end of term test, the A level, the final examinations for a degree programme. A summative assessment might be to provide data on what the student has achieved at the point

of time at the end of a course; it might also be more of a retrospective review of what has taken place during the course and what has been learned from it. Summative assessment is often concerned with certification, the awarding of marks and grades and public recognition of achievement.

Summative assessment carries the major risk of a negative backwash effect on the curriculum, narrowing the curriculum to that which will appear on the assessment (often the examination) and narrowing the learning to a limited range of activities. Put simply, summative assessment can become behaviourist rather than embodying the more open-ended, constructivist view of learning.

Formative and summative assessment appear to lie in tension with each other, even though there may be some degree of overlap: certification and accountability in summative assessment steer assessment towards the production of simple grades which have little formative function – they are literally largely useless for planning teaching and learning, whilst formative assessment for planning day-to-day teaching and learning requires a much fuller, detailed kind of assessment, with a different purpose and focus.

Ipsative assessment

The discussion of action planning takes us into another type of assessment to be considered here: ipsative assessment.⁴⁹ Ipsative assessment (derived from the Latin 'ipse', meaning 'herself' or 'himself') refers to a process of self-assessment in which students identify their own starting points or, in the language of action planning and school development planning, *initial conditions*. This is undertaken *in the student's own terms* (hence the appeal to the Latin root). From this analysis the student sets targets for future learning and achievements, often in conjunction with the setting of a time frame. Self-assessment works particularly well when students are very clear on the purpose and focus of learning and on the criteria for judging successful learning.

Ipsative assessment feeds directly into the process of keeping a Progress File (see Chapter 18) – the contents of which are the students' own property – and is a useful parallel to, or com-

plement to, the more academic, curriculum-oriented view of action planning. As with action planning that uses feedback from assessment formatively, ipsative assessment need not be undertaken by the student in splendid isolation; rather it can be undertaken with a teacher as facilitator and negotiator.

Authentic assessment

There has been a growing trend to render assessment more like real life, using real evidence from real situations, rather than through the use of proxy or surrogate indicators of achievement like tests. Authentic assessment relates assessment to the real world of what people actually do rather than using some easy-to-score responses to questions. What makes authentic assessment authentic is that all parties know what students can actually do in real life with the knowledge, skills and competencies that they have learnt.

What we have in authentic assessment is a major move towards increasing the validity of assessments, though the reliability is difficult to address. Even if criteria, marking schemes, grades and contents are made explicit, the problems come in applying these consistently, fairly and with equity and generalisability across different projects, students, teachers and contexts. Very many of the problems of reliability outlined in the next section present themselves squarely in authentic assessment. Moderation meetings to address reliability are time-consuming and lengthy.

Despite these problems, it remains that authentic assessment is authentic! That is not a mere tautology – it is a reminder that learning is bound to assessment; it makes learning and assessment real, meaningful and motivational.

Performance assessment

Performance assessment, as its name suggests, is that assessment which is undertaken of activities or tasks in which students can demonstrate their learning through performance in real situations. It typically uses teacher assessment, usually observation, questioning and professional judgement, rather than objective assessment

and often uses some form of portfolio assessment (discussed below).

Performance assessment is already widespread in some subjects, for example communication skills, psychomotor skills (e.g. physical education and athletics, music making, drawing, science experiments, design and technology, project work, drama, social skills in group activities). It requires the learner to demonstrate knowledge, learning and understanding through a real task and application. Hence performance assessment strives to be as close to authentic assessment as possible.⁵⁰

We commented earlier that the *purposes* of assessment are not only distinct but lie in tension with each – the more assessment serves one purpose the less it can serve another. This is true for some *types* of assessment. For example, the more we move towards summative, grade-related examinations the more we move away from formative and diagnostic assessments that required detailed – often qualitative – comments; the more we move towards standardised tests the more we move away from ipsative assessments; the more we move towards norm-referenced assessments that often yield a single score or grade the more we move away from criterion-referenced assessments that will yield specific details about a range of elements; the more we use external, objective instruments the less opportunity we have to use internal, teacher-devised instruments (often simply as a function of the time available). We suggest that student teachers should be concerned with diagnostic and formative assessments, providing useful feedback to students, i.e. feedback to improve learning, and that these can be part of ipsative assessment and action planning. Further, by involving students in ipsative assessment and by providing feedback to students upon which they can act to improve, positive interpersonal relationships are developed between students and student teachers that, themselves, support enhanced learning through engagement and motivation.

Reliability and validity in assessments

As educators we need reliable data on students' achievements so that we can have confidence

both in how we judge students and in what we subsequently plan for them. Black⁵¹ reports that there has been up to a 30 per cent chance of some students being placed in the wrong level of Key Stage 3 assessments. Reliability is compromised when students of the same ability and achievements score different results on the same test, when the same student scores differently on different tests of the same matters/contents, or when the same student scores differently on the same (or very similar) test on a different occasion. Reliability means that the results are consistent and reproducible with different markers, occasions, test items, test types, marking conventions, grading procedures and contexts. Further, we need to be assured that the assessments that are made of students actually assess what they are intended to assess or else subsequent planning begins from the wrong place, i.e. to address validity.

Reliability

Reliability is an index of consistency and dependability, for example of marking practices/conventions and of standards. An assessment would have little reliability if it yielded different results in the hands of another assessor or different results for similar students. Reliability, then, requires comparability of practices to be addressed.⁵² This can be undertaken prior to assessments by agreement trials, so that a range of assessors can be clear and can agree on the specific marks and grades to be awarded for particular samples of work, examination scripts, course work and marks scored in elements of an overall assessment, though *in practice* it often only becomes an issue in the post-assessment standardisation and agreement of marks and awards. Reliability, then, affects the *degree of confidence* that one can put on assessment data and their interpretation.

Reliability is an important issue given the significant role of teachers in formal assessments and examinations, and the need for external markers of examination scripts to be fair to all candidates, neither too harsh nor too generous in comparison with other external examiners. When external examiners commit breaches of reliability it often makes the national press; this echoes the

comment made earlier that when ‘the stakes are high’ attention focuses on reliability in graded examinations.⁵³

Not only must reliability be addressed but it must be seen to be addressed; marking must be seen to be fair. This issue was highlighted in a collection of papers from the British Educational Research Association’s (BERA) Policy Task Group on Assessment, where the notion of ‘transparency’ was included in discussions of reliability.⁵⁴ It comes as no surprise, therefore, that the significance of reliability and transparency should lead to objective, standardised, national, externally marked tests and that this should accord with the views of a government that replaced the four criteria for assessment, specified earlier as being *formative*, *criterion-referenced*, *moderated* and *related to progression*, in favour of summative, norm-referenced, externally moderated pencil and paper tests. As was indicated earlier, assessment plays its part in a political agenda.

In an educational context most standardised tests include ‘technical’ details in their test manuals; these report the levels of reliability of the test. In test construction reliability is a statistical concept that refers to numerical indices of *stability* (the test–retest form of reliability), high correlations with results obtained in *equivalent forms* of a test, and high correlations between different items of a single test (*internal consistency*). For reasons that will become clear later when comparing validity and reliability, we shall not dwell on the formulae for calculating reliability coefficients; rather we shall remain with the concept of consistency *qua* concept.

Reliability in teachers’ assessment at Key Stages 1, 2 and 3⁵⁵ can be improved by, amongst other things:

- joint planning between teachers in the same year or department, across years or across key stages;
- using the programme(s) of study to agree objectives for teaching, learning and assessment;
- developing common activities focused on agreed objectives.

It can be seen merely from the size of this (incomplete) list that reliability features highly

when assessment is undertaken externally and by teachers. It enters the assessment arena at the point of agreeing marks, i.e. after the product – the examination script or the course work for assessment, for example – has been made.

There are several threats to reliability in assessments, for example⁵⁶ with respect to examiners and markers:

- errors in marking (e.g. attributing, adding and transfer of marks);
- inter-rater reliability (different markers giving different marks for the same or similar pieces of work);
- inconsistency in the examiner/marker (e.g. being harsh in the early stages of the marking and lenient in the later stages of the marking of many scripts).

With reference to the students and teachers themselves, there are several sources of unreliability:

- Motivation and interest in the task has a considerable effect on performance. Clearly, students need to be motivated if they are going to make a serious attempt at any test that they are required to undertake, where motivation is *intrinsic* (doing something for its own sake) or *extrinsic* (doing something for an external reason, e.g. obtaining a certificate or employment or entry into higher education). The results of a test completed in a desultory fashion by resentful pupils are hardly likely to supply the student teacher with reliable information about the students’ capabilities.⁵⁷ Research suggests that motivation to participate in test-taking sessions is strongest when students have been helped to see its purpose, and where the examiner maintains a warm, purposeful attitude toward them during the testing session.⁵⁸
- The relationship (positive to negative) between the assessor and the assessee exerts an influence on the assessment. There is sufficient research evidence to show that both *test takers* and *test givers* mutually influence one another during examinations, oral assessments and the like.⁵⁹ During the test situation,

students respond to such characteristics of the evaluator as the person's sex, age and personality. Although the student teacher can do little about his/her sex and age, it is important (and may indeed at times be comforting) to realise that these latent identities do exert potent influence. It could well be, for example, that the problems experienced by a female student teacher conducting a test with older secondary school boys have little if anything to do with the quality of the test material or the amount of prior preparation she has put into the testing programme.

- The conditions – physical, emotional, social – exert an influence on the assessment, particularly if they are unfamiliar. The advice generally given in connection with the location of a test or examination is that the test room should be well lit, quiet and adequately ventilated. To this we would add that, wherever possible, students should take tests in familiar settings, preferably in their own form rooms under normal school conditions. Research suggests that distractions in the form of extraneous noise, walking about the room by the examiner, and intrusions into the room all have significant impact upon the scores of the test takers, particularly when they are younger pupils.⁶⁰ An important factor in reducing students' anxiety and tension during an examination is the extent to which they are quite clear about what exactly they are required to do. Simple instructions, clearly and calmly given by the examiner, can significantly lower the general level of tension in the test room. Student teachers who intend to conduct testing sessions may find it beneficial in this respect to rehearse the instructions they wish to give to pupils *before* the actual testing session. Ideally, test instructions should be simple, direct and as brief as possible.
- The Hawthorne effect, wherein, in this context, simply informing a student that this is an assessment situation will be enough to disturb her performance – for the better or the worse (either case not being a fair reflection of her usual abilities).⁶¹
- Distractions (including superfluous information).
- A considerable and growing body of research in the general area of *teacher expectancies* suggests that students respond to the *teacher-assessor* in terms of their perceptions of what he expects of them.⁶² It follows, then, that the calm, well-organised student teacher embarking purposefully upon some aspect of evaluation probably induces different attitudes (and *responses*) among her class of children than an anxious, ill-organised colleague.
- The time of the day, week, month will exert an influence on performance. Some students are fresher in the morning and more capable of concentration.⁶³
- Students are not always clear on what they think is being asked in the question; they may know the right answer but not infer that this is what is required in the question.
- The students may vary from one question to another – a student may have performed better with a different set of questions which tested the same matters. Black⁶⁴ argues that 'two questions which seem to the expert to be asking the same thing in different ways might well be seen by the pupil as completely different questions'.
- Teachers teach to the test. This is perhaps unsurprising in high stakes assessment, or where, as in some countries, teachers' contract renewal is contingent on students' test results, or where 'league tables' of overall performance are published.
- Teachers and students practise test-like materials. It used to be the case that pupils would practise 'intelligence' in preparation for the 11-plus examination, and there are entire lucrative businesses operating to prepare students for public tests, e.g. the GMAT and GRE tests in the USA, where entrance to university depends on test scores.
- A student may be able to perform a specific skill in a test but not be able to select or perform it in the wider context of learning.
- Cultural, ethnic and gender background affect how meaningful an assessment task or activity is to students, and meaningfulness affects their performance.
- Marking practices are not always reliable, teachers maybe being too generous, marking by effort and ability rather than performance.

- The context in which the task is presented affects performance: some students can perform the task in everyday life but not under test conditions.

With regard to the assessment items themselves, there may be problems (e.g. test bias), for example:

- The task itself may be multidimensional, for example testing 'reading' may require several components and constructs. Students can execute a mathematics operation in the mathematics class but they cannot perform the same operation in, for example, a physics class; students will disregard English grammar in a science class but observe it in an English class. This raises the issue of the number of contexts in which the behaviour must be demonstrated before a criterion is deemed to have been achieved.⁶⁵ The question of transferability of knowledge and skills is also raised in this connection. The *context* of the task affects the student's performance.
- The validity of the items may be in question (discussed below).
- The language of the assessment and the assessor exerts an influence on the assessee, for example if the assessment is carried out in the assessee's second language or in a 'middle-class' code.⁶⁶
- The readability level of the task can exert an influence on the assessment, e.g. a difficulty in reading might distract from the purpose of an assessment which is to test the use of a mathematical algorithm.
- The size and complexity of numbers or operations in an assessment (e.g. of mathematics) – that might distract the assessee who actually understands the operations and concepts.
- The number and type of operations and stages to a task – a student might know how to perform each element, but when they are presented in combination the size of the task can be overwhelming.
- The form and presentation of questions affects the results, giving variability on students' performance.
- A single error early on in a complex sequence may confound the later stages of the sequence (within a question or across a set of questions), even though the student might have been able

to perform the later stages of the sequence, thereby preventing the student from gaining credit for all she can, in fact, do.

- Questions requiring use of mechanical toys might favour boys more than girls.⁶⁷
- Questions requiring use of dolls or kitchen work might favour girls more than boys.
- Essay questions favour boys if they concern impersonal topics and girls if they concern personal and interpersonal topics.⁶⁸
- Boys perform better than girls on multiple choice questions and girls perform better than boys on essay-type questions (perhaps because boys are more willing than girls to guess in multiple-choice items), and girls perform better in written work than boys.⁶⁹
- Goulding⁷⁰ indicated that continuous assessment of course work at 16-plus enabled a truer picture of girls' achievements in mathematics to be presented than that yielded by results on a written examination. Girls may be more anxious about examinations than boys, and consequently their performance may suffer.
- Questions and assessment may be culture-bound:⁷¹ what is comprehensible in one culture may be incomprehensible in another.
- The test may be so long, in order to ensure coverage, that boredom and loss of concentration may impair reliability.⁷²

What we are saying is that specific contextual factors can exert a significant influence on learning and that this has to be recognised in conducting assessments, rendering an assessment as unthreatening and natural as possible.

With specific reference to the National Curriculum standard assessment tasks (SATs) it has been argued that some tasks which meet the criteria for a higher level in fact might be easier than other tasks⁷³ for lower levels, dependent on the previous experiences of the students, i.e. as was mentioned before, there are no objective levels of difficulty. The construction of difficulty is in the mind of the individual. Further, there is a problem connected with levels of maturation and age of the students. For example, a task for a Level 5 student might be suitable for an 11-year-old but might be given to a 16-year-old; students of different ages (and not necessarily different

abilities) make qualitatively different responses to the same task. This is unremarkable; student teachers who found their GCSE examinations difficult could probably pass them with ease now that they are older. Further, Hall⁷⁴ reports problems with validity in respect of the English level descriptions for assessment purposes, arguing that they do not fairly cover the domain of the component elements of the subject. Indeed Wedeen *et al.*⁷⁵ raise questions about whether a Level 3, 4, 5 means the same for a Key Stage 2 and Key Stage 3 student, and what a Level 3, 4, 5 *actually* means that a student can do.

Validity

Validity in assessment is defined as ensuring that the assessment in fact assesses what it purports to assess and provides a fair representation of the student's performance, achievement, potential, capabilities, knowledge skills etc. (i.e. addressing what it was intended to address). This is a problem when defining and operationalising abstract constructs like intelligence, creativity, imaginativeness, anxiety. Validity⁷⁶ refers to appropriateness, meaningfulness, usefulness, specificity, diagnostic potential, inferential utility and adequacy.

Face validity requires the assessment to assess what it was intended to assess.

Content validity requires the assessment to cover the intended contents in sufficient depth and breadth so as to be fair and adequate, and not to exceed the scope of those boundaries of content (i.e. not to cover items or contents that were not included in the programme).

Consequential validity depends on the way in which the results are used, i.e. that they should be used in the ways intended and not in other ways. Consequential validity would be violated if inferences made from the results of assessment were not sustainable or justified by the results themselves and were illegitimate. This requires the user of the results to know what the intentions of the assessment were. Of course, this is frequently violated when sensationalist headlines in the media indicate falling standards, when, in fact it was not possible to infer this legitimately from the data.

Predictive validity concerns how much the results of an assessment can be used to predict achievements in the future, e.g. how much scores at A level might be fair indicators of future degree classification. Low predictive validity (e.g. using A level scores to predict degree classification, where it is lower than 50 per cent) suggests that limited credence should be placed in such uses.

Construct validity requires the assessment to provide a fair operationalisation of the construct – often abstract – in question, e.g. intelligence, creativity, spatial awareness, problem solving. This is usually the most difficult aspect of validity to address, not least because opinion is divided on what a fair construction of the construct actually is. For example, exactly what intelligence is, and what proxy indicators of intelligence might be, can founder at the starting line if there is disagreement on whether it is a single ability, a multiple ability (e.g. Gardner's 'multiple intelligences'), a composite, innate or capable of being developed (nature or nurture).

One statistical means of addressing construct validity is to seek inter-correlations between several items which are intended to measure the same construct (or to undertake factor analysis, itself based on inter-correlations). The principle here is that inter-correlations between items in a test, for example, that are intended to measure the same construct should be higher than inter-correlations between items that are not intended to measure the same construct or which are intended to measure different constructs. Further, different types of question that are intended to measure the same construct should have stronger inter-correlations than inter-correlations using the same types of question to assess different constructs.

So here we have a dilemma. We commented earlier on the tensions between competing purposes of assessment and competing types of assessment. We argued that one has to select which purposes and types of assessment will be used, because a single assessment could not serve all purposes and types of assessment, they being incompatible with each other. So it is with reliability and validity. The more we steer towards reliability, consistency, uniformity, standardisation and their outcomes in nominal grades, the

more we move away from the rich data upon which teachers can often take action. Conversely, the more we move towards teacher- and student-defined, personalised valid data the less generalisable, standardisable, comparable and consistent are the results (though no less transparent provided that the criteria are made public). The notion of representativeness of a wide population in reliability becomes redefined as representing and capturing the specific needs, abilities and achievement of each individual student.⁷⁷ We advocate addressing the latter rather than the former set of issues. To address reliability and validity in detail could easily lead to endless assessment, and this, clearly, is not to be wished.

Moreover, Lambert⁷⁸ argues that not only are reliability and validity in a state of tension with each other but that a third factor – manageability – might reduce both reliability and validity. Manageability, reliability and validity are in tension with each other.

Assessment is an inherently inexact science.⁷⁹ Indeed it is an art rather than a science. We suggest that student teachers should be primarily concerned to address validity because this has strong individualistic, diagnostic and formative potential. This is not to suggest that reliability should be neglected; indeed student teachers will find it useful to compare their own assessments of work with those contained in the school portfolio of moderated work that are exemplars of different levels and attainment targets. We suggest that student teachers should be concerned with carefully planned and differentiated work that is well matched to students' needs. In these the intended learning outcomes for students are communicated to them and discussed with them – generating their involvement and 'ownership' – as mentioned in Part II. Diagnostic assessment feeds into diagnostic teaching. That renders validity, particularly 'consequential validity', a significant issue. Assessment takes place by identifying opportunities to undertake it in everyday teaching. Where assessment is more 'formal', i.e. less embedded in everyday teaching, care should be taken to reduce stress as much as possible and to address as far as practicable the features of reliability outlined above.

The suggestion that assessment is an inherently inexact activity suggests to us that a counsel of

perfection should give way to a counsel of utility, practicability, validity, and strong formative potential. That said, it would be a useful experience if student teachers took the opportunity to conduct a standardised test or assessment.

Methods of gathering assessment data

The student teacher has several ways of gathering assessment data. These can be divided into two main types: *written sources of assessment data* and *non-written sources of assessment data*. Mitchell and Koshy⁸⁰ also suggest that formative assessment by teachers can address what a student does, says and writes. Written sources include tests and written examinations (including essays); portfolios; samples of students' work; records, and self-completed, self-referenced assessments. Non-written sources include observation (visual, oral); practical activities with concrete outcomes; questioning; interviews and conferencing; presentations and exhibitions; video and audio recordings and photographs; role play and simulations. We shall deal with these in turn.

Written sources of data collection

Tests

The major means of gathering assessment data over the years have been tests and examinations. Published tests are commercially produced and they take various forms: *diagnostic* tests (e.g. the Metropolitan Diagnostic Tests);⁸¹ *aptitude* tests (which predict a person's aptitude in a named area, e.g. the Comprehensive Test of Adaptive Behaviour, the McCarthy Screening Test, the Assessment for Training and Employment Test); *achievement* tests; *norm-referenced* tests (the Boehm Test of Basic Concepts); *criterion-referenced* tests (e.g. the GCSE examinations of course work); *reading* tests (e.g. the Edinburgh Reading Test); *verbal reasoning* tests (e.g. the Wechsler Adult Intelligence Scale and tests published by the National Foundation for Educational Research); tests of *critical thinking* (e.g. the Watson-Glaser Critical Thinking Appraisal); tests of *social adjustment* (e.g. the British Social Adjustment Test and

the Kohn Social Competence Scale); *baseline assessment* tests (e.g. the Basic Achievement Skills Individual Screener). Several commercial companies hold tests that have restricted release or availability, requiring the teacher or school to register with a particular company. For example, in the United Kingdom the Psychological Corporation Ltd. not only holds the rights to a world-wide battery of tests but has different levels of clearance for different users. Having different levels of clearance attempts to ensure, for example, that students are not 'prepared' for the test by coaching on the various items.⁸²

Published tests have several attractions: they are objective and standardised (as a result of piloting and refinement); they declare their levels of reliability and validity through the inclusion of statistical data; they come complete with instructions for administration and processing; they are often straightforward and quick to administer and mark, and an accompanying manual gives guidance for the interpretation of results.

On the other hand, simply *because* they have been standardised on a wide population and are generalisable, by definition they are not tailored to an individual institution, a local context or specific needs. Hence if published tests are to be used they must serve the desired purposes of the assessment – the notion of *fitness for purpose* is crucial in selecting from a battery of tests in the public domain.

A test that is devised by the teacher for a specific purpose, whilst it does not have the level of standardisation of a commercially produced test, nevertheless will be tailored to that teacher's particular needs, addressing very fully the notion of *fitness for purpose*. Cohen *et al.*⁸³ provide some guidelines for the construction of a test by a teacher:

- the *purposes* of the test must be explicit (i.e. to provide data for a particular type of assessment);
- the *type* of test must be appropriate (e.g. diagnostic, achievement, aptitude, criterion-referenced, norm-referenced);
- the *objectives* of the test need to be stated in operational terms;
- the *content* of the test must be suitable;
- the *construction* of the test must address *item analysis* (e.g. ensuring that each item in the test

serves one or more specified objectives), *item discriminability* and *item difficulty* (see the discussion of these topics below).

On the other hand, teacher-devised tests are prone to several problems:⁸⁴

- they can encourage rote learning and superficial learning, simply for the test day itself;
- discussions of reliability, validity and utility are not undertaken between teachers – the tests are a private creation by individual teachers;
- quantity can be favoured over quality;
- there is a tendency to lead to an overemphasis on marks and grades, to the detriment of learning and rich feedback;
- they foster too much of a competitive mentality in learners;
- they lead to 'learned helplessness' in students – where they are only motivated by the desire to do well rather than to learn and where they come to believe that if they fail then it is because they are not sufficiently clever and so there is nothing that can be done about it to improve, therefore they avoid risk taking and challenge.

Too much testing can be counterproductive, leading to a decline in performance, particularly if the results of the test are simply a mark or grade rather than rich feedback on how to improve. Clarke⁸⁵ summarised much research evidence to suggest that grading every piece of work is simply counterproductive.

Planning a test

In devising a test the student teacher will have to consider several stages:

1 Identify the purposes of the test

The purposes of a test are several, for example to *diagnose* a student's strengths, weaknesses and difficulties; to measure *achievement*; to measure *attainment* (e.g. of the National Curriculum); to measure *aptitude* and *potential*; to identify *readiness* for a programme ('placement testing') and is used for *formative*, *diagnostic* or *summative* purposes.

2 Identify the test specifications

The test specifications include:

- which programme objectives and student learning outcomes will be addressed;
- which content areas will be addressed;
- the relative weightings, balance and coverage of items;
- the total number of items in the test;
- the number of questions required to address a particular element of a programme or learning outcome;
- the exact items in the test.

To ensure validity in a test it is essential to ensure that the objectives of the test are fairly addressed in the test items. Objectives should:

- be specific and be expressed with an appropriate degree of precision;
- represent intended learning outcomes;
- identify the actual and observable behaviour which will demonstrate achievement;
- include an active verb;
- be unitary (focusing on one item per objective).

One way of ensuring that the objectives are fairly addressed in test items can be done through a matrix frame that indicates the *coverage* of con-

tent areas, the coverage of *objectives* of the programme, and the *relative weighting* of the items on the test. Such a matrix is set out in Box 93, taking the example from a secondary school history syllabus.

Box 93 indicates the main areas of the programme to be covered in the test (*content areas*); then it indicates which objectives or detailed content areas will be covered (1a–3c) – these numbers refer to the identified specifications in the syllabus; then it indicates the marks/percentages to be awarded for each area. This indicates several points:

- the least emphasis is given to the build-up to and end of the war (10 marks each in the ‘total’ column);
- the greatest emphasis is given to the invasion of France (35 marks in the ‘total’ column);
- there is fairly even coverage of the objectives specified (the figures in the ‘total’ row only vary from 9 to 13);
- greatest coverage is given to objectives 2a and 3a, and least coverage is given to objective 1c;
- some content areas are not covered in the test items (the blanks in the matrix).

Hence we have here a test scheme that indicates relative weightings, coverage of objectives and content, and the relation between these two

Box 93: A matrix of test items

Content areas	Objective/area of programme content			Objective/area of programme content			Objective/area of programme content			Total
	1a	1b	1c	2a	2b	2c	3a	3b	3c	
Aspects of the 1939–45 war										
The build-up to the 1939–45 world war	1	2		2	1	1	1	1	1	10
The invasion of Poland	2	1	1	3	2	2	3	3	3	20
The invasion of France	3	4	5	4	4	3	4	4	4	35
The allied invasion	3	2	3	3	4	3	3	2	2	25
The end of the conflict	2	1		1	1	1	2	2		10
Total	11	10	9	13	12	10	13	12	10	100

Box 94: Compiling elements of test items

Content area	Identifying key concepts and principles	Practical skills	Evaluative skills	Recording results	Total
Designing a crane	2	1	1	3	7
Making the crane	2	5	2	3	12
Testing the crane	3	3	1	4	11
Evaluating the results	3		5	4	12
Improving the design	2	2	3	1	8
Total	12	11	12	15	50

latter elements. Relative weightings should first be addressed assigning percentages at the foot of each column, then by assigning percentages at the end of each row, and then completing each cell of the matrix within these specifications. This ensures that appropriate sampling and coverage of the items are achieved. The example of the matrix refers to specific objectives as column headings; of course these could be replaced by factual knowledge, conceptual knowledge and principles, and skills for each of the column headings. Alternatively they could be replaced by specific aspects of an activity, for example: designing a crane, making the crane, testing the crane, evaluating the results, improving the design. Indeed these latter could become content (row) headings – see Box 94.

Here one can see that practical skills will carry fewer marks than recording skills (the column totals), and that making and evaluating carry equal marks (the row totals).

This exercise also enables some indication to be gained of the number of items to be included in the test, for instance in the example of the history test the matrix is $9 \times 6 = 54$ possible items, and in the ‘crane’ activity the matrix is $5 \times 4 = 20$ possible items. Of course, there could be considerable variation in this, for example more test items could be inserted if it were deemed desirable to test one cell of the matrix with more than one item (possible for cross-checking), or indeed there could be fewer items if it were possible to have a single test item that serves more than one

cell of the matrix. The difficulty in matrix construction is that it can easily become a runaway activity, generating very many test items and, hence, leading to an unworkably long test – typically the greater the degree of specificity required, the greater the number of test items there will be. One skill in test construction is to be able to have a single test item that provides valid and reliable data for more than a single factor.

Having undertaken the test specifications, the researcher should have achieved clarity on (a) the exact test items that test certain aspects of achievement of objectives, programmes, contents etc.; (b) the coverage and balance of coverage of the test items; and (c) the relative weightings of the test items.

3 Select the contents of the test

Here the test is subject to *item analysis*. An item analysis will need to consider:⁸⁶

- the suitability of the format of each item for the (learning) objective (appropriateness);
- the ability of each item to enable students to demonstrate their performance of the (learning) objective (relevance);
- the clarity of the task for each item.

In moving to test construction the student teacher will need to consider how each element to be tested will be *operationalised*: (a) what indicators and kinds of evidence of achievement

of the objective will be required; (b) what indicators of high, moderate and low achievement there will be; (c) what the students will be doing when they are working on each element of the test; (d) what the outcome of the test will be (e.g. a written response, a tick in a box of multiple choice items, an essay, a diagram, a computation). Indeed the Task Group on Assessment and Testing in the UK⁸⁷ took from the work of the UK's Assessment of Performance Unit the suggestion that attention will have to be given to the *presentation*, *operation* and *response* modes of a test: (a) how the task will be introduced (e.g. oral, written, pictorial, computer, practical demonstration); (b) what the students will be doing when they are working on the test (e.g. mental computation, practical work, oral work, written); and (c) what the outcome will be – how they will show achievement and present the outcomes (e.g. choosing one item from a multiple choice question, writing a short response, open-ended writing, oral, practical outcome, computer output). Operationalising a test from objectives can proceed by stages:

- identify the objectives/outcomes/elements to be covered;
- break down the objectives/outcomes/elements into constituent components or elements;
- select the components that will feature in the test, such that, if possible, they will represent the larger field (i.e. domain referencing, if required);
- recast the components in terms of specific, practical, observable behaviours, activities and practices that fairly represent and cover that component;
- specify the kinds of data required to provide information on the achievement of the criteria;
- specify the success criteria (performance indicators) in practical terms, working out marks and grades to be awarded and how weightings will be addressed;
- write each item of the test;
- conduct a pilot to refine the language/readability and presentation of the items, to gauge *item discriminability*, *item difficulty* and *distracters* (discussed below), and to address validity and reliability.

Item analysis is designed to ensure that: (a) the items function as they are intended, for example, that criterion-referenced items fairly cover the fields and criteria and that norm-referenced items demonstrate *item discriminability* (discussed below); (b) the level of difficulty of the items is appropriate (see below: *item difficulty*); (c) the test is reliable (free of distracters – unnecessary information and irrelevant cues). An item analysis will consider the accuracy levels available in the answer, the item difficulty, the importance of the knowledge or skill being tested, the match of the item to the programme, and the number of items to be included.

In constructing a test the researcher will need to undertake an item analysis to clarify the item discriminability. In other words, how effective is the test item in showing up differences between a group of students? Does the item enable us to discriminate between students' abilities in a given field? An item with high discriminability will enable the researcher to see a potentially wide variety of scores on that item; an item with low discriminability will show scores on that item poorly differentiated. Clearly a high measure of discriminability is desirable.⁸⁸

Distracters are the stuff of multiple choice items, where incorrect alternatives are offered, and students have to select the correct alternatives. Here a simple frequency count of the number of times a particular alternative is selected will provide information on the effectiveness of the distracter: if it is selected many times then it is working effectively; if it is seldom or never selected then it is not working effectively and it should be replaced.

If we wished to calculate the *item difficulty* of a test, we could use the following formula:

$$\frac{A}{N} \times 100$$

where A = the number of students who answered the item correctly; N = the *total* number of students who attempted the item.

Hence if twelve students out of a class of twenty answered the item correctly, then the formula would work out thus:

$$\frac{12}{20} \times 100 = 60\%$$

The maximum index of difficulty is 100 per cent. Items falling below 33 per cent and above 67 per cent are likely to be too difficult and too easy respectively. It would appear, then, that this item would be appropriate to use in a test. Here, again, whether the student teacher uses an item with an index of difficulty below or above the cut-off points is a matter of judgement. In a norm-referenced test the item difficulty should be around 50 per cent.

In constructing a test with item analysis, item discriminability, item difficulty and distractor effects in mind, it is important also to consider the actual requirements of the test,⁸⁹ for example:

- whether all the items in the test are equally difficult;
- which items are easy, moderately hard, hard, very hard;
- what kinds of task each item is addressing (e.g. is it (a) a practice item – repeating known knowledge, (b) an application item – applying known knowledge, (c) a synthesis item – bringing together and integrating diverse areas of knowledge?).

4 Consider the form of the test

Much of the discussion in this chapter assumes that the test is of the pen-and-paper variety. Clearly this need not be the case, for example tests can be written, oral, practical, interactive, computer-based, dramatic, diagrammatic, pictorial, photographic, involve the use of audio and video material, presentational and role play, or simulations. This does not negate the issues discussed in this chapter, for the form of the test will still need to consider, for example, reliability and validity, difficulty, discriminability, marking and grading, item analysis, timing. Indeed several of these factors take on an added significance in non-written forms of testing; for example: (a) reliability is a major issue in judging live musical performance or the performance of a gymnastics routine – where a ‘one-off’ event is likely; (b) reli-

ability and validity are significant issues in group performance or group exercises – where group dynamics may prevent a testee’s true abilities from being demonstrated. Clearly the student teacher will need to consider whether the test will be undertaken individually, or in a group, and what form it will take. The test will need to consider the presentation (introduction) mode, the activity mode (what will be done in the test) and the response (outcome) mode – what product the student is expected to produce.

5 Write the test item

Many objective tests are composed of a number of items – for example, missing words, incomplete sentences or incomplete, unlabelled diagrams, true/false statements, open-ended questions where students are given guidelines for how much to write (e.g. a sentence, a paragraph, 300 words etc.), closed questions, multiple choice questions, matching pairs of statements and responses, short answer and long answer responses. They can test recall, knowledge, comprehension, application, analysis, synthesis, and evaluation, i.e. different orders of thinking. These take their rationale from the work of Bloom *et al.*⁹⁰ in 1956 on hierarchies of cognitive abilities – from low-order thinking (comprehension, application) to higher order thinking (evaluation). Clearly the student teacher will need to know the order of the thinking being tested in the test.

Missing words and incomplete sentences

Missing word items are useful for rapid completion, and guessing is reduced because a specific response is required. On the other hand such items tend to require lower level recall and can be time-consuming to score, if the marker has to try to understand what the student has been thinking about in writing the answer.

The test will need to address the intended and unintended clues and cues that might be provided in it, for example:

- the number of blanks might indicate the number of words required;
- the number of dots might indicate the number of letters required;

- the length of blanks might indicate the length of response required;
- the space left for completion will give cues about how much to write;
- blanks in different parts of a sentence will be assisted by the reader having read the other parts of the sentence (anaphoric and cataphoric reading cues).

There are several guidelines for constructing short-answer items to overcome some of these problems:⁹¹

- make the blanks close to the end of the sentence;
- keep the blanks the same length;
- require a single word or short statement for the answer;
- ensure that there can be only a single correct answer;
- omit only the key words and avoid omitting so many key words as to make the sentence unintelligible, maybe making the blanks appear towards the end of the sentence;
- avoid putting several blanks close to each other (in a sentence or paragraph) such that the overall meaning is obscured;
- only make blanks of key words or concepts, rather than of trivial words;
- avoid addressing only trivial matters;
- ensure that students know exactly the kind and specificity of the answer required;
- specify the units in which a numerical answer is to be given;
- use short answers for testing knowledge recall.

Multiple choice statements

Multiple choice items can test lower order and higher order thinking. They are quick to complete and to mark; they are objective and are widely used in formal tests, though they may take some time to devise. In devising fixed, closed response questions there are several considerations to be borne in mind, for example:

- make the question and requirements unambiguous and in a language appropriate for the students;

- avoid negatives in statements;
- avoid giving clues in the 'wrong' choices to which response is the correct one;
- provide around four choices in order to reduce guessing, and ensure that the 'distracters' are sufficiently close to the correct response as to be worthy of consideration by the student, i.e. make the options realistic;
- keep the choices around the same length;
- avoid giving grammatical cues in the choices (e.g. the word 'an' in the stem requires an option that begins with a vowel; the word 'is' in the stem requires an option written in the singular);
- ensure that one option does not contain more information than another, as this suggests to students that this is the correct option;
- avoid the use of 'all of the above' or 'none of the above', as these tend to become the options chosen;
- avoid value and opinion statements, as these are contestable;
- consider the use of pictures, tables, graphics and maps, particularly for higher order multiple choice questions (e.g. the siting of a supermarket).

It was mentioned earlier in this chapter that serious questions lie over the use of multiple choice questions. However, they are only as good as the choices offered. If they require higher order thinking then they may be as limiting as their critics suggest (of course the problem is that they tend not to involve higher order thinking). There are several attractions to multiple choice items, for example:⁹²

- they can be completed quite rapidly, enabling many questions to be asked which, in turn, enable good coverage of each domain, thereby increasing reliability and validity;
- there is limited writing, so students' writing skills (or their lack) do not impede demonstration of knowledge;
- the opportunities for errors or biases in marking are reduced.

On the other hand they have attracted severe criticism:⁹³

- they demean and reduce the complexity of knowledge, learning and education to the trivial, atomised and low level;
- they have little diagnostic or formative potential;
- scores may be inflated through informed guessing.

In devising tests, attention has to be given to the issue of student choice; what is deemed to be unavoidably and centrally important, over which there is no option, and what might be optional is a matter for decision. Black⁹⁴ suggests that offering students choices of questions in a test does not help them to achieve higher marks, whilst it engages issues of reliability (e.g. consistency of demand across questions) and validity (e.g. to cover the required domains to be tested). Indeed some students may make unwise choices, and this might compromise reliability. The issue of choice extends further, to include whether one gives different tests to different students, for example depending on their anticipated performance, or whether one offers a single graduated test, with items becoming progressively more difficult the further one moves through the test. Black alludes to a potential gender issue here, in that girls may not choose some difficult items in mathematics as they do not want to take such risks, even though in fact they may have the ability to undertake them.

With regard to multiple choice items there are several potential problems:

- the number of choices in a single multiple choice item (and whether there is only one right answer or more than one);
- the number and realism of the distractors in a multiple choice item (e.g. there might be a number of distractors but many of them are too obvious to be chosen – there may be several redundant items);
- the sequence of items and their effects on each other;
- the location of the correct response(s) in a multiple choice item.

There are several suggestions for constructing effective multiple choice test items:⁹⁵

- ensure that they catch significant knowledge and learning rather than low-level recall of facts;
- frame the nature of the issue in the stem of the item, ensuring that the stem is meaningful in itself (e.g. replace the general ‘Sheep: (a) are graminivorous, (b) are cloven footed, (c) usually give birth to one or two calves at a time’ with ‘How many lambs are normally born to a sheep at one time?’);
- ensure that the stem includes as much of the item as possible, with no irrelevancies;
- avoid negative stems to the item;
- keep the readability levels low;
- ensure clarity and unambiguity;
- ensure that all the options are plausible so that guessing of the only possible option is avoided;
- avoid the possibility of students making the correct choice through incorrect reasoning.

True false items

True false items are useful in being quick to devise and complete, and easy to score. They offer students a fifty-fifty chance of being correct simply by guessing. To overcome the ‘guess factor’ students could be asked to indicate why a false item is false, indeed to rewrite it to make it true, where possible, with marks being awarded for the correct revision. In constructing true false items it is important to ensure that the statements are unequivocal, unambiguously true or false. This means omitting questions of value or questions in which there may be differences of opinion. Borich⁹⁶ suggests that it is important to keep the statements of approximately the same length, to avoid extremes (e.g. ‘never’, ‘only’, ‘always’) as these will not be chosen, and to avoid double negatives.

There are particular problems in true false questions:⁹⁷

- ambiguity of meaning;
- some items might be partly true or partly false;
- items that polarise – being too easy or too hard.

To overcome these problems the authors suggest several points that can be addressed:

- Avoid generalised statements (as they are usually false).

- Avoid negatives and double negatives in statements.
- Avoid over-long and over-complex statements.
- Ensure that items are rooted in facts.
- Ensure that statements can be either only true or only false.
- Write statements in everyday language.
- Decide where it is appropriate to use 'degrees' – 'generally', 'usually', 'often' – as these are capable of interpretation.

Matching items

The use of matching items is another rapid-to-construct and easy-to-score means of testing, and is useful for measuring associations between statements and facts. It keeps the role of guessing to a minimum. Matching items comprise a descriptions list and an options list, with the options list to be matched to the appropriate descriptions list. In writing lists of matching items Borich⁹⁸ suggests that it is important to:

- keep each of the two lists of items homogeneous;
- ensure that the options are plausible distractors;
- ensure that the descriptions list contains longer phrases or statements than the options list;
- provide clear instructions for how to indicate the matching (e.g. by joining lines, by writing a number and a letter);
- ensure that there are more options than descriptions, to address the issue of distractors;
- indicate in the instructions whether the options can be used more than once.

There are also particular potential difficulties in matching items:⁹⁹

- It might be very clear to a student which items in a list simply *cannot* be matched to items in the other list (e.g. by dint of content, grammar, concepts), thereby enabling the student to complete the matching by elimination rather than understanding.
- One item in one list might be able to be matched to several items in the other.
- The lists might contain unequal numbers of items, thereby introducing distractors –

rendering the selection as much a multiple choice item as a matching exercise.

Difficulties in matching items can be addressed thus:

- Ensure that the items for matching are homogeneous – similar – over the whole test (to render guessing more difficult).
- Avoid constructing matching items to answers that can be worked out by elimination (e.g. by ensuring that: (a) there are different numbers of items in each column so that there are more options to be matched than there are items; (b) students can avoid being able to reduce the field of options as they increase the number of items that they have matched; (c) the same option may be used more than once).

Essay questions

A more open-ended type of written assessment is an essay. It is the freedom of response that is possible in the essay form of examination that is held to be its most important asset, enabling higher order and sustained, in-depth and complex thinking to be demonstrated.

With regard to essay questions, there are several advantages that can be claimed. For example, an essay, as an open form of testing, enables complex learning outcomes to be measured; it enables the student to integrate, apply and synthesise knowledge, to demonstrate the ability for expression and self-expression, and to demonstrate higher order and divergent cognitive processes. Further, it is comparatively easy to construct an essay title. On the other hand, essays have been criticised for yielding unreliable data,¹⁰⁰ for being prone to unreliable (inconsistent and variable) scoring, neglectful of intended learning outcomes and prone to marker bias and preference (being too intuitive, subjective, holistic, and time-consuming to mark). To overcome these difficulties the authors make the following suggestions.

- Instructions must be given as to whether the requirement is for a short or long essay.
- The essay question must be restricted to those learning outcomes that are unable to be measured more objectively.

- The essay question must ensure that it is clearly linked to desired learning outcomes; that it is clear what behaviours the students must demonstrate.
- The essay question must indicate the field and tasks very clearly (e.g. 'compare', 'justify', 'critique', 'summarise', 'classify', 'analyse', 'clarify', 'examine', 'apply', 'evaluate', 'synthesise', 'contrast', 'explain', 'illustrate').
- Time limits must be set for each essay.
- Options should be avoided, or, if options are to be given, ensure that, if students have a list of titles from which to choose, each title is equally difficult and equally capable of enabling the student to demonstrate achievement, understanding etc.
- Marking criteria should be prepared and explicit, indicating what must be included in the answers and what cognitive processes are being looked for in the essay (e.g. higher order and lower order thinking), together with their specification in the essay requirement (e.g. 'compare', 'speculate', 'contrast', 'evaluate', 'give reasons for'). The points to be awarded for such inclusions or ratings should be scored for the extent to which certain criteria have been met.
- Decisions should be made on how to address and score irrelevancies, inaccuracies, poor grammar and spelling.
- The scoring criteria must be agreed, e.g. for content, organisation, logic, structure, presentation, secretarial skills, reasonableness, coverage, completeness, internal consistency, originality, creativity, level of detail, persuasiveness of the argument, conclusiveness, clarity, demonstration of understanding and application, and so on.
- The marks to be awarded for each element should be agreed, including the weighting of the marks.
- the work should be marked blind, and, where appropriate, without the teacher knowing the name of the essay writer. Of course this is perhaps difficult or even undesirable for the student teacher, who may need to know the identity of the writer. The issue here is how to avoid personal knowledge clouding an objective judgement.

Clearly these are issues of reliability. The issue here is that layout can exert a profound effect on the test. Unlike the objective test, the essay allows the candidate to organise her thoughts and to communicate them in her own style; in short, it gives her freedom to be creative and imaginative in the communication of her ideas. There are disadvantages, however, in the essay as a gatherer of information. Essays are difficult to assess reliably. With only one or two assessors a considerable degree of unreliability can creep into the assessment of essays, i.e. 'inter-rater' reliability may be limited. Black¹⁰¹ suggests that a reliability coefficient of only 0.6 is likely for a single marker marking several essays, which is very low, so having essay work second marked is vital. Even with analytical marking schemes (see below) the degree of agreement between markers may be low. Since only a limited number of essay titles can be answered in one examination, only a limited part of a syllabus of work can be addressed by the candidate. The student who has the misfortune to choose the 'wrong' essay title may produce work that does not fairly represent her true abilities. Chase¹⁰² has suggested some ways of overcoming these weaknesses in the essay form of test. First, all students might be asked to write on the same essay title(s), the principle being that individuals can only be compared to the extent that they have 'jumped the same hurdles'. Second, marking should be *analytic* rather than *impressionistic*. Analytic marking is based upon *prior decisions* about what exactly is being assessed in the essay – the content; the style; the grammar; the punctuation; the handwriting? (In other words, criterion-referencing should apply.) On the question of the low agreement between essay markers, Lewis¹⁰³ suggests the following ways of reducing the subjective element:

- by marking for substantive content rather than style;
- by fixing a maximum penalty for mistakes in grammar, syntax and spelling;
- by multiple marking followed by a further close scrutiny of those essays placed near the pass fail line.

For public examinations this problem can also be addressed by agreement trials and moderation.

Again the notion of *fitness for purpose* must be the criterion to judge the openness of the essay and its marking frame.

6 Consider the layout of the test

This will include:¹⁰⁴

- the nature, length and clarity of the instructions (e.g. what to do, how long to take, how much to do, how many items to attempt, what kind of response is required – a single word, a sentence, a paragraph, a formula, a number, a statement etc., how and where to enter the response, where to show the ‘working out’ of a problem, where to start new answers, e.g. in a separate booklet), whether one answer only is required to a multiple choice item, or more than one answer;
- spreading out the instructions through the test, avoiding overloading students with too much information at first, and providing instructions for each section as they come to it;
- considering what marks are to be awarded for which parts of the test.

The layout of the text should be such that it supports the completion of the test and that this is done as efficiently and as effectively as possible for the student.

7 Consider the timing of the test

This refers to two areas: (a) when the test will take place (the day of the week, month, time of day); and (b) the time allowances to be given to the test and its component items. With regard to the former, in part this is a matter of reliability, for the time of day, week etc. might influence how alert, motivated, capable a student might be. With regard to the latter, the researcher will need to decide what time restrictions are being imposed and why (for example, is the pressure of a time constraint desirable – to show what a student can do under time pressure – or an unnecessary impediment, putting a time boundary around something that need not be bounded – was Van Gogh put under a time pressure to produce the painting of sunflowers?).

Though it is vital that the student knows what the overall time allowance is for the test, clearly it might be helpful to a student to indicate notional time allowances for different elements of the test; if these are aligned to the relative weightings of the test (see the discussions of weighting and scoring) they enable a student to decide where to place emphasis in the test – she may want to concentrate her time on the high scoring elements of the test.

8 Plan the scoring of the test

The awarding of scores for different items of the test is a clear indication of the relative significance of each item – the weightings of each item are addressed in their scoring. It is important to ensure that easier parts of the test attract fewer marks than more difficult parts of it, otherwise a student’s results might be artificially inflated by answering many easy questions and fewer more difficult questions. Clearly, also, it is important to know in advance what constitutes a ‘good answer’.¹⁰⁵

The more marks that are available to indicate different levels of achievement (e.g. for the awarding of grades), the greater the reliability of the grades will be, though clearly this could make the test longer. Scoring will also need to be prepared to handle issues of poor spelling, grammar and punctuation – is it to be penalised, and how will consistency be assured here? Further, how will issues of omission be treated, e.g. if a student omits the units of measurement (miles per hour, dollars or pounds, metres or centimetres)?

Related to the scoring of the test is the issue of reporting the results. If the scoring of a test is specific then this enables variety in reporting to be addressed, for example, results may be reported item by item, section by section, or whole test by whole test. This degree of flexibility might be useful for the student teacher, as it will enable particular strengths and weaknesses in groups of students to be exposed.

Underpinning the discussion of scoring is the need to make it unequivocally clear exactly what the marking criteria are – what will and will not score points. This requires a clarification of

whether there is a 'checklist' of features that must be present in a student's answer. The specification of the performance criteria is crucial, defining high-scoring, medium-scoring and low-scoring criteria. In essence, what is being required here is a rubric for the test, specifying:¹⁰⁶

- the performance criteria;
- what to look for in judging performance;
- the range of quality of performance and how to score different levels of performance;
- how to determine reliability and validity, and how these are reflected in the scoring.

Clearly criterion-referenced tests will have to declare their lowest boundary – a cut-off point – below which the student has been deemed to fail to meet the criteria. A compromise can be seen in those criterion-referenced tests which award different grades for different levels of performance of the same task, necessitating the clarification of different cut-off points in the examination. A common example of this can be seen in the GCSE examinations for secondary school pupils in the United Kingdom, where students can achieve a grade between A and F for a criterion-related examination.

9 Consider special adaptations to the test

There will be some students who will need to have special arrangements made for them for the test, for example in terms of:¹⁰⁷

- the presentation format of the test (the need to read the questions slowly to a student, or in stages rather than all at the start, or to have them read aloud, or language levels adjusted, or, indeed, not to have them in written form);
- the response format (allowing dictionaries and calculators, allowing responses other than in written form, having a scribe to write the dictated answers, allowing the use of notes);
- the timing of the test (providing extra time, avoiding timed tests, providing breaks through different parts of the test, allowing an unlimited amount of time);

- the setting of the test (testing in a separate place, providing a one-to-one test situation, reducing distractions).

Ethical issues in preparing for tests

A major source of unreliability of test data derives from the extent to which students have been prepared for the test, and the ways in which this has been done. These can be located on a continuum from direct and specific preparation, through indirect and general preparation, to no preparation at all. With the growing demand for test data (e.g. for selection, for certification, for grading, for employment, for tracking, for entry to higher education, for accountability, for judging schools and teachers) there is a perhaps understandable pressure to prepare students for tests. This is the 'high-stakes' aspect of testing¹⁰⁸ where much hinges on the test results. At one level this can be seen in the backwash effect of examinations on curricula and syllabuses; at another level it can lead to the direct preparation of students for specific examinations. Preparation can take many forms:¹⁰⁹

- ensuring coverage, amongst other programme contents and objectives, of the objectives and programme that will be tested;
- restricting the coverage of the programme content and objectives to those only that will be tested;
- preparing students with 'exam technique';
- practice with past/similar papers.

Should one teach to a test; is not to do so a dereliction of duty (e.g. in criterion- and domain-referenced tests), or giving students an unfair advantage and thus reducing the reliability of the test as a true and fair measure of ability or achievement? In high-stakes assessment (e.g. for public accountability and to compare schools and teachers) there is even the issue of not entering for tests students whose performance will be low. There is a risk of a correlation between the 'stakes' and the degree of unethical practice – the greater the stakes, the greater the incidence of unethical practice. Unethical practice, observes Gipps,¹¹⁰ occurs where scores are inflated but reliable inference on performance or achievement

is not, and where different groups of students are prepared differentially for tests, i.e. giving some students an unfair advantage over others. To overcome such problems, she suggests, it is ethical and legitimate for teachers to teach to a broader domain than the test; teachers should not teach directly to the test, and the situation should only be that better instruction rather than test preparation is acceptable.

One can add to this list of considerations the view that:

- tests must be valid and reliable;
- the administration, marking and use of the test should only be undertaken by suitably competent/qualified people (i.e. people and projects should be vetted);
- access to test materials should be controlled, for instance: test items should not be reproduced apart from selections in professional publication; the tests should only be released to suitably qualified professionals in connection with specific professionally acceptable projects.

Portfolios and samples of work

Authentic assessment may draw on portfolio assessment.¹¹¹ A portfolio is a collection of pieces of students' work, which indicate accomplishments over time and context, which may be used to represent their best achievements as they contain the samples of the best work and best represent their development. Portfolios, compiled by the student, with or without the support from, and negotiation with, the teacher, are powerful ways of involving students – a form of ipsative assessment, on which we have commented above. Portfolios are useful in that they:

- indicate best accomplishments;
- help students to evaluate themselves;
- indicate improvement and development over time;
- comprise ongoing assessment.

The contents of a portfolio are not fixed, but they change over time and to suit different purposes and audiences, as work is selected in and selected out.¹¹² Clearly it is important to know

the purpose of the portfolio – whether, for example, it is intended to represent the *best* work of the student or the *typical* work of the student, as this affects the selection of the contents of the portfolio. Reflecting on the choice of samples for the portfolio is important, as it encourages a student to reflect on her/his best/poorest/average/easiest/hardest piece of work and the reasons for this judgement, together with considerations of the pieces of work that demonstrate the greatest improvement and progress.

A portfolio has many purposes and uses, for example:¹¹³

- to act as a showcase of a student's best work, as selected by the student;
- to act as a showcase of a student's best work, as selected by the teacher;
- to reflect the student's interests (see Chapter 18);
- to chart development, improvement and rates of progress.

Hence, in using portfolios for assessment it is important to decide:¹¹⁴

- the purpose of the portfolio (e.g. to monitor progress, to communicate what has been learnt, to inform employers, to document achievements, to grade students, to select students for employment and higher education);
- the cognitive, affective and psychomotor skills, social skills, competencies, attitudes to be addressed in the portfolio;
- who will plan the portfolio (e.g. the teacher, the student, both, the parents);
- the contents of the portfolio and the sample of work to be chosen (e.g. the best work, typical work, a range of work, a close focus on a few items).

In marking/scoring portfolios several issues should be considered:

- select the performance to be taught;
- state the performance criteria: what constitutes effective learning, what are the learning outcomes, the required performance, the required activities and the required targets to be met;

- identify how students and teachers will be involved in the selection of the items for inclusion in the portfolio, the review of, and reflection on, the selection, and the opportunities to be provided for students to: (a) select in and out samples of work; (b) rework a particular activity or piece of work.

It is important for all parties to know the 'rules of the game' in devising and assessing portfolios, so that the criteria for inclusion and marking are transparent. There is the issue of whether it is acceptable to include poor samples of work, as students may have the right to privacy and to include only those samples of work which demonstrate their best achievements rather than the processes which led up to those achievements (should students be marked on drafts or poor work, or only on their best work?). The matter is akin to writing a *curriculum vitae*: we deliberately exclude our failures and weaknesses, and only include those items which present ourselves in the best light.

Portfolios are not without their difficulties, for example:¹¹⁵

- decisions on whether to include the best work or typical work (which may not be the best work);
- honesty (students may download materials from the internet, and pass them off as their own);
- time (portfolios take a long time to score and mark).

Clearly these are tricky problems. At heart the portfolio is almost inevitably subjective and personal; the difficulty of reconciling this for use in a more objective style of assessment, for comparisons and comparative judgements of students, is problematic.

Throughout the years of schooling samples of work can be used to provide assessment data, be they pieces of course work specifically undertaken for assessment purposes (for example, the course work elements for GCSE examinations) or pieces of work undertaken as part of the everyday learning of students. As with the devising and use of tests, the use of the course work or other

written work must be appropriate to the purposes and objectives of the assessment and, like most samples, be representative of the wider range of work that a student has done. Using samples of work for assessment represents one of the most widely used means of assessment because the samples of work are ongoing and rooted in the reality of classroom life.

Ensuring that the samples of work fit the objectives and purposes of the assessment means that the criteria for setting the work in the first place must fit the assessment purposes and that the assessment or marking of the work must make explicit the criteria to be used and disclose these to the students. In the interests of good teaching and natural justice there is little justification for withholding from students the purposes of the written work and the criteria that will be used to assess the work. It is unacceptable to have students 'play a game' whose rules they have not been told. Students will be more likely to feel involved in the process of assessment if it is made clear to them what it will be and what criteria will be used (see the discussion earlier about reliability, motivation, the relations between the assessor and assessee and the assessee's 'nerves' during the assessment). This breaks with the traditional type of assessments where contents and criteria are kept secret.

Schools should have a marking policy that is consistent and consistently used through the school, and the student teacher should be able to see this. This policy might include, for example, the proportions of marks to be given for coverage of content, depth of own research, grammar, spelling, presentation, effort, achievement, together with weightings for these several elements. Guidance should be sought on what to mark for, e.g.:

- Was the work clear, sequenced, structured and presented?
- Was the argument clear, developmental and supported?
- Did the work keep to the point?
- Did the work address the key points comprehensively and deeply?

For marking GCSE course work the criteria for assessment are explicit and given by the

examining body; they constitute the 'analytical' marking schemes described above. For other pieces of work and for pre-GCSE students the criteria might be those set out in the National Curriculum documentation. With reference to the National Curriculum, though it is important that the *level descriptions* and *end of key stage statements* should be used for assessment purposes, in practice some of these are too generalised to provide *operational* criteria; the student teacher might be better advised to refer to the programmes of study and the attainment targets in the National Curriculum for more concrete criteria – or to operationalise in more detail the level descriptors and end of key stage statements of the National Curriculum.

To be able to assess a sample of work in terms of its demonstration of the achievement of a particular aspect or subject of the National Curriculum it is important for the school and department to keep a *portfolio* whose samples of work have been judged by a process of internal moderation,¹¹⁶ external moderation and agreement trials to demonstrate a particular level of achievement in every subject of the National Curriculum. When a teacher wishes to assess a sample of work she can refer to these samples in the school portfolio in order to match her own assessment standards with the agreed standards of work that have been decided for the samples of work contained in it. The school portfolio should include: (a) work to cover the levels of each core subject of the National Curriculum, (b) two or three examples for each level in each subject, and (c) examples of work that are at the top of each level.

A portfolio is simply a collection of samples of students' work over time, usually containing the best pieces of work in the area/field which may have been produced from previous drafts, and it will comprise different kinds of work: projects, reports, essays, assignments, reflective writing, self-assessment,¹¹⁷ test materials, homework, class work. The items will vary in focus, scope, size, style, amount of teacher input and support, but may often comprise:

- a biography (of a project or piece of work, so that the reader can judge the difference

between the student at the start and the end of a period of time);

- a range of works and assignments;
- reflections, self-evaluation and critique: what they have learned, how they have improved, and how they have changed.

Portfolio assessment links strongly to authentic assessment, and can be used to document the kinds of activities undertaken, the best performance (a showcase of work), a record of progress over time, or, indeed, a collection of evaluated work. Though the items to be included in the portfolio may be self-selected, this may be facilitated by the teacher.

Portfolios can be used formatively and summatively, though their formative use is most frequently advocated. Because portfolios are usually selections of best practice, and because it may not always be clear how much help from parents and teachers has gone into the portfolio or how much the student has simply downloaded material from the web, their reliability, indeed their validity, may be suspect, hence they tend not to be used for high-stakes assessment. Indeed a decision has to be taken on whether to include *typical* or *best* work in the portfolio. Portfolios are very time-consuming to develop, review and mark, and this is a major problem for time-pressed teachers. Further, given that the contents of a portfolio may vary from one student to another, it becomes almost impossibly difficult to assess them fairly – consistently and comparatively – across students. Hence they tend to be used formatively rather than summatively. Portfolios are developmental and are intended to facilitate the process of communication and conferencing between teachers, learners, parents and maybe employers.

Records

Student teachers on teaching practice will be required to keep records of students' progress. The issues of record keeping will be addressed later in this part. For the present we note that the day-to-day, week-to-week and term-by-term records should provide clear evidence for student teachers' and teachers' assessments of students,

in a subject-specific form as well as in terms of a student's wider development (including, for example, social and emotional factors).

Teachers are required to report on a student's progress in every National Curriculum area each year; to be able to do this entails the keeping of records throughout the year so that a student's achievement can be documented, difficulties noted and particularly strong features recorded. These records are *informal* though not necessarily private documents. For a *formal* assessment record the teacher can review the data that have been recorded that chart a student's progress, and match these to the level descriptions and attainment targets of the National Curriculum in order to document the student's level of achievement. The corollary of this is that the student teacher will be well advised to ensure that the ongoing record keeping system that she adopts is framed in terms of the National Curriculum as well as including other elements. By dating each record entry a student's *rate of progress* will be indicated, showing where there have been periods of rapid progress, limited progress, periods of consolidation and periods where very little seems to have happened. Student teachers would be well advised to practise writing short, punchy accounts, often in note form.¹¹⁸

Self-referenced assessments

A final type of written source of assessment data is the self-assessment undertaken by students. This was signalled in the comments earlier about ipsative assessments where it was suggested that a student could set her own targets (often in discussion with the teacher) and refer back to these at a given point in time in order to assess how successfully she has met those targets. As was mentioned earlier, these might be focused on academic knowledge and the National Curriculum subjects or they might also include other aspects of development that are not touched on in too great detail by the National Curriculum, for example developing confidence and motivation, what has been found easy or difficult (and why), what has been achieved in social behaviour, how the student has managed to stay calm in difficult settings etc.

For many students one must recognise that to give them a blank sheet of paper and ask them to complete a self-assessment in their own terms is sheer folly; they will have little or no understanding of what to do, and limited ability either to decide the focuses of the comments or to write them. In these circumstances the student teacher can offer a 'scaffolding' or framework for analysis – either provided entirely by the student teacher or arrived at through a process of discussion and negotiation with the student.

A summary of methods of data collection from written sources is provided in Box 95. We suggest that the use of written data for assessment purposes should select the most appropriate form(s) – to address the notion of *fitness for purpose* – and that caution may have to be exercised in interpreting written data, particularly from students for whom writing is difficult, demotivating or threatening. That said, many lessons which require a written outcome can also become, thereby, opportunities for assessment.

Non-written sources of data collection

Non-written sources of assessment data might be particularly appropriate for students whose written abilities are limited. They enable credit to be given for work other than written work. There are several sources of non-written data, including questioning, observations, interviews and conferences, presentations, video and audio recording, and photographs.

Questions

Perhaps the most commonly used way of gathering informal assessment data is by asking the students questions, because that is what teachers do for much of their time anyway. This form of data gathering is true to everyday classroom life.¹¹⁹ Effective questioning is quite a skill, as was demonstrated in Part III. Asking the 'right' questions in order to elicit required information is an art that the student teacher would do well to rehearse beforehand, rather than trying to organise her questioning on the spur of the moment. Further, the student teacher may wish

Box 95: Written sources of assessment data

Method	Strengths	Weaknesses
Tests	Targeted, specific, written, flexible, many types, marks can give credit and compensation for partial answers.	Unnatural, threatening, outcome-focused, the Hawthorne effect, simplistic, often only one 'correct' answer.
Questionnaires	Focused and specific.	Not central to the purposes of everyday teaching and learning.
Essays	Open-ended, enable individuality to be demonstrated, much formative potential.	Prone to unreliability, poor coverage of a whole course, risks of not showing a student's overall abilities, problems of comparability between different essay titles.
Portfolios and samples of work (including, for example, different kinds of writing)	Rooted in everyday teaching and learning, much formative potential, criterion-specific, public criteria, ongoing.	Need to ensure validity, much hinges on single items, problems for poor writers, neglects processes.
Records and reports	Specific, detailed, focused, much formative potential, charts rates of progress, honest, ongoing, cumulative.	Time-consuming, risk of subjectivity.
Self-referenced assessments	Authentic, focused, honest, highlight priorities, high student ownership.	Irrelevant for National Curriculum assessment, problems for poor writers, problem of institutional response only.

to rehearse different wordings of a question so that she can have ready a different way of putting the question in order to be helpful to the respondent.

In using questions for assessment purposes, it is important to give students time to think, to respond, and to move beyond simply low-level recall questions. The student teacher will have to plan the type, sequence, level, wording, number, focus and purposes of questions if they are to yield reliable and valid data. There is also the issue of the timing of different types of question, for example at the start of a session the questions might refer back to previous teaching and then move to more speculative, open-ended questions, whereas questioning at the end of a session might be for summarising and review, using more closed questions. The focus of the questions

can be derived from the purposes and focuses of the assessment that, in turn, are informed by the contents of the National Curriculum. What is required, then, is for the student teacher to *operationalise* the relevant contents of the National Curriculum so that appropriate, concrete, specific questions can be asked of the students. That operationalisation should not be difficult as it should have taken place at the point of planning the schemes of work and the weekly, daily and lesson plans (see Part II).

We end this section on a cautionary note. Many students may be extremely threatened if a teacher poses a battery of questions, particularly if the respondent does not know the answer. Many student teachers will have insufficient knowledge of particular students to be able to ask questions appropriately, discreetly and unthreateningly.

Indeed many students might consider the posing of a range of questions by a relative outsider an invasion of their privacy. All of these constitute significant threats to reliability.

Observation

For the most part observation is a very useful tool for collecting assessment data because it need not interrupt or upset the daily life of classrooms – thereby being strong on validity and reliability. Observation can play a highly significant part in assessment. Some activities can only be assessed by observation *in situ*, for example in PE the student teacher will need to watch the performance of a handstand or a forward roll as it happens. Notes on the performance can be made at the same time or written up shortly afterwards. In planning observations, attention should be given to the *methods and recording, focus and the role of the teacher*.

With regard to *methods and recording*, observation can be *systematic*, i.e. at regular intervals of time in an activity, at certain points in or stages of the activity, or by working down the list of students to be observed. Another suggestion is that observation can be targeted at specific *critical incidents* (where the teacher is present when an unanticipated event occurs that yields assessment data). In truth, these two types of observation lie at two poles of a continuum in observation.

At one pole is *structured* observation,¹²⁰ where the observer knows in advance what she will be looking for and enters data on a previously worked out pro-forma. One such pro-forma is for *event sampling*. Here a tally mark is entered whenever the looked-for behaviour occurs over a given time period, for example whenever the student reads on her own, writes without assistance, addresses safety factors in the laboratory. For instance:

- 1 The student fetches safety glasses /////
- 2 The student checks that his shirt cuffs are tucked into an overall //
- 3 The student keeps the Bunsen burner flame yellow when not in use ////
- 4 The student wears gloves when handling acids
////////

In this example the event 4 occurs most frequently and event 2 least frequently. Event sampling enables the observer to note the incidence and frequency of the looked-for behaviour; that might indicate to the student teacher whether a student has learnt something and can apply it confidently and securely.

There are other forms of structured observation, *viz. instantaneous sampling* and *interval recording*. Both require data to be entered onto an observation grid of looked-for behaviours, using some form of coding symbols for speed of entry. We suggest that at this stage the student teacher would not have sufficient time available to conduct this type of observation, hence we do not dwell on it here.

In structured observation the focus of the observation can be decided by reviewing the level descriptions, the attainment targets in question or the programmes of study of the National Curriculum. It is likely that this has already been undertaken at the planning stage (see Part II); in this case the student can refer to the lesson plans where ‘assessment data’ and ‘intended learning outcomes’ were specified. These can then be operationalised into specific items to feature in the observation. We would argue against too structured an observation unless it is for in-depth assessment as it is very time-consuming, unnatural (unlike an everyday teaching situation) and potentially very threatening to students.

An *unstructured* observation (of critical incidents) records incidents that take place spontaneously. Here data are usually entered in the form of words and descriptions; these are reviewed later in light of the criteria used for assessment – perhaps derived from the National Curriculum level descriptions or attainment targets, lesson plans, or objectives of the scheme of work. We would argue against a completely unstructured observation as it may be time-wasting. Nevertheless a *responsive observation* – where a student teacher notes down an unanticipated event, reaction, outcome – may be useful for assessment purposes.

Between structured and unstructured observation comes *semi-structured* observation, where the teacher has a range of points about which to

gather data, e.g. the students' ability to plan, undertake and evaluate a piece of design technology, but the nature of the entry about the features or behaviour looked for is open-ended, enabling a tailored response (often in words) to be written about a particular behaviour or activity in question. The observer has to know what is being looked for in the observation.¹²¹ For example, the student teacher might be interested in assessing a student's abilities to conduct an experiment, e.g. finding out which kind of paper towel absorbs the most liquid. She might divide the assessment activity into eight areas:

- 1 Exactly what the problem is in the experiment.
- 2 Identifying key variables.
- 3 Isolating and controlling the variables in order to conduct a fair test.
- 4 Operationalising the experiment.
- 5 Conducting the experiment.
- 6 Recording the results.
- 7 Interpreting the results.
- 8 Evaluating the experiment (e.g. how it could have been improved).

Each of these eight points is listed and comments are written about the student's performance in each. The comments might also include numbers (marks for the student's achievement in different aspects of the activity).

We advocate very strongly a semi-structured observation as it sets an agenda of areas and items to be observed but is sufficiently open-ended to allow an individual, 'customised' response in the form of words. That respects the student teacher's growing professional insight and judgement.

With regard to the *role of the teacher* in gathering observational data, attention needs to be given to whether the teacher is to be a participant or non-participant observer. We can surmise that teachers have to be aware that if they intervene too greatly in the activity this may reduce the reliability of the data that they acquire.

With regard to the *focus of the observation*, this should consider individual and group activities. Indeed one of our early comments indicated that the assessment activity should resemble normal

classroom practice as far as possible so that the problem of the Hawthorne effect and the other threats to reliability set out earlier could be reduced. In reality this implies that collaborative group projects should feature in an assessment. Whilst this is a very positive factor it does create some problems for the assessor:

- how to minimise students copying from one another;
- how to identify an individual's contribution, particularly if it did not result in a visible outcome;
- the composition, size, dynamics of, and personalities in the group that might exert a significant influence on an individual's contribution, for example if there is a dominant student.

Some of these problems can be minimised if: (a) the teacher clarifies what each student will be doing in the group (perhaps after the group itself has discussed this); (b) every student has the opportunity to make a contribution; (c) it is possible to identify how each individual has enabled the task to move forward; (d) the teacher builds into the task the opportunity for individual discussions between herself and each student.

Interviews and conferencing

This 'live' form of data collection generates data that can be recorded as the interview takes place or shortly afterwards. Interviews and conferencing can take place on a one-to-one basis, with groups of students, and with the student(s), parent(s) and teacher(s) present. In the case of the latter the interview might be recorded; this is useful but very time-consuming. Interviews, like observations, vary from the structured to the unstructured. *Highly structured* interviews will have the contents, wording and sequence of questions worked out in advance. *Semi-structured* interviews will have a list of topics and questions planned but the sequence and wording will follow the flow of the interview. Questions here are open-ended as well as closed, enabling respondents/participants to address matters in

their own terms and in their own words. The assessor might have a list of *prompts* and *probes* ready to use if students are unforthcoming or if they are able to be pressed into further comments respectively. Honesty, candour, depth and authenticity of response are the canons of validity in a semi-structured interview.

An *unstructured* interview, in parallel with an observation of an unanticipated critical incident, by definition cannot set its agenda. It is more like an everyday conversation, open-ended and uncontrived. Though this might yield assessment data it is a high risk form as it may not yield anything – just as many everyday conversations are comparatively inconsequential. We would not advocate this form of interview as it is time-consuming with the strong possibility of yielding very little assessment data.

Interviewing and conferencing have commanded significant attention, where conferences with parents, teachers and children are foundation stones. Such conferencing has been developed much more fully with all age groups and areas of school life with the rise of Records of Achievement and action planning. Both of these have conferencing at their heart, whether it be to engage in a process of review or to decide future targets, success criteria and ways of achieving the targets. In this respect the importance of interviewing and conferencing in this book's advocacy of action planning cannot be overstated. Interviews and conferencing can be motivating for students and student teachers; many students respond positively to the individual attention that they receive in a conference and this form of action planning puts student involvement and engagement in learning as a high priority. Using interviews and conferencing for teaching and learning purposes and for assessment purposes gives this form of data collection an authenticity which is derived from its rootedness in the everyday life of classrooms.

Presentations

Data can be acquired from students making short presentations to their peers or to the student teacher. A presentation might be in the form of a play, reporting what they have done in a par-

ticular lesson, leading a debate, reporting how they conducted a traffic census, introducing the work that they have done as a group, reporting on a collaborative project etc., presenting their exhibits of art or design technology work. Using an oral rather than a written medium enables students to use their own ideas in their own words. As a 'live' matter it can involve students more in their own learning and engage them in the activity in question, raising their motivation and interest. This is particularly true for students who find writing difficult or unpleasurable.

On the other hand this activity can be very threatening for inarticulate, reticent or shy students who might become a target for public embarrassment and humiliation, condemning themselves from their own mouths. Alternatively it might give centre stage to a student who loves the limelight and public acclaim and who has an ego to match. Presentations are very personality-specific; whilst that holds out the prospect of authenticity it may reduce their degree of validity.

Video and audio recordings, and photographs

These sources of assessment data capture the unfolding complexity of classrooms and are particularly suitable for acquiring data from students whose written abilities are limited. For that reason they are sources of assessment data that are frequently used with students with special educational needs. Though they can capture 'live' events they can only do so if the equipment is trained on the appropriate parties. For example, a video recorder can be selective in its focus and can cause a major disturbance if it is being taken to several locations in the classroom. Whilst these three forms can yield data that are 'strong on reality' the student teacher ought to be warned about the cost of these forms of acquiring assessment data. With regard to photography there is the cost of the film and processing; with regard to audio and video cassettes there is the cost not only in terms of equipment but in terms of time in setting up the equipment and in analysing the results – an hour's video time might take three hours of analysis, an hour's audio

cassette time might take five hours of analysis. These latter two forms of acquiring assessment data are perhaps unrealistic for general and wide-spread use though they may be very useful indeed for in-depth, focused assessment of specific students or aspects of work.

Role play

This is an activity that might enable students who are inhibited in one context to demonstrate the looked-for abilities in another context. For example, a student who is reluctant to contribute much to a class discussion might turn out to be highly articulate in a spontaneous piece of drama. Knowing that many behaviours are context-dependent (see the discussions of reliability earlier), this is a useful way of trying to gather assessment data through additional channels. On the other hand, of course, some students may not take to role play activities; they may be overshadowed by more assertive members of a drama group and thus they may not be able to exert the freedom of decision making that might enable the student teacher to gather useful assessment data.

A summary of methods of collecting assessment data from non-written sources is presented in Box 96.

Lambert¹²² also includes *graphic evidence* (e.g. pictures, diagrams, charts and graphs, computer printouts) and *products* (e.g. artefacts, models and 3D constructions). These may be particularly useful for catching assessment data from students whose written and oral skills may be undeveloped.

As with written forms of assessment data, the selection of which non-written form of data collection to use should be covered by the criterion of *fitness for purpose*. Less tightly structured, non-written methods are often truer to everyday life. Unstructured methods risk being too time-wasting. As with written sources of data, we advocate semi-structured methods of data collection as these have a set agenda but are sufficiently open-ended to permit a response that is tailored to individuals. Hence in planning how to gather assessment data the student teacher needs first to be clear on the purposes of the

assessment and then this will determine the level of formality of the assessment. The purposes and degree of formality will indicate whether written or graphic types of data are appropriate, how structured and closed or semi-structured and open the data collection methods are to be, and how reliability and validity will be addressed.

Providing opportunities for assessment

In addition to the obvious point that students perform differently at different times of the day and the week, a more detailed analysis reveals that *opportunities* have to be provided for students to demonstrate their abilities, achievements and understandings. There are plenty of occasions in classrooms when assessment data can be collected, for example: in *writing times* – factual, stories, poems, handwriting, spelling times; in *speaking and listening times* – asking and answering questions, participating in discussions; following instructions, compiling charts and spreadsheets; when students are *reading* all manner of literature and documents; undertaking practical activities, using equipment, solving problems, investigating, working with computers.

Moreover, not only do occasions within the field of *curriculum content* provide opportunities for assessment, but there is a range of *pedagogical* opportunities that can be used to collect assessment data, for example: working individually, in pairs, in a small group; in the home corner, in the science laboratory, in the resources centre, in the music room, in a flexible learning suite. Clearly if this is to be developed it requires teachers, departments and faculties to be prepared to share information about students other than in their own curriculum area. For example, since the publication of the Bullock Report, mentioned earlier, the point has been made that language is a cross-curricular responsibility of every teacher, yet how many secondary teachers are there who do not teach English but who have been expected to contribute to a discussion of a student's performance in English? Probably rather fewer than the Bullock Report recommended!

In devising assessments, then, opportunities not only have to be planned but seized for assessment

Box 96: Non-written sources of assessment data

Method	Strengths	Weaknesses
Questions	Focused, formative, specific, true to everyday life in school.	Threat, needs skills to put the questions, problems if students are inarticulate, perceived invasion of privacy.
Observation	Strong on reality, takes in context, high validity, reliability.	Distracting for teachers, time-consuming.
Listening	Strong on reality and authenticity, takes in context, high validity, reliability.	Time-consuming to administer and analyse, students may be inhibited. May be an intrusion on privacy.
Interviews/conferencing	Build on known relationships, can be detailed, deep and focused, enables freedom of response, links with action planning and records of achievement.	Time-consuming to administer and analyse, students may be inhibited.
Debates	Provide opportunities for students to 'shine'.	May be unfair to inarticulate, quiet or undemonstrative students; limited scope.
Presentations	Enables students to present outcomes in their own terms, useful for poor writers, captures factors that written forms miss, can be true to everyday classroom processes, motivating.	Threat, public humiliation or 'showing-off', difficult to isolate an individual's contribution, difficult to build out the influence of others, students may be inhibited.
Video/audio recording and photographs	Live, captures complexity, records the non-written, suits poor writers.	Selective, time-consuming to set up and analyse, expensive materials.
Role play and simulation	May enable a student to show different abilities.	Students may be shy, a dominant student might bias another student's 'performance'.
Models and artefacts	May enable a student to show different abilities.	May have limited motivation or interest for some students.
Web pages	Up-to-date and engaging for students.	Not achievable for all students.

to occur as part of the normal everyday teaching process (referring to the notion of individual – valid – assessments to be able to provide formative feedback so that improvement can take place), rendering assessment as close as possible to a 'natural' teaching situation. Put simply, not only is it desirable *in principle* that assessment should

be integral to learning but *in practice* a school day, week, term or year does not have sufficient slack time to allow assessments to be *extra* to teaching; they are *built-in* not *bolt-on* elements of teaching. Opportunities for assessment have to be ascertained in everyday lessons. Lambert¹²³ suggests that a lesson plan, for example, should

include references to *assessment opportunities*, *assessment methods* and *evidence of attainment* (see also the lesson plans set out in Part II).

Designing an assessment task

So far this part has set out a range of issues in planning assessments. We turn now to seeing how these issues can be addressed in planning specific assessments. For clarity these are set out in an annotated sequential list.¹²⁴ The planning issues addressed locate assessment not only in general contexts but with specific reference to the National Curriculum.

- Identify the target group.

Considerations: will it be one or more groups from a whole class; a whole class; students from across more than one class; one or more age groups; one or more ability groups; how will reliability be addressed if too many students are involved?

- Decide the number of students who can be working on the activity and who can be assessed by the activity.

Considerations: will there be some students who are working on the task but who will not be assessed; what criteria will be used to decide on the numbers of students being assessed, e.g. ability, practicability, relationships, resources; how will children with special needs be part of the activity?

- Decide the purpose of the assessment.

Considerations: will it be to grade, to diagnose, to provide feedback to students, to decide future class placement (i.e. for selection), to measure achievement, to chart rates of progress, to compare students; whose purposes and who will be the audiences of the data collected, i.e. what are the objectives of the assessment and what learning outcomes will the assessment serve (applying the objectives model adopted throughout this book)?

- Decide the type of assessment.

Considerations: what are the most suitable types of assessment in order to serve the purposes of

the assessments, e.g. criterion referenced, norm-referenced, diagnostic, formative, summative, ipsative?

- Decide the assessment opportunities in a 'normal' teaching and learning activity.

Considerations: how can you derive assessment data from everyday activities rather than having to set a task specifically for assessment purposes; what assessment data and criteria are possible in a given lesson and its outcomes?

- Decide what kind of task will most fittingly serve the purposes of the assessment.

Considerations: exactly what will the assessment activity be assessing; how will validity be addressed; what will the focus of the activity be?

- Decide whether the activity is an individual or group activity and how you will assess an individual's performance in a group activity (if applicable).

Considerations: what makes the activity specifically a group activity; is the difficulty with assessing an individual's contribution to a group activity insurmountable or worth the effort; how will group interactions feature in acting on the data? Do not attempt to work with more than four groups if the students are unfamiliar with working in groups.¹²⁵

- Decide the attainment target(s) to be assessed.

Considerations: will you focus on one attainment target or more than one; what ways are there to conduct assessments in the attainment target(s)?

- Decide the range of levels in which the activity will enable you to place students as a result of the assessment.

Considerations: for standard assessment tasks (SATs) the teacher has to decide the most appropriate entry level as different SATs apply to different entry levels – will you have different activities for different entry levels or different elements of an activity for different entry levels; have you looked at the criteria for achievement at the lowest and highest levels; how will you accurately be able to distinguish levels of achievement in the activity?

- Decide how to render the activity as close as possible to everyday classroom practice.

Considerations: how important is it that students know that they are being assessed;¹²⁶ how will a student's awareness that she is being assessed affect her performance; is it possible to undertake the assessments without the timetable being disrupted; which children will be anxious; what can be done to allay anxieties?¹²⁷

- Decide the timing and time scale of the activity.

Considerations: examine the normal teaching timetable and activities to identify assessment opportunities in everyday teaching. How will you judge how much time is required; why might you be putting time constraints at all on a criterion-referenced assessment; what time of the day or the week is most suitable for the students; how will you make allowances for fast and slow workers?

- Decide what assessment evidence you need to collect.

Considerations: will you focus on processes or outcomes, how will you decide what valid and reliable evidence is required?

- Decide the most appropriate ways of gathering the assessment evidence.

Considerations: decide which parts of the assessment data can only be gathered *in situ* (e.g. a PE performance or musical performance) and which data can be reviewed out of school (e.g. by looking at samples of written work or notes made during an activity); decide whether, and which, written or non-written forms of data are most appropriate to address the purposes and focuses of the assessment (or whether a combination of written and non-written forms might be more suitable).

- Analyse the type of task required.

Considerations: is the task an application of material already learnt, application of new material, a practice task, the synthesis of existing knowledge, the synthesis of existing and new knowledge (or a combination of these, and, if so, which parts of the task address different types of task and why

are you making differential task demands); how do you know what demands the task will place on students; how precisely¹²⁸ do you know what the demands on students will be?

- Analyse the task requirements.

Considerations: look at the task requirements to see if all elements of the task are equally difficult. Why are you including elements of the task that are easier or more difficult than others; what is it that makes some elements of the task more difficult than others; are the tasks sufficiently concrete and within the experience of the students; does the number of elements in the task prevent students from demonstrating that, in fact, they might understand each element but be overwhelmed when they are put together?

- Decide options in the task.

Considerations: will some students select an easier option than others (e.g. a way of working) and what will happen if students select an easy way of working when they are capable of much more; how will the task selection process affect an individual student's recorded attainment; will the students appreciate the relevance of the task to their own lives?

- Clarify the criteria for marking (where applicable).

Considerations: how many relevant tasks does the student have to complete successfully before being credited with having reached a particular level of achievement? Consider marking conventions, criteria and weightings.

- Decide how the activity will be introduced (the *presentation* mode); what the students will actually be doing in the activity (the *operation* mode); what form the outcome will take (the *response* mode).

Considerations: how well matched are these modes to the students; how will you know whether, for example, a language difficulty is preventing a student from demonstrating her scientific or mathematical abilities; how will you support students whose first language is not English? Decide the method of delivery in: (a) the *presentation mode* (e.g. oral, written, pictorial, video, IT, practical);

(b) the *operation mode* (e.g. mental, written, practical, oral); (c) the *response mode* (e.g. a multiple choice test, essay, short piece of writing, picture, oral, practical, display, presentation, role play, computer data).

- Decide how to reduce threats to reliability and validity.

Considerations: how will extraneous influences on performance be reduced; when will you address reliability issues, e.g. in devising the task (quality assurance) or in marking the outcome (quality control); attempt an assessment that is 'good enough' rather than striving for perfection – be realistic? When will you halt the activity if students are struggling; how will you take account of teacher intervention or interventions by other students; how will the situation be made less threatening; how positive are the relationships between the assessor and the assessee; how have you addressed readability; how consistent is the proposed assessment task with the usual ways of working in the class; what other contextual variables do you need to consider that might influence the reliability of the assessment and the data that it yields?

- Decide exactly which National Curriculum criteria you will be using in judging the assessment evidence.

Considerations: some level descriptions may be imprecise, in which case the attainment targets and programmes of study might be more helpful; reference to the school portfolio of agreed standards might be helpful here.

- Decide the information/records/evidence/data that will be brought to a moderation meeting.

Considerations: how will the issue of sampling be addressed, i.e. how will you decide what is a representative sample of each student's work and several students' work?

- Decide how the results will be used as part of an ongoing recording system.

Considerations: ensure that your decisions fall in line with the school policy; decide on whether and how to aggregate marks (if applicable); how often will you update your formal records?

- Decide how to report the results and to whom.

Considerations: what will be reported to students, parents, other teachers, and other interested parties; what will go into each student's portfolio?

This long list of points and considerations is perhaps daunting, yet, for the sake of reliability and validity, these are important issues that cannot be overlooked. This was a feature of the opening comments on this part that suggested that all too easily reliability and validity become the casualties of ill-prepared, over-politicised or 'high-stakes' assessments. There is no doubt that assessment in the United Kingdom is a 'high-stakes' activity, both politically and educationally, particularly since teacher assessment in the National Curriculum has assumed an almost equal footing at Key Stages 1, 2 and 3 with externally set and externally marked SATs.

That said, a much shorter list of considerations for teacher assessment was provided by the former School Examination and Assessment Council (SEAC), which built on the acronym of INFORM.¹²⁹ An updated version of the SEAC acronym can be seen below:

- 1 **I**dentify the elements of the National Curriculum (attainment targets, level descriptions, programmes of study) that the lesson will address.
- 2 **N**ote opportunities for the student to demonstrate attainment.
- 3 **F**ocus on the performance, looking for evidence of achievement.
- 4 **O**ffer the student the opportunity to discuss what was achieved.
- 5 **R**ecord what was identified as important and noteworthy.
- 6 **M**odify the lesson plans for the student if necessary.

What is very clear in this six-stage process is that the teacher assessment envisaged here is formative, criterion-referenced, related to progression, evidential, perhaps even related to action planning at stage 6, and, because the teacher has to relate her standard of marking to agreed criteria and standards, moderated. Hence, though formal

teacher assessment and SATs might take us into simplistic summative assessments with limited formative potential, nevertheless in the day-to-day assessments of students a more educationally beneficial set of practices might still operate.

Drawing together the several strands of the arguments and issues raised in this part we suggest several principles that should guide the student teacher who is preparing to assess students during teaching practice:

- The purposes are to be diagnostic and formative, providing feedback and being educative.
- Teaching should be adjusted in light of assessment evidence.
- Assessment should promote, not damage, student motivation and self-esteem.
- Assessment should be constructively critical and provide rich, positive feedback and feed-forward.
- The assessments should be criterion-referenced and the criteria should be public.
- The assessments should lead to diagnostic teaching.
- Assessment should promote student self-evaluation.
- The assessments should be built on evidence rather than on intuition.
- Assessment data should be derived from everyday classroom activities.
- Assessment opportunities should be sought in everyday classroom activities.
- Semi-structured approaches to gathering data are recommended, generating words rather than numbers (measures).
- Assessments should be linked to the student teacher's and the student's action planning and target setting.
- Involve the students in the assessment process.
- Communicate the assessment criteria to students.
- Demonstrate validity and reliability in the assessments, addressing particularly 'consequential validity'.
- Demonstrate *fitness for purpose* in deciding the method(s) of gathering assessment data and setting assessment tasks.
- Select assessment methods that accord strongly with everyday teaching and learning processes.

Marking work

Clearly it is invidious to provide detailed guidance on marking, as the notion of 'fitness for purpose' must apply. Nevertheless, we suggest some key principles of marking policies and practices here, arguing that marking should:¹³⁰

- make clear to students its purposes and criteria, linked to the purposes of the task to be marked;
- make clear the success criteria for the work (e.g. knowledge, understanding, application, presentation, effort and so on);
- provide rich, constructive, positive, criterion-referenced and high-quality feedback and 'feedforward' to students, so that they have a clear indication of what the criteria are and how to improve.

(See www.routledgefalmer.com/companion/0415306752, Chapter 16 Assessment, Key principles of marking practice.)

A major study of feedback at the University of Bristol¹³¹ – the LEARN project – provided some important insights into marking work and giving feedback. The project involved interviews with over 200 students of different ages (7–18 years) in a range of schools, and was undertaken to gather their perceptions of assessment and how assessment was being used to help them improve their learning.

The researchers found that 'students were often confused by the use of grades and found it difficult to recognise the difference between effort and attainment grades. They also found that simple praise (ticks, good or excellent) was unhelpful.' Rather, the researchers suggest, teachers should

give narrative comments not grades or marks because narrative feedback encourages students to engage with the quality of the work while grades or marks encourage pupils to look for ways to get the best marks rather than what they need to do to improve their learning. This may result in avoidance of difficult tasks, a loss of self-esteem and increased occurrence of underachievement.

The researchers suggest that it is important to note that comments which only gave praise or criticism to students did not help them to improve; indeed it was reported that the students preferred to be given oral rather than written feedback, as this enabled them to enter into a dialogue with their teachers. Giving rich, formative feedback when marking work acts as a scaffolding for learning, not necessarily giving them the correct answers but enabling students to think for themselves.

This set of principles moves away from the simplistic awarding of a mark or grade, and towards an ongoing dialogue between teachers and learners about their learning and how to improve it. Marking work is concerned largely with improving performance. Can a mark alone indicate how to improve performance? Clearly not. Are marks and grades specific enough to improve learning? Clearly not.

If grades and marks are to be used, then their role and purpose needs to be defensible. For recording and reporting, it is important not only to have recorded the grades and marks, but also the criteria and tasks/activities, the rich feedback and the information collected and given. Without such information, the recording of a grade is entirely meaningless. It is important, then, to include comments on students' achievement of subject matter as well as to assign a grade, and it is important for the grade criteria to be transparent and communicated to the students. Clearly the awarding of a grade may cast a teacher in a dual role: as supporter as well as judge,¹³² but the management of this dual role is part of a teacher's professional behaviour.

Many schools will have marking conventions (e.g. for presentational and secretarial matters) and student teachers will need to enquire about these. Further, it is important to find out: whether the school requires a mark for effort as well as for achievement; what the procedures are for learners to do 'corrections' or follow-up to the marking; the focus of the marking; the weighting to be given to different elements of marking; what the procedures are for recording and reporting marks and comments (and to whom); what kind of comments are required to be given to students.

In providing feedback to students, it is possible for 'markers' to make suggestions on what needs to be done to improve the work; to relate the achievement to the learning intentions; to provide examples of how to improve; to prompt further thinking and action; to attend to 'secretarial' matters (grammar, punctuation, spelling, presentation, handwriting); and to attend to the *quality* of the work and the ideas, not only its quantity of secretarial matters. Giving learners time to digest the feedback and reflect on it is important, both with marked class work and homework; if this means reducing the amount of teaching time to allow time for reading feedback and reflecting on it then so be it – it is learning time.

Some teachers have students mark their own work or mark each other's work. This may be economical in terms of teachers' time. On the other hand this can induce cheating, and, indeed, shared or paired marking has been argued to be a violation of human rights to privacy and confidentiality. If the student teacher wishes to develop paired or shared marking or shared feedback, then he/she would be well advised to find out about the existing marking and feedback practices in the school/class. If there is to be paired marking then markers – children – need to be prepared for this, to do it in a non-competitive and supportive atmosphere, with due respect to privacy, what is to be marked, and how it is to be marked. Peer assessment, properly handled, can promote self-evaluation, self-assessment and reflection in learners;¹³³ the criteria for such assessments must be agreed, equitable, transparent and public.

Wedeen *et al.*¹³⁴ provide some useful guidelines on giving feedback to students:

- Be realistic.
- Be specific.
- Be sensitive to the goals of the person.

Assessment moves away from simply conducting a test, to being a rich learning experience for teachers and learners alike, with formal and informal means for gathering data being utilised: observation, questioning, discussion, marking and dialogue. Informal assessment is a major contributor to formative assessment and day-to-day

planning, whilst formal assessment is useful for summative and maybe diagnostic assessment, depending on how it is conducted. Informal assessment can be immediate, ongoing, direct and of great learning benefit; formal assessment takes longer, is usually delayed in providing feedback, and may have little impact on learning or improvement. Informal assessment is naturalistic, often subjective, close to reality, even covert, whilst formal assessment is predetermined, objective, often in a contrived situation and overt.¹³⁵

So far here we have been assuming that work is produced by an individual student. What if the students have been working collaboratively? If this is the case then the teacher must specify in advance the marking criteria, for example:

- if the work is going to be a corporate effort, with each member of the group receiving the same mark, regardless of the differential effort or input into the collaborative group;
- whether it is required to be able to identify each individual's exact contribution to the group product;
- whether the group processes and interactions will be included in the marking;
- the quality of the overall group's work (as opposed to that of individuals in the group).

A worked example of an assessment activity

Target child: The target child is a Year 2 (7-year-old) girl whom we shall call Saira. **Activity/assessment opportunity:** We decide to assess her in a group situation with two other children; they will be playing a group game called 'The Snake Game'. In this game different coloured snakes have different numbers on them, some with numbers less than 10, others with numbers of 10 or greater. The number is the same for a snake of the same colour – 2 for a green snake, 3 for a yellow snake, 5 for a red snake, 10 for a brown snake, 12 for an orange snake, 15 for a white snake. The children can choose any snake if they answer a question correctly that is printed on each card of a set of cards. The cards can ask them: (a) to add single digits; (b) to add numbers greater than 10; (c) to subtract single digits from

numbers between 10 and 100; (d) to subtract numbers over 10 from numbers between 11 and 100; (e) to count up the next 3 of a sequence, e.g. 2–4–6–8–10; 3–6–9–12–15; 5–10–15–20–25; (f) to count down the next 3 of a sequence, e.g. 30–25–20–15–10; 24–20–16–12–8; 30–27–24–21–18. Each child must write down the answer to each question, though they don't need to 'show the working' if they wish. The winner is the child who is the first to reach 100.

The purpose of the assessment: the assessment is diagnostic and formative and has several purposes:

- to see how well the child can read, write and order whole numbers up to 100 and to identify areas of strength and weakness in this;
- to see how secure the child's understanding is of place value up to 100, and to identify areas of strength and weakness in this;
- to see how well the child can add numbers below 10, greater than 10 (whose totals do not exceed 100), both mentally and on paper, and to identify areas of strength and weakness in this;
- to see how well the child can subtract numbers below 10 from totals of 100 or less, both mentally and on paper, and to identify areas of strength and weakness in this;
- to see how well the child can use repeated addition and subtraction in a number pattern.

The attainment target(s) and level of the National Curriculum to be covered: mathematics, Attainment Target 2, Level 2 (though the level might turn out to be Level 1).

The timing and time scale of the activity: a 15-minute activity in the mid-morning of a Wednesday.

Presentation mode, operation mode, response mode: the teacher will show the children what to do and give them practice in the mechanics of the game; the children will play the game, writing down algorithms and 'sums' where necessary; the response will be written.

The assessment evidence to be collected: listening to the child's conversation and confidence in the activity (observation); her ability to work out

'sums' mentally (questioning); the contents of her written work (written); responses to the teacher's questions (questioning).

The (a) easy, (b) moderately difficult and (c) difficult aspects of the activity: (a) the addition (single figures) and subtraction (single figures – no decomposition); (b) addition and subtraction (double figures – no decomposition); (c) handling large numbers and subtraction with decomposition respectively.

The type of task: the application of already-learnt material.

Threats to reliability and validity: the desire to win, the effect of losing or being incorrect or having difficulty, the effects of the other two children in the group, struggling to understand the rules of the game.

Addressing threats to reliability and validity: by discussion with the child; by ensuring that the child knows exactly what to do (with a demonstration by the child and the teacher before the assessment begins); by giving the child the opportunity to practise the 'mechanics' of how to play the game (i.e. so that the rules of the game do not obstruct the processes of using algorithms).

What to do if children have difficulties: the teacher will prompt the child and indicate this in the assessment, suggesting that further work/practice is required.

The exact criteria to be used to judge the child's performance: see above – *the purpose of the assessment*.

The data/records to be brought to a moderation meeting: the teacher's written comments, a photocopy of the child's written work.

The record of the results: the work and the results will be held in the child's own portfolio and the teacher's record book.

Reporting the results: a summary report together with the teacher's own record for discussion with the parents.

The report of the results: Saira was eager to play the game and was able to keep the other players enthusiastic, even though they were not winning very much. Saira usually chose 'high-value' snakes (bearing numbers greater than 10). She was able to count up and down in 2s, 3s and 5s mentally but needed to write down the additions of numbers over 10 when her running total exceeded 30. Her written calculations were always correct in addition, and in subtraction where single digits were being subtracted. She sometimes used counters for this latter activity. Her subtraction of numbers over 10 from larger numbers (over 20) was correct if there was no decomposition but incorrect if decomposition was involved, e.g. $60 - 12 =$ and $53 - 15 =$. When I asked her how she 'worked out' the 'sums' in her head she was clear on place value; when I asked her 'extension' questions about adding on in patterns of 2, 3 and 5 she was clear and correct, although when she was subtracting these mentally she was clear on what to do but sometimes incorrect in actually manipulating the numbers.

Assessment analysis: Saira has a good grasp of place value to 100, mental addition to 30 and simple subtraction without decomposition. She shows understanding of, and confidence in, using the correct algorithms for these processes. She can recognise and use number patterns of 2, 3 and 5. In National Curriculum terms she is operating at Level 2 of the Mathematics Attainment Target 2.

Recommendations: Saira is ready to apply the algorithms to larger numbers in addition (up to 100) in written and mental work, and to be introduced to decomposition in subtraction – using single figures only at this stage with much practical concept reinforcement before too much written (procedural) work.

It can be seen from this fairly lengthy example that the activity bears a strong similarity to the everyday activity of a 7-year-old in school and that the assessment has been planned with reference to, or derived from, the level descriptions and programmes of study of the National Curriculum. Clearly in the day-to-day work of the teacher the level of background detail reported

here would not need to be formally recorded (e.g. the details of the game, perhaps the purpose of the assessment) – the details are written here for the purpose of explication and example. They indicate, in fact, that the teacher has taken account of the several factors involved in planning the assessment; the difference between this and the normal activity of the teacher is the degree of formality involved – the teacher might be advised to go through the series of planning considerations in her mind rather than on paper.

Assessment is constantly developing. Recently the move towards ‘testing when ready’ rather than testing at particular ages and stages has been put onto the political agenda.¹³⁶ Computer-aided assessment is coming to the fore, not least for its ability to save teachers’ time (e.g. to have electronic marking and recording),¹³⁷ to be available on demand to learners, and to test a wide range of subjects (including minority subjects) and knowledge.¹³⁸ The scene shifts constantly.

Record keeping and report writing

Introduction

During teaching practice there is a clear obligation on the part of the student teacher to continue the day-to-day running of the classes in line with the organisation and methods employed by the regular class teachers. In certain forms of classroom and school organisation, for example where continuous assessment is practised, or where vertical grouping and related schemes operate, adequate record keeping is essential to the success of the educational programmes. Similarly, in systems practising 'individualised learning' the need for individual records is crucial. Further, with the rise of assessment and the increased attention given to the reporting of achievement there is a marked increase in the amount of record keeping that is taking place in the school.

The Qualifications and Curriculum Authority¹ (QCA) suggests that records are to be linked to charting the progress that students are making, and that recording student achievement can be used to raise standards. That said, it recognises that the practice of record keeping in many schools is often over-bureaucratic and time-consuming, that it is not always an aid to enhancing student progress, and that schools are not always clear how their record keeping needs to be conducted in order to serve their own needs and those of other agencies. Indeed it suggests that records need not be complicated but, rather, that it is more important for teachers to have a shared understanding of standards and that the record keeping that is undertaken in the school not only

arises naturally from, but feeds into planning, teaching and learning.

Effective record keeping enables the student teacher to:²

- track the progress of individual pupils or groups of pupils;
- identify patterns over time where there are many small steps in developing pupils' knowledge and skills;
- confirm end-of-year and statutory end-of-key-stage teacher assessment;
- set individual and group targets for improvement;
- discuss pupils' progress with their parents (or others with parental responsibility) and other teachers.

It is the student teacher's responsibility to participate fully in the record-keeping system that is used in the school to which she/he is attached. What follows is an outline of the use of records and some suggestions for students who find themselves faced with the task of designing record systems for their own use.

Record keeping is often considered an irksome chore by many teachers. In recent years the amount of record keeping that teachers have to do has increased tremendously. In many cases the official records that schools used to keep on names, address, date of birth, previous schooling, contact telephone numbers etc. are stored on computers; these are not the present subject of discussion. Rather, our concern is with the records

that the teacher keeps in connection with the ongoing work in class and the progress of students at school. In many cases there is a 'house style' of record keeping in schools, though this is usually for the more formal reporting to parents, the next school, the next teacher, the curriculum co-ordinator and the headteacher. On the other hand many teachers keep personal records on their students, often for their own personal use rather than to be shown to others. There are many considerations in record keeping that determine the records that are kept by teachers, for example:

- the purposes and uses of the record;
- the use of records for reporting;
- the formality of the record;
- the contents and level of detail of the record;
- the audience(s) of the record;
- the style (format) of the record;
- the timing of the record entry.

Different parties will be interested in different matters, for example a class teacher may wish to have a more detailed day-to-day record than, say, parents. A new school may seek a combination of a general record on a student's overall achievements and specific details of particular strengths and weaknesses. A head of year or age phase or a teacher concerned with the pastoral aspects of schooling may wish to have information about students who are experiencing or have experienced personal, emotional, social or behavioural difficulties and how these have been met successfully by previous teachers. The different purposes that records serve require different contents and formats. For example, it may be that parents wish to have a jargon-free and easy-to-read summary of their child's progress whereas a receiving teacher may wish to have a more detailed and diagnostic record within each National Curriculum subject. Records for a student teacher's personal use might contain notes and symbols that are unintelligible to others.

Some records might document curriculum content covered (e.g. by lists, schemes of work, web diagrams, flow charts, half-termly, weekly or daily plans that can also double up as records); others might be records of marks gained on

students' written work. There might be individual students' records, group records, a whole-class record. Some records might be numerical (e.g. marks scored); others might be verbal (a teacher's comments on progress etc.); others might be samples of a student's own work; others might be photographic. Some records might be open-ended; others might be closed 'tick boxes'. As with assessment, the guiding principle for record keeping must be 'fitness for purpose'. The implication of this is that student teachers initially must be clear about the purposes of their records, so that the contents, format and detail serve the purposes clearly. Given the room for difference in record keeping there is a need for student teachers to consider purposes, contents, style and format, level of detail, uses of the information, methods of gathering and recording the information.

The purposes of record keeping

Throughout this book we have advocated the objectives model as being useful for planning. The same holds true here; it is useful for the student teacher to be very clear on the purposes – the objectives – of the record keeping. In one study,³ typical reasons given by teachers for keeping records were:

- to chart pupil progress and achievement;
- to communicate information to other teachers;
- to ensure continuity of education through the school;
- to ensure continuity of education on transfer to other schools;
- to guide a replacement or a supply teacher;
- for diagnostic purposes – to spot problems, identify underachievement and pupils needing extra help;
- to provide teachers with information on the success (or failure) of teaching methods and materials;
- as a statement of 'what has happened' – to inform interested parties (parents, educational psychologists, headteacher);
- to give headteachers a general picture of achievement within the school.

A teacher may wish to augment these points by using records:

- to document effort;
- to record experiences to which the students have been exposed;
- to record a student's physical, emotional, social, intellectual development;
- to compare students;
- to chart rates of progress;
- to inform subsequent curriculum planning.

The QCA is clear that records should:⁴

- be fit for the purpose they serve and help teachers, senior managers and parents ... track the progress pupils make;
- arise from routine processes of teaching, learning and assessing;
- be manageable, concise and accurate.

Different types and contents of records are suitable for different purposes. The student teacher will need to clarify the purposes of the record before setting up a record-keeping system; it is futile and time-wasting to imagine that a single record will be suitable for all purposes. This book has argued very strongly for the utility of an objectives-based approach to planning, evaluating and assessing. This has to extend to record keeping; it is only when the purposes of a record have been clarified that the student teacher can move to deciding the most appropriate contents, timing, format and nature of the entries that will be most suitable to those purposes.

The use of the record for reporting purposes

A distinction has to be drawn between a record and a report. Typically a report is a selection from or a summary of details contained in teachers' records. The formal requirements of reporting to parents, for instance, is that by 31 July each year⁵ parents should have received a written report on the student's attendance, achievement and performance in each subject of the National Curriculum, including the results of public examinations

where relevant and some comments on non-National Curriculum subjects, together with reports of the student's level of attainment on the 10-level scale of each National Curriculum subject at the end of each key stage. The report should include a commentary and explanation by the teacher of what the achievements and attainments mean.

Though such reporting can draw on teachers' detailed notes and records one can argue that this level of reporting is not specific enough for a teacher's detailed diagnostic records. Indeed reporting to parents is often of a summative nature whereas the records that teachers keep are both summative and formative.

The formality of the record

A record for a teacher's 'private consumption' might take the form of short notes on a particular student's progress in various areas of the National Curriculum, complemented by scores on tests and details of a student's achievement in the formal assessments of the National Curriculum (e.g. in relation to a student's level of achievement of the several attainment targets in the National Curriculum). The teacher may review and select from her private records data that are to become part of a more formal record that is for 'public consumption', e.g. for the next teacher, for a student's parents or guardians. A teacher may wish to record some particular personal details, e.g. about a student's behaviour during breaks or lunch times, that she may not wish to make public unless matters reach a critical point, though the Data Protection Act⁶ makes it a requirement that students should be able to see all records that are held on them. From 2000 changes to the regulations for schools⁷ made it a requirement that copies of pupil reports should form part of the pupil's educational record; that all students, regardless of their age, are entitled to have their records disclosed to them on written request unless special circumstances apply (e.g. unless they obviously do not understand what they are asking for); and that parents have a right to see their children's records. The Data Protection Act 1998 and the 2000 Regulations made it a requirement that schools should

not disclose anything on a student's records which would be likely to cause serious harm to the student's physical or mental health or that of anyone else, including anything which suggests that they are, or have been either the subject of or at risk of child abuse. Guidance on the Data Protection Act is available on www.dataprotection.gov.uk.

The Education Reform Act of 1988 made it a legal requirement that reports should be given to parents and guardians on their child's performance in the National Curriculum at a minimum of once each year. A formal record may be more generalised than an informal record, the former being largely summative and the latter being largely formative. A formal report might include statements from the National Curriculum attainment targets or level descriptions that teachers complete with a mark against each statement. A statement of special educational needs is a legal document that specifies action to be taken to meet the special needs of a student; that requires careful consideration of the framing, terminology and detail of the record. Some formal records are anodyne or only contain positive achievements; others are very much more detailed and diagnostic.

Many student teachers will not be required to contribute to or complete a formal record as this is usually undertaken by teachers. However, many student teachers will be teaching one class or more for a substantial period of time, typically up to a term for a final teaching practice. That means that they will probably have to provide teachers with specific data that they can use when completing the formal record. Further, given that student teachers eventually will become qualified themselves, it is important that they have the opportunity to look at, discuss, and provide data for the formal records that schools keep.

There is a common transfer form that all headteachers are required to complete for students transferring to another school,⁸ and student teachers may have to supply data for this. The common transfer form comprises, for the child in question:

- first names and surname;
- unique pupil number (supplied by the local education authority);

- name and code number of the receiving school, and the local education authority name and code number;
- whether the child has English as an additional language or if it is a first language;
- the stage of Special Educational Needs if applicable, referring to the *Code of Practice for Special Educational Needs*;
- ethnic group;
- attendance in the previous year (percentage of half days);
- most recent teacher assessment levels (Key Stages 1, 2, 3);
- public examination results (Key Stage 4);
- completed by (who has completed the form);
- test/task information (Key Stages 1, 2, 3);
- information about previous key stage tests and teacher assessments.

The contents of the record

Legally prescribed, covering a student's coverage of and achievements in the National Curriculum. However, the National Curriculum is only one element of a student's experiences at school. There are other equally important matters that may feature in a record, for example social, emotional and moral development; a student's overall standard of behaviour; confidence; effort; motivation; interests and enthusiasms; behaviour; attendance; friends and friendship patterns. A diagnostic record will necessarily be more detailed than a summative record of achievements and progress because it is usually criterion-referenced in order that action may be taken on specific matters. The contents of a record will reflect the focus of interest, the level of detail required, the level of formality and sense of audience, and the framing of the record, for example whether it will be strictly in the terminology of the National Curriculum, whether it will comment on knowledge, concepts, skills and attitudes, subject-specific and cross-curricular matters, personal and social development, medical factors (e.g. speech, co-ordination, overall health).

Clearly not everything needs to be recorded, indeed selectivity is an important feature. Student teachers will find it useful to examine records as

a way of finding out rapidly about curricula for, and assessments of students in the classes that they will be going to teach. These records might be in the form of an individual student's record (in which case permission has to be obtained to look at the record), or a record of work undertaken and curricula experienced by a whole class or particular groups.

The student teacher's own daily and weekly records concern the extent to which the students are achieving the objectives of the lessons, and what modifications need to be/have been made to the lessons in light of what has actually taken place. Hence a record may be an annotated lesson plan or notes made after the lesson, the level of detail of which is guided by the needs of the teacher for detail on individuals and groups.

The student teacher's ongoing, perhaps termly, records may comprise the schemes of work and activities which will provide assessment opportunities. The planned scheme of work is a record. Termly notes may comprise a selective note of the marking and comments written on particular pieces of work, together with a note of the extent to which the learning objectives for the term have been achieved and the kind of feedback and feed forward given to students. That said, termly records are not detailed; the close level of detail is reserved for daily and ongoing records. Teachers are able to review rates of student progress by referring to the work that students have done, the marks they obtained, the samples of work submitted, and their own ongoing notes from observations. The QCA⁹ suggests that, in the interests of manageability, only those students who achieve significantly above or below expectations should have particular notes made about them in a termly record.

The student teacher may not be in the school long enough to complete an annual record, but she/he may be required to provide some information that goes towards the compilation of the annual record or towards termly reporting. The annual record is of the key aspects of the student's progress, in terms of the National Curriculum and more broadly, and in line with statutory requirements. At the end of the key stage this will also include the results of statutory tests and tasks, together with statutory teacher assessment.

In order to facilitate record keeping the QCA suggests six ways of rendering record keeping less onerous:¹⁰

- Annotating schemes of work and lesson plans: annotations which can identify which pupils met, failed to meet or exceeded the objectives and where adjustments need to be made to subsequent teaching.
- Using class lists: class lists can be used to show the extent to which pupils or groups of pupils have met, exceeded or failed to meet the learning objectives for key assessment activities, possibly with notes about the reasons for this.
- Writing comments on pupils' work: comments related to objectives in the scheme of work or lesson plan not only provide good feedback to the pupils but aid tracking of progress . . .
- Using progress books: progress books, in which pupils do work at fixed points of the year, or in which they paste significant, assessed pieces of work, enable them to review their own achievements and set targets. Asking pupils to select significant examples of work for a folder can help them see what progress they have made.
- Compiling individual pupil portfolios: portfolios containing work selected by the teacher can be used to show significant progress and can underpin summative records, provided they are reviewed, culled and updated regularly . . .
- Using record books: some teachers use record books as ongoing notebooks with comments about daily planning. Others prefer record sheets with prompts linked to key aspects of progression in a subject. Pro formas used should be neither too detailed nor too time-consuming to complete. Mark books containing marks or grades need to be linked closely to a clearly understood and defined scale, which is consistent across the school.

The audiences of the record

Different audiences find different types of information useful. Barrs and Johnson¹¹ identify eight different audiences of records and indicate how the functions of records differ according to their audience(s), for example:

- the teacher herself;
- other teachers who have contact with the student;
- receiving teachers;
- other teachers in the school;
- the headteacher;
- parents;
- local authority assessment moderators;
- wider audiences.

This is not to deny interested parties access to different information; rather it reflects different interests at work. There are many different ‘stakeholders’ in education who may require different types of information and who may use data for different purposes. In some respects this is akin to assessment where, at the beginning of this part, assessment was seen to serve political agendas of control and managerialist (and political) agendas of accountability of schools to their consumers. Records can be used for accountability (e.g. in the documenting and reporting of students’ achievements in external tests) and for more educational purposes (e.g. planning and implementing a well-matched curriculum for students).

It is significant that Barrs and Johnson include only adults in the audiences of records, neglecting the students themselves. That reflects the bureaucratic and managerialist tenor of much record keeping. However, we commented earlier that one important purpose of assessment was to be able to give feedback to students so that they would become involved in their own learning. So it is with records; they provide information that can form the basis of, or contribute to, discussions between students and student teachers as one stage in the action planning cycle that has featured throughout this book.

The QCA identifies three main groups of people who need records of curriculum plans and about student progress, achievement and attainment:¹²

Teachers want to know:

- whether each pupil has learnt what has been taught;
- who needs more help or is ready for extension work;
- who is making better or worse than expected progress;
- whether all pupils, including those with individual education plans (IEPs), are meeting their learning targets;
- whether they need to refine any aspects of their teaching.

Headteachers, curriculum co-ordinators/heads of department and governors want to know:

- whether different groups of pupils in the school are making sufficient progress;
- whether there are any major shortcomings or successes;
- whether the school is on track to reach its pupil attainment targets;
- how pupil attainment in the school compares with other similar schools;
- which aspects of the curriculum and teaching need to be strengthened.

Parents want to know:

- whether their child is making appropriate progress;
- whether their child is showing any major strengths or weaknesses;
- how their child is doing in relation to the class, and to other children of the same age;
- what they can do to help.

This means that different groups will need different kinds of information. Student teachers on teaching practice will need to conform to the school’s practices in these respects, providing information as required.

The style and format of the record

There are several ways of entering data on a record that resonate with the ways of entering assessment results, for example by using numbers, words, samples of work, photographic evidence. As with the recording of assessments these ways can vary from the closed ‘tick box’ approach to the open-ended record that enables the student teacher to write comments about a given matter (e.g. speaking and listening skills) that are tailored to a specific student. Recording might take the form of:

- 1 Marks or grades recorded on course work or non-standardised tests, ensuring that the criteria for mark ranges or grades are discrete, clear, hierarchical (i.e. progressively difficult) and defined in concrete terms, and recognising that the extremes of the lowest and highest levels might only apply to a small number of students.
- 2 Personal observations (from structured or semi-structured observation), for example:

Joanne

Mathematics: A fast worker who prefers to work alone. She can represent and access complex data on a histogram, bar chart and line graph, using appropriate scales. She is able to access data on a pie chart and can use the computer to enter data for a pie chart; she understands the notion of proportions in a pie chart and is beginning to be able to construct simple pie charts that show this understanding.

Shaun

English (writing): Is able to express himself well on a wide variety of matters using appropriate vocabulary and registers. He enjoys writing non-fiction accounts, where his grasp of grammatical structure and clarity of style indicate his ability to explain complex phenomena straightforwardly. Shaun is able to write imaginatively and creatively on a range of non-fiction areas though he particularly enjoys science fiction.

- 3 Self-recording charts that students complete as they progress through a scheme of work, for example the self-recording charts that accompany many commercially produced mathematics and language schemes of work. This form of self-recording is usually very straightforward, comprising details of the pages that have been read in a reading book, the mathematics exercises that have been completed, with maybe some very simple extensions, e.g. what was found easy/difficult/interesting, rather than a fuller type of self-assessment.
- 4 Results of standardised tests and assessments (e.g. of achievements of the National Curriculum) for each student, for example Box 97.
- 5 Ticks against statements with room for a student teacher's own comments (perhaps using the terms of the National Curriculum statements of attainment and/or level descriptions, though these may be too generalised for student teachers who are only in the school for a limited period of time, in which case they may have to use more specific terminology than used in the National Curriculum), for example Box 98 (for each child).

The four statements in the box are taken from the National Curriculum for mathematics at Key Stage 4. It can be seen immediately that space (and time) can be saved if statements are not written verbatim from the National Curriculum documents but a shorthand version is used.

- 6 Coded entries and comments against particular statements, for example:

Box 97: Recording results of formal assessments

English	Level 1	Level 2	Level 3	Level 4	Level 5
	TA SAT	TA SAT	TA SAT	TA SAT	TA SAT
AT1 Speaking and listening					
AT2 Reading					
AT3 Writing					

Box 98: Recording specific details of students' progress

Can vary the flow of electricity in a simple circuit and observe the effects	Comments
(a) Can use sampling methods, considering their reliability.	
(b) Has extended skills in handling data into constructing and interpreting histograms.	
(c) Can describe the dispersion of a set of data; can find and interpret the standard deviation of a set of data.	
(d) Understands when and how to estimate conditional probabilities.	

Measuring temperature using a thermometer

A tick – introduced, continue to reinforce;
 A tick crossed through with another line – needs further help;
 Either of the above together with a circle around the tick – ready to advance.

This example identifies the starting point at which a student has been introduced to a curriculum feature. It is cumulative in practice in that each stage of recording improvement adds on to a given symbol (e.g. a tick, a line through) rather than requiring the student teacher to erase the first or second symbol in order to replace it with another. Whilst these examples show how a closed record-keeping system can be used, in practice the difficulty in this type of recording is that it runs away with itself; the student teacher ends up spending as much time on the recording as the planning. Whilst this approach may be useful in providing an in-depth approach to record keeping, in practice it often becomes unworkably detailed (e.g. in a primary school it could

generate 30 students \times 10 subjects \times 30 statements = 9,000 statements to be reviewed). The secret here is to operationalise the statements without generating a level of detail that is overwhelming; this is exactly the same problem as that mentioned earlier in connection with criterion-referenced assessment.

This type of 'coded' response is particularly useful where the student teacher wishes to have a whole-class or group record rather than an individual student's record (see Box 99).

On this class record the student teacher can specify exactly what items 1, 2, 3 and 4 are. In each cell the student teacher can enter comments and/or a code:

- | = Has had experience of
- + = Needs further reinforcement
- * = Ready to move on

A second example of this approach will list the names of the students targeted and then indicate the activity that is the focus of the record, for example Box 100.

Box 99: A whole-class or group record

Student's name	Activity 1	Activity 2	Activity 3	Activity 4
Martin Armstrong				
Janice Asher				
Ahmet Al-Sabah				
Ruth Brown				
Soo-Lee Chang				
Joanna Davison				

Box 100: A class or group record of an activity

Student's name	Cutting sticky squares into halves and quarters	Naming the fractions formed – quarter, half, three-quarters	Finding equivalencies – quarter, half, three-quarters
Michaela Bayes			
Angela Downs			
Peter Forrest			
James Kelly			

Box 101: Recording several aspects of an activity

Student's name	Designing a crane	Making the crane	Testing the crane	Evaluating the results	Improving the design
Sahira Anwaz					
Zoe Bond					
James Clinton					
Sean Davison					
Jane Flynn					

There is also a space for individual comments to be written if required.

A third example might break down an activity into significant elements, with space provided for a student teacher's comments, for example Box 101.

A fourth example of codes and comments is of a record of activities undertaken over a period of time, maybe each week, e.g. Box 102.

Here space is required for the student teacher to specify in more detail in the appropriate cells exactly what each student has done (unless it is possible to have included this in the column descriptor) together with relevant comments and codes to reflect effort, achievement and a diagnosis of the success of the outcome.

What we have, then, is a combination of a closed record-keeping system and an open-ended system, with numbers/codes and words respectively, i.e. a double entry. Having a system that enables data about many students to be entered on a single record facilitates comparisons between students to become clear. Some record-keeping systems might be structured to provide room for a double entry

wherein a code is used to indicate achievement and another code for effort, for example:

A = All points clearly understood

B = Reinforce a little

C = Reinforce a great deal

1 = Has made a very good effort

2 = Has made an acceptable effort

3 = Has made little or no effort

- 7 Multiple choice statements (where each statement must be discrete and it must be made clear whether more than one statement in a group of statements can be selected).
- 8 Open-ended areas for comment (where an element of, say, English is indicated, e.g. a student's response to a piece of literature) and space provided for comments to be written, or where National Curriculum statements are given, for example in mathematics:

Mathematics (understanding and using measures): Develop an understanding of the difference between discrete and continuous

Box 102: Recording activities over a period of time

Student's name	Language task	Science investigation	Art activity	History project
Yasmin Bakhtar				
Paula Bates				
John Clements				
Alan Dodds				
Susan Evans				

measures; read and interpret scales, including decimal scales, and understand the degree of accuracy that is possible, or appropriate, for a given purpose.

Alan has a sound grasp of the difference between discrete and continuous measures and has acquired this understanding through representing and interpreting different types of data using a variety of scales, including decimal scales. He is able to choose appropriate scales for different types of data and different purposes.

Another example of an open-ended record-keeping system is presented in Box 103.

This type of record is useful provided that it is focused and selective (i.e. identifying priorities) and that it recognises that a particular activity may serve more than one curriculum area, for example a single activity might address language, mathematics, ICT and history. That would need to feature in the record and again, perhaps, in some subject-specific records.

A compromise between too closed and too open a record can be seen where an agenda and

major foci are established but the student teacher is able to tailor comments to individuals, for example:

Speaking and listening (identifying major strengths and needs in relation to personal accounts, providing information and explanation, participation in class discussions, collaboration within a small group, awareness of register and vocabulary).

Reading (identifying major strengths and needs in relation to the range of the reading diet, fluency and reading strategies used, understanding and recall, responding to literature, study skills, enjoyment).

Writing (identifying major strengths and needs in relation to awareness of audience, conveying meaning clearly and appropriately, use of vocabulary and syntax, drafting, using different forms of writing, spelling, use of word-processing facilities).

In this example the rubric provides suggestions of areas of focus for student teachers but there

Box 103: An open-ended record keeping system

Student's name	Activity/task	Knowledge, concepts, skills, attitudes	Comment on effort and achievement (what was learnt)	Action needed
Deborah Roe				
Alex Sanders				
Mary Slater				
Paula Squires				

is no necessity for slavish adherence to these if they are inappropriate.

There is a well-documented problem in open-ended statements and comments that teachers write, viz. that the statement reflects more the biases, preferences and subjectivity of the record writer (the teacher) than the student. Law¹³ draws attention to six problematical types of statement in connection with this:

- 1 *Undefined statements* – that use jargon that is inappropriate for the target audience or that conceals the writer's true intentions, for example: 'has difficulty interpreting interpersonal behaviour and modifying own response when necessary' (i.e. is a major disruptive influence in the class or I don't like this student); 'can use phonic skills, particularly digraphs, in monosyllabic word attack' (i.e. can read simple single-syllable words).
- 2 *Mixed statements* – which say more than one thing at a time. The writer is attempting a nuanced statement but a reader does not know which part of the statement to emphasise, for example: 'can take initiative but prefers guidance'; 'is absent regularly but apparently with good reason'; 'is an intelligent and amusing talker'.
- 3 *Non-operational statements* – which, although apparently based on observed behaviours and events, use language that renders it difficult to imagine the behaviour that gave rise to the comment, for example: 'is very polite and creates a good impression' (i.e. shows off to visitors or is genuinely polite to all teachers in all lessons and all situations); 'has distinct leadership potential' (i.e. the ringleader of disruptive behaviour or is able to organise other students very positively and supportively in the series of lessons that I have taken in mathematics); 'has a very strong personality' (i.e. is awkward and a bully or reacted very well when finding the science work difficult).
- 4 *Generalised statements* – where a statement about one facet of a student is made in such a way as to render it applicable to all facets of the student (when the teacher does not see all facets of a student), for example: 'is reluctant to try new ideas' (i.e. did not enjoy the new history topic or preferred to work on her own); 'does not like to be in the limelight' (i.e. did not want to take part in the school pantomime or was very modest about her ten grade A passes at GCSE level); 'needs constant encouragement to relate to others' (I found her very difficult

in my music lessons or she was very shy in my class drama lessons).

- 5 *Interpretive statements* – which point to underlying states and conditions rather than to specific behaviour, where the knowledge of the underlying states and conditions can only flow from an intimate knowledge of the student (that the teacher rarely has), for example: ‘is capable of sustained friendships’ (i.e. she always chooses to work with two other girls in my language lessons); ‘has exceptional self-confidence’ (i.e. did not bother to consider other approaches to solving a design and technology problem that was presented to his group); ‘is very resilient’ (i.e. he always undertook his mathematics corrections without complaint).
- 6 *Value-laden statements* – where the student is judged according to the personal preferences of the teacher, for example: ‘is lazy and unhelpful’ (i.e. I didn’t like the way that she responded to failure); ‘has a friendly, helpful attitude’ (i.e. I always give him the jobs to do in the classroom); ‘makes constructive contributions to classroom discussions and activities’ (i.e. I always ask her to speak first in a class discussion).

All of these examples show (a) how easy it can be for the writer of the record to mean something very different from the meaning read into a statement by somebody else; (b) how easy it is for the writer’s personality and preferences to colour the comments that are written in a record. In one sense this is an intractable problem as long as people use words, for a writer’s vocabulary can be similar to a reader’s but they both bring different interpretations and connotations to the same words. A record writer, then, may find it salutary to consider whether: (a) she likes students that are like her in temperament and personality; (b) she dislikes students that are like her in temperament and personality; (c) students whom she likes have characteristics that she likes; (d) students whom she dislikes have characteristics that she dislikes. We are not suggesting that teachers deliberately misrepresent their students; rather we are arguing that biases all too easily can slip in unnoticed by the record keeper – be they positive or negative they can easily misrepresent the student.

In entering a word-based comment on a record, then, it is important for statements to be framed as objectively and evidentially as possible, so that solutions to the six problems outlined above can be met by ensuring that statements are:

- *defined* – so that everybody who reads them will understand them in the same way;
- *singular* – they say one thing at a time;
- *operational* – they describe what the student has been doing to give rise to the comment;
- *specific* – they indicate the circumstances in which the characteristic has been demonstrated;
- *guess-free* – they say that which can be correctly known about the student;
- *value-neutral* – they do not voice the writer’s preferences for one student over another.

This is an art that needs to be practised by student teachers looking critically at comments that are written about a student in a record. This also applies very powerfully to a Progress File (see Chapter 18) where even greater opportunities exist for open-ended, subjective, prejudiced remarks to be made.

- 9 Comments taken from lesson, daily and weekly evaluations and plans. It is often the case that student teachers refer to particular students or groups in a class when they are writing evaluations on lessons, a day’s activities or a weekly review. These evaluations can provide important data for record keeping.
- 10 Photographs.
- 11 Flow charts, web diagrams, descriptions of curricula studied (where a planning document doubles as a recording document).
- 12 There is also a completely open-ended type of record that begins life as a blank sheet of paper apart from a student’s name, and the student teacher enters notes made about unanticipated behaviours, learning, comments by a student. This is a salutary exercise, for the student teacher can review these sheets after a few weeks and think why more notes have been made on one student than on another (e.g. is the student teacher concentrating more of her attention on one student rather than another, and if so, why?).

A standardised format enables data to be entered fairly rapidly and enables the student teacher to compare one student with another. Moreover, a standardised format may enable some useful parity to be achieved between teachers and age phases, enabling continuity to be addressed – vertically across several teachers of a specified age group and laterally across several teachers as a student moves up through a school. On the other hand tick boxes and closed forms of recording may fail to catch some important individual features about a student. In this case it may be more advisable to have a semi-structured approach to record keeping, wherein an area for comment is specified (maybe with reference to attainment targets of the National Curriculum) and space is provided for a student teacher's individual comments, carefully referenced to specific individuals and activities. There is a danger in more open forms of recording, *viz.* that the record may become platitudinous and generalised, saying more about the student teacher's likes and dislikes than the student's. Open-ended forms of recording must confine themselves to evidential matters, noting the context and activity that gave rise to the record entry.

There is a tension, therefore, between the need for standardisation and the need to be able to catch each student's individuality on a record. Further, there is another tension between the overall desirability of parsimony in a record – for rapidity and ease of completion – and the need for a record to be sufficiently detailed and comprehensive in order to provide useful data (i.e. data upon which action can be taken). There is a third tension between the ability of the record to enable the student teacher to enter data in her own preferred manner and the need to avoid so personalised a style or format that personal prejudices can appear.

The timing of the record entry

The notion of 'fitness for purpose' that was mentioned earlier also applies to the timing of the record entries. It might be most fitting to complete a summative record each half-term whereas it might be more fitting to review

detailed records on a daily or weekly basis. All data entered on a record should be dated in order that the student teacher can chart rates of progress. Timing of data entry varies according to the purpose (formative/summative) of the record, the level of detail required (the less the detail, the less frequent the record) and the focus (the more specific the focus the more frequent the entry, though the more open the entry does not necessarily imply the less frequent the entry). Moreover, we have assumed so far that the timing of the data entry will be regular – once a day, once a week, once a term etc. This need not be the case. For example, an entry in a record could be made whenever a particular event occurs – which may be once in a day or once in a week. This echoes the comments on 'event sampling' earlier, where the occurrence of the event is recorded (and dated) rather than the number of occasions on which it occurs in a given period of time. This is an important matter, for it adopts an approach termed the 'critical incident' approach,¹⁴ in which the significance of an event can be recognised (e.g. when a child first writes her name correctly) rather than its frequency. This type of data entry enables unanticipated events, comments and behaviour to be noted.

The picture of record keeping that we have painted so far has portrayed it as being a relatively complex activity that has increased in tandem with the bureaucratisation and management of much of education. We recognise that this might be off-putting for student teachers. Nevertheless, throughout the discussion here we have provided some examples of different record-keeping systems that student teachers may wish to adopt during their teaching practice. We would wish to suggest that student teachers do not confine themselves simply to recording students' achievements of the National Curriculum but that it is useful to keep notes on all aspects of a student's development, strengths, needs, interests, and social and emotional make-up.

A student teacher undertaking a short teaching practice might not be in the school or class for a sufficient length of time to be able to complete anything but the most perfunctory records. However, many student teachers are

placed in a school for up to a term's duration; in light of this as a minimum requirement we suggest that a student teacher's records for a term's teaching practice should include the following.

- 1 A record of work and activities undertaken in each curriculum area taught. This might be in the form of a web or flow diagram, a sequence of lessons, a scheme of work, an ongoing record of activities undertaken.
- 2 A formative and diagnostic record of every student's progress in the National Curriculum areas taught, highlighting particular successes and difficulties encountered.
- 3 A summative record of every student's achievements and efforts for every National Curriculum subject taught (for primary school student teachers this will probably be with reference to a single class of children; for secondary school student teachers this will probably be with reference to a single main subject together with personal and social education).
- 4 A 'blank sheet' type of record for each student (though this is perhaps more practicable in primary rather than secondary school classes in the time available) that records unanticipated events, observations, comments etc. that move beyond the narrow intellectual or academic record and towards a more holistic record on a student's whole personality, personal, emotional and social development, particular strengths and needs, particular achievements and interests.

The QCA provides a useful summary chart of the purposes, uses, timing, contents, formats, audiences and storage of records (Box 104).¹⁵

There are several forms, timings, formats, purposes and audiences of records. Unfortunately for many teachers record keeping seems to be a bureaucratic chore. However, we suggest that this need not be the case. Records that are linked to assessment, that in turn is linked to planning, can provide important documentation for addressing progression and continuity. Above all they must be useful; a cosmetic record that has no formative or summative potential is a sheer waste of time. Students on teaching

practice may find that they are requested to deposit a copy of their records with the school for the school's own record-keeping purposes.

Writing reports

Student teachers may be involved either in writing reports or in contributing to the writing of reports for parents or other outside agencies. These may be end-of-year reports, end-of-term reports, or other reports as required. Indeed the student teacher may be required to submit a report on students taught during the teaching practice. The school should have its own formats for reporting, and the student teacher must find these out. Alternatively the student teacher could devise his/her own reporting systems.

There is no standardised way in which reports are written, and so each school has its own format, which may include comments, tick boxes, statements from item banks of computer-stored statements, or other elements. Item banks of statements can be found at: www.dfes.gov.uk/cuttingburdens/goodprac/gpindex.shtml#area4. Whilst it is invidious to be prescriptive about report writing, nevertheless there are some particular points which can be raised; reports should:¹⁶

- be clear, concise, straightforward and jargon-free;
- be written in English, though arrangements may have to be made for them to be mediated or translated into the community language or mother tongue of the recipients;
- be written in the knowledge that students themselves will probably read them;
- include words and numbers (e.g. in rating scales, grades, levels);
- be personal to the student in question, rather than, for example, to the whole class or to groups;
- indicate cognitive and non-cognitive issues (e.g. the child's attitudes, social and emotional behaviour);
- advise recipients how they can help and support the student's development (though this is a moot point: a report is a report rather than a development document);

Box 104: The purposes and uses of records

	Daily/weekly	Termly	Annually
Who uses the records and for what purpose?	Teacher and support staff, to plan and refine next steps.	Teacher, support staff, Special Educational Needs Co-ordinator, to adjust day-to-day teaching, track progress, set termly targets. Pupils and parents to review progress.	Next teacher, pupils and parents, senior staff to review progress and set targets. Next teacher to adjust planning.
What do the records relate to?	Short-term learning objectives identified in day-to-day lesson planning.	Significant aspects of progress identified in schemes of work and derived from the national curriculum. Individual Education Plans.	National expectations.
Is all the information recorded?	Mainly no, because pupils' folders or exercise books and teachers' mark book will show progress. Some ephemeral evidence may be recorded.	No, except for significant assessments and some notes/comments on individuals.	Yes, for each pupil, in the annual report.
If so, what format might be used?	Day-to-day assessment in format determined by the individual teacher, for example planning notes, pupil file, mark book, comments on pupils' work in exercise books/folders or in an evaluation box on planning sheets.	Either teacher's own records, or school pro-forma, as determined by the school. Pupils with Individual Education Plans may have their own pro-forma.	School report form. Further advice in [annual documentation on formal reporting] requirements in the <i>Code of Practice on the Identification and Assessment of Special Educational Needs</i> , 1994
Should the records be retained or discarded?	Discard when information is no longer useful for planning new work.	Discard when pupils have moved on to next stage of learning. Keep most recent work and targets.	Keep and pass on information when pupil moves to next teacher.

- indicate the student's attainments and achievements (the former referring to academic attainment, often related to the National Curriculum; the latter referring to a wider range of achievements);
- indicate progress made within, and outside, the subject areas;
- include a National Curriculum level where this is a statutory requirement at the end of each key stage, though it does not need to do so unless there is a statutory requirement;
- include teacher assessment results;
- include task and test results from the National Curriculum;
- indicate how the child is performing and making progress in relation to the average child of his/her age;
- indicate effort as well as attainment;
- indicate strengths as well as areas for improvement;
- indicate targets, where relevant and appropriate, and how to achieve them (but see the comments earlier on the difference between reporting and providing information for development and improvement purposes);
- provide details of attendance (number of half-days attended; number of authorised absences, number of unauthorised absences, number of late arrivals).

Some reports will be accompanied by the programmes of study and level descriptions for the National Curriculum, as a reference for parents and other parties, so that readers have a clear indication of the work undertaken.

Many reports will be subject-specific and will include, for each subject:¹⁷

- the effort that the student has made (maybe on a rating scale or grade);
- the overall level of attainment/achievement in that subject, which might be on a rating scale (e.g. very poor to very good), a grade, a level;
- the levels of attainment/achievement against particular statements within each subject (maybe related to the National Curriculum statements in the programmes of study or level descriptions, for example: (a) in art and design: exploring and developing ideas; investigating and making art, craft and design; evaluating and developing work; (b) in music: joins in singing simple songs and rhymes; can listen attentively to music in a range of genres, and express responses to the music; can recognize simple rhythms and repeat them using a range of instruments and sounds);
- a written comment on each individual subject;
- targets for the student to reach;
- achievements and areas for improvement in the foundation subjects;
- space for general comments by the child;
- space for general comments by the teacher.

An example of this is given in Box 105.

Here a rating can be given for effort and achievement, an overall assessment level, levels of achievement in each substantive area, and there is a space for specific comments by the teacher. The comments that teachers write should be specific and evidence-based, for example:

Joanne has used the word processor and drawing packages confidently and effectively in presenting her project on farms. She can use the floor turtle accurately. She is starting to be able to use the internet for searching and retrieval of information for her project work, and she has been able to send and receive e-mails from her friends.

Samson has made good progress in his mathematics this year and has tried very hard throughout the year. He is achieving above the national average for his age group. He understands numbers up to 1,000 and is good at explaining the methods that he uses for adding and subtracting and for working out problems which need more than one calculation. He is good at mental computation in adding and subtracting up to 100. He has learnt two, three, five and ten times table, and can use these in his number work. He has been using graphs and tables, sometimes with the computer, and is able to construct and interpret graphs well. His work on shape is improving, though he has some difficulties in remembering all the names and properties of squares, triangles and rectangles. He can tell

Box 105: Reporting pro-forma for geography

Geography	National Curriculum level of achievement				
	Very good				Very poor
	Effort (1–5)				
Achievement (1–5)	1	2	3	4	5
Geographical enquiry					
Knowledge and understanding of places					
Knowledge of geographical features and environments					
Climates					
Comments					

the time on a clock face and digitally. Now Samson needs to improve on his shape work, to learn all his times tables up to ten, and to start some simple multiplication and division.

Sarah enjoys her science lessons, particularly when we do experiments and investigations, and she is very good at applying fair tests. She is able to classify living and non-living things on relevant properties. She has an initial understanding of electric circuits and can explain what we need to do to switch a light bulb on and off. Her attainment is at the national average for her age. Sarah now needs to be able to plan experiments and investigations for herself, whilst still keeping the tests fair.

It can be seen here that the comments are focused, include reference to achievements and attainments, progress, targets and both cognitive and non-cognitive elements, and that they are based on, and report, evidence.

Another form of reporting is given in Box 106.

This 'template' would be repeated for all the subjects. If more details were needed, e.g. of

National Curriculum attainment levels then it could be included as in Box 107.

A further example provides an indication of the element of learning/attainment target and space for the teacher's comments, as in Box 108.

If the reporting pro-forma wished to use a rating scale then this could be presented as in Box 109.

Rating scales can be used for a variety of aspects of reporting, together with comments, for example Box 110.

It can be seen that, whilst there is no clear single blueprint for record keeping, the records and reports should demonstrate fitness for purpose, be based on evidence, be related to the National Curriculum yet move beyond that, should allow scope for comments on attainment and achievement, progress made, comparisons to national averages, and include targets and how to improve. This moves the issue of report writing beyond simply being a document of record to becoming another mechanism for improving learning and achievement. The report document is not inert; it is formative.

Box 106: Reporting pro-forma for English

English				
	Teacher assessment results	Speaking and listening	Level 3	
		Reading	Level 4+	
		Writing	Level 3	
	Task and test results	Reading task	Level 2A	
		Reading test	Level 3	
		Writing task	Level 2A	
Programme of study description	Children learn to speak confidently and listen to what others have to say. They begin to read and write independently and with enthusiasm. They use language to explore their own experiences and imaginary worlds.			
Progress	Nazim has made good progress this year, and is speaking English fluently, clearly and confidently to children and adults about all his work in school and life outside school. He shares his ideas well in the class. He is an attentive listener and this has helped him well in his pronunciation; he tries very hard to correct his pronunciation, and he is achieving well here. His careful listening has helped him to answer questions accurately and to keep to the point. Nazim enjoys reading, and his reading is at the national average for his age group, which indicates very good progress from the start of the year. His handwriting is improving and he is now using joined-up writing very successfully. He has used word processing for his creative writing, and his stories are very interesting and full of ideas. His sentences are still rather short, and he is beginning to learn to slow down and write longer sentences.			
Targets	His targets for next year include writing longer sentences, being a little less rushed in his work, joining in drama sessions a little more, and making his explanations a little clearer when he is speaking to the teacher.			

Box 107: Reporting pro-forma for National Curriculum attainment

Attendance						
Number of sessions attended			Number of authorised absences			
			Number of unauthorised absences			
English			Teacher assessment	Test level	Teacher assessment	Test level
AT 1 Speaking and listening			4		Overall subject level	
AT 2 Reading			4	4	4	4
AT 3 Writing, including spelling and handwriting			3	3		
Programme of study						
Comments on progress						
Attitudes to learning (e.g. motivation, perseverance, diligence, effort, concentration, behaviour, enjoyment)						
Targets						
<ul style="list-style-type: none"> • • • • 						

Box 108: Comment boxes for areas of learning

English	Teacher assessment level: 5
Programme of study	
General comments	
Curriculum area	Comments
Speaking	
Listening	
Discussion and interaction	
Poetry and non-fiction reading	
Non-fiction reading	
Creative writing	
Factual writing	
Planning and drafting	
Secretarial skills (e.g. punctuation, spelling, handwriting, presentation)	
Targets <ul style="list-style-type: none"> • • • • 	

Box 109: Reporting pro-forma with rating scales

Science					
Programme of study	Not yet able to do	Developing skills	Satisfactory	Good	Exceptional performance
• Knowledge and understanding of science					
• Investigative skills					
• Planning investigations					
• Conducting experiments					
• Conducting fair tests					
• Recording results					
• Interpreting results and drawing conclusions					
• Presenting work					
General comments					
<p>Targets</p> <ul style="list-style-type: none"> • • • • 					

Box 110: Using rating scales and comments in reporting

Design and technology					
Programme of study					
	Excellent	Good	Satisfactory	Room for improvement	Unsatisfactory
Attainment					
Progress					
Effort					
Behaviour					
Strengths					
Areas for improvement					
Targets <ul style="list-style-type: none"> • • • • 					

Progress files

Introduction

An aspect of reporting which is different from teachers' reporting and record keeping is the progress file, formerly called the record of achievement, and related to the portfolio. The change of name followed a review of the record of achievement in 1996¹ and 1997² as part of an overall review of education for 16 to 19-year-olds and the government's Green Paper, *Extending Opportunities, Raising Standards*, in 2002. The record of achievement was relaunched and is now termed the progress file, and is designed to be used with students from the age of 13 onwards. Details of the progress file can be found at www.dfes.gov.uk/progfile. The progress file differs from a portfolio in that a portfolio is deliberately designed and used for assessment purposes, whereas the progress file may or may not be used for assessment purposes (indeed, most are not).

The principles underpinning the progress file are as follows.

- It can act as a summary record of achievements.
 - It values and formally recognises individual learning and achievement.
 - It is designed to motivate students for further learning.
 - It is intended to help students to manage transitions, e.g. from school to work.
- Teachers have their part to play in this process, providing support for review, action planning, guidance and assessment. The progress file is designed to help individuals plan their own learning and review its development, to recognise the knowledge, skills and competencies that they are acquiring, and to record their achievements.³ It is intended to equip students to plan and manage their own learning and to make effective transitions from school to work, to increase their motivation and confidence to achieve, and to promote their learning of knowledge, skills and competencies, even if these are not recognised in formal qualifications. It is designed to ensure that every student has access to high-quality, challenging yet realistic learning. Further, by focusing on individual needs, for example in review and target setting, the progress file is intended to further the principles of inclusion and equality of opportunity, building on strengths and supporting weaknesses.⁴
- Principles of recording achievements are linked to the development of lifelong learning:⁵
- *guidance* and advice on education and training from specialist and independent sources;

- *reviewing* of past achievements, progress and action planning between the student and teachers/trainers/supervisors;
- *action planning*, comprising review (where am I now?); goals (where do I want to be?); targets (what are my next steps?) and learning and training arrangements (how am I going to get there?);
- *assessment*, making clear what is being assessed, what criteria are being used, the methods of assessment, the use of a range of appropriate assessment methods, involvement of the students in the assessment, assessment of prior achievement, and certification;
- *continuous recording* of achievements, based on ongoing discussion, and covering education, training, work and beyond, key/core skills, personal qualities and other achievements, and the development of lifelong learning;
- *summary recording* of achievements, together with evidence, and perhaps in accordance with the school's procedures for entering information here.

Further, at the heart of the progress file lies a concern that students should be able to manage their own learning. It is explicitly designed to:⁶

- support target setting to raise attainment and the achievement of career goals;
- assist in planning and time management;
- focus attention on learning, both in school and out of school;
- encourage reflection on learning and approaches to learning, with a view to improve learning;
- help to identify evidence of achievement, and how to select evidence;
- develop presentational skills, in recording and summarising achievements and presenting them for others.

This involves the development of, for example:⁷

- knowledge and understanding;
- application of knowledge, understanding and learning;
- skills and competencies, for example:
 - *key skills* (e.g. communication, application of number, information technology, problem solving);

- *interpersonal skills* (e.g. working with others, communicating, negotiating, networking, giving and receiving feedback, enterprise skills);
- *process skills* (e.g. reviewing and assessing, target setting, planning, recording, presenting);
- *personal skills and qualities* (e.g. improving one's own learning, time management, decision making, personal development planning, taking responsibility, being motivated);
- *thinking skills* (e.g. reasoning, inquiry, creativity, evaluation, critical reflection).

In managing their own learning it is students rather than teachers who are the drivers of the learning, becoming independent and autonomous learners. The DfES suggests several questions which can be raised in evaluating how far a student is able to manage his/her own learning by using a progress file, in the following areas:⁸

- *Target setting*: does the student:
 - know what motivates him/her to learn?
 - understand the relationship between goals and targets?
 - understand the benefits of target setting?
 - understand what is meant by SMART targets? [**S**pecific, **M**easurable, **A**chievable, **R**ealistic, **T**ime-bound]
 - know how to write SMART targets?
 - know about sources of help/information, and relevant resources?
- *Planning*: does the student:
 - understand the benefits of action planning?
 - know the key features of an effective plan, and about different types of plan?
 - know about techniques that aid planning?
 - know their preferred learning style(s) and what this means in practice?
 - know about potential learning opportunities, and different ways of learning?
 - know about sources of help/information, and relevant resources?
- *Reviewing/assessing*: does the student:
 - understand the benefits of reviewing progress?
 - understand what is meant by 'evidence', and how to evaluate evidence?
 - understand how work/performance will be assessed by others?

- know how to assess his/her own work/performance?
- understand what is meant by ‘critical reflection’?
- know about sources of help/information, and relevant resources?
- *Recording/presenting*: does the student:
 - understand the benefits of recording progress and achievements?
 - understand how recording information can aid critical reflection?
 - know about different methods and formats for recording information?
 - understand how to sift/sort/select information for different purposes/audiences?
 - know about different oral/written/visual techniques for getting his/her message across?
 - know about sources of help/information, and relevant resources?

Many schools have an assessment co-ordinator, particularly in secondary schools. The implementation of progress files requires time to be found during lessons for the necessary review and action planning processes to be undertaken for teachers and students, building on the importance of negotiating and setting objectives for the future – academic or otherwise. This requires a different approach to teaching and learning styles, not only to provide planning and implementation time but also to set a new relationship between teacher and student wherein social distance between student and teacher is reduced. The teacher moves from being solely a judge, provider of information, expert, director, instructor, controller and sometimes a dictator to being a witness, provider of opportunity, partner, consultant, counsellor, enabler and negotiator. This constitutes a major cultural and pedagogical shift in roles and role relations and opens up the pastoral side of education, and requires considerable courage by many staff to accept that they may be deskilled and that they need reskilling in different pedagogical practices.

Traditional assessment cast the teacher as the assessor who set summative examinations, marked them in private and wrote a report about the student’s success or failure in private, to be delivered to the student’s parents or guardian. The

student was largely kept out of the assessment and report construction. By contrast a progress file is the outcome of a joint discussion and joint assessment between the teacher and the student in which all of the statements are positive (it is a record of achievement, not failure), there is a strong formative potential in the comments made, where the student and teacher together plan targets (see the comments earlier on ipsative assessment). Indeed the National Record of Achievement⁹ argued that the process of recording achievements and planning future developments helps people to take greater control of their education and training and to take pride in their achievements. Student involvement and ownership is high, indeed the progress file is the student’s property,¹⁰ to be shown to, or withheld from, certain audiences at the discretion of the student. A progress file is intended to have high student involvement and ownership, with concomitant motivational significance for the student.

A progress file is not a report, nor is it a reference. It is more akin to a curriculum vitae (CV) in which achievements are noted; indeed many progress files, like records of achievement, contain a CV. Many teachers feel uncomfortable in omitting negative comments from a progress file, arguing that it is a dereliction of their duty not to make clear the weaknesses as well as the strengths of a student. However, a teacher has opportunities to comment on the weaknesses as well as the strengths of a student in a report or a reference – written or oral. A report is a separate document or event altogether.

The purposes of a progress file

The significant features of a progress file are that it:

- is an ongoing and cumulative record of a student’s achievements in school and out of school, including curricular and extra-curricular activities;
- is the outcome of a discussion between the teacher and the student;
- is based on identifiable evidence from a wide data source;
- is designed to maximise achievement;

- is intended to help students to manage their own learning and transitions;
- records success and positive achievements;
- is designed to involve and motivate students, raising their self-awareness, self-esteem and confidence, and thereby enhance learning;
- develops their personal qualities and values to help them to become responsible and caring citizens;
- makes clear to students and other interested parties the criteria that are being used to make comments and judgements;
- is the student's own property.

This accords with the four original aims of a record of achievement set out by the former Department of Education and Science:¹¹

- 1 *Recognition of achievement* (not solely in terms of public examinations but in other ways).
- 2 *Motivation and personal development* (increasing students' awareness of strengths, weaknesses and opportunities).
- 3 *Enhancement of the curriculum and organisation for the student* (considering how well the curriculum, teaching and organisation enable students to develop general, practical and social skills).
- 4 *A document of record when leaving school* (for employers and institutions of further and higher education).

A progress file may enhance employment prospects for students and, indeed, employers might be involved in contributing to it. As the Secretary of State for Education remarked when introducing the National Record of Achievement (NRA):¹²

The economic well-being of the country relies on having the right people with the right skills in the right jobs. We will only achieve that if we can secure the commitment of employers and employees to effective education. The Government is committed to the concept of life-long learning. As a further step to support that process we are introducing the National Record of Achievement (NRA). Records of achievement have significant value in motivat-

ing learners, whether at school, in further or higher education, training or employment and the NRA is one of the cornerstones of the ROA process. The NRA is designed to present a simple record, in summary form, of an individual's achievements throughout education, training and working life. It encourages people to take an active part in their own training and development, and gives employers a convenient and comprehensible record of what somebody can do. The relevant parts of the NRA might additionally help schools to report to parents on the achievements of pupils aged 16–18.

One can see from this lengthy catch-all quotation that the Secretary of State's view of the NRA was that it could be used in employment; that the keeping of a record of achievement was summative, though the ongoing processes were formative; that it could be used in a variety of contexts and shown to a variety of audiences; that it could contribute to the educative process and raise motivation through involving students; that it used a wide data source; and that it was criterion-referenced.

Hargreaves¹³ adopts a much less sanguine view, arguing that the involvement of potential employers and their use in seeking employment might result in such a record (progress file or record of achievement) being used against a student – for selection rather than motivation – as one student's record may be less impressive than another's. The results could be demotivating for students. Further, Hargreaves argues that, in fact, it may be a sop for disaffected students who will not meet the gold standard of academic qualifications, that (a) they will see through it over time as the academic agenda for education is comparatively unchanged and unchangeable by students – it is still a 'given' rather than a negotiable curriculum; and (b) the academically gifted will not require a progress file to gain access to higher education and better employment prospects.

The key tension that Hargreaves exposes is between using a progress file either for motivation or for selection; the more one serves the former the less one serves the latter and *vice versa*.

This tension is not resolved in the government's view of a progress file; indeed, it is exacerbated in that there is a requirement that a student's achievements in the National Curriculum should be recorded in the file. Hargreaves is arguing that the file can be seen as a government response to a motivational crisis in education, the economy and society and that, by stressing motivation, the government is able to appeal to very different sectors – employers, students, parents and educators. Hargreaves' argument is useful in that it sets out the potential chasm between the rhetoric and the reality of progress files. If this tension (principle *versus* practice) is combined with the realisation that such files are very time-consuming to complete (both for students and teachers), one has to question whether the claims that are made for progress files in principle can be sustained in practice. Practical difficulties include negotiating the contents and finding time for negotiation and completion of the records.

The contents of a progress file

An important feature of a progress file is its intention to embrace more than the National Curriculum or the successful learning of an academic curriculum. Hence its contents can include:

- subject-specific achievements, attainments and targets (for students who will not be leaving school at the time of entering data on the file), for example in terms of knowledge, concepts, skills and attitudes (within and outside the National Curriculum, both award-bearing and non-award-bearing), together with samples of work where relevant;
- cross-curricular achievements, attainments and targets (for students who will not be leaving school at the time of entering data on the file), for example in terms of knowledge, concepts, skills and attitudes;
- personal and social skills and achievements;
- other experiences and achievements (including events, awards, interests and activities undertaken);
- a personal statement written by the student.

In most cases the contents (and often the format) of the progress file is similar, comprising:¹⁴

- 1 *Personal details*, including name, and an updated summary of education and training history.
- 2 *Personal statement* on progress made and achievements, in which the student might comment on herself in different contexts (e.g. at school, at home, in the community),¹⁵ interests and activities that she has particularly enjoyed (at school and out of school), particular abilities and achievements, looking forward to the coming months (e.g. moving to the secondary school, college, employment, higher education).
- 3 *Qualifications and credits* (e.g. GCSEs, AS or A levels, NVQs, GNVQ credits Scottish Certificate of Education certificates, and those from other bodies, with relevant certificates).
- 4 *Achievements and experiences*, in curricular skills, core/key skills (communication, Information and Communications Technology, personal skills, numeracy, problem solving), qualifications, extra-curricular activities and achievements (e.g. sport, leisure, community, work experience). This could also include other qualifications (e.g. in music examinations of the Associated Board of the Royal Colleges of Music, first aid certificates of the St. John Ambulance Brigade).
- 5 *Employment history*, both full-time or part-time, connected with school or unconnected with school, including references and testimonials.
- 6 *Individual Action Plan*, addressing review, goals, targets, and learning and training arrangements.
- 7 *School achievements*, usually written in a summary statement, and include details of statutory assessment tests and tasks.
- 8 *Attendance rate*.
- 9 *Personal and social qualities* (e.g. self-reliance, coping with pressure, perseverance, determination, supporting others, working collaboratively, including samples of certificates or special commendations that have been gained in school).
- 10 *Statements* by the class teacher/headteacher and parent(s).

A progress file contains both a review and an action plan. The review, action plan and personal statement specify behaviours rather than qualities, i.e. concrete matters rather than non-concrete matters, enabling specific targets to be set and reviewed. Typically the entries in the progress file will be made by students themselves, though in many cases entries are also made by teachers, parents and other 'significant adults'. Entries will be numerical – maybe marks, grades or levels of achievement – and verbal, including commentaries on particular achievements.

It is sometimes the case that item banks of statements by teachers are held on computer and are called up and combined to make the commentary and teachers' comments. That this is problematical can be seen at parents' evenings – often at secondary school level – when parents, initially believing that the comments made about their child are unique to that child, speak to other parents only to find that in many cases the comments are the same or nearly the same for each child. On occasions the feeling of betrayal that parents come to hold spills over into anger! On the other hand, given the size of the task facing a teacher who may teach two hundred students a week, it is scarcely surprising that she uses computer software to ease this enormous task.

Finding time to complete a progress file

In recognition of the significant time implications of keeping progress files there are several ways in which time might be found to write such files,¹⁶ and, more recently, this has been updated by the Department for Education and Skills:¹⁷

- 1 'Directed time' after school (i.e. that time that the headteacher can fix at her discretion to be used for a named activity).
- 2 For primary teachers, bringing in secondary teachers who have non-contact time after their students have completed their public examinations.
- 3 For secondary teachers, using colleagues who have non-contact time after their students have completed their public examinations.
- 4 Building in non-contact time on the timetable and budgeting.
- 5 Releasing staff when a nominated member of staff (e.g. the headteacher) takes a whole-school or year-group assembly.
- 6 Team-teaching/team covering.
- 7 Splitting classes with work set, where students undertake the work in another teacher's class.
- 8 For primary teachers, providing 'busy boxes' of educationally worthwhile activities that can be undertaken whilst the teacher completes a file.
- 9 Bringing in other adults (including parents) to assist in classes.
- 10 Reducing the routine administrative burdens on teachers (the DfES lists 24 non-teaching tasks which should not be done by teachers, and which schools are compelled to implement). These include certain aspects of record keeping, reporting, collation of records and managing students' records using ICT).

Quite how realistic are these suggestions is highly questionable. Teachers find their non-contact time is taken up with preparation and marking; primary (and some secondary) children simply cannot be left to 'get on' with activities that are largely unsupervised (regardless of the legal implications); schools do not have enough money to provide 'supply cover' to release teachers; splitting a class often requires more time in preparation and follow-up than the lesson itself; team teaching implies that the whole team is with the students.

What is certain is that, because of the centrality of negotiation in a progress file, time must be found to complete elements of the file with the students during the teaching time rather than away from the students in the teacher's directed time. As was mentioned earlier, this has pedagogical implications, for example lessons will require careful planning to free the teacher to work with one student at a time on her file – setting work to occupy the other students productively.

Writing comments on a progress file

Comments should be entered that spring from discussions between the teacher and the student.

That is to say, the student's comments should figure in the progress file. That is a very difficult task for inarticulate students, slow or poor writers (particularly young children), or for some students whose first language is not English. The problem is compounded for students who seem to have made only minimal progress over a period of time – what do they have to report? The question arises of whether the progress file is as motivating as the claims made for it. It could well be the case (and often is) that teachers discuss progress with the student but the teacher writes the statements, the student's contribution being confined to the personal statement. The comments in a progress file should reflect positive achievements, however minimal these might be.

It was mentioned in connection with assessment that the nature of the referent should be made clear,¹⁸ for example whether an assessment has been criterion-referenced, norm-referenced, self-referenced (ipsative-referenced). The same is true for progress files. For example, in the following comments on a progress file the referent is often unclear:

'Paul makes every effort to concentrate on his handwriting' (is this ipsative-referencing or norm-referencing, i.e. are Paul's efforts good for Paul or good in comparison to the rest of the class?).

'Susan has made a little progress this year in her geography map-reading' (is this ipsative-referencing – in comparison to her progress last year, norm-referencing – in comparison with other students, or criterion-referencing – in her achievement of the National Curriculum?).

'This term Jamila has been more successful in keeping up with the history work' (is this ipsative-referencing – Jamila has been better this term in comparison with a previous term, norm-referencing – when compared to others in the class, or criterion-referencing – in meeting the specific demands of the history topic?).

'Michael has found the physics topic quite demanding this term but overall he has im-

proved' (is this ipsative-referencing – in comparison with the physics that was studied in the previous term, norm-referencing – in comparison with his peers, or criterion-referencing – in terms of meeting the specific academic demands of the physics topic?).

'Ahmed adopts a mature approach to the mathematics' (is this ipsative-referencing – where Ahmed has settled down to study more than in the previous term, norm-referencing – saying that Ahmed is more studious than his peers, or criterion-referencing – that Ahmed meets the criteria for a student working at Level 7 in the National Curriculum?).

As with assessment the data entered on a progress file must be evidential, concrete and specific so that the reader knows exactly what the referent is and the context and activity that gave rise to the comment.

Many students may find very threatening the whole business of sitting with a teacher to discuss their progress and achievements. That requires considerable thought by the teacher and, in many cases, in-service preparation for counselling skills: listening, responding, summarising, conferencing, asking unthreatening questions, being very aware of non-verbal indications of stress in the student – the tight body position, the anxious swing of the leg, the avoidance of eye contact, the protective folding of the arms. For some students having a teacher sitting next to them – rather than opposite them across a table – might reduce stress; for others it might increase stress, particularly if the teacher is male and the student is female. In many cases teachers will need to practise questioning, initiating, summarising skills so they are not threatening. Moreover, it is useful for the teacher to review who set the agenda, who did the most talking, who took the lead in a session designed to be a partnership in reviewing progress and action planning, whose comments actually appear on the progress file, whether the discussion that led to the comments was more like a dissemination of the teacher's judgements, a consultation about a given agenda, or a genuine focused discussion on mutually agreed matters.

Clearly the completion of a progress file exercises the mind of the experienced teacher; the student teacher who takes part in the completion of the file will need to plan very carefully how the session will run. This will include what she will say, how she will find the words to express positive achievements, how she will phrase questions and comments, what she will avoid (i.e. threatening, closed questions, ascription of blame), how to move from a discussion to the entering of data on the progress file.

Equal opportunities and progress files

It has already been mentioned that students whose written or oral skills are limited may find the completion of a progress file unnecessarily challenging – even if they are completing only the personal statement. One has to ask whether the progress file favours the more articulate students, the faster writers, the higher ability students, the student whose first language is English, the well-off student who simply can afford to do more exciting out-of-school activities than others and those students with a high measure of those indicators of cultural capital that many schools seem to value. For example, dancing might be less valued by schools or post-school readers of the progress file than by the student. The teacher, wittingly or unwittingly, might vet the entries, discouraging those entries that may appear less important in the eyes of some readers and encouraging those entries that might be more appealing to employers or higher education interviewers. The teacher may be suggesting excisions or inclusions to the file; whilst this might be done in the interests of students, nevertheless it does throw into high relief this issue of who controls, and contributes to the file and how authentic it will be.

Further, there is an argument to suggest that the progress file, like the record of achievement, is seen by many students as a 'second best' in comparison with success in external examinations – many students may believe that possessing three A level successes is much more valuable than having one A level pass and a good progress file. We see here the problem alluded to earlier, *viz.*

that the progress file may be used for selection rather than motivation.

Another feature in the issue of equal opportunities is that many girls tend to take the completion of the progress file more seriously than many boys. Whether this may or may not be a 'good thing' is irrelevant; if the file has differential value to a large sector of the school population then its utility needs to be questioned.

One has to question whether the completion of a progress file favours different personality types, *viz.* the more extrovert and social student who does not mind revealing her personality and matters of significance to her. Students of a more private, retiring nature may wish to withhold information in the file, fearing or disliking exposure of the personal to a public audience or maintaining a tactful silence on issues.¹⁹ Some students may regard the progress file as yet another assessment measure, in which case the less that the student says the less she is susceptible to the results of assessment and comments in the file. There is a fine line between the rights of an individual to silence and privacy and the rights of the public to know about the student in order, for example, to be able to plan future curricula, to offer employment or a place in higher education.

Summarising the outline of progress files so far raises more questions than it answers, for example:

- How do they vary by age, gender, ethnic origin (of the student and the teacher)?
- How do they vary in relation to the values, attitudes, personality, abilities, socio-economic status, of the teacher and the student?
- How do they vary in relation to teaching and learning styles and interpersonal relationships between students and teachers?
- How do they vary in relation to their perceived utility by, commitment of, and recognition of the significance of the file by students and teachers?
- To what extent do they vary with the teacher's and student's abilities to participate in, lead and conduct discussions (in the teacher's case, their tutoring and counselling skills; in the student's, abilities and willingness to participate in discussions)?

- To what extent does the success of the file vary with the time spent on them by teachers and students?
- To what extent do progress files vary according to the degree of 'vetting' (conscious or subliminal) of the contents by teachers?

What we are arguing is that there are very many variables that exert an influence on the success of the progress file, and that the teacher and student teacher have to be mindful of all of these when participating in the process of compiling and updating the file. This is not to be negative about progress files, indeed their value has been shown to be great;²⁰ rather it is to show that the compiling and keeping of a progress file engages complex and sensitive matters.

For student teachers on teaching practice the implementation of progress files can be threatening as they require a degree of confidence, knowledge about a student, reduction of the social distance between student teacher and student, that either the student teacher does not possess or is reluctant to exercise when, in many cases, their concern is to establish and maintain order in the classroom. In these cases it may be advisable for the student teacher to be involved in a comparatively limited though nonetheless significant way with progress files, perhaps being involved with only a small number of students, or providing data for a three-way discussion between the student teacher, the class teacher and the student.

We are not advocating that student teachers do not become involved in progress files; indeed, we are suggesting the opposite. Rather, we are suggesting here that, given the sensitivity of some aspects of the completion of a progress file, student teachers should regard their involvement in it as an important part of their preparation for newly qualified teacher status but as one to be handled with care and guidance from more experienced teachers and mentors. This can take the form of:

- sitting in on discussions between the teacher and students;
- contributing to the discussions between teacher and students;
- holding a discussion/conference with a small number of students;
- practising writing sample comments for a progress file – to be shown to and discussed with the class teacher or mentor;
- looking at examples of progress files in the teaching practice school, including the contents and types of comments that are entered (and by whom);
- observing how time is created to enable the contents of progress files to be discussed with students during lesson times;
- finding out how the teacher has had to alter her teaching styles and how the students have had to alter their learning styles in order to enable progress files and the action plans contained in them to become significant features of the lessons and curricula;
- discussing with teachers and students the relative strengths, weaknesses, positive and negative outcomes of progress files;
- contributing in some part to the written record in the progress file.

Whichever of these forms of involvement are undertaken by student teachers we advocate that they attempt to ascertain the strengths, weaknesses and problematic areas of keeping a progress file, their use(s) by the school and the students in it. The student teacher might also find out the students' perceptions of the progress file and the process of compiling it. Given that it embraces a central pillar of this book – the need for action planning – we advise student teachers to ask teachers and students exactly how the progress file fits into action planning in the school's and the student's planning, what they think the contribution of the progress file is to the process of action planning, and how successful a device it is for action planning.

Notes and references

1 A background to current developments in education

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18 Progress files

- 1 The Dearing Review of Qualifications for 16 to 19-year-olds recognised the value of records of achievement, but suggested amendments and a relaunch.
- 2 The government appointed a National Record of Achievement (NRA) Steering Group in 1996, which reported in 1997.
- 3 The DfES publishes a range of information about the progress file on www.dfes.gov.uk/progfile/about.cfm. Further, it provides a series of supplements which can be obtained from the website: www.dfes.gov.uk/progfile. Much of the material in this section derives from these supplements. In the same website is an online journal of examples and case studies.
- 4 Department for Education and Skills (2002) *Progress File Achievement Planner, Supplement 2*. London: The Stationery Office.

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