CREATIVITY AND ENGLISH LANGUAGE TEACHING: FROM INSPIRATION TO IMPLEMENTATION

ALAN MALEY AND TAMAS KISS

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Summary of the Book

Part 1 analyses and discusses general creativity theory, creativity in education, in applied linguistics, methodology and teaching materials. In Part 2 we define the key characteristics of the creative teacher and go on to offer practical suggestions for becoming both a more creative person and teacher. In Part 3 we suggest the pre-conditions and frameworks for classroom application. In Part 4 we discuss research implications and suggest some directions for future research.

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1

Introduction

Why did we decide to write this book? Because we believe passionately in the centrality of creativity in language education, in learning in general and in life itself. This is not to say that creativity is the only important factor in language learning—but without it the quality of the learning experience is seriously depleted. Creativity is not simply an optional add-on to what we do but is its very essence.

We wrote it too because creativity is so widely regarded as a desirable thing to have, in virtually every field. From fashion to architecture, from hand-held devices to gardening, from management to education, from computer games to interior design, everyone seems to believe that creativity is 'a good thing'. It also comes top of Maslow's pyramid and Bloom's Taxonomy. And Ken Robinson proclaims that "creativity is the new literacy". Unfortunately, when a term becomes a buzzword, its meaning is progressively blurred by its use in so many different contexts. Creativity shares this erosion of clarity with a whole range of other words in popular use: identity, culture, communicative, democracy, motivation, quality—and so on. So one of our aims in writing this book is to try to define a little more clearly just what creativity might mean.

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This is particularly important when, on closer examination, the concept proves frustratingly difficult to define concisely and accurately. Creativity is something we readily recognise in concrete instances yet find a slippery customer when asked to define it in abstract terms. As Amabile (1996, p. 33), in one of the core texts on creativity, admits, "a clear and sufficiently detailed articulation of the creative process is not yet possible." And she adds that "the nature of creativity is such that a complete and useful theory of creativity cannot be a single, simple theoretical statement" (p. 270). It is therefore perhaps preferable to regard creativity as a cluster of characteristics, along the lines of Wittgenstein's (2001) notion of 'family resemblances'. This means that here is a whole range of possible defining characteristics, but only some may be in play in any one instance.

For those in need of a clear definition, there now seems to be a consensus around Sternberg's three key conditions for defining an act as creative: novelty, quality and relevance (Kaufman & Sternberg, 2010, p. xiii). The need for creative ideas also to be relevant is clearly a key criterion. Novelty alone is not enough.

In addition to outlining at least some of the defining traits of creativity, we will also aim to identify and bring together the factors which favour creativity, particularly in the domain of language education, not least the role of the teacher. These will underpin much of the material in Parts 2 and 3. Necessarily, we shall also draw attention to factors which constrain or discourage the exercise of creativity.

In Part 1, we shall review a variety of existing work in the field of creativity. In Chap. 2 we analyse work in general creativity theory and, from there in Chap. 3, pass to the field of education. Narrowing the field, in Chap. 4, we then review work in applied linguistics, then move on in Chap. 5 to language methodology and the role creativity has played in its development. Finally, in Chap. 6, we look at some concrete applications of creativity in published language teaching materials. In Part 1, then, there is a progressive narrowing of focus in two senses: from theoretical to practical, and from general to language-teaching specific. In this way we hope to winnow out the essential nature of creativity and the conditions which favour its development, as well as its potential benefits.

Along the way, we hope to explore the relationship between creativity and play, creativity and scientific and artistic invention and discovery, creativity and the unconscious, and creativity and learning.

Part 2 focuses on teachers. In Chap. 7, we first attempt to define what qualities characterise creative teachers, based on a number of surveys, including one we conducted ourselves. We then pass in Chap. 8 to a consideration of ways in which teachers can become more creative persons. Our argument is simply that unless teachers as individuals have themselves developed a creative mind-set, they are unlikely to be able to graft creativity on to their daily practice. Chapter 9 focuses on ways of helping teachers integrate more creative ideas into their teaching and developing their personal creativity both within and beyond training programmes. One key area for discussion is the need for teachers to develop strategies for dealing with the unpredictability which is at the heart of teaching through improvisation and spontaneity.

In Part 3 we first discuss, in Chap. 10, the basic prerequisites for bringing about a creative classroom. In Chap. 11, we offer some frameworks and principles for applying them to materials design. We refer back to some of the principles derived from Part 1. The focus here will be on designing materials which will stimulate creativity in the students, including the ways students themselves can contribute to generating their own materials.

Finally, in Part 4, we will consider how classroom research and inquiry might contribute to the greater application of creative ideas and practices. Chapter 12 discusses some general issues in creativity research. In Chap. 13, we review some of the existing research in English language teaching on creativity. Chapter 14 provides a network analysis of research, with some intriguing findings. Finally, in Chap. 15 we offer suggestions for some possible research projects.

References

Amabile, T. M. (1996). *Creativity in context*. Boulder, CO: Westview Press.

Kaufman, J. C., & Sternberg, R. J. (2010). *The Cambridge handbook of creativity*. New York: Cambridge University Press.

Wittgenstein, L. (2001). *Philosophical investigations*. Oxford: Blackwell.

Part 1

Creativity: Concept to Product

2

Creativity Theory

In this chapter we shall examine the contributions of a wide variety of people who have thought deeply and long about the nature of creativity. Some are professional scholars and researchers, others more popular and accessible. The literature on creativity is now vast, so we have had to be very selective in our choice of work to discuss. We hope nonetheless to have included work which has made major contributions to our understanding of the complex phenomenon which is creativity.

Wallas and the Four-Stage Process

Among the earliest modern attempts to understand creativity were Wallas' (1926/2014) ideas. Basing his scheme on the earlier work of Helmholz (1896), he outlined a four-stage process: Preparation, Incubation, Illumination and Verification. Given a 'problem', 'puzzle' or 'conceptual space', the creative mind first prepares itself by soaking up all the information available. Following this first Preparation stage, there is a stage of Incubation, in which the conscious mind stops thinking about the problem, leaving the unconscious to take over. In the third stage, Illumination,

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a solution suddenly presents itself (if you're lucky!). In the final Verification stage, the conscious mind needs to check, clarify, elaborate on and present the insights gained. From Wallas, we can conclude that in the classroom too, there is a need to provide rich and copious information (input), and plenty of time to process it. Equally, there is a need to verify and assess what has been produced to see if it meets the condition of relevance.

Rhodes and the 4 Ps of Creativity

In 1961, Rhodes published the paper which has given rise to one of the most influential characterisations of creativity to date. In it he proposed four foci for creativity, namely person, process, press and product. "The term person, as used here, covers information about personality, intellect, temperament, physique, traits, habits, attitudes, self-concept, value systems, defence mechanisms, and behaviour" (Rhodes, 1961, p. 307). This has been highly productive in studies focusing on the characteristics of creative people as we shall see in the work of Csikszentmihalyi and Gardner below.

"The term process applies to motivation, perception, learning, thinking, and communication" (Rhodes, 1961, p. 308). Wallas' (1926/2014) four-stage process described above is a good example of process. So too are Finke's (1996) distinction between 'chaotic' and 'ordered' thinking, Boden's (2001) combinational, exploratory and transformational thinking (see below), and the notion of idea generation and idea exploration phases in Finke, Ward and Smith (1992).

"The term press refers to the relationship between human beings and their environment" (Rhodes, 1961, p. 308). This notion and the word 'press' are rather common in the field of education. A number of creativity theorists have elaborated on the importance of the material and social environment as a stimulus or a constraint on creativity, including some we shall discuss below (Amabile, 1996).

"The word idea refers to a thought which has been communicated to other people in the form of words, paint, clay, metal, stone, fabric, or

other material. When an idea becomes embodied into tangible form it is called a product" (Rhodes, 1961, p. 309). In language teaching, the main products will be written samples of the language, though other forms of creative products are also included—oral performances, digital, multimedia and multimodal artefacts.

Koestler and Bisociation

Koestler, in *The act of creation* (1964), suggests that the creative process operates through the bisociation of two conceptual matrices, not normally found together. He believed that putting together two (or more) things that do not normally belong together can facilitate a sudden new insight. As an example of this, he explores in detail the way humour functions, since humour often works by setting up expectations within one matrix, then confounds these expectations by placing them in a different matrix. For example, in this joke,

> One old woman is talking to another: 'Do you know what happened the other day?'
> 'No, what?'
> 'I sent my husband Bill out into the garden to get a cabbage for lunch. And he fell down dead.'
> 'So what did you do?'
> 'I opened a tin of peas instead.'

Here two frames or matrices are brought together: lunch is a relatively minor matter; one's husband's death is deadly serious. We anticipate a serious response but instead, the wife reverts to the trivial frame of food. It is the surprise we experience in having our expectations overturned which triggers the laughter following a joke.

Puns work in a similar way, forcing us to see one meaning, then another, in much the same way that Gestalt pictures cause our eyes to interpret the same picture in two radically different ways as we shift from one framework to another. Puns and other word play are routinely used in advertising, journalism and politics.

One of the most famous political campaign posters of all time was the Conservative party's 1979 'Labour isn't working' slogan: a complex play on words. 'Labour' is a political party but the word 'labour' also means 'work'. So the slogan can be interpreted in several different ways:

> The Labour party is not doing its job (isn't working hard enough) What the Labour party is doing as its work is not bringing results. If you vote for the Labour party you will be unemployed (Labour = not working).

Bisociation was also one of the key principles of the surrealist movement in art, photography, music, film, theatre and literature which flourished mainly in Paris in the 1920s and 1930s. Many of their experiments were based on the idea of bringing together two unrelated or incompatible frameworks in a random way to produce something new. Marcel Duchamp's toilet re-framed as a piece of found sculpture and Picasso's bull sculpture made by combining the handlebars (horns) and saddle of a bicycle (face) are cases in point. The surrealists emphasised the importance of the unconscious mind, especially dreams, of playing around and experimenting, of re-framing things and of seeing ordinary things from unusual viewpoints. They also explored the creative potential of constraints: one novelist (Perec, 1969) wrote an entire novel without using the letter 'e', for example. There are lessons we can learn from the surrealists too.

Koestler (1964) also explores the role of incubation—letting the mind loose to wander and freely associate, turning off conscious attention to the task and leaving room for the subconscious to do its work. He discusses the role of the subconscious and unconscious mind, including the phenomenon of sleep, dreams and the hypnagogic state half way between sleeping and waking. He notes that visualisation is a powerful factor in 'seeing' solutions to complex problems, citing many scientific cases in support of this, such as Faraday visualising electrical lines of force, or Kekule visualising the benzene molecule as a snake eating its own tail (the legendary Urobolus).

He emphasises the role of re-framing a problem or phenomenon—that is, seeing something familiar in a new way. "The originality of genius…consists in shifts of attention to aspects previously ignored; in

seeing appearances in a new light, in discovering new relations and correspondences" (Koestler, 1964, p. 392). He notes that conventional thinking comes in the way of such creative re-framing. We tend to accept too readily that what is habitual is correct and normal. Hence there is a tension between originality and convention: "The symbol of creativity is the magic wand which Moses used to make water come out of the rock; its reverse is the faulty yardstick which turns everything it touches into dust" (Koestler, 1964, p. 409).

Koestler's (1964) book is now somewhat dated but many of the ideas it sets out recur in later literature and continue to be relevant. Some of these ideas can be put to use in the classroom through applying the random principle (see below) to create new and unexpected connections, using the re-framing principle, and free association of words and images.

Boden and Conceptual Spaces

In contrast to Koestler (1964), Boden (1992) takes an AI (artificial intelligence) approach to investigating creativity. She asks what a computer would need to do to replicate human thought processes, and in particular whether a computer could demonstrate intuition. (This has recently been demonstrated by the Go competition in which a computer beat a champion human player.) Her focus on AI, however, need concern us only insofar as it offers insights into the creative processes which humans engage with. She refers to the self-organising properties of complex, generative systems through processes such as parallel distributed processing. For her, creativity arises from the systematic exploration of a conceptual space or domain (e.g. mathematical, musical, linguistic). She draws attention to the importance of constraints in this process. "Far from being the antithesis of creativity, constraints on thinking are what make it possible" (Boden, 1992, p. 82). Chaos theory (Gleick, 1987) tends to support her ideas. We need a rich and varied 'soup' inside the conceptual bowl to increase the possibility of creative collisions and the release of new flavours. Boden's (1992) approach is richly suggestive for language acquisition, materials writing and for teaching, in that all are rooted in complex,

self-organising systems. The relationship between language acquisition and chaos theory is explored in depth in Ellis and Larsen-Freeman (2009). And Thornbury (2001) makes reference to language/grammar emerging from the whirlpool of input.

Box 2.1: Conceptual Spaces and Creative Processes

Boden (1992) makes much use of the idea of 'conceptual spaces' within which ideas are manipulated and tried out, taking account of contextual constraints, until a creative 'solution' to the 'problem' or issue in question is found. When thinking about this issue, my mind was almost saturated with Boden, yet I could not see a neat way of making these ideas clear to a reader unfamiliar with them. This is a brief personal account of how I 'solved' one creative problem at the micro level (the limerick) and simultaneously found what I hope is a solution to the macro problem above (how to explain conceptual spaces).

Boden (1992) refers at one point to what happens inside the brain when we are asked to complete a limerick starting with a given first line. In this case:

There was a young lady from Brighton.

Having been re-reading Boden's book *The creative mind* (1992) for much of the day, I went to bed at midnight. I woke at 04.30, turned on BBC 3's *Through the Night* to a low volume. This programme plays classical music all night. I then lay and allowed my brain to ramble across the limerick problem set by Boden.

Because I have read many limericks and even written a few, I was subconsciously aware of the contextual constraints: there are five lines, the rhyme scheme has to be AABBA, the lines have to scan—lines 1, 2 and 5 have 3 stresses, lines 3 and 4 have 2 stresses. Additionally, the content has to be humorous, and preferably contain sexual or scatological images. 'Clean' limericks are not half as much fun as 'dirty' ones. In fact, they would hardly qualify as limericks at all.

In my hypnagogic state, half way between sleeping and waking, with the music playing softly as a background, I let my brain play with many possibilities for completing the limerick. I could even visualise the limerick in a room with all the possibilities flying around it like butterflies. The brain automatically engages with the content suggested by different rhyming words, compares them, makes choices among them by induction, finds new associations between ideas, makes new analogies, and is constantly sifting and re-combining ideas until there is some kind of closure or fit.

This is a summary of just some of the ideas (there were many more than I have listed) which went through my head:

There was a young lady from Brighton / Who sometimes wore clothes that would frighten/ but what about the last line? *Tighten?* Mm. Let's try another one. *Who loved to have something to bite on/ So when her male chum/Presented his bum/* but what about the last line again? *She sank her teeth into*…into what? Doesn't work. Let's try, *Who wanted her buttocks to tighten/ Because when she was viewed/ Standing there in the nude/People said* …No. Never mind. Let's just listen to the music for a bit. *Who used her new sofa to fight on?* No, I can't see where that one would go … *Who always made love with the light on.* That's better. So… *She explained to her chum/ When I want to come…* Now that last line again… *Without light I think I'd be frightened.* OK but I don't like the extra*'d'* on the end of *'frighten'. Lighten? Tighten? Brighten? Sight on?* How about '*heighten'? With the light on my responses heighten*? Still a bit awkward. Maybe, *With the light on my sensations heighten*. Better rhythmic fit – I think that's it. I like the repetition of the sound [ai] in the same line – *light on* and *heighten*. Let's just check if it scans.

Here we go:

There was a young lady from Brighton,
Who always made love with the light on.
She explained to her chum,
'When I want to come,
With the light on, my sensations heighten.'

When I woke up it was 08.00. And I immediately realised that the solution to the macro problem was to do what I have just done, namely to report my mental experiences in solving the micro problem. They illustrate how a conceptual space—the limerick form—is like a room in the brain where multiple alternatives can be played around with within a set of formal and content-driven constraints. To do this the brain has already to be primed with a lot of information and experience about the problem in hand. You can't write a limerick if you don't know what a limerick is. It then needs time to juggle possibilities in an unhurried, relaxed way till it recognises a 'fit'. Perhaps music can facilitate this process by helping to relax the brain and to allow unrelated ideas to fuse. Visualisation almost certainly helps too.

There is also a link here to one of the popular characterisations of the dimensions of creativity referred to by Csikszentmihalyi and Gardner (among others). They depict it as a triangle between *Individual talent*, the specialist *Domain* in which it operates, and the *Field,* comprising the other

workers in the same domain. In my experience above, clearly I was exercising my individual talent (such as it is), in the Domain of poetry (subdomain, limericks) and with consideration of the expectations and judgements my readers in the Field.

Of course, writing a limerick is a relatively trivial instance of creative thinking—but I believe the process would be similar with more serious 'problem spaces'. Readers may care to try this out with a 'conceptual space' of their own choosing?

Boden's (1992) text is dense and often obscure but there is no need to follow her into the thickets of her arguments in favour of an AI approach—and in any case, the AI programmes she refers to have long since been superseded. The following points are the most relevant for our purposes here:

Box 2.2: Boden and Creativity

- Ideas do not come from nowhere. "Insights do not come from the gods – and they do not come from nowhere either" (p. 18);
- They often come to us when we are thinking about something else;
- They are often formed on the basis of extensive 'tacit knowledge' (Polanyi, 1966/2009). This is the kind of expert knowledge acquired from long familiarity with a given domain or field;
- There is great value in 'playing around'; "nothing is more natural than 'playing around' to gauge the potential – and the limits – of a given way of thinking" (Boden, 1992, p. 46). "creativity has much in common with play" (p. 46). Another term for playing around is 'exploration'. The links between creativity and play are dealt with in more detail below (Bateson & Martin, 2013);
- Constraints are important. "Constraints on thinking do not merely constrain, but also make certain thoughts – certain mental structures – possible" (Boden, 1992, p. 46). "a creative genre can be based on precisely specifiable rules" (p. 77). We can think of constraints as the nozzle which shapes the fluidity of thought and gives it force;
- Chance is important but we also need the specialist knowledge and experience which will make it possible to recognise it. "chance with judgment can give us creativity; chance alone, certainly not" (p. 221). Or, in Pasteur's words, "Fortune favours the prepared mind";

- Heuristics, such as 'consider the negative' are a powerful way of generating ideas. They can be used "to prune the search tree. That is, they save the problem-solver from visiting every point on the tree, by selectively ignoring parts of it" (p. 78);
- So too are analogy and metaphor. But to function effectively, they need to be based on experience, information and expertise in the domain. Both analogy and metaphor are often linked with visual and spatial mental representations;
- Induction, involving the ability rapidly to compare, analyse and select relevant items is also a key process. This is one thing AI programmes are designed to do;
- Semantic networks of associations are another way of generating ideas, where one item links to another in a potentially endless chain of associated ideas;
- Scripts (Schank & Abelson, 1977) and frames are helpful in organising semantic networks;
- Chaos theory (Gleick, 1987) can offer suggestive directions for thinking about creativity—and about teaching, in particular the way that small events can have disproportionately large consequences;
- Mere novelty is not the same as creativity. "Even everyday P-creativity requires that systematic rule-breaking and rule-bending be done in domain-relevant ways" (Boden, 1992, p. 254);
- Everyone has the potential to be creative. "creativity … based in ordinary abilities we all share, and in practised expertise to which we can all aspire" (p. 256).

Boden (2001) later developed her threefold typology of creativity processes: combinatorial, exploratory and transformational. *Combinatorial* creativity consists of associating old ideas to create something new. Using the analogy of cooking, an example would be fusion cuisine, where two or more distinctive cuisines are blended into a distinctive new one. *Exploratory* creativity is about exploring the conceptual space within the existing system of rules to find new arrangements. Using cooking again, it could involve experimenting with longer or shorter cooking times, or with the temperature at which dishes are served (such as cold soup, or fried ice cream) or new ingredients in old dishes (such as vegetarian cutlets). *Transformational* creativity involves a wholesale alteration of rules to bring about a whole new perspective. For example, the invention of the microwave oven transformed the way food can be prepared, or how dry-freezing food items transformed cooking practices.

Csikszentmihalyi: Individual Talent, Domains and Fields

Csikszentmihalyi (1990) takes a multidimensional view of creativity as an interaction between *individual* talent, operating in a particular *domain* or discipline, and judged by experts in that *field*. He also has interesting observations about the role of 'flow' in creativity: the state of 'effortless effort' in which everything seems to come together in a flow of seamless creative energy (Csikszentmihalyi, 1990). This can be related to the earlier work of Craik and Lockhart (1972) on 'depth of processing', which demonstrated how we retain better what we have acquired through more engaging, complex and psychologically demanding processes.

Csikszentmihalyi (1996) further explores creativity through analysing interviews with 91 exceptional individuals, and isolates ten characteristics of creative individuals. He concludes that creative people live highly complex lives, which manage to combine apparently conflicting characteristics:

Box 2.3: Csikszentmihalyi's Characteristics of Creative Individuals

- They are possessed of high levels of energy, yet manage to switch off for rest and reflection. Paradoxically, it is in these periods of rest that many creative ideas are born.
- They are both smart (i.e. highly intelligent) but also naïve, in the sense that they see things in a child-like way, which brings them to question what is 'obvious' to others.
- They are highly playful (see also Bateson and Martin (2013), below) but also demonstrate incredible discipline and persistence in working through the practical implications of their creative insights. One is reminded of Picasso's declaration, "Je ne cherche pas. Je trouve" (I don't search, I find), highlighting the role of 'inspiration'—and its apparent contradiction in, "Genius is 1% inspiration and 99% perspiration" (variously attributed to Edison and Einstein), which emphasises the role of discipline and effort. The paradoxical interplay of freedom with constraints is a recurring theme in creativity studies.
- They demonstrate a high degree of imagination and fantasy combined with a hard-headed sense of reality: "creative people are original without being bizarre" (Csikszentmihalyi, 1996, p. 63).

- They seem to combine traits associated with both extroversion and introversion. They typically need both the society of their peers and periods of solitude for reflection. The importance of introvert traits has been emphasised by Cain (2012) as a counter-weight to the importance current society appears to accord extroversion ('the man of action'). These include "openness to experience ('thinker, dreamer'), conscientiousness ('idealist') and neuroticism ('shy individual')" (Csikszentmihalyi, 1996, p. 270). The issue of creativity and neurosis is considered below in the review of Storr's *The dynamics of creation* (1991).
- They are both aware of the importance of their work, and simultaneously humble and deprecating about it. Creativity does not arise from arrogance. In those who live long enough, there is a shift from ambition in early life to altruism later.
- Psychologically, they display both 'masculine' and 'feminine' personality traits: the women becoming more assertive and analytical, the men more gentle and intuitive than their everyday counterparts.
- They seem able to combine a respect for tradition with the tendency to rebel against it. Clearly, any meaningful revolt can take place only against a thorough familiarity with the domain. This underlines the need for a firm knowledge base from which to experiment. Creativity does not emerge from ignorance.
- They combine a passion for their creative endeavours with a cool objectivity—a capacity to evaluate realistically what they have created. This implies the ability to discard what is deemed unsatisfactory and start again.
- And they exhibit a high level of acceptance of pain and difficulty, combined with the extreme joyfulness of the creative process. No pain, no gain.

These characteristics will prove useful as a reference point when we consider the development of teacher creativity in Part 2.

In terms of the creative process, Csikszentmihalyi broadly follows Wallas' four stages but adds a fifth stage, which he calls Elaboration. What this means is that after something has been created, it needs to be applied. (See also Bateson and Martin (2013) below for their distinction between creativity—having the idea, and innovation—applying it.) He also reiterates Boden's (1992) point that problem-finding is more important than problem-solving which chimes with Koestler's observation that "technical virtuosity is one thing, creative originality another" (1964, p. 393).

The point is also made by Amabile (1996) in her distinction between heuristic tasks (which characterise creativity) and algorithmic tasks (which are characterised by predictable outcomes).

At several points, he refers to factors which come in the way of creativity. At the Personal level, these include overload on attention (too much going on), distraction, laziness, and inability to find a direction for one's energy. He does not mention low self-esteem, self-doubt and negativity, which we would rate rather high as an obstacle to creative effort. At the Domain and Field level he mentions the tendency for a discipline to become too rigid and conformist, thus sparking resistance and change. (This relates to Kuhn's well-known cycle in *The structure of scientific revolutions* (1996).) He refers to

> a domain becoming too confining and its members mistaking the symbolic system in which they operate for the broader reality of which it is a part… When a field becomes too self-referential and cut off from reality, it runs the risk of becoming irrelevant. It is often dissatisfaction with the rigidity of domains that makes great creative advances possible. (Csikszentmihalyi, 1996, p. 89)

This, of course, applies to the domain of Applied Linguistics and Language Teaching Methodology too.

He affirms that creativity is a vital factor in human survival, particularly at a time of rapid change, such as the present. This issue will emerge strongly from Ken Robinson's work reviewed below in Chap. 3. He also refers to the fact that creativity is its own reward. It is undertaken for the personal satisfaction it brings. This autotelic quality is echoed by Egyptian novelist Naguib Mahfouz, in an interview cited by Csikszentmihalyi (p. 107): "I love my work more than what it produces."

> Even though personal creativity may not lead to fame and fortune, it can do something that from the individual's point of view is even more important: make day-to-day experiences more vivid, more enjoyable, more rewarding…living creatively links us with the process of evolution. (Csikszentmihalyi, 1996, p. 344)

It would therefore seem well worthwhile to devote some time to helping teachers develop personal creativity in both life and work. This would link with Allwright's (2003) idea of prioritising the quality of life in the language classroom. (See also Chaps. 8 and 9 where we discuss the development of personal and professional creativity.)

Gardner and the Nature of Genius

Like Csikszentmihalyi, Gardner (1993), in *Creating minds*, seeks to generalise the characteristics shared by highly creative people. His study concerns just seven contemporaries who can fairly be considered as geniuses: Freud, Einstein, Picasso, Stravinsky, Martha Graham, Gandhi and T. S. Eliot. Unsurprisingly, each of these represents a different form of intelligence, following Gardner's earlier seminal work on Multiple Intelligences (Gardner, 1983). One can question the extent to which the characteristics of genius can reasonably be extrapolated to ordinary mortals but his findings, taken alongside Csikszentmihalyi's (1996) study of a larger sample discussed above, do provide some useful pointers. In his conclusions, organised under the three nodes of the individual, the domain and the field, Gardner finds that despite their many differences, there is a remarkable congruence in some aspects. At the individual level, there is a merging of the child and the adult. Childlike behaviour and childhood memories play an important role in all seven subjects. They all also experience the feeling of being under siege, of being marginal at key creative moments, yet they manage to turn this marginality to advantage. Gardner (1993) also detects a ten-year cycle among these highly creative people. Most of them experience only two such peaks in their lives. At the domain level all of them managed a paradigm shift—they changed forever the direction of their chosen domain. (This is a theme we shall explore in greater detail in Chaps. 4 and 5.) They are also all engaged in what Clifford Geerz refers to as 'deep play', continually trying out new ways of manipulating the material within the constraints. At the field level, the main finding was the key role played by 'mentors' or colleagues. "The often inarticulate and

still struggling conversation also represents a way for the creator to test that he or she is still sane, and understandable by a sympathetic member of the species" (Gardner, 1993, p. 386).

Amabile and Social/Environmental Factors

Amabile (1996) approaches creativity from a social and environmental viewpoint. She claims that previous theories have tended to neglect the power of such factors to shape creative effort. "In contrast to these research endeavours, a social psychology of creativity aims to identify particular social and environmental conditions that can positively and negatively influence the creativity of individuals" (p. 5). She has a useful review of earlier work by Guilford (1950) and Torrance (1962) in developing tests of personality, intelligence and creativity. Some of Torrance's (1962) ideas remain relevant: the definition of creativity in terms of fluency (having lots of ideas), flexibility (having lots of different ideas), elaboration (being able to develop and combine ideas) and originality (having unusual, new ideas). However, she maintains that, while individual talent is important, so equally are the conditions—cultural, social, historical and material—in which it is set. She also finds that intelligence, while a necessary factor, is not alone sufficient to ensure creativity. People with high IQs measured by one of the standardised tests are no more likely to be creative than those with more modest scores.

Amabile makes a distinction between intrinsic motivation, which is shown to promote creativity, and extrinsic motivation, which tends to inhibit it. "the intrinsically motivated state is conducive to creativity, whereas the extrinsically motivated state is detrimental" (Amabile, 1996, p. 107). Among the factors associated with extrinsic motivation are rewards, over-critical evaluation and excessive constraints. She links these ideas with algorithmic as opposed to heuristic procedures. An algorithmic approach to solving a problem or completing a creative task is to follow a set of linear, prescribed steps leading to a single solution. A heuristic approach involves applying general rules of thumb and exploring the outcomes more flexibly until one or more solutions suggest themselves. Amabile links extrinsic motivation with a preference for algorithmic procedures, and intrinsic motivation with a heuristic

preference. And in her view, the heuristic approach is more likely to lead to a creative outcome.

Amabile's theory rests on three main factors: *Domain-relevant skills* (i.e. familiarity with a given domain of knowledge and technical skills to operate within it), *Creativity-relevant skills* (e.g. the ability to break free of 'performance scripts'—established routines, to see new connections) and *Task motivation*, based on attitudes, intrinsic motivation, extrinsic constraints and rewards, and so on.

In relation to Task Motivation, Amabile finds from her analysis of a wide variety of empirical research that an over-emphasis on evaluation has a negative effect on creative outcomes. However, this holds only for heuristic tasks. In algorithmic tasks, evaluation can have a positive effect. Likewise with rewards, "which can be detrimental to creative performance" (Amabile, 1996, p. 171). She explains, "It may be that under reward conditions people simply feel less involved in the intrinsic aspects of the task, or they feel less positively towards it and thus engage their attention less deeply" (p. 176). Many creative artists confirm that doing something for its own sake rather than for a reward is key. However, there is some evidence that, if the intrinsic aspects are emphasised, then rewards can sometimes have a positive effect, especially in the later stages of a creative process, after the major breakthrough has come, and the more routine work of 'Verification' is under way. A crucial factor seems to be the degree of choice available. In over-controlled situations, with little opportunity to exercise individual choice, creativity is reduced. She also looks at the importance of mentors and role models in facilitating creativity.

The social and environmental factors Amabile discusses include peer influence, the teacher's character and behaviour, the classroom climate, family influence, life stress, the physical environment, degree of choice offered, time, the presence of positive role models and the scope for play in the environment. These factors clearly have relevance for learning and can be blended into an approach which seeks to promote creativity. While there is some evidence that creativity is associated with being with other creative people, thus emphasising the importance of networks, there is little to suggest that mentoring as such contributes much. What is more important is "that an intrinsic orientation leads to a preference for challenging, enjoyable tasks, whereas an extrinsic orientation leads to a preference for simple, predictable tasks" (Amabile, 1996).

Amabile examines a number of other social and environmental influences such as education, teacher characteristics, the classroom (or workplace) climate, family influence, the importance of prior activity (warm ups), the key factor of playfulness and fantasy, and the physical environment. Most of her conclusions are no more than we might expect: peer pressure is unproductive, teachers who show concern and 'warmth' and have high expectations stimulate creativity, families which are relatively laid-back about social inhibitions support creative effort, play is a key element. "Not all play is creative but…all creativity contains play" (Gordon, 1961, p. 121). There are two surprising conclusions however: that homogeneous groups are superior to mixed ability groups, and that educational level (like intelligence) is largely irrelevant to creativity after a certain point.

Amabile summarises the environmental *stimulants to creativity* as follows:

Box 2.4: Stimulants to Creativity

Freedom in deciding what to do and how to do it.
Good management by supervisors.
Sufficient resources.
Encouragement.
A climate of positive cooperation, where innovation is prized.
Recognition through feedback and appreciation.
Sufficient time to consider the problem or task.
An appropriate level of challenge.
Internally generated pressure to accomplish something important.

Logically, therefore, the environmental *obstacles to creativity* are listed as follows:

Box 2.5: Environmental Obstacles to Creativity

Organisations (or classes) with inappropriate reward systems, lack of cooperation, too much red tape and so on
Lack of freedom to decide what to do and how to do it
Lack of interest by 'management' (or supervisors or teachers)

Poor organisation
Too much inappropriate evaluation and feedback
Lack of resources
Too much time pressure
Reluctance (by 'managers'—or teachers) to change; unwillingness to take risks
Too much emphasis on competition

In the last section of her book, Amabile (1996) discusses implications of her work for enhancing creativity. She describes some of the direct attempts to 'train' creativity. These include Brainstorming (Osborn, 1963), Synectics (Gordon, 1961) and some of the commercial packages such as The Productive Thinking Programme (Covinton, Crutchfield, Davies, & Olton, 1972). There is no reference to de Bono or to Seelig but we shall review their ideas below. She considers that brainstorming may produce a greater quantity of ideas but not necessarily greater quality. Synectics relies largely on heuristics, such as 'make the strange familiar and make the familiar strange', and on the importance of analogy and metaphor—both of which will figure in our later discussion.

Many of the ideas to emerge from Amabile's (1996) book will prove suggestive when we come to consider teacher development in Part 2 and classroom applications in Part 3.

Bateson and Martin and Playfulness

Most writers on creativity comment on the importance of playfulness in the creative process. The relationship between playfulness and creativity is examined by Bateson and Martin (2013) in their admirably lucid and concise book, *Play, playfulness, creativity and innovation*.

Their main points are that playfulness, which is not quite the same thing as play, is strongly associated with creativity, and that creativity is not the same thing as innovation. What are the distinctions then? "Play and playfulness do overlap, but… some aspects of play behaviour are not

playful particularly when they start to merge into overt competition or aggression" (Bateson & Martin, 2013, p. 2). The distinction between creativity and innovation is as follows:

> Creativity is displayed when an individual develops a novel form of behaviour or a novel idea, regardless of its practical uptake and subsequent application. Innovation means implementing a novel form of behaviour or an idea in order to obtain a practical benefit which is then adopted by others. (p. 3)

This echoes the distinction between the stages of Illumination and Verification/ Elaboration, as described by Wallas, Koestler and Csikszentmihalyi discussed above.

Play is defined as follows:

- It is spontaneous and rewarding for the individual.
- It is intrinsically motivated and its performance is a goal in itself.
- The player is protected from 'serious' consequences, and it occurs when the individual is relaxed and not stressed. Play is an indicator of well-being. "It is usually the first activity to disappear if an individual is stressed, anxious, hungry or ill" (Bateson & Martin, 2013, p. 19).
- The behaviour consists of actions or thoughts expressed in novel combinations.
- It is performed repeatedly and looks different from 'normal' behaviour.
- Playful play is accompanied by a positive mood state (joyfulness) which encourages spontaneous thoughts and actions.

They also note that play is strongly associated with humour, just as is creativity. Though we tend to associate play with children, they emphasise that creative people go on playing all their lives. They quote G. B. Shaw, "[w]e don't stop playing because we grow old, we grow old because we stop playing" (Bateson & Martin, 2013, p. 5).

They suggest that play may fulfil several useful functions. "Play may therefore fulfil a probing role that enables the individual to escape from false endpoints" (p. 31). It can also have a propelling or unblocking function: "When stuck on a metaphorical lower peak, it can be beneficial to have active mechanisms for getting off it and onto a higher one" (p. 31).

They make the further distinction between flexibility/adaptability and creativity.

> Flexibility and versatility are about being able to deploy a variety of different responses, and adaptability is about being able to deploy an appropriate response to a challenge, whereas creativity is about generating novel behaviour that might provide a new solution. (Bateson & Martin, 2013, p. 33)

They make a link between these behaviours and human survival. "The creative ability to find novel solutions could have made a big difference to the ancestors of present-day humans in terms of surviving and reproducing" (p. 41).

A clear link is established between creativity and play.

> Creativity is about breaking away from established patterns. Creative people perceive new relations between thoughts, or things, or forms of expression that would normally seem utterly different. They are able to combine them into new forms, connecting the seemingly unconnected. Play is also about breaking away from established patterns and combining actions and thoughts in new ways. Play is an effective mechanism, therefore, for encouraging creativity and hence facilitating innovation. Playfully rearranging disparate ideas into novel combinations is a powerful means of gaining new insights and opening up possibilities that had not previously been recognised. (Bateson & Martin, 2013, p. 45)

They underline a number of points already made by other writers reviewed here:

- Intelligence as measured by standardised tests of IQ is associated with convergent personality rather than with the divergent feature of creativity.
- The timing of ideas is crucial. The creative person "must generate the right product at the right place and at the right time" (p. 65).
- Early play experiences can help individuals meet new challenges in later life. Hence the importance of starting young.

- It is important for creativity for individuals to have a wide and varied range of contacts. "the degree of playfulness in the interactions someone has with their contacts may be a major influence on how creative they are" (p. 79).
- It is best to avoid burdensome constraints so as to foster a positive light-hearted mood which favours divergent thinking.

The relationship between play and humour is also explored.

> the commonalities between playful play and the generation of humour are striking. They both encourage a positive, light-hearted mood…They both occur in protected contexts where the normal consequences of behaviour are disregarded. They are both intrinsically motivated and rewarding in their own right. And they both generate novel outcomes that can lead to creativity. (Bateson & Martin, 2013, p. 109)

There is an interesting chapter on the role of dreaming, daydreaming and the use of mind-altering substances like alcohol and various forms of drugs. The role of dreaming (especially the hypnagogic state between waking and sleeping referred to by many other commentators) appears to have a major role to play in creativity. Daydreaming—that pleasant state of letting the mind wander off and browse without a firm objective—also seems to contribute to the formation of creative ideas. The role of alcohol and other substances is a little more complex, as earlier studies have shown. Aldous Huxley's (1954/2011) account of experiments with mescaline in *The doors of perception*, and Alathea Hayter's (2009) study of opium in *Opium and the romantic imagination* are cases in point. But as we are unlikely intentionally to introduce such substances into our classrooms any time soon, we will leave these to one side.

They comment negatively on the current pressures to produce measurable results in the school curriculum. These have "contributed to fewer opportunities for play by children…the loss of time for playing is likely to have contributed to the observed decline in creative thought" (Bateson & Martin, 2013, pp. 101–102). This point has been made by

a number of concerned educationists, including Sue Palmer (2007) in her book *Toxic childhood*. Creativity suffers without play and playfulness. Educational authorities tend to believe that "play …competes with the time needed to learn the fundamental skills of literacy and numeracy" (Bateson & Martin, 2013, p. 125). Yet teaching these skills too early can be counter-productive. "Playfulness in the classroom can have major benefits in motivating them" (p. 125).

Nachmanovitch and Improvisation

The works reviewed so far can broadly be described as scholarly studies. There are however many books with the issue of creativity at their core which could be termed 'inspirational'. These too can provide helpful insights, especially when written by practising artists. One of the more useful of them is Stephen Nachmanovitch's (1990) *Free play: Improvisation in life and art.* Nachmanovitch writes from the perspective of a musician and writer. He is primarily interested in how works of art come into being and sees improvisation "as a master key to creativity" (p. 6). Clearly, because we cannot predict the outcome of improvisation, it involves a degree of risk. But the risk is worthwhile for the rewards the process brings. As he rightly points out, "[a]ny action can be practiced as an art, a craft, or as drudgery" (p. 10). He summarises the prerequisites of creativity as "playfulness, love (*i.e. passion for the work),* concentration, practice, skill, using the power of limits, using the power of mistakes, patience, courage and trust" (p. 12). Though the focus is on artistic creation, he emphasises that everyday life too is full of improvised creativity. "Every conversation is a form of jazz. The activity of instantaneous creation is as ordinary to us as breathing" (p. 17). He links this to the need for teachers to be 'present' in the unpredictable moment if they are to do more than simply enact a prescribed script. He speaks of the importance of surrender to the unknown. "Surrender means cultivating a comfortable attitude toward not knowing, being nurtured by the mystery of moments which are dependably surprising, ever fresh" (pp. 21–22). We can regard ourselves as "a vessel