

Developing Students' Creativity through a Higher Education

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Abstract

The challenge of '*developing students creativity*' is bound up with the *wicked problem* of preparing them, and enabling them to prepare themselves, for the unknown challenges they will encounter over a lifetime of working, learning and adapting to the changing circumstances of their lives. The challenge facing the leaders of our universities is 'How do we change our university so that it is better able prepare learners for the complexity and uncertainty of their future lives?' How do we move from what is still a predominantly industrial provider-designed and directed model of higher education towards a more ecological, learner self-directed approach.

Developing a culture that values the professional creativity of its teachers is essential because ultimately the creative development of learners is largely determined by their teachers and their responses to the educational designs they provide. Studies of the conditions that encourage people to be creative in everyday work identify a dozen factors and nourishers that are likely to foster personal and collective creativity. The article outlines three different ways in which encouraging and supporting the creative development of learners can be achieved.

1 Pedagogies for creative development: Encouraging learners to think about and understand their own creativity in the different contexts they inhabit is an important first step. So providing them with the tools to think and providing opportunities for them to share and grow their understandings is essential. Pedagogies that engage learners with the unfamiliar, perplexing, complex and unpredictable, that encourage them to take risks and not be penalised if they do not succeed, and involve them in challenges that demand new understandings, meanings and capabilities, are more likely to require them to use their creativity than activities that only require them to replicate what they already know and can do. The notion of teacher as 'meddler-in-the-middle' rather than sage-on-the-stage or guide-on-the-side is relevant here.

2 Drawing inspiration from the discipline: Many students care deeply about the subject they are studying and want to become a practitioner in their discipline. The disciplines themselves provide inspiration for creative development. What does it mean to be a creative engineer, doctor, historian, teacher or any other practitioner in a discipline? Surveys show that faculty share similar perceptions of what being creative means in their discipline and sites for creative thinking that relate to these characteristics appear to be available in most aspects of disciplinary practice. Growing understanding and making explicit what creativity means in the academy is the first step in engaging the academy with this challenge and enabling learners to see how creativity features in disciplinary practice will increase its relevance to their scholastic life.

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3 Recognising learners' own creative lives: Outside the university, our creativity emerges in the situations we encounter or create in our daily life. It is in our responses to challenges and opportunities that our creativity is required, applied and revealed. By adopting a lifewide concept of education (a lifewide curriculum) to embrace all the spaces and places for learning, personal development and self-actualisation in a person's life, higher education can do much more to recognise and value the creative development of the learners it serves.

If the moral purpose of higher education is to enable individuals to prepare themselves for the complexities and challenges of their future life, then surely enabling learners' to develop their creative potential must be an important part of this purpose.

Key Words:

Creativity in higher education, creativity tools, creative pedagogies, creativity in the disciplines, lifewide learning and education, principles for a creative culture

INTRODUCTION

This paper was produced for the International Symposium on 'The Cultivation of Creativity in University Students' held in November, 2013 at Macao Polytechnic Institute, China. I have taken the opportunity provided by the conference to combine and integrate a number of previous writing efforts with more recent writing on how we might promote students' creative development in our institutes for higher education. To appreciate the origin of my beliefs and the background studies on which this article is based, please visit the creativity page of my website².

THE CREATIVE CHALLENGE

Educating for an unstable perpetually challenging world



Much of what I want to say about students' creative development in higher education is bound up with the *wicked challenge* of preparing them and enabling them to prepare themselves, for a lifetime of learning and adapting to the continuous stream of situations they *create* or encounter in their lives. 'Wicked' in the context being used here, is not about being evil, rather it describes an issue that is hard to understand and define, and highly resistant to

resolution (Rittel and Webber 1973) .

² <http://www.normanjackson.co.uk/creativity.html>

People working and studying in higher education are confronted every day by essentially the same wicked challenge (Jackson 2008). For teachers it is associated with a question like ‘ how do we prepare our students for an ever more complex world?’ ... I don’t just mean preparing them for their first job when they leave university, I mean how do we prepare them so that they can face and adapt to the many challenges they will encounter over a lifetime of working, learning and living, adapting to the changing circumstances of their lives. From the students’ perspective the same challenge is expressed in the question ‘ How do I prepare myself for the rest of my life?’ ... what sorts of things do I need to learn, what sorts of skills, qualities, dispositions and values do I need to develop, and what sorts of experiences do I need to have in order to develop these things? Personal and professional development needs to be so much more than simply studying and learning an academic curriculum. The central argument in this paper is that one of the most significant ways in which we can help learners prepare themselves for their future is by enabling them to understand and develop their creativity -both their imagination and capability for converting their thoughts into new things.

The second challenge facing people who work in higher education, particularly the leaders of higher education institutions, can be described by the question, ‘ How do we change our university so that it is better able to meet the challenge of preparing learners for a very complex, uncertain and ever changing world?’ How do we move from what is still a predominantly industrial provider-designed and directed model of higher education to a more ecological learner-designed and managed model of learning which is more appropriate for a modern world. Many faculty would say that there is no problem and therein lies the problem. The challenge is to persuade people who believe that there is no need to change to change something that has worked perfectly well for them in the past. So the problem of how we *cultivate creativity in university students* has a lot to do with how we *cultivate a culture of creativity in our universities*. This matter will be considered in the concluding section of this essay.

The problem with creativity in higher education

The problem of creativity in higher education is that it is not chronic, in the sense that most teachers and decision makers believe that there is an issue to be resolved. The problem is more a sense of dissatisfaction with a higher education world that seems, at best, to take creativity for granted, rather than celebrates the contribution that creativity makes to academic achievement, self-expression and personal wellbeing. The problem is not that creativity is absent but that it is omnipresent subsumed within analytic ways of thinking that dominate the academic intellectual territory (Jackson 2008). The most important argument for higher education to take creativity in students’ learning more seriously is that creativity lies at the heart of performing, learning and developing in any context, and the highest levels of performance involve the most creative acts of all.

This article is underlain by six propositions which have important consequences for higher education. The first proposition is that we all have unique creative capability and that being creative is integral to who we are, who we become and how we become who we want to become - how we fulfil our ambitions and destiny. The second is that if higher education is concerned with making a positive difference to students’ lives by enabling them to achieve their full potential, then we have to be concerned with their creative as well as their academic development. The third proposition is that teachers in higher education with their autonomy and

ability to design and facilitate interesting and challenging learning experiences, are able to exert a strong influence on students' creative development. The fourth proposition is that teachers and learners can derive inspiration for creative development from the disciplines themselves. Being creative in a field requires the mastery of domain knowledge and skills and an important part of students' creative development while they are learning to become a historian, lawyer or scientist is to appreciate what creativity means in their discipline. The fifth proposition is that we have the potential to utilise our creativity in every aspect of our lives not just the part of our lives concerned with academic study so higher education could do more to encourage students' creative development by adopting a lifewide approach to their learning and development (Jackson 2011a & b, Barnett 2011). The final proposition is that universities and colleges can do much to enable their faculty's creativity to flourish by following a small number of principles to guide their development (Jackson, 2013).

WHERE DO WE BEGIN?

If you are a teacher who wants to cultivate your students' creativity the question of where and how you begin is of great significance to you. When I began my enquiries into creativity in higher education in 2001 I started by asking lots of teachers what creativity meant to them. Perhaps this is the place to start in any higher education setting.

Conversations with teachers

If you ask any group of higher education teachers in the UK, 'what does being creative mean to you?' you will get a set of responses that embrace the following ideas:

- originality and individuality
- being imaginative, generating new ideas, thinking outside the boxes we normally inhabit, looking beyond the obvious, seeing the world in different ways
- making new things
- doing things no one has done before
- doing things that have been done before but differently
- experimenting and taking risks

At this level there is consensus as to what being creative means. In fact it is likely that if you ask this question of higher education teachers anywhere in the world you will get a broadly similar set of responses because these basic concepts of creativity transgress cultural domains. These conceptions provide a starting point for contextualising conversations about creativity in teaching and learning practices or in any other form of professional or work practice. Equally important is the widely held belief amongst higher education teachers that creativity is not a rare gift and the preserve of a few: *most* (but not all) higher education teachers agree that it is possible, with the right opportunity, for people to develop their creativity (Figure 1).

These perceptions tally with Amabile's extensive research into creativity in organisations which shows that, 'although some people have extreme levels of talent, everyone with normal human capacities is capable of producing creative work under the right conditions' (Amabile 2006:1).

Holding this fundamental belief is essential if HE teachers are to commit time, energy and intellectual and emotional effort to helping their students develop and use their creativity.

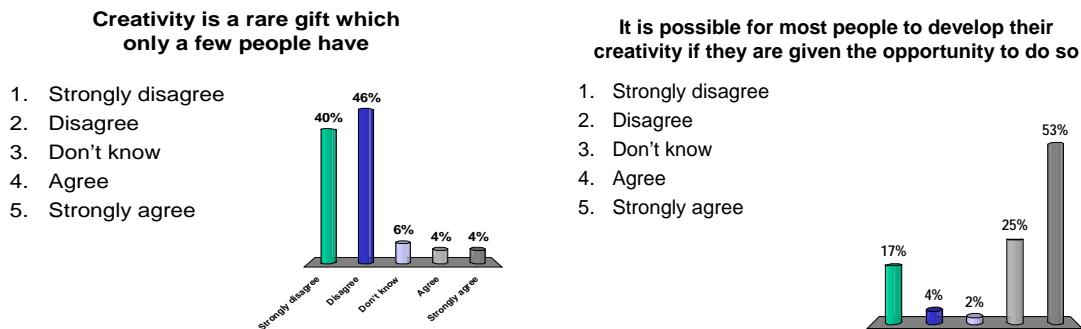


Figure 1 Typical pattern of beliefs in a group of higher education teachers.

Source: The graph shows the pattern of beliefs in an audience of 58 higher education teachers at the University of Ulster Creativity Conference April 2008 (Jackson 2008).

Clearly having the will to do something positive is the necessary first step but beyond this a good teacher will always try to establish what her students know and understand before she engages them in her own developmental process. Surveys of academic teachers in the UK (Jackson 2008) show that many teachers hold the belief that the role of the teacher is not to define creativity for their students and assess them against their own criteria. Rather, it is to help students recognise and understand their own creativity and help them express it and make claims against the evidence they feel is appropriate. This is a powerful belief when it comes to designing and facilitating education for students' self-development.

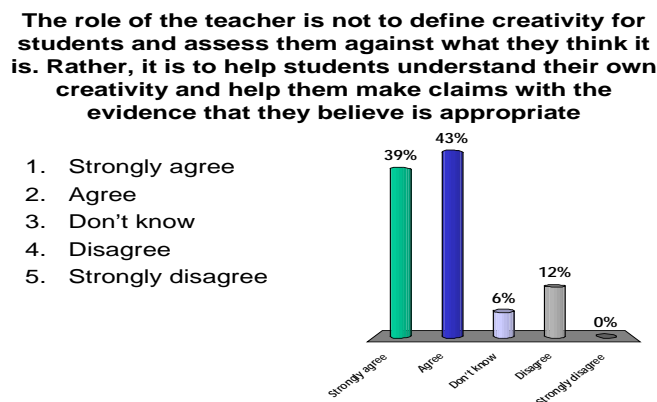


Figure 2 Typical pattern of beliefs in a group of higher education teachers.

Source: The graph shows the pattern of beliefs in an audience of 58 higher education teachers at the University of Ulster Creativity Conference April 2008 (Jackson 2008).

Conversations with learners

Where you begin with learners is the same as where you begin with teachers. There needs to be conversation to enable the sharing of perceptions and understandings. Any discussion with students or teachers about creativity will reveal multiple perspectives on and questions about whether creativity is a characteristic of individuals and / or groups, or a process or an outcome or product of a process. As Amabile (1996) points out, it could be all of these things.

Is creativity a quality of persons, processes, or products? Undoubtedly, it is all three. Persons can have, in greater or lesser degrees, the ability and inclination to produce novel and appropriate work and, as such, those persons may be considered more or less creative. Processes of thought and behaviour may be more or less likely to produce novel and appropriate work and, as such those processes may be considered more or less creative. Products (new business plans, scientific theories, artworks, articulated ideas, dramatic performances and so on) may be more or less novel and appropriate and as such, those products may be considered more or less creative. (Amabile 1996:3).

Accepting this conception of creativity has important consequences for the design of educational experiences that enable learners to use and develop their creativity, and for assessment practices that seek to recognise and judge creativity.

Enabling learners to think analytically and creatively about their own and other people's creativity is the key task in raising awareness of creativity's importance. In helping learners gain deeper understandings of their own creativity it can be helpful to introduce some simple tools to aid thinking.

TOOLS TO AID THINKING ABOUT PERSONAL CREATIVITY

Simple model of personal creativity

Amabile (1983) proposed a simple model of creativity (Figure 3) which has three essential components - domain relevant *expertise*, the ability to *think creatively* about domain relevant problems and opportunities, and the *will* to engage with a domain relevant problem or opportunity in a particular context and persist until the job is done. I have added 'context' to Amabile's illustration because it is the driving force for our creativity: context gives us the reasons for being creative and it allows students to see the relevance of creativity in their day to day lives.

But you don't have to be an expert to be creative: we all have the potential to be creative in the contexts that form our lives. We might therefore substitute the word 'capability'³ for 'expertise'

³ 'everything that a person can think or do' (Eraut 2009:6), 'what individual persons bring to situations that enables them to think, interact and perform' (Eraut 1997)

to make this model more relevant to students. Rogers (1960) provides a definition of creativity that is relevant to 'everyone' and captures the relationship between our creativity, the contexts and situations we inhabit and our presence and actions in our world.

[personal creativity is] a novel relational product growing out of the uniqueness of the individual on the one hand, and the materials, events, people, or circumstances of his life on the other' (Rogers 1961:350).

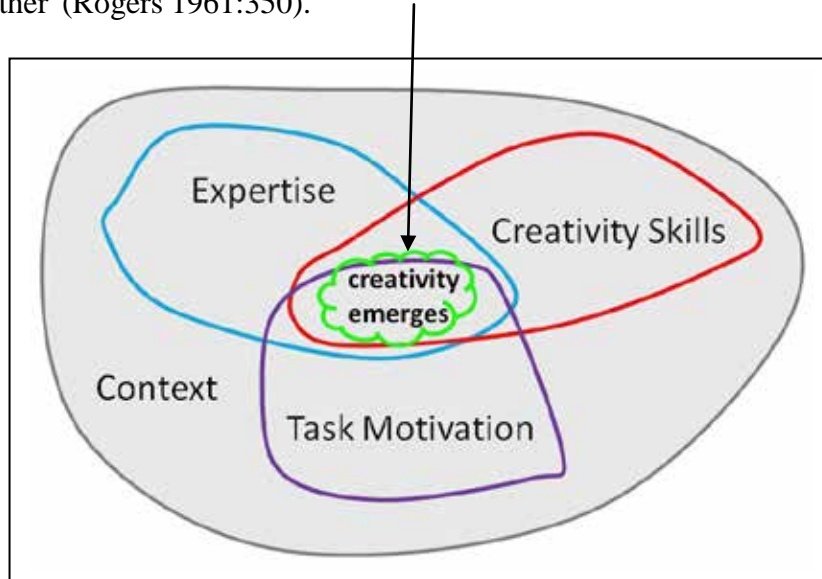


Figure 3 Adaptation of Amabile's (1983) three component model of creativity, embedded in the contexts and situations of a person's life. Creativity emerges when someone is motivated to apply their capability and creative thinking to a particular situation. Rogers' (1961) definition of personal creativity captures this process. We might substitute 'Capability' for 'Expertise' to make this model more relevant to students who have yet to develop domain specific expertise.



Dewit Jones, a renowned photographer, provides an inspiring exposition of this model in action when he explains how he worked with a client's brief to produce some stunning images as he sought the right answers to his problem. <http://www.youtube.com/watch?v=1sPYApmrJ48#t=34>

Contexts

Without the will to do something in a certain sort of way nothing will happen. Contexts - like challenging and demanding situations, immediate or intransigent problems and newly recognised opportunities, engage our will and trigger motivations. Context embraces the social environment

within which we utilise our creativity. As Amabile's research has shown, it is our interactions with other people that have most influence on our willingness and ability to be creative.

The social environment influences creativity by influencing the individual components. Although, clearly, the environment can have an impact on any of these components, the impact on task motivation appears to be the most immediate and direct (Amabile 1996:8)

Research by Amabile and Kramer (2012) indicates that the single most important factor in igniting individuals' creativity, joy, trust, and productivity in workplace situations is simply a sense of making progress on meaningful work. Her large scale diary-based study looked for commonalities that influenced "inner work life," which she defines as "the confluence of perceptions, emotions, and motivations that individuals experience as they react to and make sense of the events of their workday." Tangible incentives—salaries and bonuses—barely registered in the diaries. But the subject of progress, or lack of it, featured prominently. Diary entries that reported work progress often showed an inner work life surge, which, in turn, increased the likelihood of creative productivity. The researchers analysed the workday diaries to determine the factors that facilitated progress: catalysts (events that helped a project move forward) and "nourishers" (interpersonal interactions that lifted people's spirits). They also analysed the negative forms: inhibitors (events that induced setbacks) and toxins (interpersonal interactions that served to undermine employees' spirits.) Using analyses of stories in the diaries, the book outlines seven major catalysts for progress:

- *Setting clear goals:* it's important that the goals be reachable in a realistic time frame- achieving small wins is important to maintaining a sense of progress.
- *Allowing autonomy:* people have to have autonomy in order to get there
- *Providing resources:* that are sufficient and timely to accomplish whatever is being attempted
- *Having enough time—but not too much—to complete a project :* extreme time pressure is bad for creative productivity, but low-to-moderate time pressure is good
- *Offering help* with the work
- *Learning from both problems and successes :* an environment in which you are not punished or ridiculed if you do not succeed
- *Allowing ideas to flow*

The research identified four *nourishers* necessary for a healthy inner work life: respect and recognition, encouragement, emotional support, and, finally, affiliation—any action that serves to develop mutual trust, appreciation, and even affection among co-workers. People are more likely to engage in creative activity when they encounter such environments.

The significance of this research for higher education lies in a) the creation of work practices and cultures that encourage employees to be creative b) the ways in which teaching and learning environments created by teachers foster the conditions that are conducive to personal creativity.

A tool to aid thinking about contexts

The second tool I have found useful in thinking about our creativity helps us look at context and the situations we encounter or create in which the detail of our creative responses is located. Situations can be categorised according to whether the context is familiar or unfamiliar and whether the problem (challenge or opportunity) is familiar or unfamiliar. Stevenson (1998)

developed a simple 2x2 matrix (Figure 4) to explain how we utilise our capability (including our creativity) within this conceptual framework.

Much of our life is spent in familiar situations where we don't have to pay too much attention to what we are doing and we can reproduce our responses without really thinking deeply about our actions (X in Figure 4). Stephenson related this to traditional teaching approaches adopted in higher education. In this contextual environment we can, if we choose, adopt and perform the routines we have learnt in such situations with little or no need to invent or adapt. However, moving to the other domains in Figure 4 we can appreciate that if we are confronted with a problem, challenge or opportunity, or we enter a context that is unfamiliar we have to develop new contextual understandings and / or invent and try out new practices and ways of behaving. Through this process we are creating new understandings and new ways of performing or producing. These are the situations in which we develop (invent) new capability and utilise our personal creativity.

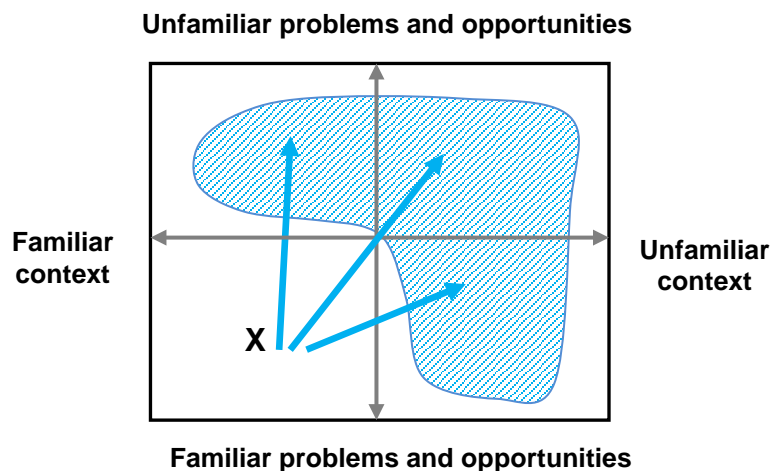


Figure 4 Relationship between context, capability and creativity. The shaded area represents situations that have the greatest potential for personal creativity because we have to invent / adapt / improvise in them.

Source: adapted from Stephenson (1998:5) by Jackson (2011)

Situations - the focus for personal creativity

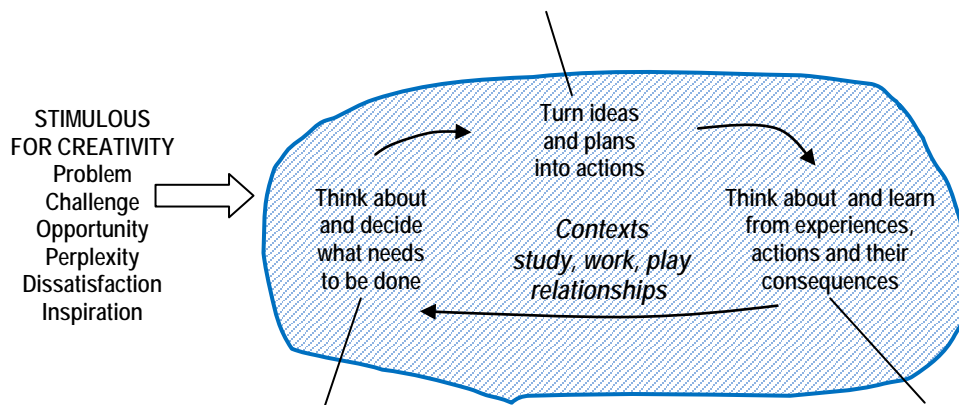
Situations are the specific incidents, events and activities that occur within a particular context. Our personal creativity is manifest in the way we deal with or create situations. This process is neatly summarised by Eraut (2007, 2009, 201) in the contexts of dealing with situations in the work place, but the basic process is relevant to any context. It follows the pattern of

- *Assessing situations* (sometimes briefly, sometimes involving a long process of *investigation and enquiry*) and continuing to assess the situation as it changes;
- *Deciding what, if any, action to take*, both immediately and over a longer period (either on one's own or as a leader or member of a team); [In complex situations this stage also includes *designing and planning the action*];

- *Pursuing an agreed course of action*, preparing for and performing professional actions – evaluating the effects of actions and the environment and adapting as and when necessary;
- *Metacognitive monitoring of oneself*, people needing attention and the general progress of the case, problem, project or situation; and sometimes also learning through reflection on the experience

ACT / PERFORM / MAKE AND MAKE HAPPEN, LEARN THROUGH EXPERIENCE OF DOING

This is where creative acts are performed and where creative events and products are produced. Creative acts are domain dependent. The creative actions of a musician are different to those of a general practitioner, engineer or business entrepreneur. Creative acts are stimulated by a context which is often a complex challenging situation or problem within the domain. Mastery of domain knowledge and the skill to use the knowledge is an essential pre-requisite to creative performance. Selling ideas, helping others to see new possibilities, opportunities and solutions may be an important part of the creative process. Engaging and communicating with others during problem working may also require creativity - communication is an important focus for everyday creativity. Creative people are good at monitoring the effects of their actions and continually adjusting what they do to achieve desired effects/results.



THINK ABOUT AND DECIDE WHAT NEEDS TO BE DONE

This is where situations are assessed, ideas are born and decisions are made about how to approach and work with a particular situation. The thinking process contains both generative and evaluative processes. Ideas on how to tackle a situation may be born from rational or intuitive/associative thought processes. The more analytical/rational brain analyses tasks, sets goals and develops strategies. The intuitive brain may provide an idea or insight to a way of thinking about a problem. The ability to generate ideas (generative thinking) and to critically evaluate ideas to distinguish those that are most useful and exciting is important. This thinking draws on memory of past experience and also imagination stimulated by things outside of own experiences.

What is planned is influenced by contexts, self-efficacy, expectation of immediate and longer term outcomes, levels of intrinsic interest and goal orientation (eg learning for assessment or mastery of a process or skill).. For some people the opportunity to be creative is a major stimulus and source of energy and motivation to thinking and subsequent actions.

For some routine situations very little imagination/creativity is used but where new and challenging problems and situations are encountered imagination will be involved to generate new ideas, to look beyond the obvious, to identify possibilities and to see the world in different ways so that it can be explored and understood better.

LEARN FROM EXPERIENCE

This is where processes and products involving creativity are reviewed, evaluated and judged, cause and effects are attributed and where we decide whether or not we are satisfied with what was achieved. The process involves making sense of experiences and outcomes in order to gain deeper insights/learning (*metalearning*) which can be drawn upon in future situations.

It is necessary to combine reflective and intuitive thinking that builds meaning through synthesis, connecting thinking, processes and outcomes in ways that are meaningful to the actor and processing emotional responses, with more critical analytical ways of thinking through which objective judgements are made and cause and effects are attributed.

It is only after a creative process has been completed that a real sense of value/worth can be gained and the quality of newness, level of significance, inventiveness / re-inventiveness can be judged. The process of appreciation is aided by dialogue with others who were not part of the creative act – tutors and peers or perhaps professional practitioners who can bring a level of objectivity to the evaluation of utility and inventiveness. Developing consensual agreement on the hallmarks of creativity in the particular contexts in which it was used through such a dialogue is an important part of the process of evaluation and the way in which we develop deeper understandings and insights into the nature of creativity.

Figure 5 Ways in which personal creativity is involved in dealing with and creating situations that involve bringing new things into existence.

Source Jackson (2010) based on the model of self-regulation (Zimmerman 2000)

The processes described by Eraut for dealing with situations in the work place but which can be applied to any context are fundamentally processes of self-regulation (Schunk and Zimmerman 1998, Zimmerman 2000). Self-regulation can be represented as a continuous process involving forethought (planning and decision making) – performance – self-reflection on performance operating within a context specific environment that is structured by the learner to provide resources to enable them to achieve what it is they want to achieve. If we accept this general theoretical model of the way we engage with the world then we must also be able to relate our personal creativity to the processes involved. Figure 5 illustrates how our creativity might be related to the way we deal with or create situations, a process that involves combining and integrating imagining, generating, reconstructing and playing with ideas, and critically evaluating possibilities and the potential consequences of actions.

Scale and influence of individual's creativity

Some people believe that they are just not creative: a belief that stems from comparing themselves with people they perceive as being highly creative (ie 'compared to her I am not creative'). Individuals' creative development will be hindered unless they believe that they have potential to be creative in their ways and circumstances. One approach is use the 'scale and significance' diagram produced by Kaufman and Beghetto (2009) to show that individuals' creativity lies on a continuum. Their four-category model of creativity explains the nature, scope and influence of individuals' creativity (Figure 6).

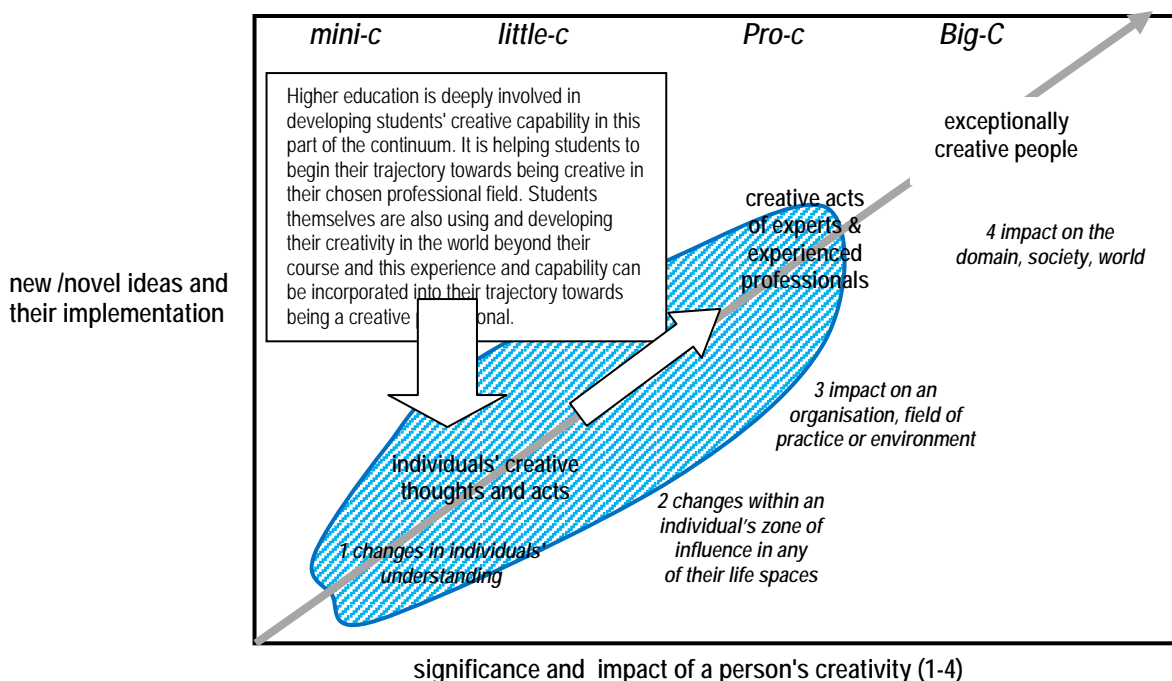


Figure 6 The natural variations in the scale and significance of individuals' creative ideas and their implementation in products, processes, practices and performances

Source: the Four-C model of creativity proposed by Kaufman and Beghetto (2009)

Kaufman and Beghetto (2009) suggest that human creativity can be categorised into '*Big-C*' creativity that brings about significant change in a domain; '*Pro-c*' creativity associated with the creative acts of experts or people who have mastered a field, including but not only people involved in professional activity; '*little-c*' creativity - the everyday creative acts of individuals who are not particularly expert in a situation and '*mini-c*' the novel and personally meaningful interpretation of experiences, actions and events made by individuals. Central to the definition of mini-c creativity is the dynamic, interpretative process of constructing personal knowledge and understanding within a particular socio-cultural context.

Both mini-c and little-c forms of creativity are relevant to higher education learning and curriculum designs, teaching and learning strategies could usefully encourage and facilitate these. One might speculate that participation in these forms of creativity are pre-requisite for Pro-c and Big-C creativity in later life: if we want creative professionals then we should be encouraging our students to be creative. It is however important to note that 'everyday creativity can extend from mini-c to little-c through Pro-c. It is only Big-C that remains *eminent* creativity (ibid:6) beyond the reach of most of us. From an educational perspective it might be reasoned that by encouraging and empowering students to use, develop and make claims for mini-c and little-c forms of creativity, we are better preparing them not only for using these forms of creativity in later life but for engaging in more expert-based forms of creativity that emerges through sustained engagement with a particular domain or field of activity.

Armed with these tools to aid thinking about personal creativity we will now consider three different dimensions of the developing students' creativity puzzle - the pedagogic challenge, the disciplinary context and the wider context of students' everyday lives.

STUDENTS' CREATIVE DEVELOPMENT: THE PEDAGOGIC CHALLENGE

Pedagogy matters

Pedagogy matters. In whatever historical time, what actually happens in the classroom can make or break the disposition to learn that is so fundamental to a young person's future social, economic and civic participation. In this century, formal teaching is, paradoxically, both important and irrelevant. Teachers are important because of what they can contribute to the development of a highly educated twenty-first century citizen, someone with a breadth and depth of literacies (scientific, print, digital) and an expectation that learning will be life-long and life-wide. However, teachers become irrelevant when their pedagogy is limited to inculcating routines of thinking that were markers of the Industrial and/or the Information Age (McWilliam 2009:281).

McWilliam's thoughts capture very well the paradox in the challenge relating to students' creative development in so far as higher education teaching can be either totally irrelevant or highly effective in meeting this challenge.



Figure 7 Opportunities for creativity within the professional act of teaching

The teaching and learning process (Figure 7), with all its complexity, unpredictability and endless sources of stimulation from the subjects that are taught or practiced in the field, has the potential to be a highly creative space for teachers and student learners and there are many potential sites for creativity embedded in the professional act of teaching. Creativity emerges spontaneously through the relationships and interactions of teachers with their institutional contexts including their courses, the knowledge, tools and materials they work with, and their students and most teachers recognise this. Indeed most higher education teachers see creativity as being important to their identity and success as a teacher (Figure 8).

Being creative is an essential part of my identity as a teacher

1. Strongly agree
2. Agree
3. Don't know
4. Disagree
5. Strongly disagree

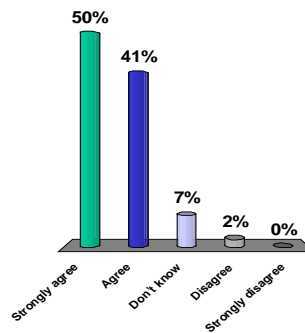


Figure 8 Typical pattern of beliefs in a group of higher education teachers. The graph shows the pattern of beliefs in an audience of 58 higher education teachers at the University of Ulster Creativity Conference April 2008.

Source: Jackson (2008)

Saunders' provides a helpful synthesis of how creativity features in the role of the *professional educator*.

...teaching is a highly complex activity – it needs both the appliance of science and the exercise of humanistic imagination; it demands scholarship, rigorous critical enquiry, the collective creation of secure educational knowledge, on the one hand, and it requires insight, inspiration, improvisation, moral sensibility and a feel for beauty, on the other Similarly, we are often encouraged to think about research mainly in terms of systematic and reliable ways of gathering and analyzing empirical data. However, research is also much more than empirical data gathering: it includes theory-building, hypothesis-testing, critical analysis and appraisal, evaluation, and the synthesis of concepts and evidence from a range of different disciplines – all of which are crucial for informing practice at deeper levels – research in this sense also happens to be rooted in imagination, intuition and aesthetic awareness... as well as cognition and disquisition. (Saunders 2004:163).

Critical to students' creative development is the teachers' pedagogic stance which McWilliam (2009) categorises into one of three types - 'sage on the stage' (knowledge transmitter), 'guide on the side' (facilitator), and 'meddler-in-the-middle' (an involved co-learner/co-producer in the learning process). In her view the promotion of students' creativity is best served by teacher 'meddlers' (ibid: 290):

Meddlers have clear intentions about what they do, and they are energetically up and doing it. "Command-and-control" is not the ethos that drives their actions, nor is their teaching by any means laissez-faire. They provide support and direction through structure- rich activity in which they themselves are highly involved. They do not take over the work of thinking and doing....

A teacher who "meddles-in-the-middle" is active and engaged. They have high expectations and provide a high level of support, in the knowledge that neither of these dispositions by themselves will make for better learning outcomes. Meddlers anticipate that they have a responsibility to induct their students into communities of creative practice...

Meddlers create opportunities for hands-on, minds-on and, where appropriate, plugged-in learning collaborations. They challenge more long-term notions of "good" teaching in a number of ways. Specifically, their pedagogy involves:

- less time spent on transmission and more time spent on working through problems in a way that puts everyone in the thick of the action;
- less time spent on risk minimization and more time spent on experimentation, risk- taking and co-learning;
- less emphasis on teaching as forensic classroom auditing and more time spent on designing, editing and assembling knowledge;
- less time spent on testing memorization and more time spent on designing alternative forms of authentic assessment; and

- less time spent on psychological counselling and more time spent on collaborative criticality and authentic evaluation.

The pedagogic task for teachers who intend to develop students' creativity is threefold. Firstly, it is one of developing learners' understandings of their own creativity by facilitating personal enquiry, the sharing of perspectives and understandings in a collaborative, supportive discursive environment and the co-creation of understandings within the group of learners including the teacher. Secondly, it is about enriching their understandings with knowledge about creativity and its role in human endeavour. Thirdly, it is about providing new and challenging opportunities for the learner to continue to develop and utilise their creativity both individually and collaboratively.

Teaching for creativity

Fundamentally teachers have to believe that their students' creativity is worthy of development and that it can be developed. An analysis of twenty-eight accounts of teaching that was deliberately trying to encourage students to be creative in a range of disciplinary contexts (Jackson, 2004) revealed the things that higher-education teachers do to promote students' creativity. They:

- give students permission to be creative
- encourage them and value their efforts to be creative
- provide time for students to be creative
- provide safe spaces where they can try new things out
- give students the confidence to take risks
- develop students' self-confidence to work in unpredictable situations
- promote the development of self-awareness and reflective learning
- provide situations for learning where there are no right answers
- provide real-world learning situations
- provide activities that are meaningful to participants
- provide learning situations that are both fun and challenging
- demonstrate their own creativity : provide a role model
- are prepared to take risks themselves
- are prepared to reveal something of themselves in the teaching process
- act as guides and facilitators
- adopt a questioning approach to learning
- create opportunities for problem- or enquiry-based approaches to learning
- provide opportunities for collaborative working and discussion
- are sensitive to the balance between challenge and reinforcement
- are sensitive to the balance between freedom and control
- are responsive to students as a group and as individuals and adapt their teaching as new possibilities emerge.

Teaching for students' creative development requires a pedagogic stance that is facilitative, enabling, responsive, open to possibilities, collaborative and *mutually co-creative* and which values process *as well as* outcomes. Teachers operate in strong cultural and procedural environments that have significant impact on what they can do as teachers to promote students' creativity. In spite of, or perhaps because of, these constraints, teachers who care about creativity

are able to overcome these barriers to create, through their pedagogy, curricular spaces and opportunities for learning that encourage and reward students for their creative efforts as well as the outcomes from such efforts.

In addition to strategies for engaging learners in activities through which creativity has the potential to emerge, teachers may also introduce techniques that enhance learners' associative thinking skills and their ability to generate and evaluate ideas. For example Jackson and Buining (2010) describe the use of 'design thinking' skills in group work with students.

Designing a curriculum for creativity

Much of higher education keeps learners in the X domain of Figure 4: the low risk domain of familiar contexts and challenges to achieve the right answers that such challenges invariably assume. To prepare people for learning in the real world outside these 'comfortable', low risk environments we need a form of education that also exposes learners to the risks and challenges of unfamiliar contexts and problems, of incomplete, ambiguous or conflicting information and messy rapidly evolving situations. We need to design or appropriate into our practice learning environments that offer challenges for which there are no single right answers but which do not penalise them if they are not successful in finding a possible answer. Jackson (2010, 2011a) set out a series of propositions (Table 1) that he believed would provide conditions which were more likely to engage learners creatively and develop their creative capability.

These principles were operationalised at the University of Surrey through the idea of a lifewide curriculum (Jackson et al 2011 - see below).

Table 1 Ten propositions for an imaginative curriculum that would provide conditions which were more likely to engage learners creatively.

1. gives learners the freedom and empowers them to make choices so that they can find deeply satisfying and personally challenging situations that inspire, engage and develop them
2. enables learners to appreciate the significance of being able to deal with situations and see situations as the focus for their personal and social development
3. prepares learners for and gives them experiences of adventuring in uncertain and unfamiliar situations where the contexts and challenges are not known, accepting the risks involved
4. supports learners when they participate in situations that require them to be resilient and enables them to appreciate their own transformation.
5. enables learners to experience, feel and appreciate themselves as knower, maker, player, narrator, enquirer, creator and integrator of all that they know and can do, and enables them to think and act in complex situations
6. encourages learners to be creative, enterprising and resourceful in order to accomplish the things that they and others value
7. enables learners to develop and practise the repertoire of communication and literacy skills they need to be effective in a modern, culturally diverse and pluralistic world
8. enables learners to develop relationships that facilitate collaboration, learning and personal development
9. encourages learners to behave ethically and with social responsibility

10. encourages and enables learners to be wilful, self-directed, self-regulating, self-aware and reflexive so that they develop a keen sense of themselves as designers/authors and developers of their own lives appreciating their learning and developmental needs as they emerge.

Assessing for creativity

While many teachers believe that it is possible to help students use their creative abilities to better effect, far fewer think it is possible to assess these capabilities reliably and even fewer are prepared to try and do it. Yet self-evaluation is critical to the very idea of creativity and peer-evaluation is crucial to acceptance of creative ideas and solutions in a field of practice.

The views of higher education teachers on whether creativity can be assessed fall into four camps (Jackson 2008). Some teachers believe that students' creativity is evaluated through explicit assessment criteria. A second group believes that insufficient attention is given to recognising students' creativity and that at best the evaluation and recognition is implicit. The third group believe that it is not possible and/or desirable to assess creativity. While teachers in the fourth group value creativity but don't know how to assess it. Looking at this optimistically I interpret this to mean that most teachers, with appropriate support, guidance and cultural encouragement, could and would assess creativity in students' higher education learning. One thing is clear; a majority of teachers also believe that assessment is a major inhibitor of students' creativity.

Outcomes based assessment that assumes that all learning can be predicted and that the teacher is the only person who can define what the outcomes should be, is antithetic to learning that emerges in unpredictable ways – such as is produced through creative processes that pursue a sense of direction rather than a preordained pattern and specific criteria. This barrier can only be overcome if learners become partners in the assessment process. The metaphor of *catching the light* through a reflective process might be appropriate for catching creativity which requires people to be conscious of their own means of engaging with complex learning to produce novel products or other outcomes. Emerging from the imaginative curriculum enquiry and endorsed on numerous occasions by groups of teachers was a view that the primary role of the teacher is not to define creativity for students and assess them against their criteria. Rather, it is to help students recognise and understand their own creativity and help them express it and make claims against the evidence they feel is appropriate.

What sort of practice would give meaning to this role?

Borrowing from practice in the architects' studio, Cowan (2006) describes a collaborative teaching and learning scenario in which the development of understanding of creativity, the criteria through which it might be evaluated, and the process of claim and judgement making, is grown by all participants through the learning processes. Working backwards, the results of creative thinking and action is embodied in a self-peer and teacher assessed portfolio – with heavy emphasis on self-assessment. The portfolio contains the following elements (Cowan 2006: 161):

- a definition of what the learner means by creativity

- a clear statement of the achievement and/or development in creative ability to which the learner aspired and an indication of the standards and levels against which the learner has decided to judge that creativity
- an indication of the sources from which the learner has drawn information from which to assemble their judgement of their performance and development: information about the products and results of being creative
- the making of the judgement and the reasoning behind it
- the judgement itself in qualitative terms, perhaps under various headings.

The learner presents the self-assessed portfolio for audit by the teacher who will scrutinise the rigour of the self-assessment rather than making their own judgements on creativity. The teacher's role is to decide whether they are persuaded to endorse the learner's claims and judgements of their own creativity against the criteria they themselves have elaborated. The primary purpose of this strategy is to enable and encourage the learner to explore, experience and develop their own understanding of creativity and to construct new meanings in the context of the task, their programme and their disciplinary field of study. It is about helping learners appreciate their personal creativity in the context of their disciplinary field and provide them with experience of being judges of creativity in their disciplinary cultural field.

Cowan underpins this evaluative process with a collaborative learning process involving:

- Induction to the process and the problem/task within which creative enterprise will be evaluated.
- Initial group discussions about creativity in the disciplinary/professional leading to initial definitions of the meanings of creativity.
- Facilitation of thinking about standards and targets, and drafting of initial standards by each student.
- Learner engagement in the task mindful of the learning objective of evaluating own creativity: learners would maintain a reflective journal focused on the creative process but framed around unanswered questions that were pertinent to the task in hand and for which the learner feels that even a partial answer would help them progress. Exemplars of completed journals would be offered to show what was expected.
- Participation of learners and teacher in group "crits", as practiced in architecture and the creative arts. In these sessions, learners critically appraise a piece of their work in progress, after which peers and tutors will offer comment, with an emphasis on reasoned and constructive judgements of that work.
- As learners engage more deeply in their task their understandings about what creativity means will change. Learners are encouraged to make any changes they wish to their initial definitions of creativity and the criteria and standards they developed.
- Learners assemble their portfolio and self-evaluations as they are working on problems with their task. The final version of the portfolio contains the elements of self-assessment detailed above.

This is just one example of the sort of 'meddler-in-the-middle' teaching practice described earlier.

DRAWING INSPIRATION FROM THE DISCIPLINE

Creativity is a social and cultural phenomenon and we need to understand how it is understood in the different cultural domains (disciplines) and the field (teachers and others who practice in the discipline).

creativity results from the interaction of a system composed of three elements: a culture that contains symbolic rules, a person who brings novelty into the symbolic domain, and a field of experts who recognise and validate innovation. All three are necessary for a creative idea, product or discovery to take place (Csikszentmihalyi 1997:6).

One way in which universities could encourage students to develop their understandings of what being creative means is to help them appreciate what creativity means in disciplinary practices and in the achievements of disciplinary practitioners. What does it mean to be a creative engineer, doctor, historian, teacher or any other practitioner in a discipline? Surveys show that faculty share similar perceptions of what being creative means in their discipline and sites for creative thinking that relate to these characteristics appear to be available in most aspects of disciplinary practice. Growing understanding and making explicit what creativity means in the academy is the first step in engaging the academy with this challenge.

Core features of being creative in the discipline

Jackson and Shaw (2006) surveyed the views of academic teachers on the core features they associated with being creative in eight different disciplinary fields and discovered that certain features were widely recognised regardless of disciplinary, pedagogic or problem working context (Table 2).

Table 2 Generic characteristics of creativity in eight disciplines.

Being imaginative – generating new ideas, thinking out of the boxes we normally inhabit, looking beyond the obvious, seeing the world in different ways so that it can be explored and understood better.

Being original. This embodies:

- the *quality of newness* for example: *inventing* and producing new things or doing things no one has done before;
- being *inventive with someone else's ideas* – recreation, reconstruction, re-contextualization, redefinition, adapting things that have been done before, doing things that have been done before but differently;
- and, *the idea of significance and value* – there are different levels and notions of significance and utility and value are integral to the idea.

Being curious with an enquiring disposition – *willing to explore, experiment and take risks* i.e. the attitude and motivation to engage in exploration and the ability to search purposefully in appropriate ways in order to find and discover. It is necessary to work in an uncertain world and often requires people to move from the known to the unknown.

Being resourceful – using your knowledge, capability, relationships, powers to persuade and influence, and physical resources to overcome whatever challenge or problems are encountered and to exploit opportunities as they arise.

Being able to combine, connect, synthesise complex and incomplete data/situations/ideas/ contexts in order to see the world freshly/differently to understand it better.

Being able to think critically and analytically in order to distinguish useful ideas from those that are not so useful and make good decisions. Being able to take value from feedback and use it constructively to improve ideas,

Being able to represent ideas and communicate them to others – the capacity to create and tell stories, pitch and sell ideas, to negotiate and persuade, empathize with others and show people possibilities, opportunities and solutions in ways that make sense to them and cause them to act differently.

Source: Jackson and Shaw (2006)

These propositions have been tested on numerous occasions in many disciplinary and mixed audiences and they generally seem to be accepted with few reservations (Figure 9).

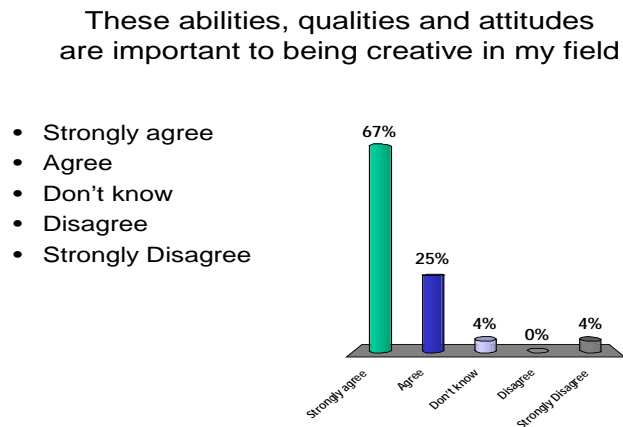


Figure 9 Typical pattern of beliefs in a group of higher education teaching professionals. The graph shows the pattern of beliefs in an audience of 58 higher education teachers at the University of Ulster Creativity Conference April 2008.

Source: Jackson (2008)

Where does creativity reside in the discipline?

Surveys of academic teachers in different disciplines (Jackson and Shaw 2006) reveal that sites for creative thinking and action appear to be available in most aspects of disciplinary practice. Sites for creativity can be connected through the idea of disciplinary enquiry and problem solving.

Being original – is understood as creating something new and useful to the discipline. For most academics this is embodied in the processes and products of research many of whom are active contributors. The idea is also connected to invention and innovation. For example in history this could mean: new approaches to solving historical problems; new techniques to gather and analyse data; new approaches to validate evidence; new interpretations of evidence; new forms of history and new forms of communicating historical information.

Making use of imagination – is focused on the use of mental models in disciplinary thinking. It is a source of inspiration, stimulates curiosity and sustains motivation. It generates ideas for creative solutions and facilitates interpretation in situations which cannot be understood by facts or observations alone. Disciplinary problems and concerns provide an essential context for the use of imagination.

Finding and thinking about complex problems – the engine of academic creativity is intellectual curiosity – the desire to find out, understand, explain, prove or disprove something. Curiosity leads academics to find questions that are worth answering and problems that are worth solving.

Making sense of complexity, synthesising, connecting and seeing relationships – Because working with complex problems often involves working with multiple and incomplete data sets, the capacity to synthesise, make connections and see new patterns and relationships is important in sense-making (interpreting and creating new mental models) and working towards better understandings and possible solutions to difficult problems.

Communication - the communication of ideas, knowledge and deeper understandings are important dimensions of creativity in the discipline. The symbolic language and tools and vehicles for communicating are all part of the disciplinary heritage. Story telling is an important dimension of communication. Disciplinary cultures are largely based on writing using the conceptual and symbolic language and images that have been developed to communicate complex information. Story-telling and story-writing are important sites for academics' creativity.

Resourcefulness – in the professional disciplines many roles involve solving difficult problems requiring ingenuity and resourcefulness. For example, a social worker or medic might need all their resourcefulness to access and acquire the resources to solve a client or patient's problem.

Amabile (1996) reveals how these characteristics of disciplinary creativity might be integrated into her model of creativity (Figure 3) through the example of a bio-engineer utilising his expertise, creative thinking and motivations to find and solve problems (contexts) that motivate him. In this scenario we are dealing with the Pro-c versions of creativity recognised by Kaufman and Beghetto (2009).

A bio-engineer's expertise includes his innate talent for imagining and thinking about complex scientific problems as well as sensing out the important problems in that domain, his factual knowledge of biochemistry and the techniques of genetic engineering, his familiarity with past and current work in the area, and the technical laboratory skill he has acquired. This component can be viewed as the set of cognitive pathways that may be followed for solving a given problem or doing a given task (ibid:5)

Our bio-engineer's arsenal of creativity skills might include his ability to break out of a preconceived perception or expectation when observing experimental results, his tolerance for ambiguity in the process of deciding on the appropriate interpretation for puzzling data, his ability to suspend judgment as he considers different approaches, and his ability to break out of strict algorithms for attacking a problem (ibid:5)

Task motivation makes the difference between what our bio-engineer can do and what he will do. The former depends on his levels of domain-relevant skills and creativity-relevant skills. But it is his task motivation that determines the extent to which he will fully engage his domain-relevant skills and creativity-relevant skills in the service of creative performance. (ibid:7)

For many people, simply having the intellectual challenge of a problem they care about is all they need to motivate themselves and increase their potential for creativity.

STUDENTS' CREATIVE DEVELOPMENT: A LIFEWIDE APPROACH

In my examination of the 'wicked problem' of creativity in higher education (Jackson 2008) I suggested that we could do much to honour and encourage students' creative development by adopting a lifewide concept for students' learning and development by creating a curriculum that values learning and development gained in all the spaces and places in a student's life while they are studying. A lifewide curriculum, it was argued, afforded the best opportunity for students' creative development, since the intrinsic motivations that drive creativity and the contexts that provide the opportunity and challenge, are more likely to be present in the spaces that individuals either choose to inhabit or are forced into by circumstances.

A lifewide curriculum honours informal/accidental/by-product learning in learner determined situations as well as formal learning in teacher determined situations. It embraces learning in the physical/emotional social spaces that characterise the work/practice environment and it honours formal and informal learning in all other environments that learners choose to be in because of their interests passions, needs [and circumstances]. Because of this a lifewide curriculum is likely to provide a better framework for encouraging, supporting, recognising and valuing learners' creativity and self-expression, than a curriculum that is solely based on academic or academic and professional practice experiences (Jackson 2008:24).

A lifewide curriculum also engages learners with what is relevant in and to their lives in ways that much of our education system does not. McWilliam and Taylor (2013) elaborate the reasons for 'why our kids need a powerful disposition to be self-managing learners when they finish their schooling'. For most of them, such a disposition will not be grown through being told what to do and how to think, rather it will be learned in all those parts of their lives where they decide what to do and how to do it.

In terms of the scale and influence of students' creativity (Kaufman and Beghetto's 2009) we are referring mainly to little-c and small-c forms of creativity, although I have come across occasions and circumstances where students' achieve Pro-c forms of creativity, particularly where collaboration is involved. A lifewide curriculum could facilitate students' creative development in three ways in the forms that are necessary to be successful and innovative in the academic disciplinary or interdisciplinary domain, in any professional/work placement domain and in the domains of activity that learners choose for themselves in their lives outside formal education. This domain is particularly rich in affordances and possibility spaces and it is this domain that is currently most difficult to honour and recognise students' learning and creative enterprise.

The significance of a lifewide concept of education for personal creativity is that it enables individual students to feel that even if they believe that there is little opportunity for them to be creative in their academic course, they can gain recognition for creativity that is being expressed in other parts of their lives. It also encourages students to see that creativity can be manifested in different ways in different parts of their lives.

An ecological perspective on creativity

We tend to think of creativity in the context of a specific thing - a sudden insight that helps solve a problem. But at an entirely different scale we might speculate that individuals' creativity is paramount to their creation of entire ecologies for learning. This is a particularly useful concept for students' to grasp as it helps them make sense of the way in which they structure and orchestrate their learning lives.

An individual's learning ecology comprises their processes and set of contexts, relationships and interactions that provides them with opportunities and resources for learning, development and achievement (Barron 2006, Barab and Roth 2006, Jackson 2013 a & b). Organised educational settings create their own ecologies for learning into which learners have to fit themselves but outside these settings self-created learning ecologies are an essential component of the way we learn and develop in work, family and other social settings. They are the means by which we connect and integrate our experiences and the learning and meaning we gain from our experiences across the contexts and situations that constitute our current lives. They are also the means by which we connect the learning we have gained from experiences in the past to the present. Learning ecologies are therefore of significant conceptual and practical value to the practice of lifelong and lifewide learning and education.

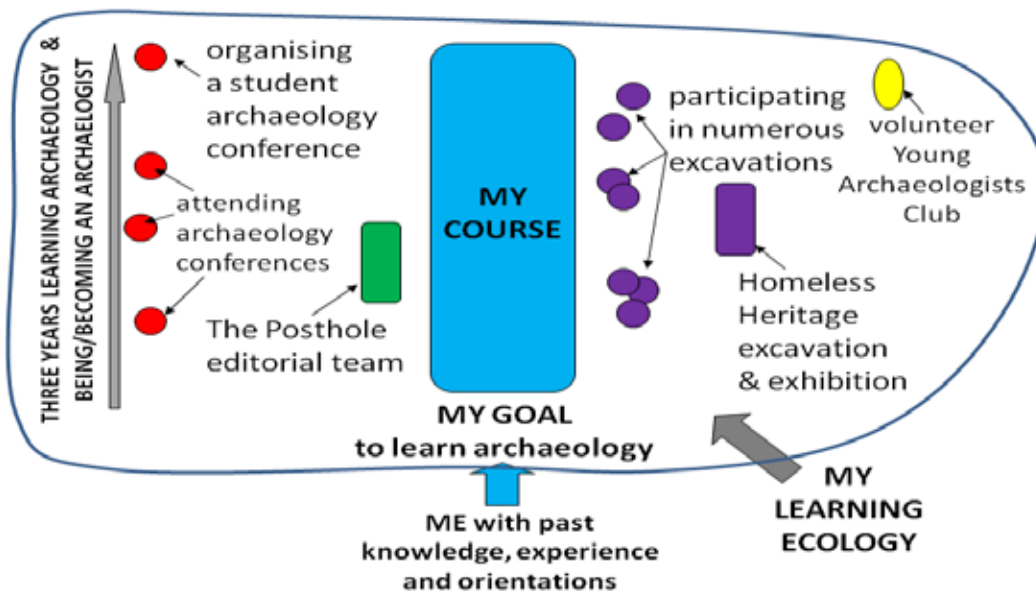


Figure 10 Example of a learning ecology for the purpose of becoming an archaeologist

Source: Jackson (2013)

Figure 10 provides an illustrative example of a learning ecology for a recent graduate called Michael who completed his archaeology degree in June 2013⁴. It shows that the process of learning, being and becoming⁵ is not simply confined to the structure, content and assessment of his course. Rather, we see his intrinsic desire and ambition to become a *good* archaeologist, form the central purpose around which he creates his personal learning ecology.

Michael's learning ecology was sustained over three years. It contains not only his course but all the other opportunities for learning that he has accessed or created for himself. While the taught course clearly provided the 'backbone' to his '*learning about*' archaeology it was the other experiences that he engaged with outside the course and in some cases outside the university environment, that enabled him to experience and learn what '*being an archaeologist*' meant to him. Furthermore, it was these experiences that enabled him to become the type of archaeologist he wanted to be - ie his ecological process was geared to helping him create himself. From an educational perspective this is clearly a good outcome. But it is worth considering that this was not accomplished through an educational design, rather it depended on the learner's own agency, interests and passion to seek out and get involved with opportunities in his immediate contexts and the wider world. Again, it might be argued that this is a great educational outcome for this student. My argument is that there is an opportunity for higher education to do much more to encourage and recognise these informal forms of development and the creativity of students.

A holistic model of learning within which creativity can be recognised

The value of a lifewide concept of higher education values and recognises learners' attempts to develop and use all their senses and embraces their full range of physical, intellectual, spiritual and emotional experiences. Beard and Jackson (2011) argue that a lifewide concept of education should be supported by a comprehensive model of learning. They present a useful framework to help us understand how our whole being is involved in learning. In this representation of learning there are three components to a learner's world – his inner world, his outer world and the sensory interface between these worlds. Learning is represented in six dimensions: *sensing, belonging, doing, feeling, thinking* and *being/becoming*. A creative act is likely to involve many if not all of these dimensions and by adopting such a comprehensive model of learning this can be recognised and valued. By comparison an academic context for creativity may be heavily biased towards the cognitive dimension of experience.

Case Study – Surrey Lifewide Curriculum and Lifewide Learning Award

Jackson et al (2011) describe a scheme at the University of Surrey which embraced the idea of a lifewide curriculum and the principles listed in Table 1 for encouraging and supporting students' creative development. The concrete expression of this idea translates into a curriculum map (Figure 11) containing three different domains, all of which have the potential to be integrated by a learner into their personalised higher education experience and be recognised and valued by the institution.

⁴ Michael's testimony can be found in Jackson (2013b)

⁴ I believe that the most important focus for our creativity is in the actualisation of ourselves (see Rogers 1961)

Support and recognition for students' lifewide learning and development, including their creative development, was provided through a Lifewide Learning Award. The Award Framework comprised an overarching award and a family of certificates underpinned by a lifewide learning capability and values statement (Appendix 1). This statement embodied the knowledge, capabilities, dispositions and values that are considered necessary to deal with and create situations in any context. Within them explicit reference is made to : *Being creative and enterprising: you need to be creative, enterprising and resourceful to invent new solutions, adapt to changing circumstances in novel ways and create new opportunities for yourself.*

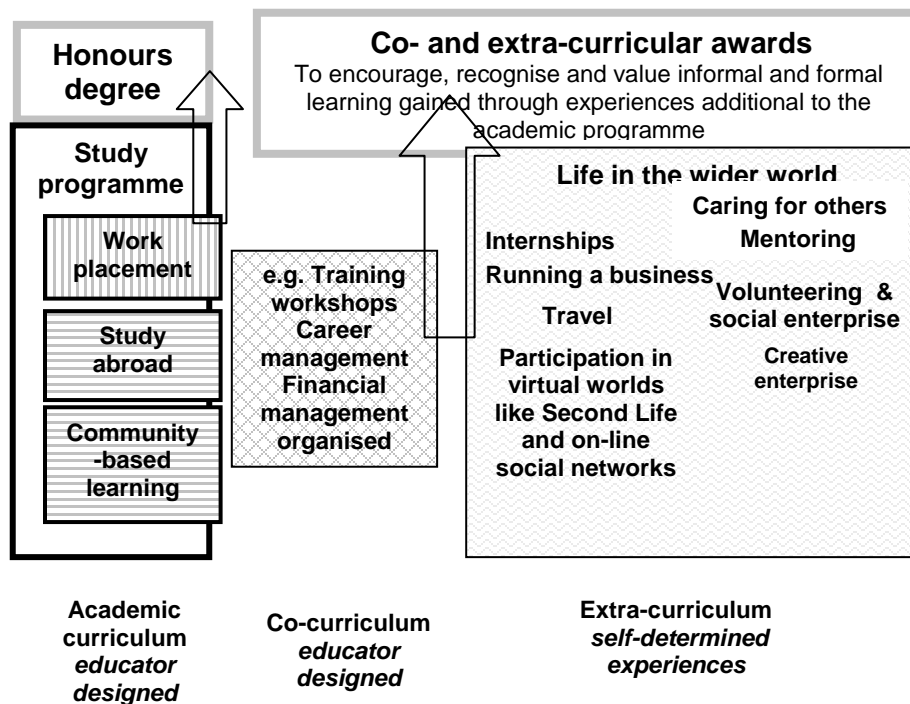


Figure 11 Lifewide curriculum map

Source: Jackson (2011a:116)

The Award did not gain academic credit and it was not attached to any level of the UK HE Qualification Framework⁶. Participation was voluntary and it required a learner to recognise the relevance and intrinsic value and benefit of engaging in this type of learning experience. The Award was made to a student who was able to demonstrate learning and personal development through their co-curricular and extra-curricular experiences, in line with the requirements for the award. A minimum involvement of 150 hours of experience-based and reflective learning was required. Students decide what experiences to include in their portfolio but they have to demonstrate new learning and personal development against the award's capability and values statement (Appendix 1). Examples of students' lifewide learning and development including spoken testimonies can be found at: <http://lifewidelearning.wordpress.com/>

⁶ <http://www.qaa.ac.uk/AssuringStandardsAndQuality/Qualifications/Pages/default.aspx>

To demonstrate their personal development students created:

- a Life Map to show the areas in their life where they were learning/developing
- a Personal Development Plan to show how they were attempting to develop the core capabilities for the award
- a 2000 word reflective account drawing out the ways in which they developed paying attention to the award capability statement (Appendix 1)
- a portfolio documenting or illustrating the experiences they drew on for their personal development.

Judgements as to whether a learner deserved the Award were based on:

- their commitment to their own personal development through self-directed and unplanned activities over a period of time while they are studying at the University
- their self-awareness - their ability to recognise that they are learning and developing in different ways through their lifewide experiences.
- their ability to explain and communicate their self-awareness of learning, personal development using the tools and frameworks provided and their overall perception of how they have changed as a result of participation and self-evaluation.
- their honouring of the self-directed learning process and completion of requirements.

Lifewide Education's 'Lifewide Development Award'

The practices developed at the University of Surrey are now being promoted through an independent organisation called the Lifewide Education Community which offers its own award framework for encouraging and supporting students' development, including their creative development. The Guidance framework can be accessed at: <http://www.lifewideaward.com/>

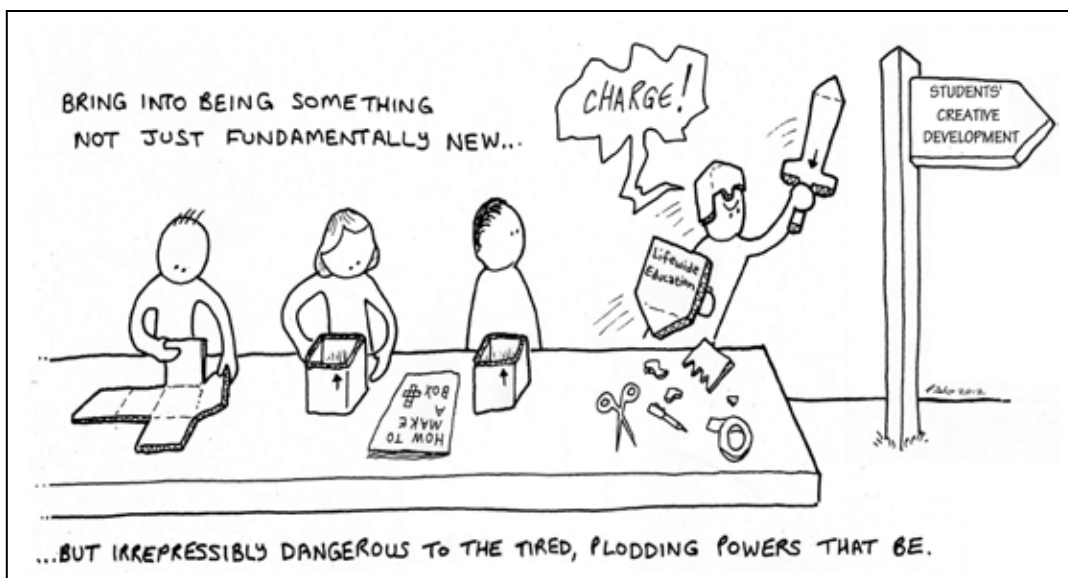


Figure 12 Sometimes we have to invent a whole new way of doing things

DEVELOPING STUDENTS' CREATIVITY: THE CHALLENGE OF ORGANISATIONAL CULTURE

The 'problem' of how we *cultivate creativity in university students* is embedded in the much trickier problem of how we *cultivate a culture of creativity in our universities*. This is not a matter that can be dealt with in a few pages. The 'wisdom' I can impart is based on my own struggle of trying to change culture in a university and a study I made (summarised in Jackson 2013c) of strategic change in another university which combined top down interventions with bottom up innovation.

The study reveals that innovators thrive in an organisational culture where leaders and managers are encouraging, supporting and enabling (in accordance with the findings of Amabile and Kramer 2012). Teacher creativity flourishes where innovators have the resources - especially the time to make change happen. Where the institution's systems and procedures enable rather than hamper their progress. Where they have the respect, emotional support and encouragement of managers and colleagues. Where they can find help when they need it and where they feel their efforts have been valued and they have made a positive difference.

Twelve principles provide an overarching framework within which teacher creativity and bottom-up innovation are more likely to be encouraged, supported and facilitated within a process of strategic change. In essence these principles might also be expected to underpin a culture of a higher education institution that cultivates the creativity of students. A fuller account of these principles is provided by Jackson (2013c).

Leadership, management & facilitation of strategic change & bottom up innovation

1 Leadership of strategic and cultural change is shared and distributed

Whole organisation change is led from the top, middle and bottom. Leadership is shared and distributed throughout the organisation and innovators must be viewed as leaders of strategic change. There is one secret to leading organisational change. The leaders at the top and in the middle have to create the conditions in which people at the bottom feel empowered and are enabled to change themselves and their own practices in order to make strategic change happen. This is a shared concept of leadership in which leadership is broadly distributed, such that people within a team and organization lead each other. It is a social, non-hierarchical concept and contrasts with more traditional notions where leadership roles are vested in individuals appointed by management.

2 A strategic vision that inspires people to create their own visions for change that they will embody

An organisational vision for strategic change must encourage and enable people to create their own visions through which they can enact and embody change that they own. The secret of encouraging bottom-up innovation through strategic change requires people to connect their own visions for educational change with the institution's strategic ambition.

3 A strategy for both planned and emergent change

To be successful a strategy for significant change has to be owned at the top, middle and bottom of the organisation. Strategy needs to balance the needs for planned action with the need to create the conditions that encourage an ecological and emergent process of change in the practice environment.

4 A strategy that involves the whole socio-cultural environment

Strategic change must involve the whole organisation. It involves working within, across and outside the cultural and practice grains of the organisation. People are more likely to commit themselves to significant change if their will to be involved is driven by their own intrinsic motivations rather than extrinsic forces. Giving people the choice or freedom to choose to be involved seems to be crucial for involving innovators

5 Involvement of brokers to facilitate change across and between organisational structures, hierarchies and boundaries

Brokerage - the intentional act of working collaboratively and creatively with people, ideas, knowledge and resources to develop or change something (Jackson 2003) is an important process in facilitating change in complex organisations. Brokers play a key role in organisational change as they facilitate communication, networking and working between and across the constituent parts of the organisation and help overcome impediments to progress. Educational and curriculum developers, instructional designers and e-learning advisors all participate in the brokerage role to enable change in teaching and learning practices to happen.

6 An effective but flexible approach to managing and accounting for resources

Changing an organisation requires new resources or the redistribution of existing resources - the most important of which is time. People need resources when they need them and it is not always possible to judge this before a change project begins. Resourcing change that is emergent requires a more flexible and adaptive model of distributing resources than is used in more predictable operational processes.

Environmental factors and conditions that support, encourage and enable strategic change and bottom-up innovation

7 An environment that promotes effective, honest and meaningful communication

Communication that is honest and meaningful connects the managed, social and individual worlds of change and is the means to overcome the barriers between these different worlds. You cannot change an organisation without changing the conversations within it. Good and honest communication creates the trust and mutual understandings that are essential when trying to accomplish change. Poor communication or an absence of communication invariably causes problems and a loss of trust. Communication, particularly conversation, lies at the heart of an organisation's culture and its ability to learn, to spread new learning and the values that underlie such learning.

8 An environment that recognises and supports the resolution of 'local contentious practice'

Tensions and conflicts often arise when bottom-up innovation meets established procedures and systems that were not designed to accommodate the new practices. An organisation involved in

strategic change needs the awareness, will and capability to facilitate the resolution of local contentious practice. This is another role for the organisational brokers.

9 An environment that encourages new relationships and collaborations in order to foster change

Organisational change is accomplished through the deepening of existing relationships and the forging of new collaborative partnerships that generate ideas and new opportunities, and which provide encouragement, practical help and support. New relationships increase diversity and facilitate the generation of ideas, help solve problems and provide innovators with practical and emotional support. Such relationships help innovators appreciate the value of their own work and efforts, encourage them to 'go the extra mile' and enable them to persist especially at the most frustrating and challenging moments.

10 An environment that provides encouragement and emotional support and celebrates what has been achieved

An emotionally nourishing environment helps people deal with the challenges, stresses, anxieties and frustrations of trying to bring about significant change and helps them to remain positive in the face of setbacks. Such an environment recognises the efforts and celebrates the achievements of those who are involved in change. Amabile and Kramer's study of the socio-cultural work environment identified four categories of nourishers (Amabile and Kramer 2011: 131- 33) and all seemed to be important to the innovators. They have a significant impact on the way they feel and on their creativity and productivity. These are:

1 Respect - managerial actions determine whether people feel respected or disrespected and recognition is the most important of these actions.

2 Encouragement - for example when managers or colleagues are enthusiastic about an individual's work and when managers express confidence in the capabilities of people doing the work increases their sense of self-efficacy. Simply by sharing a belief that someone can do something challenging and trusting them to get on with it greatly increases the self-belief of the people who are engaging with the challenge.

3 Emotional support - People feel more connected to others at work when their emotions are validated. This goes for events at work, like frustrations when things are not going smoothly and little progress is being made, and for significant events in someone's personal life. Recognition of emotion and empathy can do much to alleviate negative and amplify positive feelings with beneficial results for all concerned.

4 Affiliation - people want to feel connected to their colleagues so actions that develop bonds of mutual trust, appreciation and affection are essential in nourishing the spirit of participation. One of the challenges for innovators is that they often feel alone because they are moving into new territory by themselves - where there is no-one they can affiliate with!

11 A culture that values learning and an environment that encourages and enables people to share what they have learnt so that it can be reused or adapted to other contexts

If learning to do new and better things is the core enterprise in strategic change it is vital that new knowledge and understanding grown through the change process is consolidated, made

visible and distributed to other members of the organisation in ways that are appropriate and meaningful to them. Only then can what has been learnt be applied in other situations and contexts.

12 A culture that encourages people to take risks to put themselves in unfamiliar situations where they need to harness their creativity to actualise themselves

Accomplishing change - involves new ideas, new ways of thinking, new practices and new ways of being - it's an inherently creative process and ultimately it involves people becoming different and taking risks in order to achieve their goals. People have to feel trusted and their most be a culture of appreciation rather than blame when things do not turn out as expected.

Cultivating a culture that values students' creative development

The secret of accomplishing significant organisational change is to engage the people who want to actualise themselves through their innovations with the strategic changes a university wants to make. In other words it is about unleashing and harnessing the creativity of individuals who want and need to be creative because being creative is an important part of who they are. When these individuals are teachers trying to cultivate and nurture their students' creativity, and students respond to their efforts - we realise the idea of a self-actualising university.

It is the will to be and become a better teacher to enable students to learn better or to improve the support they give to their students that provides the deep motivational force that drives the innovative teacher. The combination of challenge, personal autonomy, the desire to do something new, the need to master new practice, and the belief that people are making a valuable contribution to the educational enterprise of students, are all part of the motives that cause teachers to innovate even when it results in a lot more work for them.

Accomplishing an innovation is inherently a challenging and creative process. Innovators view creation in terms of the invention of practice that was entirely new to them or existing practice that they have significantly modified. They also recognise creation in new relationships and infrastructures to support new practice, and in the development of new policies, frameworks and procedures to guide future practice. For teachers, the real value of whole organisation strategic change initiatives is to enable them to actualise themselves to become who they want to become. What comes out of this process is not something that can easily be codified or quantified on a piece of paper. What comes out of it are new relationships and new sorts of conversation within and outside the university, new forms of practice and models or approaches that can be re-used and adapted to other contexts, and new ways of seeing and understanding things - in other words a culture that is different to what existed before.

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Updated versions of this paper together with my presentation slides and articles relating to the background studies underlying this work can be found on my website

<http://www.normanjackson.co.uk/macao.html>

REFERENCES

- Amabile, T.M. (1983) Social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, 45, pp. 357-377.
- Amabile, T.M. (1996) Creativity and Innovation in Organizations. *Harvard Business Review* 1-15
- Amabile, T. M. and Kramer, S.J. (2012) *The Progress Principle: Using Small Wins to Ignite Joy, Engagement, and Creativity at Work*. Harvard: Harvard Business Review Press.
- Barnett, R. (2011) Lifewide education: a new and transformative concept for higher education. in N. J. Jackson (ed) *Learning for a Complex World: A lifewide concept of learning, education and personal development*. Authorhouse.
- Barab, S. A., & Roth (2006) Curriculum-based ecosystems: Supporting knowing from an ecological perspective. *Educational Researcher*, 35 (5), 3-13
- Barron, B. (2006) Interest and Self-Sustained Learning as Catalysts of Development: A Learning Ecology Perspective. *Human Development* 49:193–224 Available on-line at: <http://life-slc.org/docs/barron-self-sustainedlearning.pdf>
- Beard, C. and Jackson, N.J. (2011) A holistic model for learning and development, in N.J. Jackson (ed) *Learning for a Complex World: A lifewide concept of learning, education and personal development*. Authorhouse.
- Cowan, J. (2006) How should I assess creativity, in N.J. Jackson et al (eds) *Developing Creativity in Higher Education: an imaginative curriculum*, London and New York: Routledge 156-172.
- Csikszentmihalyi M (1997) *Creativity: Flow and the Psychology of Discovery and Invention*. New York Harper Adams
- Eraut, M. (1997), 'Perspectives on defining "The Learning Society"', *J. Education Policy*, 12 (6), 551–558
- Eraut, M. (2007) Learning from Other People in the Workplace, *Oxford Review of Education*, 33 (4), 403-422
- Eraut, M. (2009) How Professionals Learn through Work. In N. Jackson (ed.) *Learning to be Professional through a Higher Education*. Online at <http://learningtobeprofessional.pbworks.com/How-professionals-learn-through-work> (accessed 20/05/11).
- Eraut, M. (2011) Improving the Quality of Work Placements. in N.J. Jackson (ed) *Learning to be Professional through a Higher Education*. Available at:
- Greene, R. T. (2004) *60 Models of Creativity for studying how particular repertoires of such models in creators affect their creativity*. Available on-line http://www.scribd.com/doc/2162318/A-Model-of-60-Models-of-Creativity?ga_related_doc=1
- Jackson, N. J. (2003) *Engaging and Changing Higher Education through Brokerage* Aldershot: Ashgate
- Jackson, N.J. (2004) 'How can creativity be taught? Personal accounts of teaching to promote students' creativity' <http://www.normanjackson.co.uk/creativity.html>

- Jackson N J (2005) Assessing students' creativity: synthesis of higher education teacher views
- Jackson, N. J. (2008) *Tackling the wicked problem of creativity in higher education*. Background paper for a presentation at the ARC Centre for the Creative Industries and Innovation, International Conference Brisbane June 2008 Creating Value: Between Commerce and Commons Available on-line at: <http://www.normanjackson.co.uk/creativity.html>
- Jackson, N. J. (2010) *Developing Creativity through Lifewide Education*. Available online at <http://www.normanjackson.co.uk/creativity.html>
- Jackson, N.J. (2011a) An imaginative lifewide curriculum, in N. J. Jackson (ed) *Learning for a Complex World: A lifewide concept of learning, education and personal development*. Authorhouse. <http://www.normanjackson.co.uk/creativity.html>
- Jackson, N.J. (2011b) The lifelong and lifewide dimensions of living, learning and developing, in N. J. Jackson (ed) *Learning for a Complex World: A lifewide concept of learning, education and personal development*. Authorhouse.
- Jackson, N. J. (2013a) Personal Learning Ecology Narratives. In N. J. Jackson and G. B. Cooper (eds) *Lifewide Learning, Education and Personal Development e-book Chapter C4* available on line at: <http://www.lifewidebook.co.uk/research.html>
- Jackson, N. J. (2013b) The Concept of Learning Ecologies in N. J. Jackson and G.B. Cooper (eds) *Lifewide Learning, Education and Personal Development e-book Chapter A5* available on-line at <http://www.lifewidebook.co.uk/conceptual.html>
- Jackson, N.J. (2013c) The Wicked Challenge of Changing a University. Available at: <http://www.normanjackson.co.uk/change.html>
- Jackson, N.J., Betts, C. and Willis, J. (2011) Surrey Lifewide Learning Award: a learning partnership to support lifewide learning, in N.J. Jackson (ed) *Learning for a Complex World: A lifewide concept of learning, education and personal development*. Authorhouse
- Jackson, N. J. and Buining F. (2010) Enriching Problem-based Learning through Design Thinking. In Barrett, T. and Moore, S. (eds) (2010) *New approaches to problem-based learning: revitalising your practice in higher education* London: Routledge <http://www.normanjackson.co.uk/creativity.html>
- Jackson, N.J. and Shaw, M. (2006) Developing subject perspectives on creativity in higher education, in N.J. Jackson et al (eds) *Developing Creativity in Higher Education: an imaginative curriculum*, London and New York: Routledge 89-108 <http://www.normanjackson.co.uk/creativity.html>
- Kaufman, J.C., and Beghetto, R.A. (2009) Beyond Big and Little: The Four C Model of Creativity. *Review of General Psychology* 13, 1, 1-12.
- McWilliam, E (2009) Teaching for creativity: from sage to guide to meddler. *Asia Pacific Journal of Education* v29, 3, 281-293 Available at: http://www.vcu.edu/cte/workshops/teaching_learning/2011_resources/sagetoguidetomeddler.pdf
- McWilliam, E. and Taylor, P. (2013) *Personally Significant Learning*. Available on-line at: <http://www.ericamcwilliam.com.au/personally-significant-learning/>
- Rittel, H. and Webber, M. (1973) Dilemmas in a General Theory of Planning, *Policy Sciences*, 4. Amsterdam: Elsevier Scientific Publishing. pp. 155–9.
- Rogers, C.R., (1961) *On becoming a person*. Boston: Houghton Mifflin
- Saunders, L (2004) Evidence-led professional creativity: a perspective from the General Teaching Council for England. *Educational Action Research* 12(1) 163-167.
- Schunk, D. H. and Zimmerman, B. J. (1998) *Self-regulated learning: from teaching to self-reflective practice*. New York: Guilford Press.

- Stephenson, J. (1998) The Concept of Capability and Its Importance in Higher Education. In J. Stephenson and M. Yorke (eds) *Capability and Quality in Higher Education*, London: Kogan Page.
- Zimmerman, B. (2000) Self-regulatory cycles of learning. In G. A. Straka (ed) *Conceptions of self-directed learning, theoretical and conceptual considerations*. New York, Waxman 221-34

Appendix 1 Surrey Lifewide Learning Award Knowledge, Capability & Values Statement

The Award values and encourages the personal development that you undertake in order to become a more rounded and developed person. We want to encourage you to manage your own development.

- 1 Managing your own development:** the attitudes, skills and behaviours that motivate and enable you to take responsibility for, plan and engage in experiences that enable you to develop yourself. In successfully completing the award you will have demonstrated that you have:
- taken responsibility for, thought about, planned for and engaged in your own personal and professional development, taking advantage of the opportunities available to you on and off campus
 - reflected on and evaluated the learning, personal and professional development you have gained through the experiences that you have chosen to incorporate into your claim for life-wide learning
 - documented your experiences and what you have learnt from them, and gathered and organized evidence of your learning and development in your Life Skills Portfolio
 - summarised and communicated what you have learnt and how you have developed through a reflective account and an enhanced CV

The Award emphasises the importance of developing capability to deal with situations (particularly new and challenging situations).

- 2 Being able to deal with situations: solve problems work with challenge and take advantage of opportunity:** your reflections will show how you have worked with challenge and uncertainty, engaged with problems in a range of *real world* situations. These stories will reveal how you have understood and analysed a situation, decided what to do, found things out in order to decide what needs to be done, done things and learnt through the experience. In short, how you have made things happen. Your stories will not necessarily reflect success, in some cases stories may reveal how you have had to overcome significant setbacks and demonstrate your resilience in the face of failure.

The award encourages you to think about these important generic dimensions of capability to deal with situations and make things happen.

- 3 Being able to develop the knowledge you need to deal with the situation:** to be able to find out what you need to know in order to do what you need to do.
- 4 Being creative and enterprising:** you need to be creative, enterprising and resourceful to invent new solutions, adapt to changing circumstances in novel ways and create new opportunities for yourself.
- 5 Being an effective communicator :** to make things happen you need to be an effective communicator, to be able to communicate in ways that are appropriate to the situation, to be able to communicate to different audiences using different media.
- 6 Being able to work with and lead others:** your reflections will reveal how you have worked and developed relationships with other people and taken the initiative in helping others make good decisions and actions.
- 7 Behaving ethically and with social responsibility:** your reflections will provide a vehicle for showing how you have dealt with ethical issues – how you have decided what is right or wrong, considered the values of others which are relevant in your activities, and tried to do the right thing.
- 8 Any other capability that is necessary to deal with a particular set of situations**

Through your engagement with the award you will also have the opportunity to demonstrate these qualities and dispositions

- **Your will to be and become who you want to be:** the award is intended to nurture your spirit to become the person you want to be. We are interested in understanding why you choose to do the things you include in your portfolio.
- **Your values:** your reflections will reveal the values you invest in the enterprises you contribute to and the value you add to the enterprise.
- **Your confidence:** your reflections will reveal how your confidence has developed as a result of encountering and dealing effectively with situations, accomplishing new things and coping with significant challenges