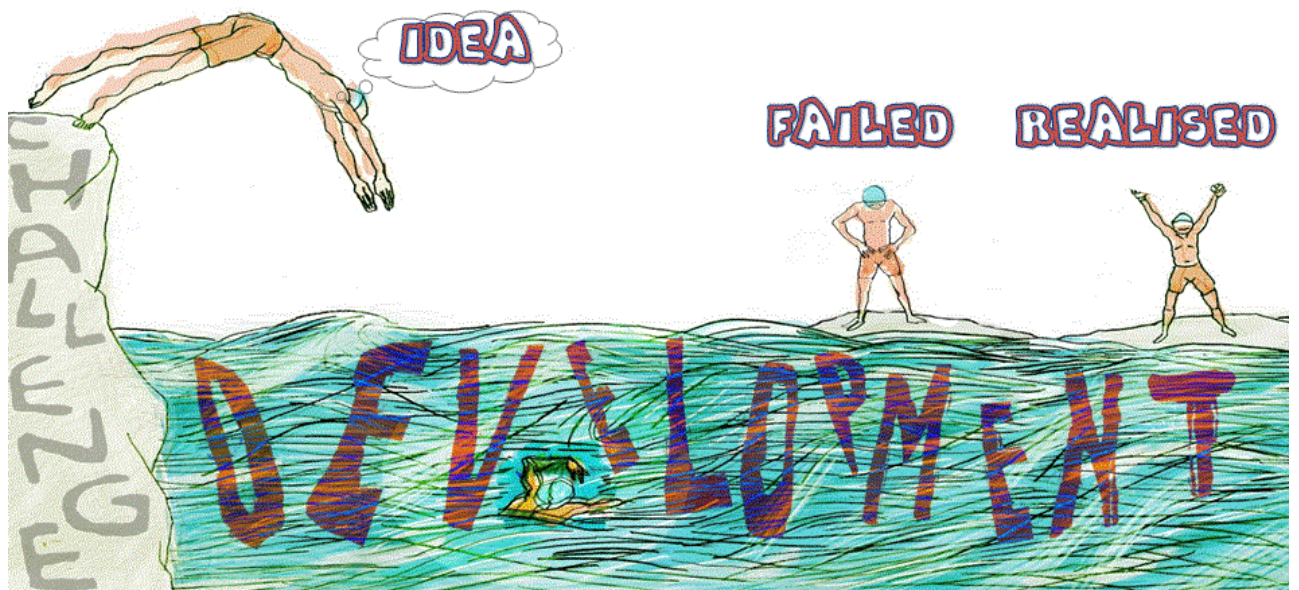


# Creativity in Development: A Higher Education Perspective

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with contributions from  
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Kiboko Hachiyon

Development never ends its creative work  
Lev Vygotsky 'The Problem of Age'

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# CHAPTER 1

## The Developmental Challenge: An Ecological Perspective

Norman Jackson

### SUMMARY

The most important educational challenge facing all universities, is fundamentally a *developmental challenge* focused on the question of how we prepare learners for the challenges they will face in their future lives. This chapter argues that designing and implementing strategies to support development at all levels and in all aspects work in a university are important sites for individual and collective creativity. The chapter begins by examining the idea of development as an intentional process of change in order to create difference, either to adapt something which already exists or to bring something new into existence. Development can be undertaken at all scales from the individual through to the whole organisation or whole system. It can be simple, complicated or complex. Any consideration of development as a process for transforming something that already exists or introducing something new must necessarily involve the idea of creativity since creativity is the concept we use when we talk about bringing new ideas and things into existence. The second part of the chapter considers the idea of creativity and provides some simple tools to aid understanding. Creativity and development are both processes and both can host each other. The socio-cultural model of creativity with its concerns for symbolic domains, fields of practice and individual creativity is relevant for both creativity and development. But the organisational environment also exerts a strong influence on the extent to which individual and collaborative creativity can flourish. The final part of the chapter considers the idea of the ecology of development within which individuals' creativity emerges as they pursue their immediate goals and longer term purposes and ambitions. The narratives of two people involved in educational development are provided which support the view that creativity is 'the emergence in action of 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' (Rogers1961:350). The same definition can also be used for many developmental projects in which the 'novel relational product' is an individual's own development and or the ideas, products, services and experiences they have created.

### THE WICKED PROBLEM

The *wicked problem*<sup>1</sup> facing all universities, is fundamentally a *developmental challenge* focused on the question of how we prepare learners for the challenges they will face in their future lives. Nested in this challenge is the developmental problem of how teachers, learning



advisors or professional educational developers develop themselves so that they can support and enable their students to develop themselves so that they can act effectively in the future worlds they will inhabit. For institutional leaders the developmental challenge is concerned with the continual process of change so that the people who work in the organisation are able to realise this developmental challenge. Fundamentally this is a story of development - at personal, professional, curriculum and organisational levels. It's also a story of creation in which people create or co-create new knowledge and understanding in order to develop along the trajectories they have chosen for themselves or have been determined by others. When these trajectories are aligned to the developmental trajectory of a university for the purpose of enabling learners to develop along the trajectories to which they aspire, we can see that development connects everyone involved in the higher education enterprise. Finally, it's also an ecological story in which personal and professional development emerges in an organic and often unpredictable way from the contexts and circumstances of people's lives.

**Figure 1** A vision of learning and developing for a complex world. This picture was created by Julian Burton and it was drawn on the wall of the Surrey Centre for Excellence in Education and Training (SCEPTreE) at the university of Surrey. It embodies the wicked challenge outlined in the opening paragraph.



## WHAT IS DEVELOPMENT?

*Development* means a progression or movement from a simpler or lower to a more advanced, mature, or complex form or stage. Development is a *process* to achieve certain goals in certain ways or a *trajectory* along which certain things change or are accomplished. The concept of development can be applied to ideas, people, objects, enterprises, organisations and organisational groups, societies and countries.

*Development* is the fundamental process that enables everyone to change themselves. It is also the process through which new things - material or virtual objects, social practices and

performances and organisations are brought into existence or changed. People who work in developmental roles are agents working on behalf of the organisation to facilitate further development often by helping the individuals who do the work of the organisation to develop new understanding and capability, new ways of thinking and behaving and new relationships.

The development that people undertake in an organisation is akin to the biological processes that lead to creation, adaptation and evolution. Like Enrico Coen I believe that 'creativity is a developmental process and development is a creative process' (cited by Diggie 2000) and the two concepts are inextricably linked. This locates the creativity of individuals and groups of people working together in any significant developmental change process but perceptions of what creativity is and how it manifests itself in the thinking and practices of individuals will be the subjective preserve of every individual involved in development.

## Development is change

Development is about *creating difference*. It involves change along a trajectory in which the amount of change may be the result of the accumulation of many small incremental changes or it might be the effect of one or more significant changes, or a combination of smaller and larger changes. But the end result of development is either that something is quantitatively different to what existed before and/or something new has been brought into existence. Motivation for creating difference or newness is grounded in the continuous search for something better which improves what exists or does something which we currently can't do. Conceptually this process of creating difference may involve elements of some or all of the things listed in Table 1 ie newness, making different, stopping, replacing and becoming. Embedded in this visualisation is the sense of bringing new things into existence (*creation*) or changing things that already exist (*recreation*). Changing the way we or other people think and practice is the focus for much educational development work. For the person involved in development it always involves the process of becoming different which invariably means learning new things by adding to knowledge or skill I already have, or replacing something which I already have. In this way development is integral to lifewide learning - our daily project of perpetually becoming.

**Table 1** Conceptual dimensions of *change and development*

### *Newness*

- New structures, tools, frameworks, processes, procedures
- New behaviour and practices
- New knowledge and understanding, ways of thinking, beliefs, values, feelings

### *Making something different*

- Modifying, adapting, combining something with something else, converting something that already exists.

### *Stopping*

- Not doing something

### *Replacing*

- Substituting or exchanging something

### *Becoming*

- Becoming different - transitioning from one thing to another





## Personal development - a self-regulated process to accomplish personal change

Development is a *process* that results in change. In human systems of application, such as when individuals undertake development work in an organisation, the development process involves both a deliberate and systematic series of purposeful actions directed to some end as well as more spontaneous or improvised actions in response to what emerges through the deliberate action. The process that was planned may change as work progresses and people appreciate the effects of what they are doing and adjust their actions to achieve better results. In other words we regulate ourselves and our processes through our metacognitive monitoring of their effects.

But what actually drives our process? What drives us to develop ourselves and how, where and why do our self-development projects originate? These are important questions in any consideration of personal or professional development.

The social cognitive view of learning argues that most human actions are goal directed (Bandura, 1986) which means that actions are performed to obtain anticipated and valued outcomes or to avoid outcomes that are not desirable. Such *outcome expectations* serve as incentives for action, guide the choice of actions and influence the level and type of effort and persistence directed toward attaining desired outcomes. The greater the personal value of the anticipated outcomes and the stronger the belief that one is capable of generating the behaviours needed to obtain the outcomes (*self-efficacy* beliefs), the greater the likelihood that action will be taken to obtain them and that effort will be expended and sustained in their pursuit. However, for anticipated outcomes to influence action, they must be incorporated into our larger self-regulatory system (Bandura 1986).

the social-cognitive perspective on self-regulated learning paints a picture of goal-directed behaviour aimed at obtaining desired outcomes (both tangible and affective). Self-perceptions of efficacy influence both initiation and continuation of goal pursuit. The ongoing processes of self-observation, self-judgment, and self-reaction also affect continued goal pursuit. Clearly goals are central to the self-regulatory process. They represent the target goals and anticipated outcomes associated with the current actions being performed (Miller and Brickman 2004:12)

Research shows that clear and specific proximal goals (concrete attainable target goals) produce higher levels of achievement and personal satisfaction than vague, visionary and distant goals (Bandura 1986, Schunk 1990 1994, Zimmerman1989). A target goal is the cognitive representation or mental model of the particular behaviour (action) or performance we wish to produce and the associated standards for their execution (Harackiewicz and Sonsome 2000). However, vague, visionary distal (future) goals also play an important role in human motivation. "The anticipation of distal outcomes provides general direction for choosing activities, and it raises the level of involvement [over long periods of time]" (Bandura 1986:336).

Miller and Brickman (2004) propose a model that fuses self-regulatory aspects of social-



cognitive theory with theories that focus on future goals (eg Markus and Nurius, 1986; Nuttin, 1984, 1985; Raynor, 1974). They argue that

All goals are representations of the future; however, they vary in their extension into the future (Nuttin, 1985). The goals at the heart of the social-cognitive account of self-regulation are rather proximal target goals, at least in the ideal case (Bandura, 1986; Locke and Latham, 1990). The future goals to which we refer are self-relevant, self-defining goals that provide incentive for action.....Such goals are more similar to outcome expectations than target goals. These goals include, but are not limited to, important personal aspirations such as getting an education, striving for a career or job, developing intimate personal relationships, and making a contribution to society. They are future-oriented in that successful performance on the current task does not, in itself, produce the desired consequence. In fact, some goals, such as becoming an educated person or making a contribution to society, may have open-ended futures in which the ultimate goals are never fully reached. Rather, they are continuous pursuits (Emmons, 1989). Others have referred to such future-oriented goals as life tasks (Cantor and Kihlstrom, 1987), personal strivings (Emmons, 1989), current concerns (Klinger, 1977), personal projects (Little, 1987), and possible selves (Markus and Nurius, 1986). The emergence of future goals is usually cast as part of the developmental process that occurs in the individual's sociocultural context. Various researchers have suggested that future goals of this type surface as culturally determined developmental tasks, such as completing school, getting a job, or starting a family (e.g., Cantor and Kihlstrom, 1987; Nurmi, 1991).... The sociocultural influences on goal development....include such contextual factors as the home, peers, school, and the media, which are known to shape individual values (Kilby, 1993; Rokeach, 1979) and influence knowledge about what is possible in the present and future (Maehr and Braskamp, 1986). Values and knowledge of possibilities are two major contributors to the development of personally valued future goals and the subgoals operating in their service (Miller and Brickman 2004:14).

Clearly, 'personal development is best served by combining distal aspirations and proximal self-guidance' (Bandura 1986:146). In this way our imaginings of a different future affect the choices we make in how we might create that future.

## Problem solving and solution finding in developmental processes

While every developmental process is different in terms of its focus, scope, contexts, problems, approaches, methodologies, interferences, time scales and outcomes there are some well known overarching patterns of problem solving /solution finding that provide clues as to how we utilise our creativity in developmental processes.

Developmental processes aimed at solving a problem or creating something new are fundamentally a process of design (Conklin 2005) ie they involve planning and making decisions about something that is being created; creating plans that show/explain how something will be brought into existence; and crafting, fashioning, executing, constructing or implementing something according to a plan. Design, in both the technical and aesthetic sense, is the process of creating something new - eg a strategic plan, an educational programme or module, a new student advisory system or any other educational tool or process. Any design problem is a problem of resolving tension between what is

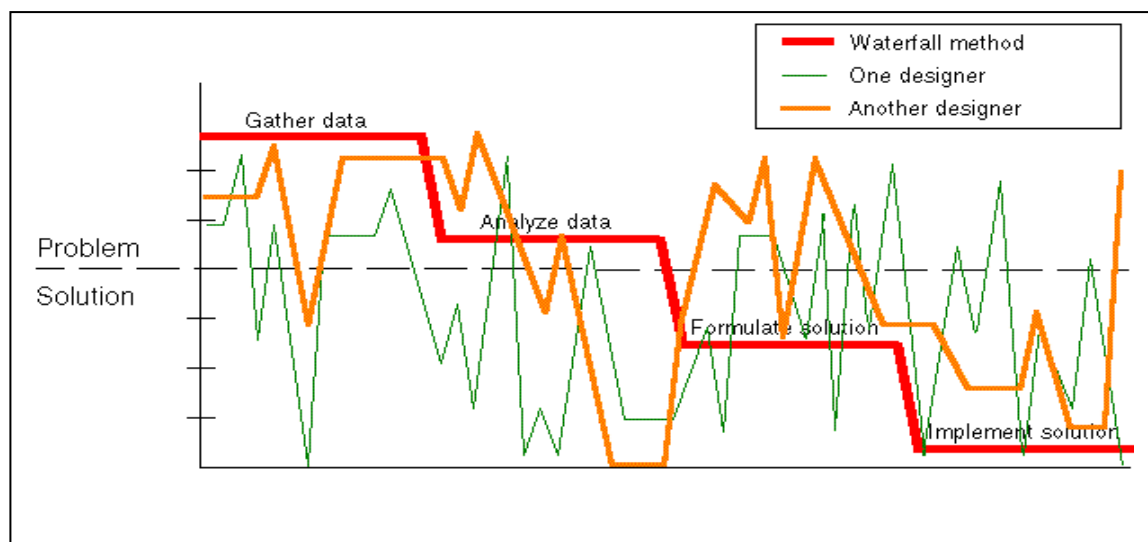


needed and what can be done within the socio-cultural contexts, time and resources that are available

When confronted with a problem like creating a new curriculum framework we typically create a plan which assumes development will proceed in an orderly and linear fashion - if we do A+B+C we will arrive at D. Such causal thinking leads to a waterfall pattern of activity depicted by the red line in Figure 2 We start by gathering information, building knowledge relevant to the problem, then we analyse the data and come up with possible solutions which are evaluated and the best solutions are then piloted and implemented. While this pattern may well be incorporated into significant educational development processes other patterns of thinking and activity are also likely to be involved.

Conklin (2005:2-6) describes an experiment in which designers were asked to design an elevator control system for an office building. All of the participants in the study were experienced and expert integrated- circuit designers, but they had never worked on elevator systems before. Indeed, their only experience with elevator systems came from riding in elevators. Each participant was asked to think out loud while they worked on the problem. The sessions were videotaped and analyzed in great detail. The analysis showed that these designers worked simultaneously *on understanding the problem and formulating a solution*. They exhibited two ways of trying to understand the problem: efforts to understand the requirements for the system (from a one page problem statement they were given at the beginning of the session); and mental simulations (e.g. "Let's see, I'm on the second floor and the elevator is on the third floor and I push the 'Up' button. That's going to create this situation....").

**Figure 2** Problem solving in complex developmental processes (Rittel and Webber 1973). Source of diagram Conklin (2005 Figure 2:6)



The subjects in the elevator experiment did not follow a waterfall pattern in their problem solving and solution designing process. They would start by trying to understand the problem but then would immediately jump into formulating potential solutions. Then they would jump back to refining their understanding of the problem. Rather than being orderly and linear, the line plotting the course of their thinking looks more like a seismograph for a major



earthquake, as illustrated by the green and orange lines representing the pattern of thinking of two different designers in Figure 3. This jagged-line pattern is opportunity-driven, and emergent because in each moment the designers are seeking the best opportunity for progressing toward a solution.

The experiment is significant because it gives us a real picture of the process that people follow when they really think about novel problems, and it is not the orderly and linear process we have been taught is proper! From another perspective, the jagged line of opportunity-driven [and emergent solution finding] is a picture of learning. The more novel the problem, the more the problem solving process involves learning about the problem domain. In this sense the waterfall is a picture of already knowing - you already know about the problem and its domain, you know about the right process and tools to solve it, and you know what a solution will look like. As much as we might wish it were otherwise, most projects in the knowledge economy operate much more in the realm of learning than already knowing. (Conklin 2005:6).

The experiment demonstrated that, faced with a novel and complex developmental problem, people who already have domain specific knowledge and have experience of dealing with similar challenges, do not simply start by gathering and analyzing data about the problem. People start the process of problem solving by creating mental models of possible solutions, part solutions or scenarios which enable them to develop better understandings of the problem. It also revealed that no two designers will follow exactly the same pattern. Their unique histories and case experiences of learning and problem solving will lead them to imagine the problem and its solutions in different ways. Furthermore, the patterns of thinking revealed in Figure 3 illustrates that the process of seeking to understand the problem continues to evolve until the very end of the project. This pattern of problem solving / solution finding behaviour may appear chaotic on the surface, but it reflects a deeper order in the cognitive process. One in which we make full use of our imaginations and intuitions.

The non-linear pattern of activity that expert designers go through gives us fresh insight into what is happening when we are working on a complex and novel problem. It reveals that the feeling that we are 'wandering all over' is not a mark of stupidity or lack of training. This non-linear process is not a defect, but rather the mark of an intelligent and creative learning process (Conklin 2005:6).

## Developmental trajectories

Personal development trajectories are a useful way of visualising changes in knowledge, capability and performance over time. Michael Eraut offers many useful insights about the nature of personal and professional development (Eraut 2009:15-16). Focusing on mid-career and early career professional learning in the business, engineering and healthcare sectors he *created a typology* to characterise the different aspects of learning and development that professionals in different contexts were involved in everyday. His categories included: performance in tasks and roles, field and context specific knowledge, capability in development of self and managing own performance, making judgements and decisions, and problem solving, working with other people. These sorts of categories are generic and they are particularly useful for tracking learning [and development] over time so

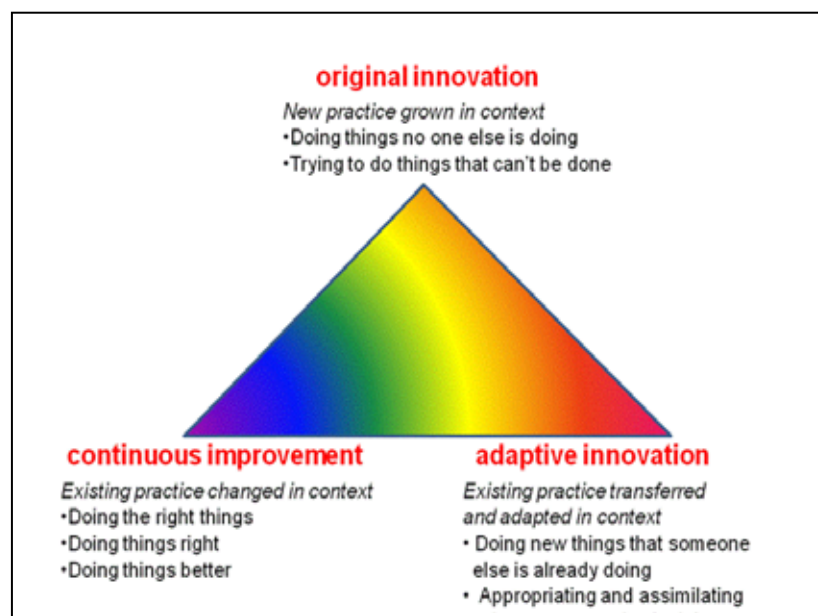


the term *learning trajectories* (was used to draw attention to both continuity of learning and changes in learning priorities. Involvement in any aspect of work eg a development project, will provide more or less opportunity for development along several of the trajectories. Eraut makes the important point that these developmental trajectories should not be treated as separate entities rather they are integrated and bound together in the capabilities required to perform specific tasks to achieve specific goals in specific situations.

## Development through practising

There is an element of development that is related to practising. By performing something over and over again we can get better at doing something as long as we are critical of our own performance and or we draw others in to help us be critical and guide us to better performances. This sense of development is an incremental process of improvement and this is the way that performers develop. While we typically associate this form of development with athletes and performance artists, it applies equally to anyone performing a professional role for example a higher education teacher.

**Figure 3** Three broad fields in the developmental conceptual space



## Scale and originality

Development involves scale and complexity, for example in developing her module a teacher may refine the lecture content without fundamentally affecting the way her students will learn. Alternatively, she may adopt an entirely new pedagogic approach for example in moving from a didactic model of information giving to an approach that requires learners to discover and make sense of the information for themselves through a collaborative enquiry. The amount of change, originality and complexity of change, including new knowledge and skill, and the risk involved in not being successful is significantly greater in the latter. The first type of situation might be thought of as an incremental change or an enhancement with little chance of failure, the later a radical change or innovation which has the potential to fail. Figure 3



represents the scale/complexity and originality dimensions of development schematically.

## The socio-cultural dimension of complexity

Significant developmental processes are about changing thinking and practice and therefore have significant impact on organisational culture. Changing is not something that most people want to *be made to do* and engaging in change - moving from the known, the tried and tested ways of doing things into unknown and unproven territory is a risk that creates a problem for most people. The act of trying to engage a university in significant development and change presents a significant challenge so it is not surprising that changing practices and cultures is so difficult. Universities as organisational environments for change contribute to the *wickedness* of the challenge inherent in educational development projects that seek significant change in thinking and practice. In the words of one retiring university leader:

Universities are pluralistic institutions with multiple, ambiguous and conflicting goals. They are professional institutions that are primarily run by the profession (ie the academics) often in its own interests rather than those of the clients and they are collegial institutions in which the Vice-Chancellor is less a CEO who can manage by diktat and decree and more a managing partner in a professional firm who has to manage by negotiation and persuasion. Change is extremely difficult to bring about in an institution with these characteristics. So, a prerequisite for change is some pressure - often a threat from outside the institution - which convinces its members that change is necessary (Bain 2007:13).

Perhaps the most distinctive feature of university organisations is their organisation into disciplinary tribes and territories (Becher 1989). The cultural and intellectual dynamics of disciplines (Becher 1989 and 1994) provide an important context for the way academics and their communities view who they are, what they do (teaching, administration, research, scholarship) and how they do it. A distinctive feature of universities is that they permit and encourage significant levels of personal autonomy of large numbers of individuals who can therefore respond to change in ways that are consistent with their own beliefs, interests and prejudices.

Institutions of higher education are characterized by extremely decentralized structures of authority, remarkably dispersed incentive systems, and relatively few restrictions on the way people choose to use their time. These prominent organizational features that render colleges and universities distinctive among social institutions certainly help the academy protect its freedom from unwanted political and external influences. But they simultaneously act to subvert change of *any* kind (Ewell 2004:2).

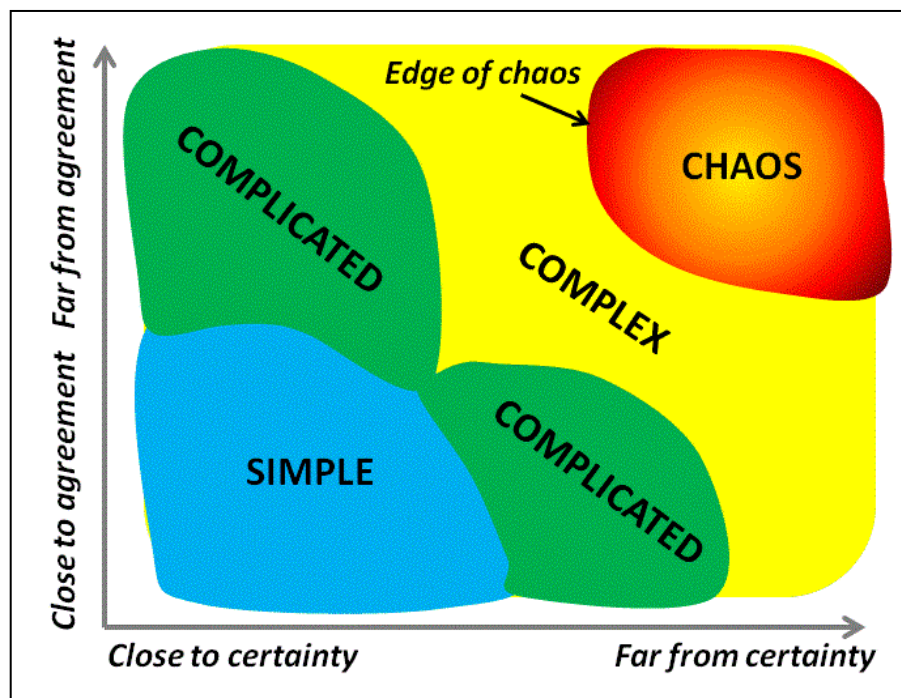
Because of these organisational characteristics, educational development aimed at bringing about significant change in a university is a complex business. It is generally a slow, managed, incremental, iterative process involving much politics, negotiation, collegial deliberation and persuasion, in contrast to the rapid, agile developmental processes that one sees in small energetic innovative enterprises.

## Levels of complexity

Development involves working with existing systems and or creating new systems and situations. The human condition is to try to understand situations in order to make good decisions about how to act (or not to act). Some situations are easy to comprehend: they are familiar and we have dealt with them or something like them before and we are confident that we know what to do. Others are more difficult to understand and some are impossible to understand until we have engaged in them.

Ralph Stacey's agreement - certainty matrix (Stacey 2000 and Figure 4) combined with the Cynefin framework developed by Snowden (Snowden and Boone 2007) provides a useful aid for developers involved in significant educational and organisational change as it helps us understand and explain the dynamics of developmental change processes within the systems they are being applied.

**Figure 4** Ralph Stacey's agreement - certainty matrix conceptual tool (Stacey 2000) to facilitate thinking about situations of differing complexity. Picture source<sup>3</sup>



The *X-axis* of Stacey's matrix represents the level of certainty on how a system works. More specifically, what are the relationships and the linkages between the causes and effects in any part of an organisational system. For example a lot of trust can be placed on a tried and

tested method of assessing learning but the introduction of an entirely new approach like awarding credit for prior experience-based learning might cause great uncertainty and anxiety.

The *Y-axis* represents the level of agreement on the system's behaviour. For example in a university most teachers might accept a general policy relating to the need to help learners

develop the skills that will enable them to gain employment, but few would accept a limited definition of what those might be and even fewer would accept a standard way of developing these.

Within this systems model we can recognise four general conditions each of which may be relevant to particular developmental situations (Snowden and Boone 2007).

*Simple:* In the *simple* domain things have a simple cause and effect - you do X and you are very likely to get Y. The environment is familiar and understood. You will probably have had many similar experiences that can be directly related to the situation. You know that 'what you do' is likely to have a particular result. And if you do the same thing in a similar situation the same result will happen.

*Complicated:* If we move along the X or Y axis of the matrix, diminishing the level of certainty or agreement, we fall into the area of the complicated systems or situations. These are not single events but involve a stream of interconnected and interfering situations (many of which may be simple) linked to achieving a goal (like solving a difficult problem or bringing about a significant innovation or achievement). They can be difficult to understand: there are cause-and-effect relationships but you have to put some effort into working out the relationships by gathering information about the situation and analysing it to see the patterns and look for possible explanations of what is happening. Engaging in these sorts of challenges is the way you become more expert in achieving difficult things and a lot of professional work is like this. The outcomes from these systems or situations cannot be predicted with certainty. Developmental designs and the implementation of solutions can draw on existing effective practices to help you to get close to possible solutions, but there is also likely to be considerable, adaptation and experimentation in reaching the optimum solutions.

*Complexity:* Moving far from situations of certainty and agreement, for example where contexts and situations are entirely unfamiliar, and where social systems are likely to contest ideas for new policies or practices moves us into the territory of complexity. Complexity is the most difficult territory for developers to understand. Complex developmental projects are usually political, involving multiple strands of activity linked to achieving a significant change in the pattern of beliefs and behaviours (culture) in a society or organisation. In such contexts the cause-and-effect relationships are so intertwined that things only make sense in hindsight and sometimes well after events have taken place. In the complex space, it's all about the inter-connectivity of people and their evolving behaviours and patterns of participation that are being encouraged or nurtured through the actions of key agents. The results of action will be unique to the particular situation and cannot be directly repeated. In these situations relationships are not straightforward and things are unpredictable in detail. People involved may not know the cause of the change that they have been involved in or ascribe the source of change to something that is quite removed from the trigger for change. The sort of factors being dealt with in the complex space are things like culture, trust and leadership, and the way you make progress in understanding what is happening is to sense the patterns of change and respond accordingly

The *chaotic* domain is where there is no perceivable relationship between cause and effect. If this situation happens in your life, you feel totally out of control and overwhelmed. In these situations your natural response is to act, sense what happens and then act again until you



get yourself into a more understandable and comfortable situation. Not surprisingly this is territory that developers and institutions seek to avoid. It is the threat of chaos that limits the risks people and institutions are prepared to take and limits the possibilities for innovation.

Development work undertaken in universities is likely to occur in all these conceptual spaces but we need to utilise our creativity most of all in the complicated and complex spaces of problems, challenges and opportunities. The complex spaces with their rich interconnectivities, social interactions, evolving beliefs and behaviour are ecological in their nature and new ideas, patterns of organisation and practice emerge in unpredictable and often surprising ways.

## Innovative forms of development

Some developmental processes in universities deliberately set out to innovate<sup>4</sup> - to change in a significant or radical way what exists or to introduce something entirely new to the institution. An innovation is something original, new, and important - in whatever field - that breaks in to (or obtains a foothold in) a market, society or organisation<sup>5</sup>.

The concept of social innovation is also relevant in higher education as education is a societal benefit. The definition of social innovation proposed by Phillips et al (2008:1) can be adapted to the educational context, 'a novel solution to an educational 'problem' that is more effective, efficient, sustainable, or just than existing solutions and for which the value created accrues to both the individual learner and society as a whole.' A 'problem' can be an issue, challenge or opportunity. This definition is particularly appropriate for the sorts of social justice aims that seek to meet the needs of new types of learner: learners that have hitherto been marginalised by higher education.

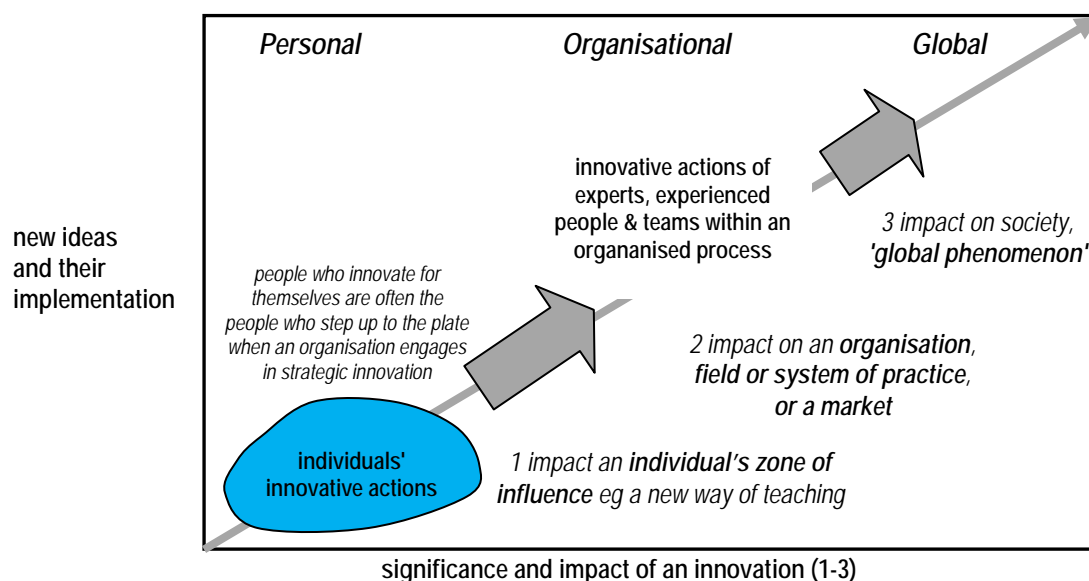
Innovation can apply to individuals' practice as well as to a university's products, processes or services. Rogers (1995) defined innovation in terms of how it is perceived by individuals or workgroups in an organisation ie the organisational users of innovation rather than the market which uses the products or services of the organisation. 'An innovation is an idea, practice or object that is perceived as new by an individual or other unit of adoption... If the idea seems new to the individual, it is an innovation' (Rogers 1995:11). This user view of innovation is entirely consistent with research into innovation in higher education conducted by Hannan and Silver (2000) who concluded that innovation was conceptualised as being something that is new to particular circumstances.

An innovation in one situation may be something already established elsewhere, but .... initiative takers and participants see it as innovation in their circumstances.. Such changes may be new to a person, course, department, institution or higher education as a whole (Hannan and Silver, 2000:10).

Like the concept of creativity (discussed below), *innovative development* can be visualised in terms of its scope, significance and influence (Figure 5) mirroring the 4-C model of creativity proposed by Kaufman and Beghetto (2009 depicted in Figure 6).



**Figure 5** Innovation can be appreciated in terms of its scope, significance and level of influence (Jackson 2012)



At the global level there are innovations - like the world wide web - which have the potential to affect everyone on the planet. Individual organisations may develop a set of products and applications (like Apple for example) that are also global in their reach and effects. More often companies create and apply ideas that affect a specific market - for example a university developing its platform to serve new sorts of students. The platform is not new to the world because all universities will have a platform for supporting delivery, but the way it has been developed to meet particular needs is new to the organisation and to the learners it affects. Such innovations are normally created by teams of people working collaboratively with a shared vision of the product or service they are trying to create, but the groups themselves are open to ideas and influences from outside the organisation. In these situations, home grown innovations selectively assimilate ideas and practices from other organisations.

At the organisational level the definition of developmental innovation proposed by West and Farr (1990:9), which captures four important characteristics of innovation: a) intentionality b) newness (c) application (d) intended benefit, is appropriate.

the intentional introduction and application within a role, group or organisation of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, the organisation or wider society

At the individual level we all innovate to varying degrees in our daily lives. It's all part and parcel of adapting and seeking better, quicker, more effective ways of doing things.

As individuals we also innovate in our professional lives. The fact that teachers have a high degree of autonomy and control over what they teach and how they teach it, means that they are continually inventing and re-inventing the curriculum, learning resources, and teaching, learning and assessment practices. Changing in a deliberate and incremental way, is a way

of life for the conscientious higher education teacher. But, the norming process in the professional environment means that most teachers tend to adopt similar practices to their peers so even though there is lots of invention it tends to follow the patterns of behaviour already established in the local cultural setting - the department or school. Established practices like acceptable forms of assessment, rigid timetable structures and the rooms in which classes take place can all constrain innovation. But it is not uncommon for teachers to engage in more radical change or innovation for example when a new module or programme is being created, or an entirely new pedagogy (like problem based learning) or technology is being introduced for the first time. Some teachers create practices that are very different to local norms and these practitioners are perceived locally as the innovators or early adopters of new ideas or technology. Here we might adapt West and Farr's (ibid) definition to embrace this fundamental building block for organisational innovation.

*personal innovation* - the intentional introduction and application by an individual of ideas, and practices that are new to the individual, which are intended to benefit the individual, and others, in the situations and contexts they inhabit

Without this personal level of activity in an organisation, through which individuals learn to develop, experiment and turn their ideas into new innovative practices, it is unlikely that innovation in a strategic organisational sense, will flourish. Many educational developers served their apprenticeship as an innovative teacher.

## WHAT IS CREATIVITY?

Any discussion of development with its intended purpose of creating difference, transforming something that already exists or introducing something new must necessarily involve the idea of creativity since creativity is the concept we use when we talk about bringing new ideas, material or virtual objects, or practices and performances into existence. But 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).

But what makes something or someone creative? Vygotsky (2004:7) argued that 'any human act that gives rise to something new is.... a creative act, regardless of whether what was created is a physical object or some mental or emotional construct that lives within the person who created it and is known only to him.' If we accept this conception then we are all creative and all more or less continuously creating. It is a fundamentally human characteristic.



Creativity exists not only where it creates great historical works, but also everywhere human imagination combines, changes and creates anything new Vygotsky (1998) 'Imagination and Creativity in Childhood'

According to Barron (1969) and now widely accepted, any creative act must satisfy two fundamental criteria namely: *originality* - something that is new like an idea, behaviour or something we have made, and *meaningfulness* - the act or result has meaning and is significant to us. However, our personal creativity is located in a social-cultural context which demands that recognition of creativity beyond what is personally new and meaningful to us must also be recognised as such by others. Creativity is 'a socially recognised achievement in which there are novel products' (Barron and Harrington 1981:442). Amabile who has been a preeminent researcher in the creativity field for over 30 years captures this social dimension very well and links creativity to development where innovation is the intent.

Creativity is the production of novel and useful ideas in any domain. In order to be considered creative, a product or an idea must be different from what has been done before. ....But the product or idea cannot be merely different for difference sake; it must also be appropriate to the goal at hand, correct, valuable, or expressive of meaning. Innovation is the successful implementation of creative ideas within an organization. In this view, creativity by individuals and teams is a starting point for innovation; it is a necessary but not sufficient condition (Amabile 1996).

In his theory of creativity Rogers (1961:350) describes the everyday process of creativity as 'the emergence in action of 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.' He placed the locus of this action in 'man's tendency to actualise himself, to become his potentialities' (*ibid*: 351). In his view creativity is at the heart of individuals' need to develop themselves in order to achieve what they are capable of achieving.

It is the property and circumstances of emergence - of new ideas, processes, practices, products through social and material interactions in the context of deliberate and purposeful developmental processes created by professionals involved in educational development in higher education that is the central concern of this e-book.

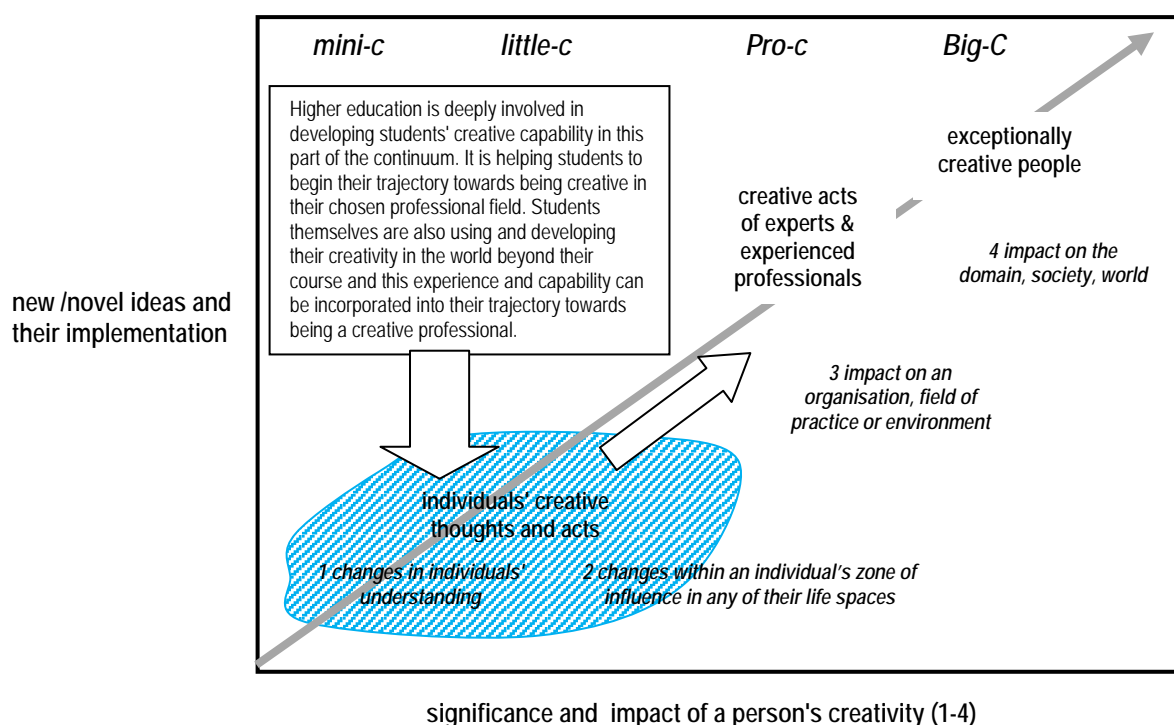
'development and creativity are both processes...[both] have been conceived as processes of emergence in complex systems' (Sawyer 2003:5), and 'emergence is the unifying thread underlying both creativity theory and development theory' (Sawyer 2003:14).

## Nature, scope and influence of a person's creativity

One of the problems with the idea of creativity is that people view their creativity in relation to others 'although I do not consider myself to be creative I know others are' (contributor to survey described in chapter 2). Kaufman and Beghetto (2009) elaborate the relational and relative dimension of creativity in their four-category model of creativity which explains the nature, scope and influence of individuals' creativity (Figure 6).

These authors refer to '*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.

**Figure 6** Four-C model of creativity proposed by Kaufman and Beghetto (2009). Source Jackson (2012).



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 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 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.

### *Significance of mini-c creativity*

The universality of personal creativity is strongly suggested by epistemological processes



through which individuals assimilate information by changing it (*adaptation*) to bring it within their cognitive systems and then accommodating it by changing (*invention*) cognitive structures and understanding (Piaget 1976). Runco (2007) argues that the process described by Piaget to explain the invention of understanding applies directly to the formulation of new ideas and new solutions; and if these are original and useful to the individual they can be termed creative and the process by which they formed one of personal creativity.

Constructivist epistemology has much to say about creativity and human nature. Its basic premise is that knowledge is created by the individual. Knowledge is literally a construction of understanding. Often the constructive process provides an original interpretation of experience. This process is a creative one, at least when the resulting interpretations are both original and effective (Runco 2007: 94)

Vygotsky conceived personal developmental and creative processes as one of *internalisation* or appropriation of cultural tools and social interaction: a process that was transforming rather than simply copying mental structures based on the individuals characteristics of existing knowledge (Moran and John-Steiner 2003:63). We can see in both Vygotsky's and Piaget's ideas the basis for the mini-c form of personal creativity which leads to changes in understanding and the invention of new thoughts and ideas emerging from changes in our mental structures as we learn and gain new insights. For Vygotsky creativity in the forms traditionally accepted in western society (ie little-c, Pro-c and Big-C of Kaufman and Beghetto 2009) was more akin to a process of *externalisation* - the construction and synthesis of emotion-based meanings and symbols expressed and embodied in cultural artefacts or creative products that endure in materialised meanings that comprise shared ideas, beliefs, knowledge, emotions and culture (Moran and John-Steiner 2003:63).

Kaufman and Beghetto's appreciation of the different forms of creativity enables us to see more clearly the important role played by higher education in the development of learners', teachers' and educational developers' understandings through constructivist learning processes (mini-c creativity). Their model also enables us to see how student and professional learners express their creativity in externalised little-c and Pro-c acts of creativity.

## The social-cultural dimension of creativity

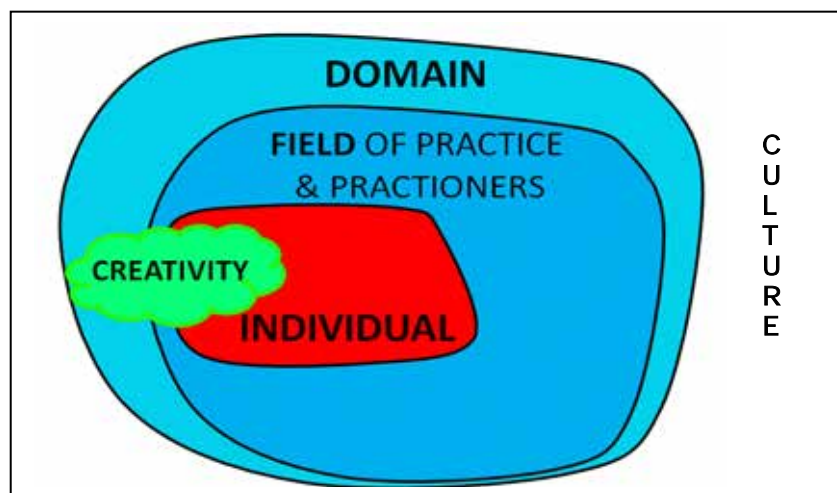
In his influential book 'Creativity: Flow and the Psychology of Discovery and Invention' Csikszentmihalyi (1999) argues that creativity cannot be understood by looking only at the people who appear to make it happen. Creative ideas need a receptive audience to receive, accept and use them. Without the acceptance of others who are competent to judge, we cannot determine whether someone's claims for creativity is valid beyond their own subjective judgement.

Csikszentmihalyi developed a 'systems' model for creativity which contains three components (Figure 7). The first of these is the domain, which consists of a set of symbolic rules and procedures. The second component of creativity is the field, which includes all the individuals who contribute to the field who act as the 'gatekeepers' to the domain. They decide whether a



new idea or product can be accepted. These people decide what new contributions are relevant and what should be recognised, preserved and remembered. The spirit of collegiality in higher education also means that the members of the field voluntarily contribute to the development of creative ideas and products as they provide feedback and critical review on new developments. The third component in the socio-cultural model is the individual, who using symbols of a given domain, generates a new idea or sees a new pattern or contributes a performance that adds value to the field of practice. It is the thoughts and actions of individuals or co-creating groups of people whose thoughts or actions change a domain, or establish a new domain.

**Figure 7** The socio-cultural model of creativity Csikszentmihalyi (1999).



Higher education is full of domains. Each academic discipline comprises a domain and the disciplinary practitioners are members of the disciplinary field. Higher education teaching and learning is also a trans-disciplinary domain within which higher education teachers comprise the field of practice. The cultural and intellectual dynamics of disciplines (Becher 1989 and 1994) provide an important context for the way academics and their communities view who they are, what they do (teaching, administration, research, scholarship) and how they do it. Becher's assertion (1994:153) 'that the cultural aspects of disciplines and their cognitive aspects are inseparably intertwined', is born out not just in behaviours relating to research, but in different pedagogic beliefs and practices (Braxton 1995; Hativa and Marincovich 1995; Smelby 1996; Hativa 1997; Gibbs 2000; Neumann 2001).

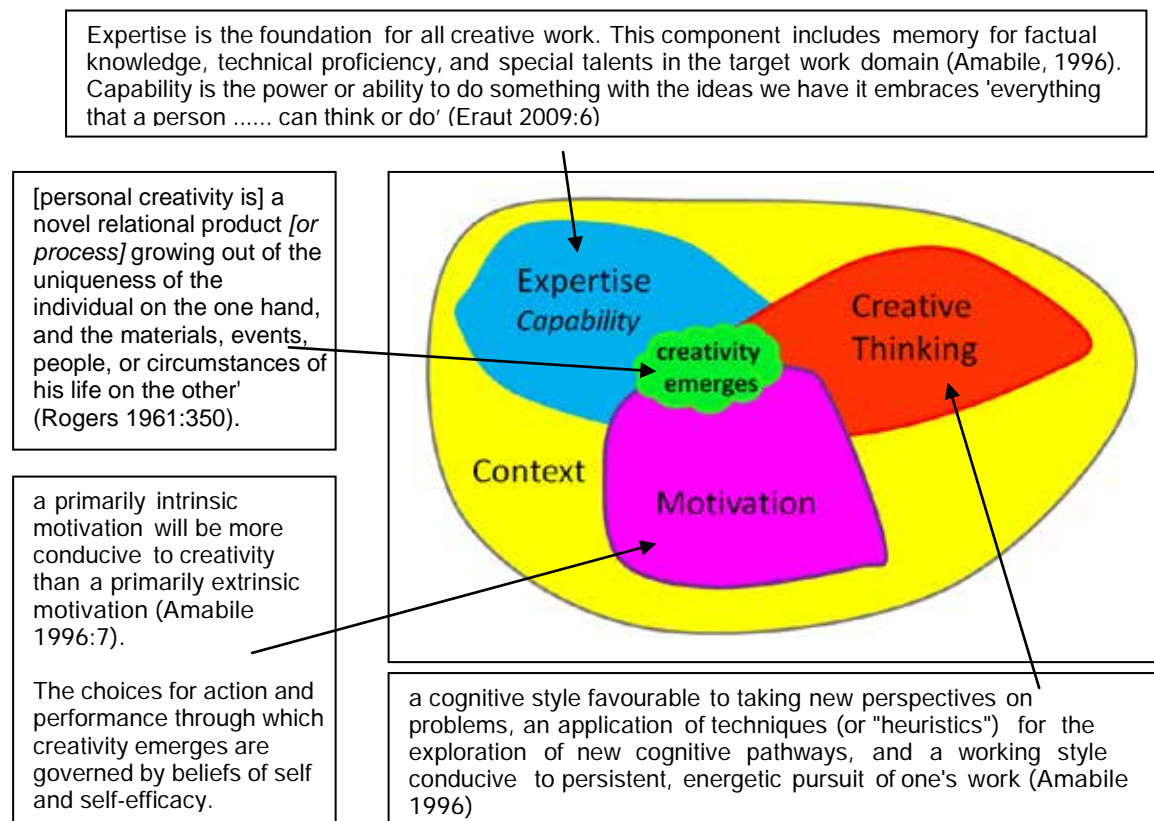
Furthermore, while a university itself does not constitute a symbolic domain it does add complexity to the socio-cultural model as the organisational culture exerts a strong influence on behaviour and individuals' willingness and opportunity to be creative (Amabile and Kramer 2011). Kaufman and Beghetto's (2009) model of creativity must therefore be linked to Csikszentmihalyi's (1997) socio-cultural model of creativity and the idea that organisational culture is also relevant to whether creativity will be encouraged or inhibited (see below p16).

## Components of creativity

There are many models of human creativity including for example the multiple models of Greene (2006). For the purpose of trying to make sense of creativity in the context of educational development Amabile's model (Amabile 1983) is as useful as any. The model has three components all of which are necessary for creativity in any domain (Figure 8) namely, 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 and persist until the job is done.

I have added 'context' to Amabile's conception of creativity because of the close relationship between the personal components of creativity and the particular situations and circumstances in which it is enacted. Rogers (1961) provides a definition of personal creativity that highlights this interdependence. It captures the relationship between our creativity, the contexts and situations we inhabit and our presence and actions in our world.

**Figure 8** 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 use their expertise/capability and creative thinking to achieve a goal in a particular situation. Rogers' (1961) definition of personal creativity captures this process.



## *Expertise in a domain*

The expertise of educational professionals includes their talent for imagining and thinking about the problems, challenges and opportunities for improving students' learning, for helping them to learn certain things in certain ways and for enabling them to demonstrate their learning and development. Their knowledge includes domain specific knowledge of subject disciplines and pedagogic knowledge and knowing relating to teaching and learning. Both teachers and educational developers also have knowledge of how their university works and the people who make it work. Educational developers will also have the process knowledge required for working across and upwards through the structures and personalities of their university - knowledge of how to bring about change in context.

Expertise is the foundation for all creative work. This component includes memory for factual knowledge, technical proficiency, and special talents in the target work domain ..... 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. As Newell and Simon (1972) poetically describe it, this component can be considered the problem solver's "network of possible wanderings" (p. 82) (Amabile 1996:5)

## *Creative ways of thinking*

Creative thinking provides the source of creative ideas. According to Amabile (1996) this type of thinking includes a cognitive style favourable to taking new perspectives on problems, an application of techniques (or "heuristics") for the exploration of new cognitive pathways, and a working style conducive to persistent, energetic pursuit of one's work. Creative thinking skill depends to some extent on personality characteristics related to independence, self-discipline, orientation toward risk-taking, tolerance for ambiguity, perseverance in the face of frustration, and a relative unconcern for social approval (Amabile 1996: 5)

A teacher's application of creative thinking might involve challenging assumptions about the relevance of what they are teaching to the world outside higher education. By changing their perspective they might change their whole approach to what and how they are teaching. The educational developer may be called upon to assist their colleague in the development process adding their expertise and creative thoughts to the mix. Alternatively, they might be pursuing a developmental agenda provided by their university. Their immersion in a challenge, like 'how do we encourage more higher education teachers to utilise enquiry-rich approaches to learning?' provides the context and stimulation for their imagination and creative ideas. Typically, they are likely to draw on knowledge and expertise from their own affordance networks (Barab and Roth 2006) and from these, the seeds of entirely new institutional practices and communities may be born.

## *Intrinsic motivation to engage with and accomplish a task*

While the two skill components determine what an individual is capable of doing in a domain, without the will to approach a task in a particular way, creativity will not emerge. It is the task motivation component that determines what that person actually will do



(Amabile 1996:7).

Motivation can be either intrinsically driven by deep interest or passion and involvement in the work, by curiosity and enjoyment, by dissatisfaction with what currently exists, by a sense of challenge or a strong conviction or belief. It can also be nurtured by beliefs in a different future stimulated by a sense of purpose ie the important life projects we pursue (Miller and Brickman 2004:14). Extrinsic motivation to achieve more concrete goals is driven by rewards, threats or performance measures that are outside the control of the individual such as managerial praise, meeting someone's deadline or gaining a bonus or promotion as a result of the work.

A person can have no motivation for doing a task, a primarily intrinsic motivation, or a primarily extrinsic motivation; obviously, intrinsic and extrinsic motivation for the same task may coexist. However, one is likely to be primary. A number of studies have shown that a primarily intrinsic motivation will be more conducive to creativity than a primarily extrinsic motivation (Amabile 1996:7).

Task motivation makes the difference between what a teacher or educational developer are capable of doing and what they will actually do. All too often development work requires people to do more than might be reasonably be expected of them particularly in the academic environment - you do your teaching, administration and research *and then you do your development work*. To go the extra mile required of developer innovators requires the deep beliefs and convictions that are associated with intrinsic value-driven motives. Such values are most likely to be held in the long term goals (individual's life projects or purposes) discussed under the theme of self-regulation (p17-18).

Amabile's componential theory suggests that creativity is most likely to occur when people take on willingly a developmental challenge and their expertise and thinking skills align to their values and beliefs and their deepest interests and passions.

## What nourishes creativity at the work?

But the context within which a person performs their tasks is also important. Amabile and Kramer (2011: 131- 33) identified four categories of nourishers that have a significant impact on the way people feel and on their creativity and productivity in their work environment.

- 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 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.

These nourishers are an important part of the context in which creativity is enacted. One of the challenges for people involved in significant educational development is 'loneliness' - they often feel alone, personally exposed and stressed as they try to make progress in their educational development work. The presence of environmental nourishers can relieve anxiety and encourage individuals to take the risks necessary in order to grow creative solutions to their problems.

## The ways and means we accomplish what we value

Creativity is hard to understand because it is integrated into our ways of being. In everyday life it is not so easy to isolate the creative thoughts that bounce around and are eventually accepted and embodied in behaviours that ultimately produce something new that we and others value. Our creativity cannot be separated from the capabilities that enable us to invent, improvise and adapt in the situations we encounter and create for ourselves. Capability is the power or ability to do something with the ideas we have. It's a complex phenomenon, according to (Eraut 2009:6) it embraces 'everything that a person ..... can think or do'. It is complex because it requires the integration and utilisation of different sorts of knowledge, practical and intellectual skill, dispositions and qualities in specific situations in order to accomplish something. It enables us to choose from a repertoire of responses and to adjust our response if we judge that it is necessary.

Capability is demonstrated through the action (what is done and how it is done), the purpose (why actions are being undertaken) and the results (the extent to which actions were appropriate, effective or inspiring). Capability is not judged through a single action but through performances in a range of contexts and situations over time. We develop our capabilities for particular contexts. Some of these capabilities are generic and others are not since they rely on domain specific knowledge and cultures for their appropriateness and effectiveness. To develop a more sophisticated understanding of capability we might turn to Greene (2004) who describes '32 capabilities of highly effective people in any field' and distils these down to just eight general capabilities.

Highly effective people have eight general capabilities. The first four such capabilities are ways of using liberty they make for constructing, establishing, and founding enduring changes in lives and the world. They have ways, when encountering difference and otherness, of keeping what is new, difficult, and unknown or challenging from being absorbed and assimilated to their existing models and preferences. They have ways of preserving the otherness of what they encounter. Second, they have ways of unearthing the most buried, subtle, intimate, and vital forces and things inside themselves and examining them for possible use or improvement. Third, they have ways of bringing order to their own selves and to the selves of those in groups around them. Fourth, they have ways of turning insights, ideas, experiences, and the like into impacts on society, actual changes in how things are arranged and done. The second four general effectiveness capabilities are ways of protecting novelty from erosion by large, traditional, already established powers of the world. Fifth, they have ways of doing things with style and



verve rather than doing them perfunctorily. Sixth, they have ways of upping the performance of all dimensions of their selves, work, and lives, not just some or a few. Seventh, they have

ways of influencing people, in many channels, modes, and means. Eighth, and last, they have ways of operating with new commonsenses, they borrow or invent, that make their automatic reactions up-to-date and future-looking (Greene 2004a:5).

Greene's rich and insightful account of the capabilities of high-performing people who are particularly effective in their field provides a comprehensive and inspiring vision for human development. Several of these general capabilities make explicit reference to the creative acts of turning ideas into impacts, protecting novelty, bringing about change and inventing new common sense. But it is likely that people who are effective and successful in what they do are able to draw upon their creativity whenever they need or want to.

It is not an exaggeration to say that effective people excel in working with ideas in every context of their work and lives. They use, invent, apply, revise, fuse, improve and inspire ideas (Greene 2004:5).

Through his research involving 150 highly creative people from 63 diverse stratas of society, Greene (2004) identifies at least 60 personalised models of what being creative means. These models reflect what is in the minds of creative people when they create - their ways and means of bringing things into existence! This way of representing creativity as personally constructed perceptions of creative practice in the situations in which people have been or tried to be creative is the most authentic way of understanding what creativity means. However, it also means that there is no simple way of defining what creativity is because it is 'the emergence in action of 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' (Rogers1961:350).

We are effectively a creative work in progress. Our continued development as a person through our actions in the world and the meanings we create through such interactions leads to our growth both incrementally and at times transformationally. Our specific acts of creativity that impact on the world around us changes us both incrementally and sometimes more profoundly, through our experience of the process. Our thinking and actions may also change others, within or beyond our immediate zone of influence, through the impact of new knowledge and innovative artefacts disseminated through our immediate environment or the culture of which we are a part (see Moran and John-Steiner 2003:72)

## So how does creativity feature in development?

Figure 9 contains a narrative that connects imagination and creative thoughts, which guide actions which result in a product that might be deemed creative and innovative. It tells the story of a young man listening to his ipod and looking at some cakes in a shop window and having the idea of creating a cake that when you eat it plays his favourite tunes. He knew that this was the first time he had ever had the idea so it was new to him and when he mentioned it to other people he could see it was novel for them - although they were sceptical that people would buy such a cake.

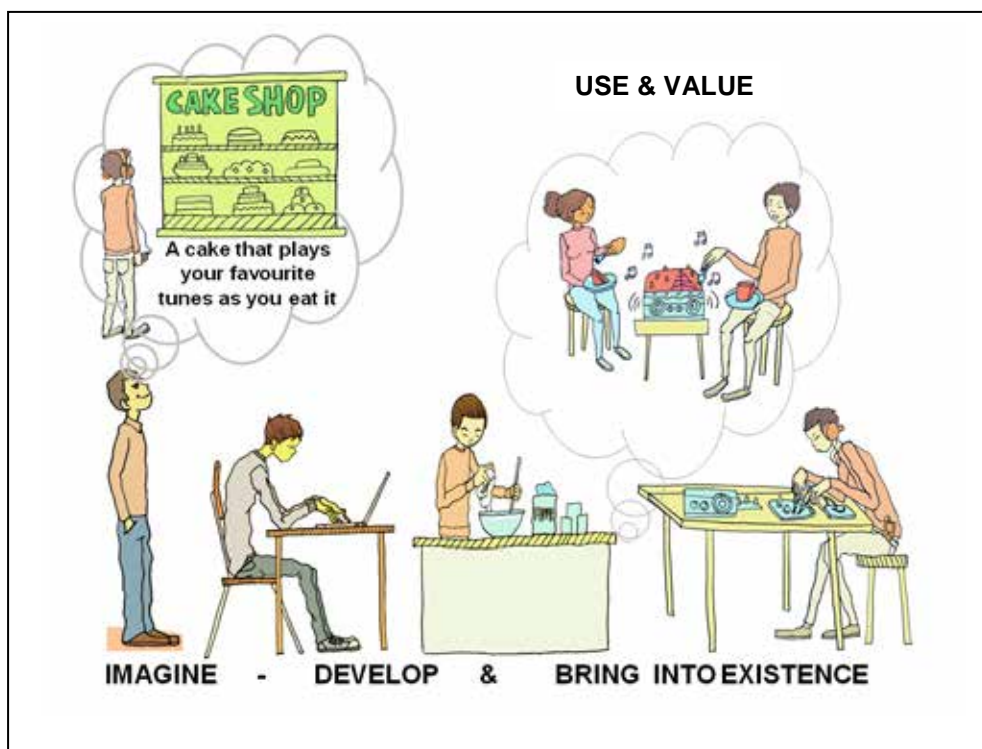


The more he thought about it the more he could see the potential in the idea and the more he became motivated to make a *musicake*. He sat on his computer for hours working out what he had to do and began experimenting making cakes and also building the electronics mindful of costs and health and safety.

Notwithstanding the complexity and difficulty of the challenge he is successful in producing a musicake and after sharing his product with a local bakery, and securing copyright for his invention, he persuaded them to make and sell it. He has created an innovative product that is judged to be new and different to any other cake by the people who want to buy and sell it.

We can apply this narrative to any process in which creativity is involved - including this narrative picture. In which a someone imagines something for the first time and is inspired to try to turn their idea into something tangible. They spend time and effort researching and developing their idea, perhaps drawing in other people to help them and if necessary raising finance to fund their venture. Eventually they are able to realise their idea in a form that can be enjoyed or utilised by other people.

**Figure 9** A narrative that connects creativity, development and innovation

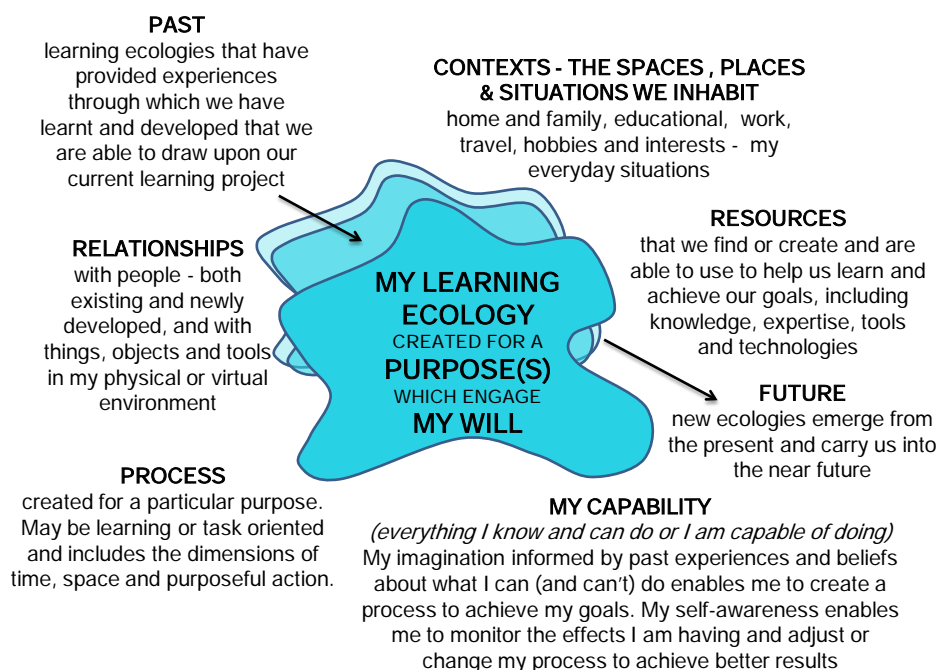


Of course not all ideas can be successfully converted into new tangible products and the risk of 'failure' is always present particular where new inventions are the focus for development. But people learn through failure as well as success and future success is often grounded in past failure.

## ECOLOGY OF DEVELOPMENT & CREATIVITY

The ecological metaphor has been applied to many contexts and is well suited to human interactions between people and their environment, their processes for doing, learning and achieving, and for developing new knowledge and practice in unstructured (informal learning) contexts. Following a review of existing concepts and definitions I proposed (Jackson 2013:14) a personalised definition 'the process(es) I create in a particular context for a particular purpose that provide me with opportunities, relationships and resources for learning, development and achievement'. A graphical representation of this definition is shown in Figure 10.

**Figure 10** Components of an individual's learning ecology (Jackson 2013a & b and 2014)



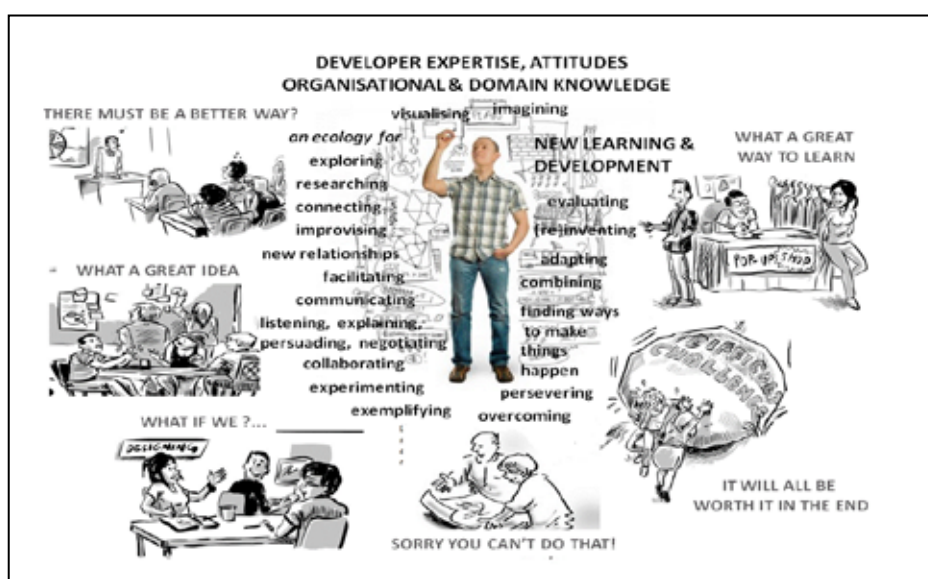
The illustration is heuristic rather than hierarchic. It represents the integration and interdependence of *context, relationships, resources, (the most important being knowledge and tools to aid thinking and action), and an individuals will, knowledge and capability to create a learning process or learning ecology for a particular purpose.* Such actions may be directed explicitly to learning or mastering something but more likely they will be primarily concerned with performing a task, solving a problem, or making the most of a new opportunity. The ecology we create to develop something like a new educational course is the living vehicle for our creativity. The evolving ecology is itself an act of creation which can be defined using Rogers (1961) concept of creativity. It is our self-determined and self-expressed process for achieving tangible proximal goals, within which we create our novel relational products [*including our own development*] grown out of our individual uniqueness which has been shaped by our past histories and imaginings of a different and better future, and the materials, events, people and circumstances of our life.

It seems to me that the ecologies we create to accomplish something significant we value integrate the personal dimensions of creativity, the contexts and circumstances in which

creativity is enacted, and the processes and relationships that are involved.

We can give meaning and substance to the abstract idea of a learning ecology by creating a narrative of their developmental process (what they did and why they did it, when and where they did what they did, how they did it and who they did it with, and the results of what they did). Development is both the process and the achievement which emerge from this ecological process. Figure 11 identifies some of the common elements of educational developer learning ecologies.

**Figure 11** Common elements of learning ecologies created by people involved in teaching and educational development



## Creativity in educational development: an ecological narrative

So what does educational development actually look and feel like? Here is an example of an 'ecology for educational development' in which a lecturer, with expertise in the fashion industry, works collaboratively and creatively with an instructional designer from the university's central flexible delivery team. Their challenge was to develop new on-line courses for professional learners using a new platform that was being developed in parallel to the development of the courses.

### *Linda: A teacher's perspective on development*

I obviously used the [market] research that we had done. Discussed with the head of school and the other school management what the outcomes of this research were and the headings that we would put together to begin to *develop* the short courses. Then I had to find external people to help with writing content. Obviously I had to start somewhere. My strongest feeling was that I needed to provide a framework for the people to work with. So I began to think about that before getting anyone external involved. I worked with John in the e-Development Centre quite extensively on trying to *develop* this effective way of delivering taught modules online and trying to put together a framework for the externals



to use when putting together their teaching material. Basically I wrote most of the unit descriptors, the sort of bible for how these would be developed in terms of teaching material and then provided that usually to the external member of staff. I found these people [using] my own contacts and appealing to people's better nature because I think the payment that they were receiving wasn't necessarily equivalent to freelance pay that they would normally... But I worked very closely with them. They came into the university at certain strategic times *throughout the development* and a lot of email communication took place with them sending me materials and me checking it and going back to them with feedback. Really, really resource heavy actually. Really time consuming for me in terms of head space and having to pull myself out of my daily operation, job, my normal responsibilities and doing this on top of that.

I was getting six hours relief from my normal duties six hours doesn't reflect in any way, shape or form the amount of time that I put into *developing* these twelve short courses that were to be accredited by the university all at once with externals helping for some of them and not for others. I was doing a considerable amount of reading through materials and feeding back during my own time in the evenings and weekends. Without that, it would not have happened. But I felt very, very strongly at the time that these are winners. There is a market for them and if we can market them in the right way I always felt they would be successful. I believed in the framework that I *developed* and that it was an effective, clear and understandable way to go through a short course for anyone who is working and [wants learning] that is relevant to their industry.

[it felt like] a constant battle because I always felt as though I was having to push other departments and other areas of the university to give me answers to questions that I had. It always felt as though the answers didn't exist in that point in time, but I needed them. I needed to know answers to certain questions and I needed sometimes some kind of framework for me to be working within and none existed. I obviously eventually got a hold of the guidelines for developing professional development units from our quality department, but I had no knowledge of that prior to poking and pushing and constantly asking for that information. I was actually quite aggrieved at the time that that existed and I hadn't been alerted to the fact that that existed before I began to *develop* the courses, because surely that would have helped. Some staff development for me would have been highly appreciated.

Once I had actually got past that initial stage of how do I put these first drafts of the units together, things began to roll and I began to discover who I could at least go and say 'Look I have t[his question, who can I ask? Who is going to answer it for me? I need answers.' I think I probably began perhaps to become a little bit annoying for some people because I kept saying 'I need an answer' and 'I need to know.'

Some of the most difficult issues, I would say, were managing the externals because some of them didn't have a huge experience of teaching.....it was very difficult to find people that could actually do this with me. I chose them based on their expertise, in the areas that I wanted the content *developed* around. So I was having to sort of almost coach them in learning and teaching as we were going as well, plus trying to help them understand how their material was going to be used online and the amount of discussion on text that was required of them rather than just bullet point teaching. So that was



another challenge that came later.

I was having to be a subject person - most of these are in an area that I can apply my expertise to. I was having to be a learning and teaching person and an online education person, working with John . Initially it was a couple of conversations that I was going to be doing this and understanding that a really clear framework would need to be put in place and how online teaching and learning would be different to in-class teaching and learning. Then, I guess, explaining to me the most important aspects to consider. Then I gradually spent more and more time with the people from EDC, particularly John, and asked for their feedback on what I was *developing* and what the externals were developing with me. They got more and more involved in it because they really believed in what I was doing once the momentum got going. They sort of started to understand what I was trying to achieve from my perspective and then they saw the potential in that and gave me more and more time. Their time was then really important to the success of the project because without them helping me so much, I wouldn't have achieved the outcomes. Basically I felt like I had made some friends there and they were going to help me get through this if no one else was. So they were incredibly supportive. It wasn't uncommon for John and I to both be online at 11 o'clock at night talking back and forth and looking at the units online and discussing areas of the unit that were strong or not so strong, that needed a bit of work, a bit of development, changing things, 'What do you think of this?' It wasn't uncommon for us to be doing that in the evenings because of our own personal motivations.

It was a huge learning curve for me and because at certain times I was quite vocal about the fact that I wasn't getting answers and I was quite persistent and tenacious about sorting things out and getting through this project. I was just tenacious in the fact that I will get this done and I will find the help somewhere and someone will give me the answers I need because I have to do this... and there were I think two occasions when... and I am being really honest now. Two times in the year when I said 'I have had enough. No one else is as driven as I am about *developing* these PDUs so I give up.' You know, those moments of kind of this is just so frustrating and no one else seems to be as bothered as I am so why am I doing it. You know? Actually this is only my own personal motivation that is making this happen, so why am I so worried? But the next day was a new day and I continued to work on it because I know I am not really going to give up on doing this. I was venting frustrations and trying to I guess not get attention but get people to respond to me and find a way through. But yeah, there were two occasions at which I got to that point.

### *John: An instructional developer's perspective on development*

I worked with a number of academics to help them *develop* their on-line courses targeted at the professional market - the concept is for entirely distance and entirely online professional development units, short 12 week credit bearing units. One of the people I worked with was Linda in the Fashion Department. She had a fairly good idea of how she wanted to structure the units in terms of how the content would be delivered and also in terms of some of the learning activities that the students would participate in. Where I came in was then to look at how that actually translates into online content, how you get it online, how you guide the students through the materials, how you make it accessible, how you stage and present particular events. Because on-line units have events such as web conferences that happen two or three times during the duration of the twelve



weeks, and there's points at which where the students are asked to then communicate with a peer partner and they might have a one-to-one tutorial with their tutor.

So I went into discussions with Linda particularly at first over the unit that she wrote herself. She was at the forefront of this area of *development* - the first person to actually get a unit *developed*. I looked at what originally was a Word document map of how she wanted the activities to occur, and sat down and discussed with her how that might best or better be structured in terms of the activity points that happen throughout it, where you might place the assessment tasks, like the formative and final assessment tasks. And then, because what we'd worked on as a team was getting a look and feel and format for how the content goes online, I worked with her Word document plans and putting that up online, putting the content in the correct places. Together we *created* the detailed design and content Linda typing directly the stuff online or I took ideas of hers and put it up for her, putting the online tools into the correct place. And between us, moving things within her unit until it felt like there was a structure that would actually guide the students through structured study. And the work on Linda's unit kept going on for a long time because that was the one we were really trying to refine down as an exemplar. So it was a highly *co-creative* process and the work we did then helped us to establish a template and a guide for how other PDUs could be *developed* and written ...which has proved very useful.

These narratives reveal the wonderfully interwoven productive relationships that can be developed between an educational developer with an institutional remit for helping academic teaching staff, and a lecturer who would like to innovate using technology and a learning environment that was initially unfamiliar to her. Effectively, the instructional developer is helping the lecturer to adapt to an entirely new teaching and learning context. By combining their expertise and passions both participants are able to contribute ideas, knowledge and expertise to the process that leads to the development of new on-line courses and the 'know how' and guidance to help other academics who want to develop similar on-line professional development courses. But the relationships do more than enabling people to share and combine their ideas and expertise - they stimulate new ideas, help sustain motivations and provide emotional support at difficult times. Relationships were clearly an important part of the ecology for development some of which enabled some of which hindered or mediated the innovation - but all had to be accommodated and worked with. Relationships included people with knowledge and expertise (*essential resources*) in the design of on-line educational courses and learning environments, experts in the teachers professional network who would provide the content for the on-line courses and people in central roles in quality assurance whose systems and procedures had to be satisfied. The narrative reveals something of the dynamic, messyness and emotion of the development process, something that anyone who has to tried to engage in significant development will recognise. But these stories also reveal the wonderful effects of creative collaboration by people who believe, trust, respect and understand each other. Both Linda and John are clear that their creativity played an important role in their educational development work.

*Linda:* I think due to the fact that I was doing something new allowed a level of creativity yes, I think when you are developing any aspect of the curriculum you are being 'creative', you have the feeling that you have the opportunity to 'shape' what is available for people/students to learn and you are 'creating' that learning experience. I personally find that a creative process. It isn't entirely without edges though, there are boundaries and



quality considerations to work within but still, there is room within the set frameworks to 'create' the richness of content and the teaching and learning strategies that encourage an inspirational learning process. I am a 'creative' at heart and maybe that is something else that is a driver for me when doing the types of projects that I involve myself in.

*John:* I definitely think there is creativity in the work that I do. This creativity is applied in different ways. For the development of the platform, there was a collaborative creative process in coming up with a combination of design components that would make the VLE both attractive and useable. This was a process generated out of looking critically at what other providers do for similar provision and deciding what aspects or changes we would like to apply to our own work. There is also a creative process that goes into looking at classroom teaching practices and re-imagining them as online learning events. Again, this is usually a collaborative process between myself and the academic subject expert such as the work I did with Linda.

## The importance of narrative

These narratives reveal some of the true dynamic and emotional experience of educational development in a way that abstract de-contextualised models of development cannot. They reveal the purposes and contexts in which development is planned and conducted, and the spaces, places and moments when creativity is required or emerges from the uniqueness of individuals and the materials, events, people and circumstances of their lives (Rogers 1961:350). Perhaps the way to study the ecology of development and the phenomenon of creativity within development is through the narratives people tell of their own developmental processes. With this in mind an open collaborative narrative inquiry has been initiated for people who would like to share understandings of their ecology for development and the ways in which their creativity features in their own development. Further details can be found at: <http://www.creativityindevelopment.co.uk/>

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## End Notes Chapter 1

<sup>1</sup> Accomplishing significant self-determined change through deliberate and conscious development in a university is a 'wicked problem' (Rittel and Webber 1973). By that I mean accomplishing significant change is an ill-defined, ambiguous, socially grounded and often contested problem associated with strong moral, political and professional issues and values (Richie 2011). The term 'wicked' in the context being used here describes an issue that is hard to understand and define, and highly resistant to resolution.

<sup>2</sup> <http://www.merriam-webster.com/dictionary/design>

<sup>3</sup> <http://www.inspearit.it/it/in-primo-piano/blog/what-to-do-with-simple-complicated-and-complex-systems/>

<sup>4</sup> Latin *innovat* 'renewed or altered' *novare* = make knew (Oxford Dictionary).

<sup>5</sup> <http://en.wikipedia.org/wiki/Innovation>



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