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What does creativity mean : what does being creative mean in HE learning & achievement?

Steps to a Manifesto to Advance Imagination and Creativity in Higher Education Learning and Educational Practice

*In a world consumed with uncertainty and a growing sense of the obsolescence of our education systems, how can we ensure the success of ourselves as individuals, our communities, and the planet? We need to evolve education.*¹ Imagining a different future for higher education in which more attention is paid to the development of learners' imaginations and creativity, is one way of evolving education in a way that will facilitate the wellbeing and success of learners, our societies and our planet. We will need all our imagination and creativity to secure this future.

**What does being creative mean in
HE learning and achievement?**

In the third discussion paper to support a manifesto, we examine some of the ways in which creativity is defined, and how it is perceived and understood in the academy. The paper draws on a number of studies and surveys in UK HE. Readers are invited to draw attention to other studies to expand the evidence on which a manifesto can be based.



What do we mean by creativity? And how does it relate to imagination and innovation?

Vygotsky^{2,7} 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 we are all continuously creating. Being creative is a fundamentally human characteristic.

Fundamentally creativity is about bringing things e.g. ideas, solutions, objects, products or services, processes, performances and practices, into existence. Creation occupies a continuum from inventing, producing or doing entirely new things that no-one has done before, to inventing, producing or doing entirely new things for oneself. The word 'creativity' is used in different ways, in different contexts. The problems of definition lie in its particular associations with the arts, in the complex nature of creative activity itself, and in the variety of theories that have been developed to explain and situate it. Academics are not so concerned with precise definitions as with their own perceptions of creativity in the subjects and other contexts in which they work.

There are many (over 100) definitions of creativity some of which are shown below. Most recognise the idea of originality (new to the individual or more widely), and the ideas of value and meaningfulness. The idea that creativity involves *imagining* something that does not exist and engaging in actions that turn what was imagined into something real and tangible. In this way an act of being creative involves both thinking and action – it's a process.

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Innovation is often associated with creativity and there are just as many definitions (over 60) many of which link the idea to the commercial world e.g. "Innovation is the successful conversion of new concepts and knowledge into new products, services, or processes that deliver new customer value in the marketplace." (American Society for Quality- ASQ). But the term can be equally applied in social contexts where an innovation is, "a novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions and for which the value created accrues to both the individual and society as a whole."^{3:1}

While creativity is related to the generation of new and valuable ideas, innovation is more about the implementation of those ideas. Most innovations begin with creative ideas, but many highly creative ideas are never implemented or adopted. But achieving an innovation may also involve creativity as innovators strive to accomplish their innovation. Whereas in business innovation is often related to whole markets, in higher education the perception of newness can be very local. "An innovation in one situation may be something already established elsewhere, butinitiative 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."^{4:10}

Some definitions of creativity

Included below are some example definitions from the world of education, business and psychology that illuminate variations in orientation towards either: a purely cognitive process, a process that involves both cognition and action, and a process that situates cognition and action within an environmental context.

- Creativity is the production of novel and useful ideas in any domain⁵
- Creativity is the ability to come up with ideas or artifacts that are new, surprising and valuable⁶
- Creativity is the act of turning new and imaginative ideas into reality. It involves two processes: thinking then producing. Innovation is the production or implementation of an idea. If you have an idea but don't act on it, you are imaginative but not creative.⁷

The world of education is concerned with ideas and with changes in understanding so this definition by Dellas and Gaier is particularly useful. It highlights in a comprehensive way that creativity can and often does involve all of our senses not just cognition.

- Creativity is the desire and ability to use imagination, insight, intellect, feeling and emotion to move an idea from one state to an alternative, previously unexplored state⁸

The educationalist Erica McWilliam connected the idea of creativity to habit.

- 'Creativity is the defeat of habit by originality'⁹

McWilliam also draws attention to the way creativity often involves combining and integrating in some way two or more existing things.

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- It may help teachers to imagine the sort of pedagogy that builds creative capacity by starting from the relatively simple idea of creativity as *making a third 'thing' from two existing entities or ideas*, rather than making something from nothing. In other words, creative capability is the ability to hold disparate and even incommensurate things together long enough to generate a new or third space or idea.¹⁰

According to Barron¹¹ 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 and recognition within this social context requires that which we believe to be creative, to be recognised by others in the social group. Creativity is 'a socially recognised achievement in which there are novel products'^{12:442}

Teresa Amabile captures this social dimension very well together with the idea of 'appropriateness'.

- 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 meaning⁶

Creativity does not just happen in a vacuum. Individuals are located in the circumstances and situations that form their lives and Rogers' definition draws out the fact that what results from our creativity emerges from our life. In fact, we can view creativity, like learning, as an ecological phenomenon emerging in the course of our interactions with our environment as we try to accomplish the things we care about¹³ in a manner described by Rogers¹⁴

- 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'¹⁴

These relational products might be ideas, material or virtual objects, practices, performances and processes. Knight¹⁵ adds more details.

- Creativity constructs new tools and new outcomes – new embodiments of knowledge. It constructs new relationships, rules, communities of practice and new connections – new social practices.^{15:1}

Definitions that highlight the cultural effects of creativity, such as might be achieved with a new breakthrough idea or theory in a discipline emphasis change in a domain. Such definitions also highlight the role of acceptance of novelty by the members of the domain.

- Creativity is any act, idea, or product that changes an existing domain, or that transforms an existing domain into a new one. What counts is whether the novelty he or she produces is accepted for inclusion in the domain¹⁶

Integrative definitions

In his definition of creativity Ken Robinson tries to relate and integrate the ideas of imagination, creativity and innovation.

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- Imagination is the ability to step outside of your current space to bring to mind things that aren't present to our senses. I see creativity as putting your imagination to work. [It's a process]. You could be imaginative all day long and never do anything [with it] but to be creative you have to do something with it. One short way of defining creativity is 'applied imagination'. Innovation is putting good ideas into practice. It's the process of implementing [imagined] original ideas.¹⁶

All creative processes are intermingled with value judgments and that's critically important because you have to know which values to apply and why to what sort of work. You have to apply what's relevant. So creativity is about process, originality and value. . I define creativity 'as the process of having original ideas that have value.'¹⁶

Tina Seelig's invention cycle¹⁷ defines and connects imagination, creativity, innovation and entrepreneurship in the following way.

- Imagination is envisioning things that do not exist.
- Creativity is applying imagination to address a challenge.
- Innovation is applying creativity to generate unique solutions.
- Entrepreneurship is applying innovation, scaling unique ideas, by inspiring others' imagination.

Creativity in the service of production and/or discovery

Macdonald^{18 123-24} distinguishes two different kinds of creativity namely, production-related and discovery-related. These forms align with the product- and process- oriented creative experiences of academics. By production-related creativity, Macdonald doesn't only mean novel inventions and product designs, he means the creation of something of value that never existed before, in any creative medium: canvas and paint, clay, bronze, electronics, architectural materials, machined metal, welded metal, words, biochemistry, and an infinite number of other media for creative self-expression. The product or creation need not be novel in all respects, but something about it must be unique, and it must have value — aesthetic value, utilitarian value, inspirational value, or value of some other kind.

Discovery-related creativity has more to do with seeing something in a uniquely different (or at least unusual) way. One of its manifestations is the scientific breakthrough where insight leads to yet another layer being peeled off the onion of truth. Another manifestation of discovery-related creativity is spiritual seeing, where the individual changes to a new and more enlightened perspective on something. But the task of expressing these insights-of-discovery to others involves returning to production-oriented creativity in order to share the insights that have been gained. This insight means that any sharing of creative self-expression must involve a 'product' or 'performance' in the case of oral communication or physical demonstration.

What Does Being Creative Mean to Academics/Faculty?

The first thing to say is that most academics are probably not overly interested in the idea of creativity. They just take it for granted that it is part and parcel of their everyday practice but they don't need to talk about it: nor are they encouraged to do so.

"What emerges from this research is that issues of definition that so concern creativity researchers are of little concern to those who are engaged with and interested in creativity in learning and teaching. There is

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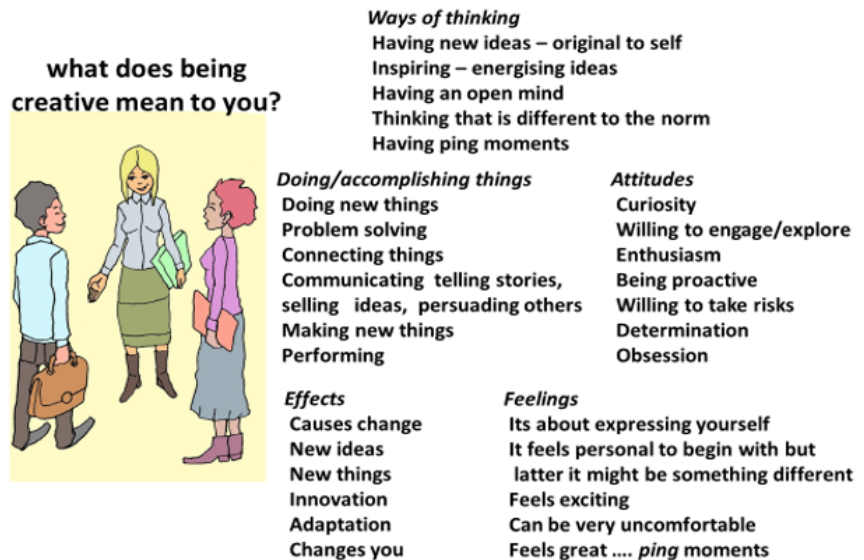
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an obvious fascination with creativity, but it is also apparent that creativity is not part of the daily academic educational discourse...."^{19:10}

Furthermore, academics do not think in terms of definitions, rather, they hold a concept or set of ideas in their mind that they associate with a particular thing. So, if a group of academics and others who support students learning and development are invited to share their understandings of what being creative means, responses reflect not only thinking in certain ways and doing certain things, they also involve how it makes you feel, your attitudes and dispositions and the effects or products of creativity (Figure 1)²⁰

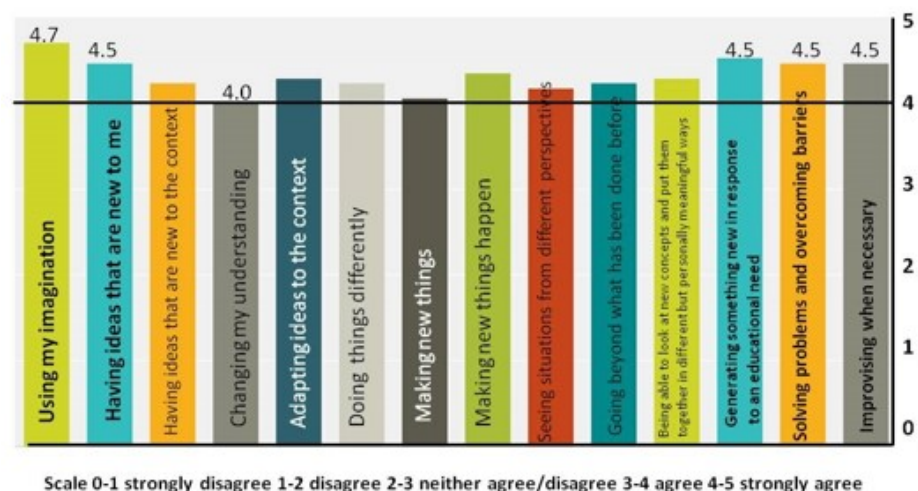
Figure 1 summary of responses from many institutional surveys (unpublished data).

If the question is more focused, 'what does being creative mean to you in your own work contexts?' and people are able to quantify the relative importance of particular things (Figure 2), the highest rated ideas are using imagination, having ideas that are new to me, solving problems, generating something new and improvising where necessary.



At this level, there seems to be a general consensus amongst institutional communities as to what being creative means and 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 professional conversations about creativity in Higher Education teaching and learning practices within disciplinary domains.

Figure 2 Typical views of academics in response to the question, 'what does being creative mean to you in your own work contexts?' The survey has been conducted many times in the UK with a similar pattern of responses. In fact similar responses have been noted in Saudi Arabia and China.



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Equally important is the widely held belief amongst higher education teachers that creativity is not a rare gift and the preserve of a few gifted people and most (but not all) higher education teachers agree that it is possible, with the right opportunity, for people to develop their creativity.

How Do Academics/Faculty Experience Creativity in Learning and Teaching Practice?

Paul Kleiman's phenomenographic study¹⁹ involving 12 university identified five main ways of understanding creativity in the context of learning and teaching namely: a constraint-focused experience; a process-focused experience; a product-focused experience; a transformation-focused experience; a fulfilment-focused experience. All or only some of these may be present in any experience.

1 Creativity as a *constraint-focused* experience: In this category creative experience is described in terms of constraint or as a form of resistance to compliance and orthodoxy.

2 Creativity as *process-focused* experience : There are three conceptual variants, i.e. those processes that lead to explicit outcomes or products; those that lead to implicit outcomes; and those that are not necessarily linked to any outcome. The latter recognises that creativity sometimes requires an acceptance of a lack of structure and direction, e.g. 'playing for the sake of playing' [in the hope that something useful will emerge].

3 Creativity as a *product-focused* experience: In this category the primary focus is on the production of either something that is simply new and original, or the production of something in which notions of novelty and originality combine with notions of utility and value. The creation of something new or original ranges from something relatively modest to something that is truly groundbreaking or paradigm shifting. It also ranges from a 'democratic' notion that 'we are all creative' to the notion of creativity as the province of the great individual or individual genius. At the modest end of the creative continuum, there is a certain hesitancy about describing the experience. At the other end of the continuum, the view emerged that creativity in learning and teaching needs to involve or consist of something significantly new or original. Also in this product-focused category, creativity consists of a combination of novelty and originality with value and utility. It is not sufficient for a creative action or outcome simply to be new and/or original: there has to be a sense or recognition that the action or outcome has some utility and value.

4 Creativity as a *transformation-focused* experience: In this category creativity in learning and teaching is experienced as engagement in a process that is transformative either in itself, or undertaken with the intention (implicit or explicit) of being transformative. Engagement in such a process may derive from the desire to change (intrinsic motivation) or as a response to a change event (extrinsic motivation) – whether intended or unintended. It is in this category that encountering and exploiting chance and risk-taking appear as important factors.

Creativity as a *fulfilment-focused* experience: In this category, the experience of creativity is linked strongly to notions of personal and professional fulfilment combined with an acknowledgement that creativity involves a personal commitment or investment.

There are echoes here of Maslow's Hierarchy of Needs, in which self-actualisation or fulfilment is at the highest level of the hierarchy. Maslow^{20,21} believed that human motivation is based on people seeking fulfilment and change through personal growth. Self-actualized people are those who were fulfilled and

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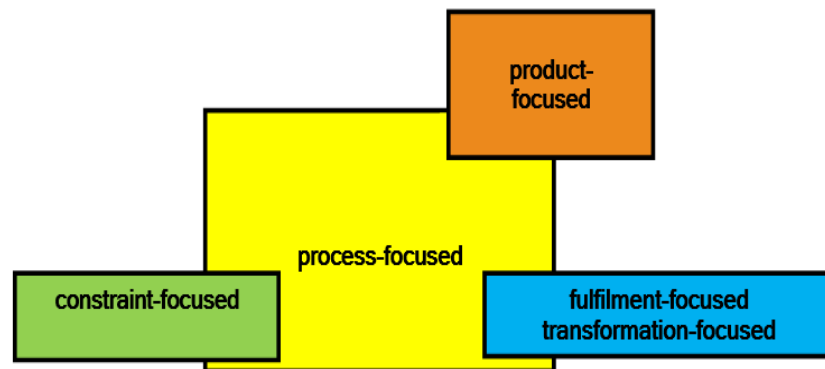
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doing all they were capable of. The growth of self-actualization²² refers to the need for personal growth and discovery that is present throughout a person's life. For Maslow, a person is always 'becoming' and never remains static in these terms. In self-actualization, a person comes to find a meaning to life that is important to them. For some people self-actualization can be achieved through creating works of art or literature, for others through, science or technology, sport, services to society -like medical, educational or social work, or within a corporate setting.

If the categories identified by Kleiman are placed on a continuum, creativity as a constraint-focused experience would be situated at the 'lower' end of the continuum: the constraint is often the trigger for powerful emotions like dissatisfaction, anger or frustration that trigger the motivations to do something. Creativity as a fulfillment-focused experience would be positioned at the 'higher' end of the continuum. It would also appear logical that creativity as a process-focused experience ought to precede creativity as a product-focused experience. However, that is problematic as it is clear from the research data that there is a conception of creativity-as-process that is not linked to product. The idea of creativity as transformation might also be expected to occupy space at the fulfillment end of the continuum.

Figure 3 Possible way of representing the continuum of the ways in which academics experience their own creativity in teaching and learning experiences, based on Kleiman¹⁹



What is particularly interesting about this related set of categories is the way they can be interpreted through a theoretical model developed by the philosopher John Dewey²³ summarised in Figure 4 and described below.

“For Dewey, what brings action and creativity together is human experience, defined precisely by the interaction between person and environment and intrinsically related to human activity in and with the world. ...Action starts....with an impulsion and is directed toward fulfillment. In order for action to constitute experience though, obstacles or constraints are needed. Faced with these challenges, the person experiences emotion and gains awareness (of self, of the aim, and path of action). Most importantly, action is structured as a continuous cycle of “doing” (actions directed at the environment) and “undergoing” (taking in the reaction of the environment). Undergoing always precedes doing and, at the same time, is continued by it. It is through these interconnected processes that action can be taken forward and become a “full” experience.”^{24 2-3}

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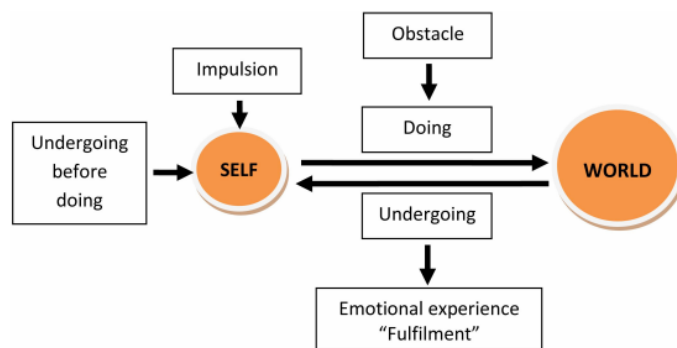


Figure 4 Dewey's model of human experience developed by Glaveanu et al ^{24:2}

We can connect this model of human experience to Paul Kleiman's research on how academics understand their creative experience. If we assume that action, at least in part is directed to the creation, then all the categories identified in Kleiman's study are present in the Dewey model of creative interaction with transformational personal growth taking the form of 'undergoing'.

What emerged from this research study is a deeper understanding of:

"the complexity and richness in the way academics perceive their experience of creativity in learning and teaching. The centrality of creativity-as-transformation, and the importance of creativity in relation to personal and/or professional fulfilment, poses a series of challenges to the current focus on creativity in higher education. The outcomes suggest that there is much more to the experience of creativity in learning and teaching than simply 'being creative'. Furthermore, the results indicate that a focus on academics' experience of creativity separated from their larger experience of being a teacher may encourage over-simplification of the phenomenon of creativity, particularly in relation to their underlying intentions when engaged in creative activity." ^{19:13}

Given that higher education is fundamentally concerned with encouraging and enabling people to develop their potentialities, and given the value HE teachers place on their own growth as they engage in processes that require their creativity, there is a good argument for utilizing, in educational practice, a concept of creativity that is more concerned with transformation than with originality. This would place creativity at the heart of teaching and learning.

Suggestion: Creativity in the context of both society and the individual could be considered *transforming* instead of "novel" or "original". Teryl Cartwright

Interactional, ecological and lifewide perspectives on creativity

Galveanu and others²⁴ argue that creativity should be viewed through an interactionist perspective.

"action theories of creativity start from [the] epistemological premise of interaction and interdependence. Human action comprises and articulates both an "internal" and "external" dynamic and, within its psychological expression, it integrates cognitive, emotional, volitional, and motivational aspects. Creativity, from this standpoint, is in action as part and parcel of every act we perform Creativity exists on the other hand also as action whenever the attribute of being creative actually comes to define the form of expression (and, as such, we can talk of "creative work" as different from other types of work which, in themselves, don't completely lack the attribute of creativity)." ^{24:2}

Drawing on Dewey's interactional model described above, these researchers focused on creative activity within five creative domains: art, design, science, scriptwriting and music composition. By applying an action

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framework they explored the generalities and specificities of the doing-undergoing cycle in each domain and across domains. The study revealed ‘a patchwork of similarities and differences between the five domains’ Table 1.

Table 1 Summary of creative activity in five domains ^{24:12}

	Art	Design	Science	Scriptwriting	Music
Impulsion	<i>Create/express</i>	<i>Create/solve</i>	<i>Solve/curiosity</i>	<i>Create/express</i>	<i>Create/express</i>
Obstacle	<i>Tools/material</i>	<i>Budget/ tools</i>	<i>Tools/material</i>	<i>Budget/time</i>	<i>Tools/time</i>
Doing	<i>Idea/work/idea</i>	<i>Idea/work/idea</i>	<i>Work/idea/work</i>	<i>Idea/work/idea</i>	<i>Idea/work/idea</i>
Undergo (MAT)	<i>Physical prop.</i>	<i>Physical prop.</i>	<i>Laws/norms</i>	<i>Laws/norms</i>	<i>Physical prop.</i>
Undergo (SOC)	<i>Colleagues</i>	<i>Client</i>	<i>Colleagues</i>	<i>Client/ colleagues</i>	<i>Client/ colleagues</i>
Emotion	<i>(DIS)Satisfaction</i>	<i>(DIS)Satisfaction</i>	<i>(DIS)Satisfaction</i>	<i>(DIS)Satisfaction</i>	<i>(DIS)Satisfaction</i>

This study highlights the importance of the domain specific features of creative action and the educational consequences of preparing learners to participate in their own creative action. For these researchers “educators should focus on the nature and quality of what we called here ‘undergoing before doing’ – the stage of preparing oneself for creative activity on the long run but also before working on particular projects.”^{24:13}

Jackson^{25,26} is also proposing an interactional model for viewing creativity arguing that learning, development, creativity and achievement are phenomenon that emerge from and through an individual’s interactions and relationships with their environment. This can be represented schematically through the concept of an individual's learning or practice ecology (Figure 5).

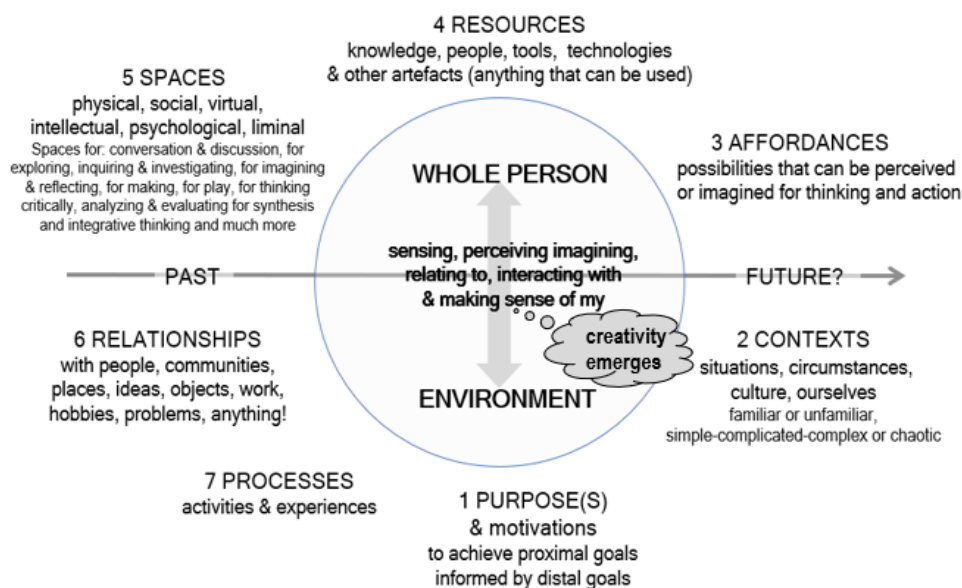


Figure 5 Learning ecology heuristic to make explicit some of the complexity involved in significant acts of learning, doing and achieving. The labels explain an aspect of the ecology but do not say how they interact. This is revealed in narratives of actions and activities. The components of the ecology do not stand in isolation. They can and do connect, interfere and become incorporated into each other.

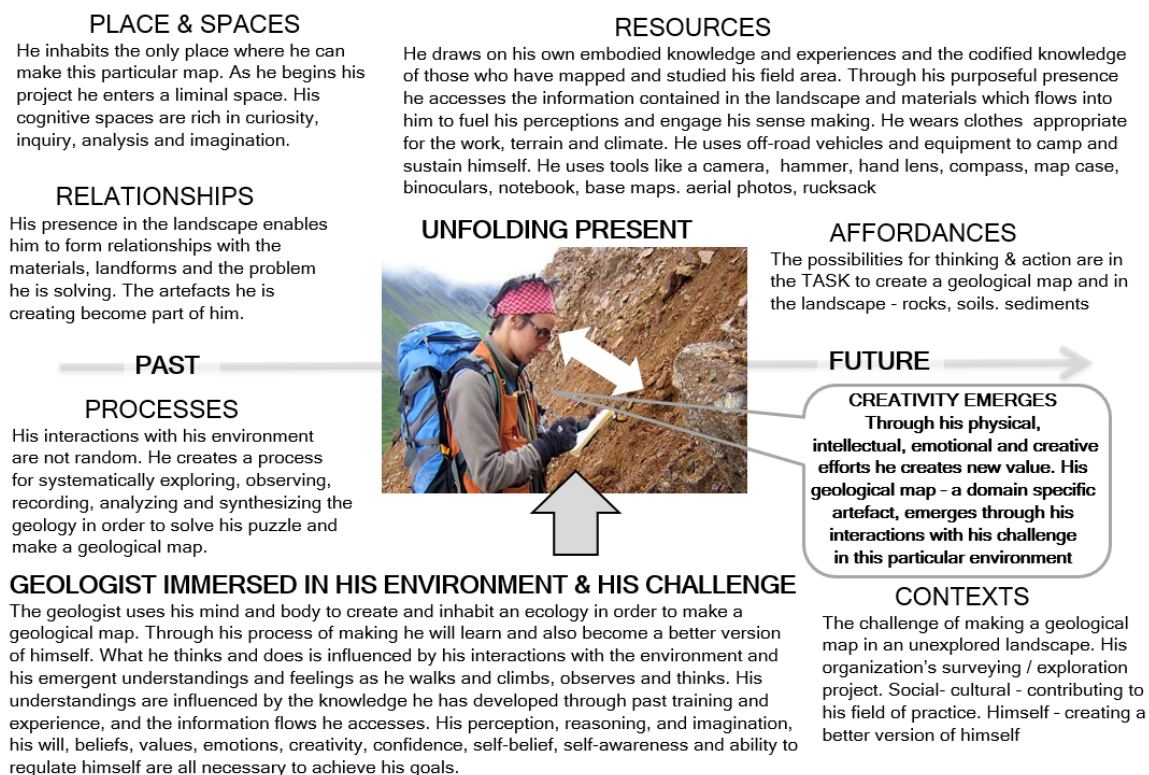
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A learning ecology is also an ecology of practice in which the primary purpose of practice is learning. The same framework can be used to characterise any complex practice where learning is a 'bi-product' of trying to achieve something²⁶. Ecologies for learning and practice have temporal as well as spatial dimensions, they enable the maker to connect different spaces, places, resources, contexts, situations, relationships, activities and themselves in ways that they find meaningful, through which they create new meaning and effect various transformations (personal and material).

The components of an ecology for learning are woven together by the maker in a part deliberate, part opportunistic act of trying to achieve create new value. For example, Figure 8 illustrates how the conceptual framework can be used to map and explain the work practices of a field geologist making a geological map (the artifact or new value that is created through his ecology. His ecology for learning and practice enables him to think and act in an ecological (connected, relational and integrated) way, to perceive (observe, sense and comprehend the information flows), to imagine (conceptualise and modify what has been observed in order to create possible meanings and new interpretations), to reason (analyse and critically evaluate observations and make judgements), to reflect on what has been seen and experienced to make better sense of it and learn from the experience.

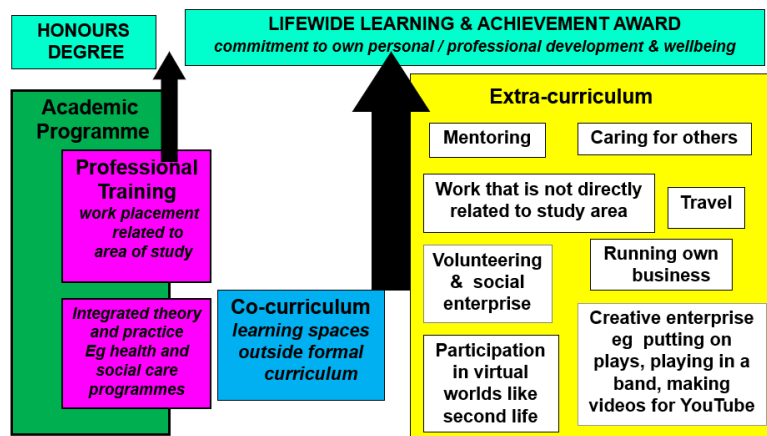
Figure 6 illustrates how this concept can be applied to real practice using the example of a geologist making a geological map.



One of the most important reasons for developing such a framework is to show how learning and practice are entangled and to show the relevance of learning in a higher education environment to practice in work.

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The environment within which an HE learner can be creative is not restricted to their academic institutional environment, rather it extends to all the spaces and places they inhabit simultaneously across their lives, while they are studying - their lifewide curriculum²⁸ (Figure 7).

Figure 7 Concept of a lifewide curriculum²⁸

Broadening the concept of curriculum and learning experiences that afford learning and development enables higher education to embrace the whole of a student's learning life in which they use and develop their creativity and to gain recognition for their creative achievements. It also enables institutions to recognise where learners are creating their own ecologies for learning²⁶

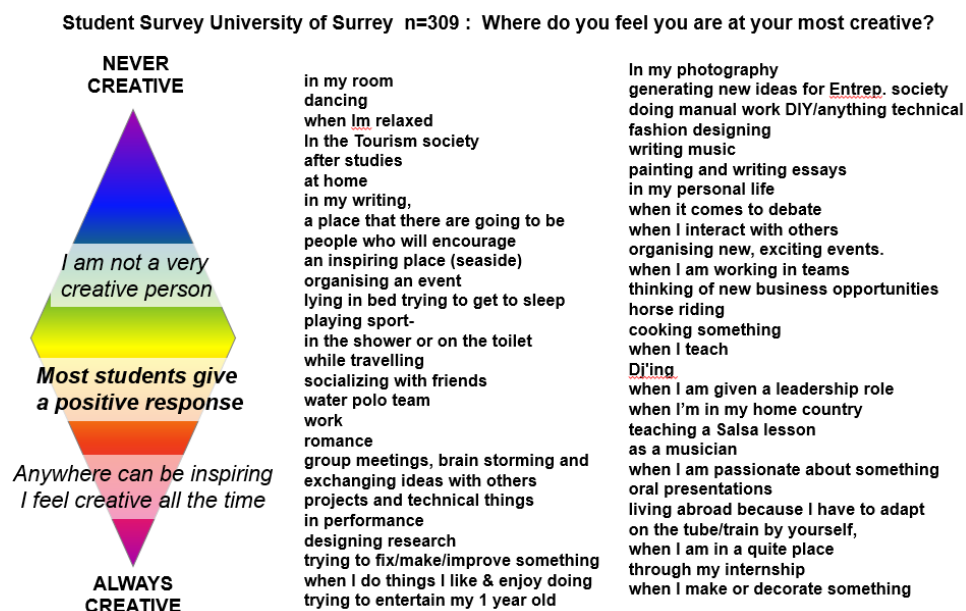


Figure 8 Survey of students' views at the University of Surrey

When students are asked how creative do you think you are? On a scale from never to always creative, most students give a response that is positive. When asked 'where do you feel you are at your most creative?' surveys of HE students reveal many places outside the academic curriculum where they utilise and develop their creativity. But Willis²⁹ highlights the problem that, "students do not fully appreciate or value the learning gained through their everyday lifewide experiences." But "perceptions of capability developed through everyday life experiences can be changed if students are encouraged to engage in formal

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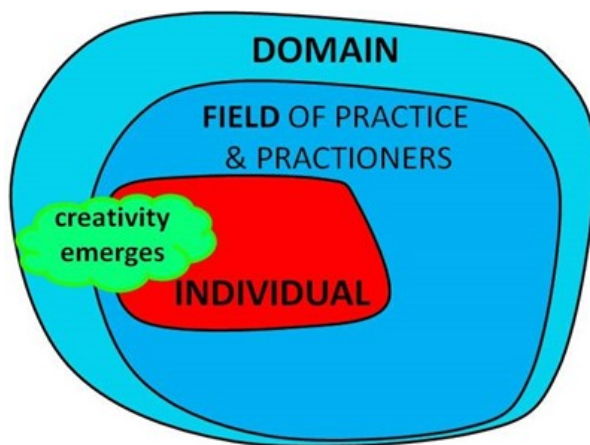
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educational processes that raise self-awareness through the production of personal maps and narratives and the processing and reflection that attends such processes.”^{29:13} In other words, to gain the benefits of embracing the affordances for learning and achievement, including creative achievement, through a lifewide curriculum requires investments in the formal curriculum to develop learners’ self-awareness of what learning and development mean, and the development of reflective practices and techniques that enable them to record and evidence such learning so that they are able to gain recognition.

Creativity in the Disciplines

Any consideration of creativity in higher education needs also to take into account the disciplinary perspective, since subject- or multi-subject based departments, schools and faculties form the main academic organisational units through which teaching and learning is organised in universities. Furthermore, subjects or disciplines are the primary cultural and knowledge production domains in higher education and within each domain there is a field of social practice composed of people who identify themselves with the thinking and practices and normative behaviours of the domain.

In the 1990's Mihaly Csikszentmihayli undertook an interview-based study of people who had achieved eminence in their chosen field - the assumption being that great achievement in a field is an indicator of significant creativity. His book, *Creativity: Flow and the psychology of discovery and invention*,³⁰ is full of interesting insights some of which are captured in these passages.



‘Creativity is a process that can be observed only at the intersection where individuals, domains and fields interact. This environment has two salient aspects: a cultural or symbolic aspect called the domain, and a social aspect called the field’^{30:314}

Figure 9 Representation of Csikszentmihayli’s social-cultural model.

‘Creativity cannot be understood by looking only at the people who appear to make it happen... creative ideas vanish unless there is a receptive audience to (appreciate), record and implement them. And without

the assessment of outsiders, there is no reliable way to decide whether the claims of a self-styled creative person are valid. According to this view, creativity results from the interaction of a system composed of three elements: a culture [or domain] that contains symbolic rules, a person who brings novelty into the symbolic domain, and a field of experts who recognize and validate the innovation. All three are necessary for a creative idea, product or discovery to take place.’^{15:6}

‘Creativity occurs when a person, using the symbols of a given domain such as music, engineering, business, or mathematics, has a new idea or sees a new pattern and when this novelty is selected by the appropriate field for inclusion into the relevant domain. The next generation will encounter that novelty as part of the domain they are exposed to, and if they are creative, they in turn will change it further.’When viewed in these terms ‘creativity is any act, idea, or product that changes an existing domain into the new one. And the

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definition of a creative person is: someone whose thoughts or actions change a domain, or establish a new one.^{15: 27-8}

These conceptions of creativity as being socially and culturally constructed within well defined domains have three important consequences for creativity in higher education.

- Firstly, the creative products of the members of disciplinary fields will be judged by peers and accepted or rejected. This is the fundamental process of peer review of research and scholarship in the field.
- Secondly, it might be expected that the creativity of undergraduate and postgraduate students who are serving their cognitive apprenticeship in the discipline, will be judged by disciplinary practitioners (their teachers).
- Thirdly, the creativity of teachers as they create new forms of teaching and learning will be judged by other teachers in their disciplinary field. This is the most problematic of these three propositions as the field of teaching is a trans-discipline in its own right and the innovations of teachers will also be judged by the wider community of educational professionals across all disciplines.

Being Creative in the Academic Disciplines

Surveys of the views of HE teachers on what being creative meant in the discipline³¹⁻³⁶ revealed that certain characteristics are widely recognised regardless of disciplinary, pedagogic or problem working context Table 2.

Table 2 General characteristics of what being creative means in a discipline³¹

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 / having an inquiring 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 requires people to explore what they don't know often without knowing what it is they need to know.

Being resourceful – using your knowledge, capability, relationships, powers to persuade and influence, and acquire or develop the resources they need 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 about which ideas to develop further. Being able to see and 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. The forms of communication are rich and varied - they include traditional forms of academic writing and presenting but might also include writing and presenting for non-academic audiences. It may also include a variety of media and tools.

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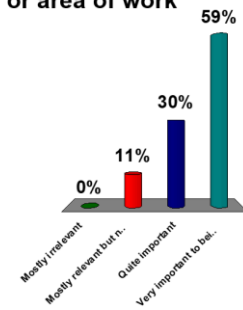
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These characteristics are widely recognised as being important to successful practice in disciplines (Figure 10)

Figure 10 Typical pattern of beliefs in a group of higher education professionals (58 people at the University of Ulster Creativity Conference April 2008).

These qualities, attitudes and abilities are important to being a successful practitioner in my discipline or area of work

1. Mostly irrelevant
2. Mostly relevant but not very important
3. Quite important
4. Very important to being successful



Where Does Creativity Reside in the Discipline?

Surveys of academic teachers in different disciplines 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 inquiry, problem solving and solution finding.³¹ Some examples of how creativity is used are given below.

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 and scholarship. 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 incomplete data, the capacity to synthesise, make connections and see new patterns and relationships, even with incomplete data sets, 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 in the discipline. Disciplinary story telling through scientific research papers or scholarly essays are important sites for academics' creativity.

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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. An engineer might be required to use the materials that are readily available to provide the solution to his engineering problems.

Provisional conclusions

A number of studies point to the importance of transformation (undergoing) in actions where creativity is involved. Because there is no agreed definition of creativity there is scope for higher education to create a definition that acknowledges the role of education in transforming individuals, enabling them to actualize themselves so that they can realise more of their potential. The idea of transformation is also relevant to the making of disciplinary artefacts as learners relate to and interact with their material and mental world. Such artefacts are only original in the sense that they relate to particular situations and circumstances. It makes sense to emphasise transformation rather than novelty or originality when we talk about creating new value in higher education.

At a general level there is considerable agreement amongst HE teachers as to the meanings of creativity and what they associate with being creative. It is when we move to the detailed level of specific practice in specific contexts and situations that particular meanings must be constructed. The disciplines within which knowledge and meaning are constructed, and problems are solved, exert a strong influence on what creativity means in the particular contexts and situations it emerges. It makes sense to engage the academy about matters relating to creativity and imagination through conversations that are embedded in the discipline.

But higher education teachers are also deeply involved in pedagogical practices through which they seek to facilitate the transformation of their students. There is evidence that HE teachers associate their creativity with personal growth or transformation as they engage in activity that demands their creativity. There is a good argument for utilizing, in educational practice, a concept of creativity that is more concerned with transformation than with originality. This would place creativity at the heart of the transformation process that is core to the moral purpose of higher education – to enable people to achieve their full potential and make a positive difference to their lives.

The development of ecological and lifewide perspectives on learning and creativity, have the potential to transform higher education so that learning and personal development (creativity as personal transformation) and achievement, including creative achievement, can be recognised and valued across the whole of students' life. In this way concrete meaning will be given to the Eduard Lindeman's vision 'the whole of life is learning therefore education can have no ending' and the boundaries between institutions and the real world will be dissolved.

There is then the thorny problem of assessing creativity in an education system that demands that learning (and creativity) be predicted in advance and evaluated against explicit criteria. If we develop the notion that a person's creativity is involved in their own transformation and fulfilment then, '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'.³⁷

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INVITATION TO THE READER

Q Are the definitions and concepts useful?

Q Are there additional definitions and concepts that should be included?

Q Are there other studies of creativity in higher education learning and practices that should be included in this general review?

Q What conclusions can be drawn from this and other evidence about encouraging and enabling learners to use and develop their creativity?

Who thinks we can do more to encourage students to develop and use their imaginations and creativity?



Please post your responses in our community forums

1 Linked-in 'Creative Academic' group <https://www.linkedin.com/groups/8755256/>

2 Facebook #creativeHE group <https://www.facebook.com/groups/creativeHE/>

Sources & further reading

1 Manifesto 15: Evolving Learning <https://manifesto15.org/en/>

2_Vygotsky, L.S. (2004) Chapter 1. Creativity and Imagination, Imagination and Creativity in Childhood Journal of Russian and East European Psychology, vol. 42, no. 1, January–February 2004, pp. 7–97. Available at: http://lchc.ucsd.edu/mca/Mail/xmcamail.2007_08.dir/att0149/LSV_1967_2004_Imagination_and_creativity_in_childhood.pdf

3 Phillips, J. A. Jr., Deiglmeier, K., and Miller, D.T. (2008) Rediscovering Social Innovation Stanford Social Innovation Review. Available on-line at: http://www.ssireview.org/articles/entry/rediscoveringsocial_innovation

4 Hannan, A. and Silver, H.(2000) Innovating in Higher Education: teaching, learning and institutional cultures Open University Press

5 Amabile, T.M. (1996) Creativity and Innovation in Organizations. Harvard Business Review 1-15

6 Boden, M. (2004). In a nutshell. In M. Boden (Ed.), The creative mind: Myths and mechanisms(revised and expanded 2nd ed.). London: Routledge (pp. 1–24)

7 Naiman L (2014) What is Creativity? (And why is it a crucial factor for business success?)

Available at: <https://www.creativityatwork.com/2014/02/17/what-is-creativity/>

8 Dellas, M., Gaier, E. L. 1970. Identification of creativity: The individual. Psychol. Bull. 73:55– 73.

9 McWilliam E (2007) What is creativity? National Creativity Showcase Australia Available at

https://www.youtube.com/watch?v=n-fL1_H6wuc

10 McWilliam, E. (2011) Two Cheers for STEM, Three Cheers for Creativity Available at:

<http://www.ericamcwilliam.com.au/two-cheers-for-stem-three-cheers-for-creativity/>

11 Barron, F. (1969) Creative Person and Creative Process. New York: Holt, Rinehart & Winston.

12 Barron, F. and Harrington, D. M. (1981) Creativity, intelligence and personality. Annual Review of Psychology 32 439-476

13 Rogers, C.R. (1960) On becoming a person, Boston: Houghton Mifflin

14 Knight, P. (2002) 'The idea of a creative curriculum'. Working Paper York: LTSN Generic Centre

15 Csikszentmihalyi, M. (1997) Creativity: Flow and the Psychology of Discovery and Invention New York: Harper Perennial.

16 Robinson, K. (2011) Out of Our Minds, Learning to be Creative. London Business Forum video's presentation March 18 2011 Available at: <https://www.youtube.com/watch?v=NtnRaa7AgLs>

17 Tina Seelig's invention cycle <https://medium.com/@tseelig/inventure-cycle-e89579b328da>

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What does creativity mean : what does being creative mean in HE learning & achievement?

- 18 MacDonald, C. (1995) Strategies for Joyful and Effective Living. Charlottetown Deep Understanding Available at: <http://www.wisdompage.com/gl-35620.pdf>
- 19 Kleiman, Paul (2008) 'Towards transformation: conceptions of creativity in higher education', Innovations in Education and Teaching International, 45: 3, 209 — 217 Available at: https://www.researchgate.net/publication/248912296_Towards_transformation_Conceptions_of_creativity_in_higher_education
- 20 Maslow, A. H. (1943). A Theory of Human Motivation. Psychological Review, 50(4), 370-96.
- 21 Maslow, A. H. (1954). Motivation and personality. New York: Harper and Row.
- 22 Maslow, A. H. (1962). Toward a Psychology of being. Princeton: D. Van Nostrand Company.
- 23 Dewey, J. (1934). Art as Experience. New York: Penguin.
- 24 Glaveanu Vlad, Lubart Todd, Bonnardel Nathalie, Botella Marion, de Biais Pierre-Marc, Desainte-Catherine Myriam, Georgsdottir Asta, Guillou Katell, Kurtag Gyorgy, Mouchiroud Christophe, Storme Martin, Wojtczuk Alicija, Zenasni Franck (2013) Creativity as action: findings from five creative domains , Frontiers in Psychology 4 , 176 Available at: <https://www.frontiersin.org/article/10.3389/fpsyg.2013.00176>
- 25 Jackson N J (2016) Exploring Learning Ecologies Chalk Mountain: LULU
- 26 Jackson, N.J. (2018) Ecological perspectives on learning to practice in the arts in health and arts therapies fields In J. Taylor and C. Holmwood (Eds.) Learning as a Creative and Developmental Process in Higher Education: A Therapeutic Arts Approach and Its Wider Application. Routledge
- 27 Jackson N J (2018) Illustrating an Ecology of Practice: Making a geological map. Creative Academic Magazine #9 p43-7
- 28 Jackson, N. J. (2011) An imaginative lifewide curriculum. In N. J. Jackson (ed) Learning for a Complex World: A lifewide concept of learning, education and personal development. Authorhouse. 100-21
- 29 Willis J (2010) Role of lifewide learning in becoming a creative professional: University of Surrey Case Study, Chapter D4/D5 in N J Jackson (ed) Learning to be Professional Available at: <http://learningtobeprofessional.pbworks.com/w/page/15914981/Learning%20to%20be%20Professional%20through%20a%20Higher%20Education%20e-Book>
- 30 Csikszentmihalyi, M. (1999). Implications of a systems perspective for the study of creativity. In R. J. Sternberg (Ed.), Handbook of creativity (pp. 313–335). New York: Cambridge University Press
- 31 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 89-37 Available on-line at <http://www.normanjackson.co.uk/creativity.html>
- 32 Jackson, N. J. (2005a) Creativity in Earth and Environmental Science Teaching and Learning Higher Education Academy Working Paper Available on-line at: <http://www.normanjackson.co.uk/creativity.html>
- 33 Jackson, N. J. (2005b) Creativity in Engineering Teaching and Learning Higher Education Academy Working Paper Available on-line at: <http://www.normanjackson.co.uk/creativity.html>
- 34 Jackson, N. J. (2005c) Creativity in History Teaching and Learning Higher Education Academy Working Paper Available on-line at: <http://www.normanjackson.co.uk/creativity.html>
- 35 Jackson, N. J. (2005d) Creativity in Medical Teaching and Learning Higher Education Academy Working Paper Available on-line at: <http://www.normanjackson.co.uk/creativity.html>
- 36 Jackson, N. J. (2005e) Creativity in Tourism Teaching and Learning Higher Education Academy Working Paper Available on-line at: <http://www.normanjackson.co.uk/creativity.html>
- 37 Jackson, N. J. (2008) Tackling the wicked problem of creativity in higher education. Available at: <http://www.scribd.com/doc/156798692/46319442-Tackling-the-Wicked-Problem-of-Creativity-in-Higher-Education>

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