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Developing creativity: Aligning community, learning and teaching practices

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We propose a discussion framework for developing creativity as a graduate capability. It begins by investigating creativity and its correlation to community of practice principles. This is followed by an analysis of capabilities and the context of creativity within higher education. Finally it outlines a selection of learning theories and taxonomies that indicate how creativity could be developed within curriculum design. Within our globalised society, higher education is challenged, and has the opportunity, to develop creative capabilities within its learning environments. Graduates who possess creative capabilities have the self-efficacy to expand and express their learning. This knowledge creation can equip individuals and communities with the capability and confidence to explore, interpret and successfully deal with personal and socio-economic changes.

Keywords: creativity, capabilities, alignment

Introduction

How to facilitate a cohesive dialogue amongst higher education stakeholders so as to develop creativity as a graduate capability is a dilemma that this paper aims to address. The authors contend that defining creativity, the creative process and universities as communities of practice is vital. This will assist in advancing a discussion framework that promotes the notion, value and utility of creativity within higher education and an age of 'supercomplexity' (Barnett 2000). To acquire this goal there is a need to position higher education as a community of practice; this provides the context for instigating dialogue, sharing knowledge and integrating stakeholders' perspectives. This dialogue can then inform and align with learning and teaching practices that aim to develop creativity as a graduate capability.

Understanding creativity

The term creativity has been investigated and debated across many disciplines and spheres of knowledge. What is apparent from the creativity discourse is that a definition of creativity fluctuates according to the differing conceptions and contexts of creativity – which vary markedly. A disadvantage of this broad debate is the variable perceptions of creativity that make it difficult to categorise and define. However, an exciting advantage of this spectrum of dialogue is the potential and flexibility of both the term and its process for individuals and communities.

Defining creativity

Finding a definition of creativity is important in the endeavour to develop creative graduates in higher education. Defining creativity establishes a common personal and social term of reference that increases awareness and understanding. A definitive term would also improve the application of creativity within higher education learning communities. Differing perceptions of creativity cause confusion and variability in processes and outcomes. Therefore a standard term should be understood across disciplines so that the curriculum can be aligned in relation to creative teaching and learning practices (methods, activities, assessments and outcomes).

The Macquarie Dictionary (1988) describes the word ‘create’ as, “to evolve from one’s own thought or imagination”. This links to the aim of developing creative graduates who build on their knowledge and discoveries. Exploring beyond this, keywords that are prominent in creativity definitions by notable theorists include novelty and innovation, as outlined in Table 1.

Table 1: Creative keywords

Keywords	Novelty	Innovation	Design
<i>Theorists</i>			
Csikszentmihalyi (1988)	*		
Giddens (1991)		*	
Amabile (1996)	*		
Sternberg (1996)	*		
De Bono (2000)		*	*
Florida (2005)		*	
Boden (2001)	*		
Cropley (2001)	*		
Gardner (2003)	*		

This table illustrates how the term “novelty” arises as the most common aspect of what theorists term creativity. The Macquarie Dictionary (1988) describes “novel” as something new, or different, and a “novelty” as a new or different thing, experience or proceeding. “Novel” is therefore something that involves understanding, awareness or involvement in change. Based on this examination of these definitions, this paper proposes the following definition of creativity:

creativity is the capability to respond to change by analysing, applying and expanding knowledge.

This definition is useful for both individuals and communities if they choose to target creativity as a personal or social capability. It would assist higher education learning communities who choose creativity as a graduate capability because a definitive term would encourage more thorough dialogue and application within curriculum alignment. If a common term for creativity can be accepted and valued, the next step is to examine and understand the creativity process.

The creativity process

Higher education learning communities aim to develop creativity as a graduate capability (Precision Consultancy 2007). Therefore, it is crucial that the creativity process be analysed and understood. The alignment of teaching and learning practices to develop creativity outcomes requires an insight into the sequence of creativity and the creative process. This process is outline in Table 2.

Table 2: Creative Process

Process	Initiative	Knowledge-Creation	Creative Outcome
<i>Theorists</i>			
Csikszentmihalyi (1998)	individual	field	cultural domain
Amabile (1996)	novelty	appropriateness	acceptability
Sternberg & Williams (1996)	synthetic	analytic	practical
Boden (2001)	surprising	intelligible	valuable
Cropley (2001)	novelty	effectiveness	ethicity

Table 2 outlines the three common elements within the creative process. The first step of initiative requires the introduction of something new or different – this is a novel element that may (or may not) stem from prior knowledge. The second step necessitates some form of analysis, testing or development – the initiative in step one needs to be applicable, relevant or logical to the expansion of knowledge. The third and final step requires some form of theory, product or outcome that is valued or approved within a field or domain. The authors would like to posit the term “knowledge creation” as the creative process that can develop creativity as a capability. Knowledge creation is the

capability to select, apply and expand knowledge. Increasing the understanding of creativity-related terms contributes to the discussion and development of creativity as a graduate capability.

Higher education as communities of practice

There is a major advantage for higher education learning communities to view themselves as communities of practice. Leach (2001) states that creativity is a social and interactive process leading to learning and human development. How a university perceives and positions itself as a community of practice influences stakeholder relationships, input, direction and progress. If higher education aims for successful learning and the development of effective educational environments, a community of practice approach would oversee the productive sharing of ideas and development of resources and capabilities. This paper contends that to develop creativity as a graduate capability within a higher education community of practice requires dialogue to assess current contributions and ideas for future developments. Stakeholders in the higher education process include: students, teachers, universities, employers, professions, government, society and culture. The relevance, impact and contribution of these stakeholders to a higher education community of practice should be articulated. This is to maximise dialogue that overcomes obstacles and reaps optimum benefits: “Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly.” (Wenger 2008).

Wenger (2008) states that one of the ways in which a community of practice develops is by mapping knowledge and identifying gaps. Australian government, businesses and universities are eager to support and increase learning, productivity and innovation (DEST 2007; Precision Consultancy Report 2007; Group of Eight 2007). According to Smith (2003) a community of practice needs to develop resources (tools, documents, routines, vocabularies and symbols) to carry the accumulated knowledge of the community. Charting dialogue and information amongst higher education stakeholders can provide vital information for universities. It increases the richness and relevance of their resources to assist in the development of creativity as a graduate capability.

Further to developing a community of practice approach, Wenger et al (2002) propose seven principles. This paper proposes that Wenger’s principles be juxtaposed with the creative procedures (derived from Table 2) required for each principle to reach fruition. The authors contend that the creative process and knowledge creation are correlated to the cultivation of a higher education community of practice; this is outlined in Table 3.

Table 3: Communities of practice and creative capabilities

Communities of practice principles (Wenger et al., 2002)	Related creative procedures
1. Design for evolution	Initiative: imagining possibilities, novel situations
2. Open a dialogue between inside and outside perspectives	Knowledge creation: sharing and developing ideas
3. Invite different levels of participation	Knowledge creation: interactions and dialogue
4. Develop both public and private community space	Knowledge creation and creative outcome
5. Focus on value	Creative outcome: quality
6. Combine familiarity and excitement	Knowledge creation: expanding and exploring knowledge
7. Create a rhythm for the community	Creative process: initiative, knowledge creation and creative outcome

The first four principles (Wenger et al, 2002) in Table 3 indicate activities and interactions for higher education communities of practice: designing for evolution, bringing in outside perspectives, inviting different levels of participation and having public and private community spaces. Higher education benefits from being a community of practice by providing a context and focus for discussions and developments. The benefits of this paradigm are holistic and repercussive: creative and productive individuals contribute to creative and productive communities of practice. A community of practice approach examines knowledge and illuminates gaps that can then propose a path that promotes and develops creativity as a graduate capability.

Developing creativity in higher education

Interest in the place and process of creativity within higher education has been burgeoning (Jeffrey & Craft 2001; Reid & Petocz 2004; Jackson 2006). It is the view of this paper that development of creativity in higher education requires three stages. The first stage is to examine the capabilities discourse. The second stage is to increase the value and understanding of creativity in higher education. The final stage is to align teaching and learning practices within higher education.

Capabilities discourse

The first stage of developing creativity as a graduate capability is to analyse how the term ‘capability’ is viewed and utilised within a higher education context. This examination is important to understand the process of how creativity as a graduate capability will be potentially implemented and integrated within higher education policy – as well as aligned with teaching and learning practices. The broad term ‘capabilities’ has inspired a great range of prescribed, potential graduate qualities that are increasingly viewed as important in higher education (DEST 2004).

The broad number of capabilities seems beneficial for a university hoping to attract new cohorts with a unique, fresh and inviting ethos. Yet this spectrum of capabilities is also problematic and inconsequential if these capability outcomes are not met. The introduction of capabilities to higher education discourse is relatively recent with debate occurring mainly within the last ten years (Precision Consultancy 2007). The report 'Generic Capabilities of ATN University Graduates' (Bowden et al, 2000) describes three reasons why graduate capabilities are being adopted: the role of universities to provide good citizens; the unknown future; employers expectations. This paper contends that a capability that would meet these three targets is creativity: the capability to respond to change by analysing, applying and expanding knowledge.

Graduates who possess creativity are valuable to the workforce because of the range of capabilities they possess that stem from being cognisant of the creative process. The expectation of a set range of employability skills has become more frequent in the employment domain. In a Department of Education, Science and Training report, Employability Skills for the Future (2002), there were key skills identified for both new and established employees, most significantly – initiative and enterprise:

Initiative and enterprise...that contribute to innovative outcomes

- *Adapting to new situations*
- *Developing a strategic, creative, long term vision*
- *Being creative*
- *Identifying opportunities not obvious to others*
- *Translating ideas into action*
- *Generating a range of options*
- *Initiating innovative solutions (DEST, 2002, p. 42).*

It is pertinent that terms like 'being creative', 'initiative', and 'innovation' are being utilised within employment discourse and the work domains. This confirms the importance of creativity as a graduate capability and its relevance within higher education and other communities of practice.

It is apparent that capabilities are becoming more important within higher education debate and discourse. This is due to the changes occurring in technology, work and society within what Giddens (2003) terms our 'runaway world'. The process of defining and refining capabilities within higher education obviously requires time and collaboration to consider the societal and cultural issues that impact on the choice of capabilities. That many Australian universities have completed, or are in the midst of planning to implement a list of graduate capabilities sheds light on this growing shift in university policy. A table of twenty-nine Australian universities and their graduate attributes illuminates the growing policy developments (Precision Consultancy 2007). There needs to be a shift from traditional teaching and learning procedures to encompass the capabilities that are viewed as vital, integrated aspects of modern university education. According to Hart (1998) graduates need to be confident about tackling new challenges in an ever-changing workplace context.

The ongoing process of how the university community of academics and students understands and relates to these capabilities; moreover, how these capabilities affect and influence teaching and learning is an area that requires further research to reach common understandings (Barrie 2004). There are a range of capabilities expected to be developed within higher education learning communities. Focusing on one capability – such as creativity – presents the opportunity to examine, evaluate and instigate its thorough alignment and integration into university policy and teaching and learning practices.

Valuing and understanding creativity

The second stage of developing creativity as a graduate capability is to increase the value and relevance of creativity within higher education. The contemporary pressures of societal flux, combined with revising traditional roles of a university constitute a new stage for higher education. Examining the role of universities can provide the foundation for what is integral to the higher education process:

Higher education should be judged to the extent to which it

1. gives students the confidence and ability to take responsibility for their continuing personal and professional development;
2. prepares students to be personally effective within the circumstances of their lives and work;
3. promotes the pursuit of excellence in the development, acquisition and application of knowledge and skills (Stephenson 1992, p. 1).

From this perspective arise three main aims of student development for universities:

- self-efficacy and lifelong learning;
- active engagement in life and learning communities;
- knowledge quality, creation and utility.

Creativity as a graduate capability is important because it has the potential to integrate and bind these aims into a dynamic, ongoing relationship. The knowledge-creation nexus encourages individual learning and confidence (self-efficacy), learning within communities (communities of practice) and lifelong learning. These aims have been incorporated into the knowledge creation framework in Figure 1.

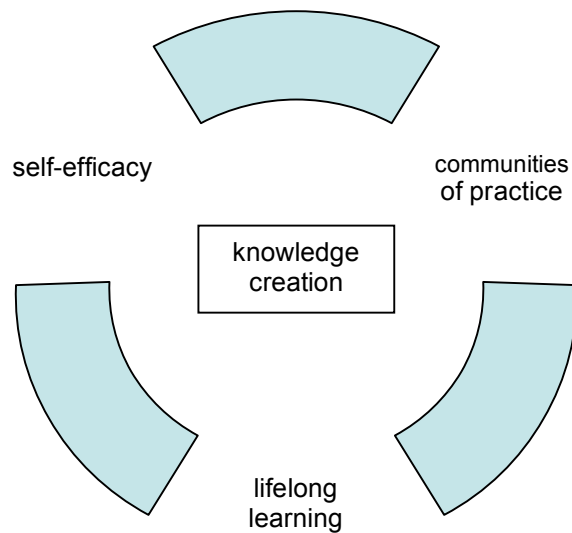


Figure 1: Knowledge creation framework

The purpose of this framework is to show how knowledge creation is at the core of developing self-efficacy, communities of practice and lifelong learning. Morrison and Johnston (2003) contend that creativity is linked to the maturation of learning and being. Knowledge creation is the capability to analyse, apply and expand knowledge and this is the essence of effective personal and social learning. This framework has the potential to be utilised by higher education learning communities to promote understanding and awareness of the integral and important inter-relationship of knowledge creation. Valuing and understanding creativity is inherent to personal and social learning cognisance and development.

Aligning teaching and learning practices

The third and final stage in developing creative graduates is aligning teaching and learning practices to meet knowledge creation outcomes. The teaching and learning relationship process is the main instigator of knowledge creation. McWilliam and Dawson (2007) found that many academics viewed developing creativity in students as important. An optimum teaching and learning environment can be built by focusing on sequences and interactions that facilitate meaningful learning. For example, Biggs' (2003) approach of 'constructive alignment' focuses on learners creating meaning for themselves as a result of teaching components (methods, activities, assessments and outcomes) being aligned. The benefits for students of such deep and meaningful learning environments is evident in studies that have explored quality of understanding (Hounsell 1997) and the link between learning approaches and confidence (Morgan & Beatty 1997). Ramsden (1997) contends that student experiences of teaching and assessment influence their adoption of a surface or deep approach towards learning. Student self-efficacy is a result of aligning deep approach teaching and learning practices. This is an important

element in the knowledge creation model (Figure 1) that generates self-efficacy and learning cognisance in communities of practice, as well as lifelong learning.

A method to assist with the alignment of teaching and learning practices is incorporation of taxonomies of learning. The taxonomy of educational objectives is: “a framework for classifying statements of what we expect or intend students to learn as a result of instruction” (Krathwohl 2002, p. 1). This is useful in building a common vocabulary and set of goals to design instruction. Bloom’s Taxonomy (1956) and Anderson and Krathwohl’s Revised Taxonomy (2002) are models that specify classes of educational objectives. Anderson and Krathwohl’s revision is particularly pertinent in that they have replaced Bloom’s most complex stage ‘Evaluation’ with the verb ‘Create’.

Table 4: Anderson & Krathwohl’s Revised Taxonomy (2002)

	Cognitive processes					
The knowledge dimensions	1 Remember	2 Understand	3 Apply	4 Analyze	5 Evaluate	6 Create
Factual						
Conceptual						
Procedural						
Metacognitive						

Incorporating a taxonomy that outlines the building blocks of learning will assist in structuring awareness, knowledge and applications of creativity and learning within higher education. It will contribute to understanding and defining creativity, as well as contribute to the development of learning environments that facilitate creativity as graduate capability. Curriculum mapping will also assist in the design, modification and targets of curriculum alignment. This mapping is beneficial because it identifies gaps and aligns graduate attributes with discipline-specific content (Precision Consultancy 2007)

Barriers to the alignment of these teaching and learning practices are the challenges and obstacles that arise when any change is implemented. Higher education pedagogy is shifting in accordance with the changes in society and technology: “In today’s knowledge economy, the role of higher education is being redefined – not simply tweaked, or fine-tuned but, rather, fundamentally redefined” (Hilton 2006, p. 1). Teaching and learning frameworks need to become more dynamic to support the changing expectations and influence of students, employers and other stakeholders. According to Jackson (2006) decision makers in educational institutions need to be aware and responsible for policies, strategies or practices that inhibit creativity, or make it flourish. Whether institutions, policymakers and educators condemn, cope or contribute to these pedagogical changes depends on their ability to work within this revision of the educational paradigm.

Conclusion

Developing creativity requires a common vocabulary and cohesive dialogue within a higher education community of practice. This can be achieved by exploring discourses about creativity, the creative process and capabilities, as well as applying community of practice principles (Wenger et al, 2002) that specify different levels of participation and incorporation of outside perspectives. Curriculum design can then target knowledge creation by establishing a model that promotes meaningful teaching activities and learning outcomes aligned with stakeholders' considerations. This establishes the ethos and elements of a more effective educational environment: one that develops graduates who can confidently assess, adapt and contribute to a constantly changing world. Each of us inhabit multiple identities as individuals, community members and lifelong learners. Creativity is the link and capability that can help us communicate and interact successfully across and within these boundaries. Future implications of this discussion framework involve concrete examples of curriculum design based upon a model for developing creativity. This would be complemented by case studies across different discipline areas. Another step based on this work is to further investigate the links between knowledge creation, creativity and research. This would advance the correlation of knowledge creation within higher education communities of practice by clarifying the context and expectations of the research-teaching paradigm.

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