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Leadership and creativity in higher education: the role of interdisciplinarity

Camille B. Kandiko*

King's Learning Institute, King's College London, UK

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Many organisations are under increasing pressures to recruit and retain creative individuals as a core asset in the emerging knowledge economy. In universities, such people are often academics who focus on high impact, innovative and interdisciplinary research. Yet, instead of feeling supported, many of these academics face structural, epistemological and socio-cultural challenges. This paper reviews the role of creativity across disciplines in higher education and draws on interviews of 10 senior interdisciplinary leaders from the UK and Australia to discuss motivational aspects of creativity, challenges of pursuing creative work and how creativity through interdisciplinarity can be supported in higher education. Leadership styles based on the various conceptions of creativity are proposed and further research is discussed.

Keywords: leadership; creativity; interdisciplinarity; management; innovation; higher education

As with the transition from an agricultural economy to the industrial age, the emergence of the knowledge economy has global implications, with dramatic changes seen in politics and economics as well as society and culture (Stiglitz 1999). This shift has brought increased attention to institutions of higher education, as they are both the foundation for training an educated workforce and the generators and producers of knowledge. In a recent business management book, Goffee and Jones (2009) raise the importance of making organisations more valuable to creative people and teams. In many ways, universities are positioned as model organisations for the knowledge age, where innovation and creativity are valued and promoted. However, even within academia there is debate about what creativity is, how it is similar and different from intelligence and innovation, and it can be (or how it is) fostered.

In this paper, the role of creativity in interdisciplinary work is explored, particularly how leaders of interdisciplinary projects and programmes succeed in higher education. Leadership is always challenging, and without a specific bottom line or product outcomes, it can be quite daunting. In this paper, various disciplinary definitions and conceptions of creativity are analysed, leading to a notion of fostering creativity through a combination of disciplinary and interdisciplinary approaches. Findings from an empirical study on how interdisciplinary leaders have successfully negotiated this tension are used to develop a framework for leadership and creativity in universities.

Creativity

Creativity has been variously defined as a characteristic of a person, as a process or as an outcome (Amabile 1988). It has been summarised as 'any act, idea, or product that changes

*Email: camille.kandiko@kcl.ac.uk

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an existing domain into the new one. And the definition of a creative person is: 'someone whose thoughts or actions change a domain or establish a new one' (Csikszentmihalyi 1997, 28), and as 'the production of novel and useful ideas in any domain' (Amabile et al. 1996, 1155). Much of the literature on creativity combines the ideas of originality (or innovation) and usefulness (or value) as defining features (Boden 1994; Mayer 1999). Creativity is also characterised as an escape from self-imposed constraints (Ackoff and Vergara 1981); as three parts consisting of expertise, the ability to think flexibly and imaginatively and motivation (Amabile 1998); involving a culture, a person and a field of experts (Jackson and Shaw 2006); and the creative process as sequence of preparation, incubation, illumination and verification (Poincaré 1982).

Creativity research is so broad and contested in part because it is conceptualised from several disciplinary angles (Edwards, McGoldrick, and Oliver 2006). Initially it featured most prominently in psychology, although now it is regularly treated in management literature and has made recent inroads in education, at both school and university levels. Craft (2006) notes there is dialectic between disciplinary understanding and creative engagement, although others see a more contested disciplinary environment (Oliver et al. 2006). Jackson (2006) advocates looking at creativity from multiple standpoints, including contextual, perceptual, practical and conceptual. Balchin (2006) remarks upon the confusion and debate over assessing creativity and warns there is no one way of measuring creativity. Creativity has historically been an under-researched area; with early studies often being aligned with mysticism and spirituality; a lack of theoretical, definitional and methodological rigour; and lack of synthesis bringing different disciplinary approaches to creativity together (Sternberg and Lubart 1999).

Research on creativity often takes an exploratory approach due to the lack of an established framework for interpreting perceptions of creativity (Oliver et al. 2006). Research on creativity was dominated by trait-based theories in 1950s (see Barron 1958; Gardner 1984), followed by a movement towards creativity tests in 1960s, such as the Torrance Tests of Creative Thinking. This was followed by a 'systems' approach to creativity, involving individuals and environments and organisations which enable creativity (Csikszentmihalyi 1988). Now, the market is encroaching on the world of creativity through the role of innovation and application. However, creativity is still contested and imperfectly understood (Edwards, McGoldrick, and Oliver 2006). There are debates about creativity versus innovation, novelty, imagination and genius (Edwards, McGoldrick, and Oliver 2006) and about revolutionary versus incremental creativity (Smith-Bingham 2006). Nevertheless, there is increasing interest in stimulating creative behaviour in organisations (Amabile 1998; Woodman, Sawyer, and Griffin 2003), particularly as the old industrial order is being replaced by a new global economy founded on trade in intellectual property and intangible assets (for a UK perspective, see Caves 2000; Howkins 2001). Tensions in creativity research are in part due to different disciplinary approaches, which are briefly summarised below.

Psychology and sociology

In early psychological research, creativity was closely aligned with conceptions of genius and intelligence. However the genius-myth has been largely discredited (Weisberg 1993), with only a loose correlation between creativity and intelligence (Fryer 2006). Oliver et al. (2006) make the claim that creative people are intelligent, but not all intelligent people are creative. Forty years ago creativity research focused on personality, cognition and how to stimulate creativity, all focused on a product outcome (Elliot 1971). Recently there has been a shift towards more ordinary forms of creativity, with a focus on characterising rather than

measuring creativity, on the social system rather than the individual and overall broader views than the limiting product view of creativity (Craft 2003). Much of the more current research has been influenced by Bourdieu's (1996) work on the sociology of culture, and how the individual is never free from the broader context and its associated rules.

Management

From the management literature there is the idea that creativity forms the backbone of the knowledge economy (Robinson 2001) and that creativity is closely linked with innovation (Smith-Bingham 2006). Creativity is seen as necessary for competitive advantage (Amabile 1988; Bilton 2007; Kanter 1983). Businesses are increasingly looking to recruit, support and retain 'clevers', the people who bring a unique strategic advantage to the firm (Goffee and Jones 2009). In the popular management context, creativity is often aligned with buzzwords, such as 'lateral thinking' and 'thinking outside the box' (De Bono 1982, 1993) and the association between creative climates and innovative outputs (Ekvall and Tangerberg-Andersson 1986; Nyström 1990). Much of the management literature concentrates on leading creative organisations and leadership in creative fields, discussed in more detail further below.

Education

Early views of creativity in education focused on exceptional or 'big-C creativity' (Stein 1987) and individuals, qualities and traits (Stein 1984). More recently there is a broader look at the kinds of creative work done (Policastro and Gardner 1999). There is also research into the interaction of person, process and originating environment (Mayer 1999) and on the social systems in which creativity takes place (Csikszentmihalyi 1999). The 'exceptional' view of creativity has been overshadowed by conceptions of ordinary, 'everyday creativity' or 'little-c creativity' (Stein 1987). This is a more democratic, broad interpretation of creativity, also known as 'life-wide' creativity, or creativity in everyday life and know-how (Craft 2002). This 'universalisation' of creativity, the perspective that everybody is capable of being creative given the right environment, is now commonplace (Jeffery and Craft 2001), although some continue to argue against broad conceptions of creativity (Novitz 1999).

There are current debates about the role of creativity in teaching and learning in schools (Craft 2003). Some researchers promote creative teaching, which takes a practitioner-focused stance, while others advocate teaching for creativity, a more student-centred approach. Craft (2006) highlights a more inclusive approach, which sees 'creative learning' as an apprenticeship into the practical, social, intellectual and values-based approaches to creativity, with a key role by the expert (teacher) to offer induction to the novice (student). The discussions about the different disciplinary approaches to creativity in schools extend to higher education.

Interdisciplinary perspectives

As noted above, creativity has been approached from various disciplinary and conceptual perspectives. Kowall (2010) argues that although creativity has been used to categorise disciplines, such as classifying language-emphasis disciplines and perception-emphasis disciplines, it also can be used to illuminate the character of interdisciplinarity. This more often features in 'big-C' creativity, through the creation of the new and novel, often rare and unique. Although popular belief of eureka moments remains, most discoveries are through systematic research and work (Sawyer 2006), which is also the case for interdisciplinary research.

Plucker and Zabelina (2009) found weaknesses in conceptualising creativity as either domain (or disciplinary)-specific or domain-general, and argue for a hybrid position. Sill (1996) developed a widely-used notion of creativity that serves as a model for synthesis and integrative thought, and a foundation for Interdisciplinary Studies fields. Using empirical data, Rhoten, O'Connor and Hackett (2009) found that both disciplinary and interdisciplinary approaches were core to developing creative research proposals. In many ways, fostering creativity is synonymous with the integration of disciplinary and interdisciplinary approaches. Although often applied in under-theorised ways, both creativity and interdisciplinarity are used to describe new approaches, novel applications, original advances and innovation in general.

Debates about whether creativity comes through some sort of inspiration, or from diligent hard work have carried on since the time of the ancient Greeks (see for example Plato's Ion dialogue), and may continue as long into the future. However, the question of how creativity is fostered and supported can begin to be addressed though exploring how interdisciplinarity, which shares many of the same features as creativity, is nurtured and promoted in higher education. The next section describes the findings of a study about interdisciplinary leaders and how they were motivated to pursue an interdisciplinary career, what the challenges have been and how they function as leaders and managers in universities.

Interdisciplinary leadership study

In the study, 10 highly successful interdisciplinary academics were identified through peer networks, at two major research universities in the UK and Australia. All of the academics had pursued long interdisciplinary careers, through their own interdisciplinary research area, working with interdisciplinary teams, as well as through developing and managing interdisciplinary courses, programmes and Schools. An appreciative inquiry approach was used to find out why they pursued an interdisciplinary path and the experiences they had along the way. Findings from this study have previously reported on the departmental, national and disciplinary challenges to interdisciplinarity (Kandiko and Blackmore 2008); the role of interdisciplinarity within an academic career (Blackmore and Kandiko 2011); and the specific leadership and management challenges in interdisciplinary contexts (Blackmore and Kandiko 2010). Here, the focus is on the role of creativity in the pursuit of an interdisciplinary career.

Reflecting on motivation, interviewees reported that they were not drawn to interdisciplinarity for its own sake, but were fascinated by a theme that crossed disciplinary boundaries, or that could only be addressed through insights that a range of disciplines could offer. Their motivation stemmed from creating something new, bringing together ideas, concepts and methodologies from different disciplines. Interdisciplinarity, drawing on disciplinary traditions, provided a depth and rigour to creative thinking in academia. As one interviewee noted:

> I mean, you can get extremely creative thinkers who have, you know, all sorts of ideas about things, but the other problem was of people borrowing things from other fields, not really understanding them, and then getting credit in their real field, because other people didn't understand it either, and doing it badly, so you've got that sort of thing. Whereas the interdisciplinarity seems to be where you can actually produce anew, you blend everything, and it produces a new understanding, which is an integrated understanding. (Interviewee E)

Through bureaucratisation and new managerialism (Deem, Hillyard, and Reed 2008), universities have been seen to be moving away from traditions that support creative individuals (see MacLaren, this issue). Performance metrics, short-term outcomes and national assessment structures were described as inhibiting 'blue-skies' thinking and leading to a focus on output production rather than nurturing innovation. An interviewee described the tension:

> These are very difficult times, and perhaps the thing the university is going to have to do is to be a lot kinder to its staff on its expectations of their research performance, and start reducing that to at least give the staff a break and give them more time to be more creative – but we can't do it all. But while they've got the chopper over our heads, you've got to meet these targets; that's what's causing real stress, panic and resentment. So, you can't do everything at the same time. (Interviewee F)

Despite the challenges, all of the interviewees managed to pursue interdisciplinary work and often take a significant leadership role on as well. Creativity emerged as theme in conducting interdisciplinary research, managing interdisciplinary programmes and in developing new interdisciplinary fields of study. Several interviewees identified managing the internal tensions in universities towards interdisciplinarity and the disciplinary community and external stakeholders as, in itself, an inherently creative task.

Leadership and creativity

> Creativity contains both a spontaneous, individual act and a deliberate, self-conscious, rational process. For these elements to be reconciled, the creative process must be managed, either by the individual or by an organization or system. (Bilton 2007, 21)

In the management literature, there are discussions of both personal and product-based creative leadership. This stems from differences on two approaches to promoting creative performance, on one side there is a focus on the products, ideas, and so forth produced at the individual level. This takes a more psychological-oriented notion to developing creativity. On the other side the attention is on organisational innovation, concentrating on successful implementation of these products at the team level (Oldham and Cummings 1996). These two strategies, characterised as leadership *of* creativity and leadership *for* creativity, reflect the debate in education about the role of creativity in teaching and learning. These various disciplinary approaches are used in the paradigm set out below, in the context of leading interdisciplinary work in universities, drawing on notions of how creativity emerges in leadership roles.

Leadership of creativity

Leadership and management *of* creativity focuses on leading creative individuals. This leadership approach concentrates on the identity of creative individuals, positioning creativity at heart of a unique and individual identity (Dineen 2006; Jackson and Sinclair 2006; Oliver et al. 2006). This conception of creativity often assumes that creative individuals are best left alone and interfered with as little as possible, which presents inherent leadership and management challenges. This has led to a number of popular business management books, often detailing how poorly organisations understand and manage creativity (see Bilton 2007; Torr 2008). Creative people are thought to be intrinsically motivated (Amabile 1988) and self-regulated (Jackson and Sinclair 2006). In higher education, this conception relates to academic and administrative leaders and how they manage faculty in their creative research and teaching efforts, and how they promote an environment that encourages creativity in students' learning.

Many academics spoke of the challenge of getting individuals from different disciplines working together in a new interdisciplinary way. Several also saw this leadership and management process as requiring fundamentally creative skills. One academic spoke of developing a new creative industries-based field:

> I'm convinced that within three years we can really be the leaders in the country on this, in a way that we're not, because the outfit is far too small and, and these… and the people don't really see beyond this little island that they have. So it's those things: putting together these kinds of developments; talking to people that I need to talk to to get the information, and then trying to find ways to actually make that happen. I think it's extraordinarily creative. (Interviewee D)

Much of the challenge in leading creative individuals was blamed on rigid institutional structures, traditionally aligned with disciplinary-based departments. Several interviewees said much of their time was taken up with trivial, yet time-consuming, management tasks. This included managing cross-school and faculty budgets; working with staff on multiple part-time contracts across the institution; and in finding creative solutions to computer systems that were designed for departmental-based work. Confirming the work of Amabile (1988) and Jackson and Sinclair (2006), the leaders did not speak of having to motivate or tightly manage creative individuals, rather they saw their role more as putting the right structures in place and easing administrative and bureaucratic burdens for them. A partial explanation for this could be the type of academic drawn to the environment of a competitive research-intensive university. The next section further explores the context of leadership beyond the individual.

Leadership for creativity

A similar, yet different, approach is taken with the idea of leadership *for* creativity, which focuses on systems and organisations rather than individuals. This notion concentrates more on teamwork and fostering a creative environment. There is tension between the approaches to supporting the creative individual, discussed above, and managing a creative team. Much of this group-oriented research notes how the modern assessment culture inhibits creativity (Fryer 2006; Smith-Bingham 2006). As Perutz (2003) famously noted, 'Creativity in science, as in the arts, cannot be organized. It arises spontaneously from individual talent. Well-run laboratories can foster it, but hierarchical organization, inflexible bureaucratic rules, and mountains of futile paperwork can kill it' (ix). The creative team leader is seen as a facilitator. In the higher education context, this conception relates to how academic leaders structure and organise the university to promote groups in their creative endeavours. One senior academic spoke about leading interdisciplinary teams:

> …one of the conditions under which interdisciplinary work will be successful is that there's a fairly sharply defined focus which should bring all this stuff to bear. And everybody in that disciplinary focus, ideally, should be equally enthused about the subject even if they're coming at it from a different angle. And that gives the creativity. (Interviewee B)

Bringing disciplinary-based academics together was one way of fostering a creative environment. Interdisciplinarity can be supported throughout a career, particularly through mentoring schemes. However, as disciplinary-based departments and Schools were seen as key challenges to developing an interdisciplinary career, it was often seen as essential to create institutional structures that supported interdisciplinary academics, from the PhD throughout a career.

On working to promote interdisciplinarity at school and faculty-level, several academic leaders found such work itself a creative endeavour as well. As in the previous section, many leaders spoke of their role as removing barriers to interdisciplinary work, but often on a larger scale. Several leaders worked to create the space within institutional constraints for creativity to flourish, through bringing major grants in to the university or creating new interdisciplinary centres and departments to give academics a new 'home' in the institution.

Creative leadership

As with creativity and schooling, there is a third, more inclusive approach: creative leadership. Sternberg, Kaufman and Pretz (2003) propose three types of creative leadership – leadership that accepts existing ways of doing things; leadership that challenges existing ways of doing things; and leadership that synthesises different ways of doing things. In the spirit of the latter, creative leadership is also known as: transformational leadership, in contrast to transactional leadership (Bass and Avolio 1990, 1994); emotionally intelligent leadership (Goleman 1998); visionary leadership (Sashkin 1988); and charismatic leadership (Conger and Kanugo 1998). In contrast to the two previous sections, this approach often positions the creativity within the leader, rather than with them supporting others or creating nurturing environments.

Developing new interdisciplinary fields of study requires many of the characteristics of creative leadership. Such efforts demanded both organisational and academic leadership skills, through bringing together individuals and synthesising ideas. One academic spoke about the early days of developing the field of women's studies:

> …we were breaking new ground, and that in itself, I think made people think very carefully about how one might create real interdisciplinarity, and indeed, whether one wasn't also simultaneously questioning the deficiencies of all existing disciplines. So you didn't want the old stuff exchanging, you wanted to… using Sarah Maitland's metaphor it wasn't wanting the biggest slice of the cake, we wanted to make the cake to a different recipe. (Interviewee C)

Creative leadership takes an 'interactionist' approach to understanding creativity (Amabile 1987) and can also be seen as a means to sustain creative efforts of team members (Rickards and Moger 2000). Supportive leadership has been positively linked to creativity (Oldham and Cummings 1996); this view concentrates on the role of the leader to enact new change and focus on creativity (Cowan 2006). As noted above, a major barrier to interdisciplinary work is the challenge of fitting in with disciplinary-based recognition and reward schemes. One leader of a large interdisciplinary team realised many academics in his team enjoyed the work but felt pressured to continue to publish in traditional, established disciplinary-oriented journals. The leader organised a special issue of a broad-based high impact journal for members of his project team. Not having to worry about rewriting their interdisciplinary work into disciplinary journals gave the team the space to work creatively in their new research area.

In addition to developing new interdisciplinary fields of study, many leaders took on the role of starting and designing new programmes. Several leaders saw their function as developing networks with external stakeholders. This was done through strategic partnerships with cultural and civic institutions, governmental and political groups as well as with business and industry. As one leader noted on developing a new programme in knowledge management:

> ... knowledge is shared by all of us here. Because of my expertise in this field it's located here [in the particular faculty], and I'll put it together, but these other two faculties, from their perspectives, have a lot of things to contribute. And from management, of course, if you train a new manager, one of the big things in the knowledge society is that they need to know what to do with it, because they also believe that the creation of new knowledge is one thing that gives them a competitive advantage. (Interviewee G)

The creative leader was able to develop a programme that worked within the structures of the institution and spoke to the needs of the external community. Several academics who seemed to embrace the creative leadership role still saw themselves as facilitators of others, particularly in bridging the institutional context with broader sets of stakeholders.

Conclusion

This study drew on experiences of successful interdisciplinary academic leaders. There is further research to be done on environments that may have inhibited creativity or were not supportive of creative individuals and teams. Further, this study investigated interdisciplinary leaders, and there is also work to be done exploring the role of creativity in traditional disciplinary contexts. The interdisciplinary leaders, all in research-intensive institutions, noted how in such an environment, money talks. Bringing in major grants or recruiting large numbers of students went a long way towards easing administrative and bureaucratic challenges and allowing for more creative space.

As the knowledge economy continues to grow, there is increasing complexity in universities. 'Complexity requires us to change our epistemological stance towards creativity and change' (Tosey 2006, 40); this change may provide the 'conditions for emergence' that challenge traditional linear ways of leading and following. As Goffee and Jones (2009) noted, a key factor in the future will be how organisations make themselves welcoming and supportive of clever and creative individuals. Academia has traditionally been seen as such a place, but current trends in managerialism and national assessment structures are making universities more like businesses, just at the time businesses are trying to function more like universities. Developing and sustaining networks across disciplines and with business, industry, the cultural and public sector to support innovation will be the creative leadership challenge of the future.

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Notes on contributor

Camille B. Kandiko is a research fellow in King's Learning Institute at King's College London. Her research focuses on international and comparative higher education, with areas of interest in curriculum and the student experience, interdisciplinarity, academic motivation, PhD supervision, and developing the use of concept mapping in higher education.

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