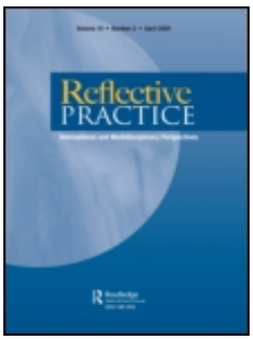

Routledge
Taylor & Francis Group

Reflective Practice
International and Multidisciplinary Perspectives

ISSN: 1462-3943 (Print) 1470-1103 (Online) Journal homepage: http://www.tandfonline.com/loi/crep20

Creativity in the classroom: from an intuitive approach to a reflective approach

Catherine Lowry-O'Neill

To cite this article: Catherine Lowry-O'Neill (2011) Creativity in the classroom: from an intuitive approach to a reflective approach, Reflective Practice, 12:4, 481-493, DOI: 10.1080/14623943.2011.590337

To link to this article: http://dx.doi.org/10.1080/14623943.2011.590337

Reflective Practice
Vol. 12, No. 4, August 2011, 481–493

Routledge
Taylor & Francis Group

Creativity in the classroom: from an intuitive approach to a reflective approach

Catherine Lowry-O'Neill*

School of Education and Professional Development, Waterford Institute of Technology, Waterford, Ireland

(*Received 23 August 2010; final version received 19 May 2011*)

This paper presents the journey of inquiry of a lecturer who sought to broaden and deepen her understanding of creativity through critical reflection and thereby enhance her practice as a higher education lecturer. The study involved three discrete processes. It began with an unpacking of the author's personal knowledge of the subject, her intuitive understanding of the term 'creativity'. Her perspective was then triangulated in two ways: by engaging with the literature on the subject; and by interviewing seven students. The study suggests that one's understanding of creativity impacts on how various approaches and activities in the classroom are perceived and evaluated. The study also facilitated the author to draw conclusions in relation to her practice, empowered her to engage in action planning for future teaching in a manner informed by critical reflection, and in particular helped her to better conceive how to encourage learners as they give rein to their own creativity.

Keywords: creativity; higher education; reflection; pedagogy; emergence theory; We-paradigm of creativity

Introduction

Creativity is a concept which has been enjoying a particularly noticeable degree of attention in higher education during the past decade. With the rate of change in contemporary society continuing to accelerate, the ability to respond more and more quickly to diverse demands has been seen as vital not only to the growth of society but, moreover, to that of the burgeoning 'knowledge economy' (Bjarnason & Coldstream, 2003; Branscomb & Auerswalk, 2002). Graduates who can offer creative responses to problems and innovative approaches to markets, for example, are increasingly desirable. Within this context, Europe turned to the Higher Education Institutions (HEIs) to take the lead in bringing creativity more explicitly into play in terms of the education of students (European University Association [EUA], 2006).

As a lecturer in education and professional development in a Higher Education Institution, this context certainly was apparent to me. I was aware of the ubiquitous nature of words such as 'innovative', 'new', 'novel' and 'creative' that peppered conversations in the Institute and were dotted on education-related posters as prolifically as spots on a leopard. I would have considered myself as having an interest in

*Email: clowry-oneill@wit.ie

ISSN 1462-3943 print/ISSN 1470-1103 online

DOI: 10.1080/14623943.2011.590337
http://www.informaworld.com

creativity and certainly believed I made efforts to integrate it into my teaching; I came to realise, however, through a growing sense of unease in relation to how the term 'creativity' was being used, that I had not engaged in critical reflection on the topic. Being in a state of perplexity, confusion or doubt is a condition that encourages professionals to engage in critical reflection (Dewey, 1933). Reflective practice can lead to the exposure of implicit questions which are 'often personally biased and limiting' (Rosenberg, 2010, p. 9) and facilitate a more expansive perspective. I committed myself to engagement in critical reflection on the subject (Brookfield, 1995; Hatton & Smith, 1995) and hoped that by so doing I would be brought to a transformed perspective (Mezirow et al., 1990; Mezirow, 1991).

Critical reflection allows the individual to begin a tentative interpretation of the issue that concerns her, to seek further clarity, to develop a theory and design an action plan in order to address the question at hand. This article outlines the journey I embarked upon in order to reflect on what the concept of creativity meant to me as a professional in higher education, and more specifically as a practitioner in the classroom, using three distinct processes. It begins with a reflection on my personal knowledge in relation to creativity and a description of various ways in which that knowledge informed my practice. Subsequently, it adumbrates key ideas that emerged from engagement with the literature on creativity. This is followed by the findings of the interviews of seven students who had participated in a module that I facilitated. A discussion of the insights that came to light as a result of all three processes leads to some conclusions, the beginnings of an action plan for further development of practice, and some final reflections.

Process 1 – reflecting on my personal knowledge in relation to creativity

My journey began with an exploration of my personal knowledge (Polanyi, 1974). This first process might be considered first person research which has been characterised as a form of enquiry that one carries out alone and that fosters the individual's capacity to develop an enquiring approach and to act with awareness and purpose in his or her life (Coghlan & Brannick, 2005). Such an approach can lead the individual 'upstream', where they look within to consider their assumptions, intentions and philosophy, for example. It can also lead 'downstream', where they look into their ways of relating to others and their actions in the world (ibid.). I hoped to be led in both directions by my enquiry and used two techniques, the first more analytical, the second more intuitive, as a means to learning more about my personal knowing in relation to creativity.

'Going upstream'

My reflections commenced with a consideration of childhood experience, then of secondary school experience, then of adult experience within three categories: home, education, and recreation. These were categorised (see Table 1), identifying key themes and providing a useful indication of those elements which for me were associated with creativity, as well as revealing lacunae in my understanding.

Table 1 clearly shows that my conception of creativity was strongly linked with music, both listening and performance, and included an appreciation of the visual arts and of culinary arts, with the importance of talent in creativity identified as an element of my implicit understanding.

Table 1. Personal knowledge: reflecting on experience.

	Home	Education	Recreation
Childhood	Father played guitar/mandolin and sang Mother sang in choir	Sang in school choir	Taught myself to play guitar
Teenage years	Siblings were musically talented Father cooked with flair	Sang in school choir Studied art but felt I had no talent Was particularly taken by the work of Van Gogh Studied cookery but felt I had no talent Enjoyed learning languages Loved literature but felt I had no talent for creative writing	Played guitar and sang with different groups Kept a journal
Adulthood	Piano and other instruments in the home	Lecturer in French (15 years) Penchant for teaching literature, film and other aspects of popular culture Lecturer in Education and Professional Development (5 years)	Played guitar and sang in bands and choirs in early adulthood This continues in a modified fashion Continue to journal

When I moved from an analytical approach to unpacking my tacit understanding of creativity in the format of creating a grid, to a more 'right brain', intuitive technique, asking myself, 'What myth, story or image comes to mind?', it was the short story by novelist Antoine de Saint Exupéry, *Le petit prince* (1943, 1997), that emerged. The story opens with the tale of the protagonist's failed childhood attempts to be taken seriously as an artist. His earnest efforts to evoke fear and terror in the adults around him by showing them his drawing of an elephant that had been swallowed by a boa constrictor come to naught because, having drawn simply the outline, the adults can only see a drawing of a hat. As the story progresses, the protagonist learns to draw once more, to persist in his attempts to communicate, to venture into the unknown and to take grave risks. My reflections on the story told so exquisitely by Saint Exupéry helped me to identify the following associations that I held at a tacit level about creativity:

It involves stepping beyond the familiar, the comfortable, the habitual;

It requires stepping toward or into a domain beyond – journeying, (re)discovering, exploring;

It demands curiosity, emotion, imagination, (inner) vision;

It leads to new perception, perspective;

It may be facilitated or communicated through metaphor;

It may in some way require both time and space for incubation;

It may evoke wonder, awe, mystery;

At some level it is a core aspect of our humanity and identity.

The two reflective approaches helped illuminate my personal knowledge and reveal an attitude to creativity that is highly influenced by the arts. It is associated with higher vision, with talent, with heroic journeying on the one hand, and yet at some level mysteriously seems to be potentially available to all. What is distinctly missing in my excavated site of mental connections is an association of creativity with science, with business, with invention. My tacit knowledge of creativity was one which valued the development of humanity at the level of uplifting the mind and soul rather than the development of the economy or of pragmatic contributions to comfort or lifestyle.

'Going downstream'

As a lecturer who teaches current and prospective lecturers in higher and further education, my reflection on my practice in relation to how I tried to encourage creative learning and to model a creative approach myself began with my listing some of the activities and actions I have at times introduced in my teaching. These include the integration of music, singing, poetry, painting and literary quotations into the design of pedagogical materials and tasks. Perhaps one of the most successful activities that I designed is one I use on occasion as a concluding activity at the end of a module in order to facilitate reflection on the learning that has taken place, and the communication of this learning in a mode of the students' choice. They can, for example, write a poem, make a drawing or present a mime.

The above activity was informed by my personal knowledge of creativity and by multiple intelligences theory and, as a concluding activity on a module, on many occasions gave rise to highly engaging, novel and creative presentations including poetry, song, the composition of a piece of music, drawings and mime. Nonetheless, there was still a tendency in my approach to be skewed toward music and the arts and to arguably overlook more scientific/inventive endeavours.

Process 2 – Engaging with the creativity literature

My journey continued with engagement with the literature on the subject of creativity. By choosing to read in a critically reflective manner, my intention was to expand my knowledge base, to broaden my theoretical frame, and to facilitate integration between theory and practice (Kember, McKay, Sinclair, & Wong, 2008). There is a broad range of literature on creativity; moreover, there is a wide spectrum of meanings given to the term (Rhyammer & Brolin, 1999). Very helpful contributions have been made to clarifying and classifying various approaches to understanding creativity (Craft, Jeffrey, & Liebling, 2001; Csikszentmihalyi, 1999). One particularly useful framework is outlined by Glăveaunu (2010), whose presentation of three different paradigms of creativity provides a most useful framework for thinking about creativity. Much has also been written on how creativity might be nurtured (Craft et al. 2001; Rhyammar & Brolin, 1999; Pink, 2005; Seel, 2005). Amongst the various theories put forward, one which is based on a wealth of scientific research and applied to various disciplines is emergence theory (Seel, 2003).

This section will outline the main arguments of Glăveanu (2010) and Seel (2003), including a brief reference to how they inform my practice.

Glăveanu identifies three paradigms in creativity and research in psychology. Before the 1950s, research tended to focus on the solitary genius; this he refers to as the He-paradigm. This paradigm originally linked genius with divine inspiration, then later with genetic inheritance. Within this paradigm, creativity refers to the highest level of creation, only the worthiest of contributions that 'constitute landmarks in the history of a domain, sometimes even the history of humanity' (2010, p. 81).

Glăveanu sees the socio-political context in the US after the Second World War as having made a significant impact on the emergence of a second paradigm, which he calls the I-paradigm. Within this paradigm creative acts are seen as within the grasp of almost all individuals, with individual traits increasingly analysed and evaluated. Eventually, criticisms of the limitations of this approach that essentially examined personality and cognitive aspects of the individual cut off from other significant elements led to the emergence of the We-paradigm and a social psychology of creativity.

Within this third paradigm of creativity, the focus moves from the individual to the context in which creativity occurs. Glăveanu builds on the work of Csikszentmihalyi (1999), who proposes a systemic approach to creativity, looking at the interplay between the *person*, the social system in which he creates (the *field*) and the symbols related to culture in which he operates (the *domain*). For Csikszentmihalyi, creativity is contextual and generative: it is embedded within a socio-historical cultural setting, and emerges from pre-existing knowledge. Glăveanu broadens this conception, putting increased emphasis on the importance of the 'other', arguing that 'creativity always takes place in a community'; the We-paradigm 'promotes the contextual and situated study of creative acts, persons and communities' (2010, p. 91).

The delineation of these three paradigms provides us with a helpful framework to understanding comments on creativity. The first paradigm – the He-paradigm – with its focus on the lone genius whose contributions revolutionise his discipline, if not the world, gives way to the I-paradigm which makes creativity a possibility for all. The third paradigm is the most complex and considers the individual, not as cut off from his world but rather as embedded in a rich system of interrelated social and cultural experiences, and creativity as arising from this complex environment.

In relation to the literature that addresses how creativity may be facilitated, Craft et al. (2001, p. 3) argue that the change of focus in terms of understanding the concept has led to the universalisation of creativity: 'First, it is easier to alter environments than it is to affect personalities, and second it has encouraged perspectives that suggest that everybody is capable of being creative given the right environment'.

If creativity is indeed the generative, dynamic process outlined by Glăveanu (2010), and if we accept that changing the personality traits of others is a difficult – indeed potentially ethically questionable – ambition, perhaps serious consideration of the learning environment is the most appropriate place for practitioners to begin. Whilst it may not be possible to influence the individual to become more creative, surely there is much educators can do to impact the physical, intellectual and emotional environment in which students learn. Emergence theory presents a comprehensive and encouraging perspective on how a learning culture that would effectively nurture the generative process of creativity might be fostered.

Emergence theory appertains to 'the process through which novel ideas, social forms and patterns of behaviour arise in an uncoordinated way through human interaction' (Tosey, 2006, p. 29). Tosey suggests that as educators 'we may not need to create "creativity" so much as generate conditions in which it can flourish' (2006, p. 30). He finds a list of seven such conditions in the work of Seel (2003). These are:

(1) connectivity;
(2) diversity;
(3) rate of information flow;
(4) lack of inhibitors;
(5) good constraints to-action;
(6) positive intention; and
(7) watchful anticipation.

Tosey (2006) provides an analysis of each of these conditions in relation to teaching in higher education, referring for example to the need in the current context of ever-growing technological connectivity to also pay attention to our peers in nearby offices. He also alludes to the possibility of considering learning contracts as 'good constraints to action'. His analysis of the conditions moreover brings him to point out how often the principles above may come into conflict with other dearly held values in higher education such as needs for conformity and accountability, underlining for us the tensions that exist between competing educational goals.

In his application of emergence theory to management ideas, Seel presents a table in which he contrasts 'command and control' organisations with an emergent paradigm (Seel, 2003, Table 2), for instance where he contrasts 'blame people for failures' (command and control) with 'learn from events' (emergent paradigm). As part of my reflection, I developed a table (Table 2) relevant to higher education, contrasting 'command and control' pedagogies with an emergent paradigm:

Table 2. Emergent paradigm of pedagogy, inspired by Seel (2003).

'Command and control' pedagogies	Emergent paradigm
Lecture at students non-stop for an hour	Create moments for students to interact
Use only one teaching methodology – one size fits all	Vary methodological approaches
Give students a limited reading list	Provide guidance on a wide range of texts to access that may be of interest
Make students painfully aware of all the ways in which they may fail your course	Aim to reduce anxiety through the provision of clear information
Keep students over time in class	End class punctually
Tell students they are in competition with one another and many will not succeed	Encourage students to work cooperatively, with the intention that all might succeed
Set unannounced exams and use the results as part of the final grade	Allow students to work on longer term projects that allow for deeper understanding and insight

Process 3 – interviewing students

The third phase of my journey centred on my desire to broaden my reflection through dialogue with others. By doing so, I hoped to deepen the effectiveness of my reflection which may be evidenced 'when it leads the teacher to make meaning from the situation in ways that enhance understanding so that she or he comes to see and understand the practice setting from a variety of viewpoints' (Loughran, 2002, p. 36). For the purpose of this inquiry, seven students who had recently taken a module on pedagogy facilitated by me were interviewed, the dialogues lasting from approximately 40 to 75 minutes each. Four individual interviews took place, as well as one group interview with three students. All were recorded and transcribed. Ethical considerations were observed: for instance, I took steps to ensure that participants were fully informed on the research; that they felt able to stop the interview or withdraw at any stage; and that informed consent was given before proceeding with the interview.

The semi-structured interview was selected as the most appropriate format for the interviews: an interview guide with nine questions was designed. In the actual interviews, however, the respondents were very comfortable talking and often the answers to my questions arose spontaneously without my needing to prompt in any particular direction. The findings are recorded below in response to the following three questions. A discussion of the findings in relation to the literature and to my personal knowledge is expounded in the following section:

> What key words or phrases come to mind when I mention creativity?
>
> Was there anything in the module design or delivery that you would deem creative?
>
> Did you and/or the other students do anything over the duration of the module that you would consider creative?

What key words or phrases come to mind when I mention creativity?

This question evoked a rich response in terms of the vocabulary that arose. Certain words and phrases were quoted on more than one occasion. 'Spontaneity', for example, was mentioned numerous times, as was the idea of 'making or having something at the end, something new, something different'. Another word that occurred numerous times was 'engaging'. One respondent explained: 'creative teaching would engage me as a learner'.

Other, very dynamic words that came up included: 'positive'; 'freedom'; 'imagination'; 'original'; 'enjoyment'; 'new'; and 'fun'. Phrases associated with creativity included: 'new ideas and confidence to express them'; 'team-work'; and 'grasps my interest'. There were also some phrases that seemed to offer advice: 'not run-of-the-mill'; 'new approaches'; 'mix it up a little'; and 'add surprise elements'. And, interestingly, one respondent's association was that creative was 'the opposite of academic'.

Was there anything in the design or delivery of the module that you would deem creative?

Many comments in response to this question referred to the design and content of the module itself. The module includes two short micro-teaching sessions which are

video-recorded and reviewed for self and peer assessment. This element was seen as being creative. Respondents commented on being able to learn from one another's presentations and from ensuing discussions. Respondents also valued the opportunity to be introduced to a wide variety of teaching approaches and methodologies and to have the opportunity to try them out for themselves.

The interviewees also made reference to teaching approaches used in the module. For example, all commented on the integration of music into the module, such as the playing of classical music to set the tone at the start of class, and the use of YouTube clips. One student found the playing of quiet background music during a reflective task creative: 'I think sometimes the silence that we operate in can be inhibiting for the students ... I responded to that very well . . .'

There were some interesting comments, too, on my unplanned singing of a very short original song. One student whose background was not in the arts or social sciences was rather shocked by it, referring to it as 'startling ... It really woke me up!' A student whose discipline was arts based took it entirely in her stride by contrast: 'You played some lovely guitar music which was very nice!' A third respondent, again with an arts background, had noted in particular how I had cut the nails on my left hand with a large pair of scissors in order to play and referred to the episode as 'performance art'. Another interviewee commented, 'I've never experienced anything like this before in a lesson. I was 100% engaged!'

As well as referring to specific actions or activities, the interviewees also alluded to the learning environment. 'There was always a very positive feeling in the room,' asserted one respondent. Another commented on the importance of the learning climate in terms of the expression and generation of ideas: 'There was a very open environment so there was no problem putting forward ideas', he remarked. Another declared: 'I would say that the best aspect of your course for working with new ideas or for generating new ideas was really the atmosphere of openness that you worked at'. He continued: 'You obviously worked at it constantly, at keeping that, at maintaining that. That was by far the most effective thing you did . . . to keep that flow of ideas open'.

Did you and/or any of the other students do anything over the duration of the module that you would consider creative?

One respondent reflected: 'The micro-teaching was an opportunity to be creative. I didn't see it at the time, but I soon realised.' She particularly admired one participant's integration of her own photographs into her *Powerpoint* presentation: 'She said at the time that she had taken pictures herself and then she learned how to upload them especially for the micro-teaching ... That's very creative'. All commented on the final activity. One participant exclaimed: 'I really surprised myself!' A second highlighted how enjoyable the activity had been: 'We did a mime and that was creative – a lot of fun, a lot of fun!' Another respondent explained: 'We could have all taken the easy option or the boring option but we all put in the effort to be creative'. Another student particularly liked this activity because it allowed individuality and freedom of expression: 'Creativity allows you to show things in your own way'. This theme was echoed in the following comment: 'We did songs. They were very creative ways of communicating what people had learned, of expressing themselves, by people who aren't in the creative arts, who are just from various disciplines meeting together'.

One respondent was very impressed by what some of his colleagues were able to do in terms of responding creatively to the task at hand: 'I was sort of struck that by the end of five weeks you had people delivering poems to the group. That's reasonably novel! That's quite creative'. He had not felt the same freedom to express himself in the concluding activity as some of the others: 'The creativity itself, the actually making stuff happen doesn't happen in the room for me. It happens where you do your work'. Further exploration of this dichotomy between this lecturer's experience as a learner on the module and his capacity to be creative in the teaching role revealed that, in spite of my efforts to be broad and inclusive in the spectrum of potential exercises, no activity connected to his discipline had been included in the list of activities.

Discussion

The insights gathered from my personal knowledge, from consideration of the literature and from the comments of the students who were interviewed provide a fertile and expansive resource for reflection on my practice to date in relation to creativity and for action planning in this regard. The discussion will consider the ways in which my understanding of creativity has developed as a result of the enquiry, with reference both to the main theories presented – briefly to the three paradigms of creativity and more particularly to emergence theory – and to insights gained from the comments of the students. Implications for practice are also discussed, informing the taking of concrete steps in terms of action planning.

The article began with a reflection on my personal knowledge in relation to creativity, sought in two distinct forms. I had noted that music and literature tended to dominate my thinking about creativity; as the study progressed, I berated myself at times for being overly influenced by the He-paradigm and for my undervaluing of the pragmatic. Having professed a belief in multiple intelligences theory for a decade (Gardner, 1984), I felt I was now acknowledging a gap between my espoused theory and my theory-in-action (Argyris & Schön, 1974). This gap was emphasised to me by the lecturer who made me aware that no express activity that suited him had been presented in the list of tasks in the concluding activity. However, reassured by the argument that this gap may represent an opportunity for a leap in development, I aimed to take cognisance of it and consider ways in which it might be bridged.

Emergence theory (Seel, 2003) illuminated my reflections on the Saint Exupéry story, *The Little Prince*, and the associations with creativity that emerged from it. The importance of a lack of inhibitors, the fourth point on Seel's list (ibid.), found echo in my thoughts that creativity involves a bold going forth: 'It requires stepping toward or into a domain beyond – journeying, (re)discovering, exploring'. It was also identifiable in some of the students' comments on the learning environment that characterised the module that suggested a significant lack of inhibitors, for example, 'I would say that the best aspect of your course for working with new ideas or for generating new ideas was really the atmosphere of openness that you worked at'.

Diversity, the second condition for the emergence of novel forms on Seel's list (ibid.) is an element of my practice that I particularly appreciate, and am fortunate enough to experience in my teaching of students from many disciplines. It is also clearly valued by students who connected creativity and diversity in relation to teaching. One student stated simply: 'Doing things in different ways allows for creativity'. The fact that Seel (ibid.) places diversity so high on his list and that the

students echo his view encourages me to take proactive steps in order to become increasingly informed of some of the basics in subject areas and disciplines about which I know little so that I can increase the variety of what I do and how I do it.

Connectivity is the first condition which Seel (ibid.) identifies as contributing to the emergence of new phenomena. It is also a cornerstone of the We-paradigm which places great emphasis on the other and on community. I find it interesting to note that there is no sense in my list of associations of creativity arrived at by a reflection on *The Little Prince* as to whether the journeying, the stepping beyond, and the awe and wonder experienced is that of one person or more. This is a particularly useful reminder of the iterative nature of reflection. Returning to the story, it is evident that the narrator has a journey to take which is quite different from that of the little prince that he meets. Indeed, it could be argued that the range of characters each has a distinctive journey to make. However, in terms of the key insights gained by the characters, these come about as a result of connectivity, of relationships formed, enjoyed, cherished.

Connectivity is a key focus of my practice. Efforts are made to get to know learners and allow them to know each other. This is with the positive intention (Seel's [ibid.] sixth condition) of building trust within the group in order to create a space that is conducive to increased sharing and openness and enhanced learning. The students' comments suggest that this is achieved; as one said: 'There was a lot of learning going on'. Another participant spoke particularly enthusiastically about her experiences of connectivity within the group: 'I think the whole idea of having so many different people in the room, and we were able to talk to each other and spark off each other, and everybody brought themselves and their experience into that room: I think that ties into creativity'. She continued: 'There were all these people and we were all giving and taking and learning from each other, and I think even just sharing ... I saw how I fit in more in the overall picture'. This latter comment helps me to broaden my reflection on connectivity to consider its significance beyond the classroom. Often groups wish to have some mechanism by which they can continue the connection they have developed through their learning experience on a module together. Thinking through potential opportunities to allow such individuals to be and feel part of a community of practice (Wenger, 1998) has become a vital challenge for me.

Conclusion

In seeking to reflect critically on the concept of creativity and its significance for me as a practitioner in the classroom, I took the approach of exploring my own personal knowledge before engaging with the literature and seeking out the voices of students. To a large extent, this was to enable me to both identify those aspects of my practice which might be seen as facilitating creativity in the classroom, as well as those which could benefit from development. 'You can understand your practice by looking backwards – but work needs to be lived forwards' (Ghaye & Ghaye, 2010). My evaluation leads me to the conclusions and implications for future planning set out in Table 3.

Final reflections

The intention of this paper was to provide insight into one practitioner's journey from an intuitive, tacit understanding of creativity towards a more reflective one.

Table 3. Action plan.

Conclusion	Action plan
Seel's (2003) list of conditions that nurture the potential emergence of novel forms seems wholly appropriate to my experience of higher education	Engage in further reflection on these conditions in order to enhance the ways in which they are characteristic of my practice and how they may be fostered to enhance student creativity
I acknowledge that I have a potential at an unconscious level to consider creativity as the output of the lone genius. I accept Glăveaunu's argument that creativity exists on a continuum	Watch out for internal dialogue that suggests that only great works of art constitute creativity. Look for and appreciate creativity across that spectrum
Glăveaunu's We-paradigm of creativity is the one which is most comprehensive and inclusive, taking into account as it does not only the individual but also society and culture	Approach creativity in the classroom with an eye that is sensitive to context and that takes into consideration social and cultural influences
There are infinite possibilities in relation to diversity. Multiple Intelligences Theory is a useful framework, but not exhaustive	Enquire further into what creativity means within different disciplines so as to be able to recognise, respond to and plan for it in the classroom from a discipline perspective
The connectivity that arises from learning in the classroom as a group has a rich potential for future creativity	Take steps to create a forum in which such individuals can come together in conversations that promote potential new creative initiatives

By engaging in critical reflection through three distinct processes, I was able to grasp the 'nettlesome' knowledge (Sibbett & Thompson, 2008) of ways in which my approach to creativity in the classroom might be skewed or flawed. My perspective is 'transformed', having become 'more inclusive, discriminating and integrative' (Mezirow et al., 1990). I have gained much: unarguably increased self-awareness; a sound theoretical underpinning to my approach in relation to creativity; an invaluable sense of student experience; and solid foundations of an action plan. I also recognise that much of my discomfort around discussions on creativity as referred to in the opening paragraphs relates to paradigmatic assumptions I held around *making* students creative in order to use them to fix the economy. But that is another paper ...

Acknowledgements

Thanks are due to all the students who have been willing to engage creatively with me and each other in the classroom. Most especially, my thanks are extended to those who participated in the interviews.

Notes on contributor

Catherine Lowry-O'Neill graduated with a BA and DPhil in French from the University of Ulster at Coleraine. She lectured in French in UUC, the University of Limerick, and the University of Leeds, before moving back to Ireland to lecture in French in Waterford Institute of Technology in 1997. Catherine joined the team in the School of Education and

Professional Development in 2005 and has subsequently graduated with an MA in Management in Education. She currently lectures on the MA in Learning and Teaching, and her research interests include emotional intelligence and experiential learning.

References

Argyris, C., & Schön, D. (1974). *Theory in practice: Increasing professional effectiveness*. San Francisco, CA: Jossey-Bass.

Bjarnason, S., & Coldstream, P. (Eds.). (2003). *The idea of engagement: Universities in society*. London: Association of Commonwealth Universities.

Branscomb, L.M., & Aurswald, P. (2002). *Between invention and innovation: An analysis of funding for early-stage technology development*. Prepared for Economic Assessment Office, Advanced Technology Program, National Institute of Standards and Technology. NIST GCR 02-841. Retrieved from http://www.atp.nist.gov/eao/gcr02-841/contents.htm

Brookfield, S. (1995). *Becoming a critically reflective teacher*. San Francisco, CA: Jossey-Bass.

Coghlan, D., & Brannick, T. (2005). *Doing action research in your own organisation*. London: Sage.

Craft, A., Jeffrey, B., & Liebling, M. (2001). *Creativity in education*. London: Continuum International.

Csikszentmihalyi, M. (1999). Implications of a systems perspective for the study of creativity. In R.J. Sternberg & T.L. Lubart (Eds.), *Handbook of creativity* (pp. 313–335). Cambridge: Cambridge University Press.

Dewey, J. (1933). *How we think*. Chicago, IL: Henrey Regney.

EUA. (2006). The rise of knowledge regions: Emerging opportunities and challenges for universities. Retrieved from. http://www.eua.be

Gardner, H. (1984). *Frames of mind*. New York: Basic Books.

Ghaye, T., & Ghaye, K. (2010). *Teaching and learning through critical reflective practice*. London: Routledge.

Glăveaunu, V. (2010). Paradigms in the study of creativity: Introducing the perspective of cultural psychology. *New Ideas in Psychology, 28*(1), pp. 79–92.

Hatton, N., & Smith, D. (1995). Reflection in teacher education: Towards definition and implementation. The University of Sydney: School of Teaching and Curriculum Studies. Retrieved from http://www2.edfac.usyd.edu.au/LocalResource/Study1/hattonart.html

Kember, D., McKay, J., Sinclair, K., & Wong, F.K.Y. (2008). A four-category scheme for coding and assessing the level of reflection in written work. *Assessment & Evaluation in Higher Education, 33*(4), 369–379.

Loughran, J.J. (2002). Effective reflective practice: In search of meaning in learning, about teaching. *Journal of Teacher Education, 53*(1), 33–43.

Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco, CA: Jossey-Bass.

Mezirow, J., et al. (Eds.). (1990). *Fostering critical reflection in adulthood*. San Francisco, CA: Jossey-Bass.

Pink, D.H. (2005). *A whole new mind: Moving from the information age into the conceptual age*. Crows Nest, New South Wales: Allen & Unwin.

Polanyi, M. (1974). *Personal knowledge*. Chicago, IL: University of Chicago Press.

Rosenberg, L.R. (2010). Transforming leadership: Reflective practice and the enhancement of happiness. *Reflective Practice, 11*(1), 9–18.

Ryhammar, L., & Brolin, C. (1999). Creativity research: Historical considerations and main lines of development. *Scandinavian Journal of Educational Research, 43*(3), 259–273.

Saint-Exupéry, A. de (1943, 1997). Le petit prince. Paris: Gallimard.

Seel, R., 2003. *Emergence in organisations.* Retrieved from http://www.new-paradigm.co.uk/emergence-human.htm

Seel, R., 2005. *Creativity in organisations*: An emergent perspective. Retrieved from http://www.new-paradigm.co.uk/creativity-emergent.htm

Sibbett, C., & Thompson, W. (2008). Nettlesome knowledge, liminality and the taboo in cancer and art therapy experiences. In R. Land, J.H.F. Meyer, & J. Smith (Eds.), *Threshold concepts within the disciplines* (pp. 227–242). Rotterdam: Sense.

Tosey, P. (2006). Interfering with the interference. In N. Jackson, M. Oliver, M. Shaw, & J. Wisdom (Eds.), *Developing creativity in higher education* (pp. 29–42). London: Routledge.

Wenger, E. (1998). *Communities of practice: Learning, meaning and identity.* Cambridge: Cambridge University Press.