Passion: Engine of Creative Teaching in an English University?

Craft, A., Hall, E. & Costello, R.

Abstract

Literature suggests that whilst creativity is frequently seen as ubiquitous and taken for granted (Dawson, Tan & McWilliam, 2011; Livingston, 2010) there is evidence that creative approaches in higher education can be seen as unnecessary work (Chao, 2009; Clouder et al., 2008; Gibson, 2010; McWilliam et al., 2008), and creative teaching is not always recognised or valued (Clouder et al., 2008; Dawson et al., 2011, Gibson, 2010). Forming part of a cross-cultural study of creative teaching (although reporting on only one part of it, the cross-cultural parts being presented in other articles in production), the research explored student and lecturer perspectives in four universities in England, Malaysia and Thailand, using mixed methods within an interpretive frame. This paper reports on findings from the English University site. Key elements of creative teaching in this site were having a passion for the subject and for using sensitised pedagogical strategies, driven by an awareness of student perspective and relationship. Crucial goals were fostering independent thinking; striving for equality through conversation and collaboration; and orchestrating for knowledge-building. The lecturers' passion for the subject was a powerful engine for creative teaching across all academic disciplines spanning the arts, the humanities, and STEM (science, technology, engineering and mathematics) subjects.

Key words: creative teaching, higher education, passion for subject

1. Introduction

Frequently positioned in relation to economic productivity and competitiveness, nurturing student creativity from school into higher education is increasingly prioritised by policy makers as vital to building successful future work forces (Dawson *et al.*, 2011; Gibson, 2010; Livingston, 2010; McWilliam & Dawson, 2008; McWilliam & Haukka, 2008; McWilliam, Hearn & Haseman, 2008). McWilliam et al. (ibid) refer to 'the call to creativity' in higher education and many universities include 'creativity' in their mission statement (Dale, 2008). Knowledge-acquisition in itself is no longer sufficient and instead universities place increasing emphasis on 'creative human capital' (EUA, 2007; Livingston, 2010). Thus, modern-day graduates are expected to be able to forge new relationships, take on new challenges and condense and simplify 'big-picture scenarios' (McWilliam & Dawson, 2008). Yet, many university lecturers hesitate in this regard because they have succeeded in an education system that praised conformity (Gibson, 2010). The counter argument is that educators must move forward from fear of the unknown to teach new generations differently, as creativity is possible in any activity that involves human intellect (Robinson, 2001).

During the twentieth century a number of traditions emerged (Craft, 2001a; Ryhammar & Brolin, 1999); three of which have been perhaps particularly influential: the cognitive (concerned with modelling the nature of human creativity), humanistic (concerned with human potential) and the psychometric (focussing on the measurement of human creativity). However, from the start of the 21st century a greater emphasis has been placed on understanding the everyday creativity of people (rather than genius), and on the social context and dynamics of the phenomenon. Creativity has thus been increasingly understood by many current researchers as a social phenomenon with emotional dimensions as well as cognitive ones. For example, intrinsic motivation is considered to be a crucial prerequisite for creativity (Moran, 2010), along with positive mood (Amabile *et al.*, 2005; Madjar *et al.*,2002; Vosberg, 1998) and perceived importance of the problem being solved (Hennessey & Amabile, 2010).

Most definitions of creativity include a focus on imaginative, novel or original outcomes that have purpose or value, and there is general agreement that creativity involves framing new questions, generating a wide spectrum of ideas, and reflecting on the problem-solving process itself. Additionally, research sets out a spectrum of activity from paradigm shifting to everyday, key examples being as follows. Boden (2004) refers to novelty at a personal level as being 'psychological' and therefore refers to such creativity as P-creative. Ideas that are new to the society in general are those that have never existed before, and thus these are historical or H-creative. Similar distinctions have been made across disciplines; for example, little c creativity, which Craft (2001b) conceptualises as personal effectiveness and life-wide resourcefulness, middle-c or mastery-level creativity as affects a community (Moran, 2011), and big-C or paradigm-shifting creativity which changes the world

(Simonton, 1994). Kaufman and Beghetto (2009) focus on everyday creativity, distinguishing mini-c creativity (personal meaning-making) and little-c creativity (everyday creativity shared with others). They also identify professional creativity or "pro-c" reflecting the construction of professional knowledge and understanding. Within the context of this study, there is a particular focus on little-c creativity and professional creativity.

Creativity in higher education is thus influenced by parent paradigms and stances on the kinds of creativity that it is valuable to foster. In general the neo-liberal call for a creative workforce perhaps demands a focus on both little and middle-c creativity in higher education. Yet models of creativity or of creative teaching in universities are sparse. This paper reports on a study of the lived experience of creative teaching according to both students and teachers, in a range of disciplinary areas, within one English University. Part of a wider, cross-cultural, study of creative teaching its focus touches on but does not foreground student creativity.

1.1 Creative teaching in higher education

In higher education, despite the argument that the ordered structures found in universities often act as a barrier to creativity (Gibson, 2010; McWilliam et al., 2008), other researchers document the emergence of creative teaching through a number of approaches including work-based learning (e.g., Little & Brennan, 1996), problem-based learning (e.g., Livingston, 2010), the use of technology (e.g., Chao, 2009, Dale, 2008, Livingston, 2010), and the arts as a vehicle for creative teaching (Belluigi, 2009; Karakelle, 2009;). It is noteworthy that a distinction can be made between teaching *creatively* and teaching *for* creativity: teaching *creatively* focuses on imaginative approaches in teaching, whereas teaching *for* creativity is concerned with teaching practices that inspire and nurture students' own creative abilities (Jeffrey & Craft, 2004). However, it is possible to understand creative teaching as encompassing both teaching creatively and teaching for creativity (Fautley & Savage, 2007; Jeffrey & Craft, 2004) and this encompassing definition is adopted within this study. It is argued that creative teaching should be oriented to building a two way communication of co-learning between teacher and student.

As indicated above, there is very little focused research in terms of what actually characterises creative teaching in higher education although its importance has been emphasised. For example, although the European University Assocation (2007) study explored the role and potential development of creativity in 32 European Universities acknowledging the economic and also wider transformational arguments for nurturing creativity, creative teaching was not scrutinised. Yet, in the same year Sousa (2007), in line with Jeffrey and Craft (2004), found that the traits, characteristics and behaviours that have been used to identify creative teaching are often similar to effective teaching. Sousa's study in Portugal invited students to nominate lecturers who they considered to be creative and these nominated lecturers were then interviewed. It was found that, in contrast to the uncreative teacher, creative teachers could be described as either an "innovative-type" – i.e.,

interested in igniting a passion for the subject, or a "facilitator-type" – i.e., interested in students' ideas, and listening to student voice (Gibson, 2010). The findings of this research suggests that creativity lies in the interaction between teachers and students, as communicating effectively with students was deemed more important than creative ways to deliver subject matter. Interestingly, the creative teachers nominated by the students appeared to conform to the expected teaching role, rather than being highly unconventional in their practice.

At least three tensions exist amongst studies on creativity and creative teaching in higher education. The first concerns the relationship between creativity and performativity in approaches to work-based learning (McWilliam et al., 2008). Work-based learning as a means to make universities more flexibly and creatively responsible to the needs of the workplace, brings with it concerns about parity between traditional and vocational higher education (e.g., McDonald, 2011). It can be difficult for academics to make course content accessible beyond the classroom, such that this is relevant to an individual student's workplace and ensuring the resulting qualification is recognised both inside academia and within wider society (Boud & Soloman, 2001). In addition, how University lecturers conceive of their roles can involve conflicting values; having both academic and applied knowledge can cause tutors to shift their pedagogical emphasis toward the facilitation of learning as an application of their expertise in their field and thus student experience is more of the facilitator-style teacher. Yet, as Sousa's (2007) work shows, the "facilitator-type creative teacher' is a valuable role to adopt, reflecting the recommendation that university teachers need to be prepared to alter their pedagogy to be more responsive to their students (Robinson, 2006).

Secondly, tensions between extrinsic and intrinsic motivation (e.g., Belluigi, 2009) show that when students are subject to extrinsic motivational factors they may lack the commitment to pursue personal creative endeavours and explore new possibilities. The more rewards placed on students "being creative", the less creative they will actually be, because the task becomes more about completion rather than exploration. Instead it is suggested (Amabile, et al., 2005) that students who are intrinsically motivated are more likely to produce creative outcomes in their work, as they are driven by their *own* curiosity, not somebody else's.

Thirdly, researchers identify a West/East contrast in how creativity is manifest in education. In the West, there is the belief that all learners have creative potential (Robinson 2001; 2006), whereas in East Asia, students are held to be extrinsically motivated through cultural emphasis on social tradition; conformity and communal well-being are prioritized over individual difference, and little emphasis is given to intrinsic and self-motivation such that creative individuality is diminished in value (Kim, 2005). The fostering by teachers of inquisitiveness, nonconformity and individuality seen in the West as the essence of what it means to be creative (Craft, 2005, Lim, 2004; Ng & Smith, 2004) is in tension with the

perspective of the teacher as a vital and sole source of knowledge and expertise found widely in Eastern contexts.

1.2 Gaps in research on creative teaching in higher education

Despite the growing emphasis on creativity in higher education, there is little research focusing on lived experiences. Indeed, it is argued that creativity in higher education is frequently seen as ubiquitous and is taken for granted (Dawson *et al.*, 2011, Livingston, 2010). There is also evidence that the pressures on University staff to produce high achieving students means that creative approaches can be seen as unnecessary work, and resources including time are perceived to be insufficient (Chao, 2009, Clouder *et al.*, 2008, Gibson, 2010, McWilliam *et al.*, 2008). Consequently creative teaching is not always recognised or valued (Clouder *et al.*, 2008, Dawson *et al.*, 2011, Gibson, 2010). In addition, there is little work on the cross-cultural dimensions of this problem.

The study from which this paper is drawn sought to focus on the study of student and lecturer perspectives on creative teaching in Universities in three countries: England, Malaysia and Thailand. The research questions for the study as a whole were:

RQ1: what does creative teaching in higher education involve?

RQ2: what similarities and differences exist between Malaysia, England and Thailand?

This paper concentrates on the first of these research questions: What does creative teaching in higher education involve? The paper concentrates on the findings from England only. Other papers are planned showing the cross-cultural comparison.

2. Methodology

A partial mixed method research paradigm (Onwuegbuzie & Teddlie, 2003) was adopted. Firstly, a survey of undergraduates generated nominations of creative lecturers, following which observations of teaching, interviews with lecturers, and student focus groups were undertaken. This approach allowed for the exploration of diverse perspectives of creative teaching and learning as well as their diverse interpretation. Several data types enabled triangulation, strengthening the trustworthiness of the data (Lincoln & Guba, 1985). Given the interest in lecturer and student perspectives and the dynamics of the university classroom, the emphasis was on the exploration of lived experience (Morgan, 2007).

2.1 Sampling and participants

In total, four universities were involved, two in Malaysia (from where the study was coordinated), one in England, and one in Thailand. However, as this article focuses on the English site, what follows focuses on this only. Pseudonyms, for students and staff and the University itself, have been used throughout.

Aspirational University, England. A public university, typical of the higher tier of England's research-intensive Universities, it has 18,500 students, of whom 90% are studying full time and 11,500 are undergraduates. There are 1,800 members of staff, and the University is ranked in the top ten English Universities and in the top 1% of Universities worldwide. Aspirational University students are reported through the annual National Student Survey to be among the most satisfied in the UK. Teaching is research-informed, staff feeding their own research into their teaching, and undergraduate students are taught how to do research themselves. A fast-growing institution, in Europe it is among the top 70 fastest growing organisations and in the United Kingdom among the top 25. An effort is made to support undergraduates' career development from the first day of their studies, offering generic employment skills such as commercial awareness and assertiveness training. The University's employment record is excellent. Major graduate recruiters target the university and over 90% of graduates find work or further workplace study within six months of graduating. Students are encouraged to participate in extra-curricular activity such as sport (in which the University excels), clubs and societies, with 8000 students participating in 165 societies. This University aims very high, both for students and staff, hence its pseudonym.

At Aspirational University although a significant minority (11%) do not give their ethnicity, the majority of undergraduate students (78%) are white Europeans. A further minority classified themselves as Asian (6%) of whom 2% are British, or mixed White and Asian (2%). The remaining students classified themselves as African, Caribbean, other black background or mixed.

2.2 Ethical considerations

The research adhered to ethical standards of the British Educational Research Association (2011) and ethical approval was sought and obtained from the relevant Research Ethics Committee at Aspirational University. Informed consent was accordingly acquired from all participants.

2.3 Research design

The research design comprised: surveys, observations, individual interviews, and focus groups. Additionally, visual data was collected in the form of photographs and drawings. The design had something in common with Sousa's (2007) research, in the sense that Sousa's study invited student nominations of creative teachers but in contrast to Sousa's study, the present study included observations alongside interviews, it also used photographs and drawings. Data collection was undertaken over a six-month period during 2012-2013.

2.3.1 Lecturer Nomination Questionnaire (LNQ)

Undergraduate students were sent an e-mail invitation to complete an online lecturer nomination questionnaire which was informed by relevant theory and research and informed by a pilot study. Students were invited to nominate lecturers they perceived and experienced as teaching creatively and/or teaching for creativity, enabling the selection of lecturers to approach for participation. The reasons for nomination were carefully scrutinised and a purposive sample of lecturers and associated students identified.

The total distribution of the questionnaire at Aspirational University was 10,775 students. There were 286 responses and an additional 109 incomplete responses. Whilst one advantage of an online survey is that it can be completed at a time the respondent chooses, because of this it is also more likely to be forgotten or ignored.

Across the responses at Aspirational University there were 235 nominations for 143 lecturers. From those lecturers with the highest nominations, 7 staff were chosen of whom a full data-set was achieved for five. Participating lecturers came from the following academic disciplines: Drama, Mathematics, Business Studies, Accounting and Physics.

Once the sample of lecturers had been identified in each country, qualitative instruments (each piloted before use) were used to collect data regarding creative teaching and learning:

<u>2.3.2 Qualitative instrument 1: Lecturer Observations</u>. Face to face taught sessions were observed at least once and most twice or three times, using a classroom observation schedule. Two members of the team undertook most observations, sometimes with one another. One observation was carried out by the third team member.

- 2.3.3 Qualitative Instrument 2: Audio recording. All observations were audio-recorded and key episodes later transcribed. Audio recordings of teaching and learning activity are particularly valuable during naturalistic research, providing opportunities to gain further understandings of teaching and learning unimpeded by the researcher's influence (Rosenstein, 2002). Combined with the COS and still images, rich documentation of teaching sessions was achieved. Interviews with lecturers and focus groups with students (both discussed below) were also audio-recorded.
- 2.3.4 Qualitative Instrument 3: Sequential digital images. Sequential digital images of observation sessions sought to capture details of engagement in learning and teaching (Pink, 2006, Thomson, 2008). Following initial analysis, images of key episodes were available for stimulus-use in the interviews and focus groups. Digital images were analysed as part of the overall dataset, systematically coded using content analysis and interpretation (Rose, 2004) and 'read' in relation to the dynamics of creative teaching.
- 2.3.5 Qualitative Instrument 4: Lecturer Interviews with conceptual drawings. A Lecturer Interview Protocol (LIP) was used, and interviews audio-recorded. Discussions included conceptual drawings (Chappell *et al.*, 2011, Holcombe & Shonka, 1993) following an approach devised by Chappell and Craft (2011). Undertaken either individually or collaboratively as part of a recorded discussion conceptual drawing offers a highly reflective medium and generates visual media that provides a discussion focus (Chappell *et al.*, 2011). It provides a powerful medium for research participants to share their reflections on key experiences and can offer both individual and group insights into lived experience of phenomena. Typically, research participants will be provided with paper and coloured pens or pencils with which to record images and diagrams representing their experiences and perceptions. As they draw, in response to the interview questions, they are encouraged to talk about what they are representing. The whole session is audio recorded and transcribed. Analysis of the transcript is undertaken in parallel with analysis of the drawings produced. The drawings can be digitised so as to be easily accessed by the research team.

In this study, we used conceptual drawing with both lecturers and students to encompass abstract representations as well as literal ones. Lecturers were provided with paper and coloured pens or pencils with which to represent their experiences and perceptions. As they drew, in response to interview questions, they were encouraged to talk about the drawings. This was audio recorded and later transcribed. Analysis was then undertaken in parallel with analysis of the digitised drawings.

2.3.6 Qualitative Instrument 5: Student Focus Groups with Conceptual Drawings. For each creative lecturer nominated, a small number of students (from three to ten) were involved in focus group discussions. Conceptual drawings (as above) were carried out by each student in the focus group, using one large sheet of paper; this offered the opportunity for collaborative drawing as well as individual constructions, the intention being to generate 'creative learning conversations' (Chappell and Craft, 2011: 364).

2.4 Approach to Data Analysis

As noted above, the LNQ was treated as a selection tool and not as data for analysis. Analysis of transcripts from the interviews and focus groups were triangulated with observations and documents to explore commonalities, emergent concepts and categories, based on Miles and Huberman's (1994) guidelines. Qualitative data were then subjected to a version of grounded theory analysis as proposed by Glaser and Strauss (1967).

The analysis discussed in this paper focused on the first research question for the wider study, i.e., What does creative teaching involve? In preparing for analysis, the research team undertook triangulation of analysis to ensure consistent approaches to coding. Each researcher open coded the same slice of data (containing all data types) with respect to the first research question. This was done 'blind', i.e., researchers did not see others' coding until their own was complete. The researchers then compared the coding to agree interpretations and understandings of phenomena (this was further triangulated with the teams in the other two countries). Next, open coding of all data was undertaken mainly by the research assistant, with blind triangulation of slices of data throughout the processes of analysis delineated above so as to maintain critical scrutiny. Once the open coding was complete for each case, axial coding (grouping of codes) was undertaken for each case with respect to their strength, i.e., perceived importance for each case. This was undertaken initially by the research assistant and then triangulated across a sample of cases with the research team, generating a small number of thematic responses to each question, for each lecturer involved. Finally, the thematic codes for each case were compared, to generate thematic codes across the whole analysed sample at Aspirational University.

2.5 Addressing trustworthiness

Given the qualitative emphasis of the study, the concept of trustworthiness (Lincoln & Guba, 1985) is deemed more appropriate than the more quantitatively focused 'validity' and 'reliability'. Lincoln and Guba (ibid) highlight credibility, transferability, dependability and confirmability as key elements of trustworthiness, ensuring rigour in qualitative studies. In this study, *credibility* or seeking to 'demonstrate that a true picture of the phenomenon under scrutiny is being presented' (Shenton, 2004: 63) was achieved by adopting appropriate research instruments to achieve 'thick description' (Lincoln & Guba, 1985). Instruments were also combined and triangulated. Frequent debriefing was undertaken between team members so as to enable recognition of possible researcher preferences or biases. Opportunities were also taken for peer scrutiny of the project, through both formal presentation and informal discussion. *Transferability* of the study's findings to another situation (Merriam, 1998) is achieved in qualitative studies through offering sufficient contextual information about fieldwork sites and participants to enable participants to consider the meaningfulness of any such transfer. Whilst recognizing that what the

research team consider to be important may mis-match with what is seen to be important by a reader (Firestone, 1993), the research team has sought at the least to locate the site with reference to its typicality (Merriam, 1998) offering as full a contextual picture as possible above. *Dependability* or seeking to ensure that research is replicable, accurate and that results measure what they set out to measure, was achieved through transparency about the research design and implementation, and by the teams evaluating the effectiveness of the enquiry throughout the study (Shenton, 2004). The specification and development of shared research instruments was undertaken collaboratively and triangulation of methods (thus data) and also of analysis was undertaken. Reflective scrutiny with reference to the project's findings was encouraged, as well as in writing about the project. *Confirmability*, or the level of trustworthiness of the study in general, was sought through triangulation of method, researcher and analysis seeks to address this, together with efforts to acknowledge possible researcher bias (as discussed under credibility).

3. Findings

Five inter-related themes emerged from analysis of the English data, discussed below, in order of intensity. It will be noted that they mainly foreground teaching *creatively*. Whilst there is some discussion of teaching *for* creativity there was far less evidence of this than expected.

3.1 Theme 1: Passion for subject

Passion for subject emerged as the over-arching driver of pedagogy. It encompassed lecturers' enthusiasm for their subject, and the desire to make their teaching captivating, engaging, inspiring and relevant so that students developed their *own* enthusiasm for the subject.

All lecturers expressed great care and concern over students' academic progress, generating unique strategies to achieve this. For example, Jennifer Monkton [JM] (Drama) taught creatively by physically acting out scenarios and examples, embodying concepts through body language and facial expressions, described by Jennifer as: "... spatialisation of ideas, ... to try to make it real so that we're not just working in the abstract and pointless all the time" (JM Interview). Efforts toward rendering their subject-concepts as concrete and relevant to and accessible by students was a key concern to all lecturers.

Growth of knowledge formed a key aspect of Passion for Subject, again expressed uniquely by each lecturer. For example, George Wise [GW] (Physics) argues that creativity in physics demands a strong foundation of knowledge and understanding which should be continually developed and more refined. His students echoed the experience of being taught in this way, George frequently demanding that they re-start their work on a problem so as to grasp

the scientific process which constantly re-tests the basis of any scientific-assumption. George put it like this: "... I have created a base, and upon that I'm putting more, and then more and more and more, and that's ... accumulative, creative, those two things go together" (GW Interview).

In Accounting, Jack Mason [JKM] is said by students to be able reach from his love of the subject to his students' future careers. With a focus on its relevance to their future work, he encourages students to apply the theory to a practical context which will help them when they are qualified and in the workplace. As one student put it, "He makes me think not only about the theory but about the real life practice which is the most important thing, why we are here, for the job" (JKM Focus Group student).

Isaac Ashford's [IA] passion for Business and Accounting stems from his own love for the subject, but he also explained that lecturers should maintain their enthusiasm for the sake of their students and to keep their focus on what the subject can offer them by way of inspiration. Isaac described how he is sometimes met by a sea of sad faces in lectures; he explains that when students get their A-Level results and enrol on the course, they are excited and eager and full of energy, but that can slowly dwindle for a number of reasons, one being their lecturer's disinterest and uninspiring outlook. Isaac therefore strives to make his teaching engaging and interesting: "...the way I look at it if I'm not enthusiastic and if I don't love this topic well they won't either..." (IA Interview). Fig 1 shows Isaac's conceptual drawing representation of the triangular relationship between himself, his students, and the subject.

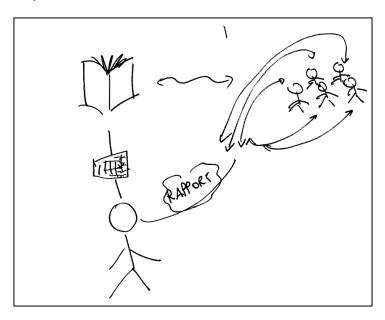


Figure 1. Isaac's conceptual drawing

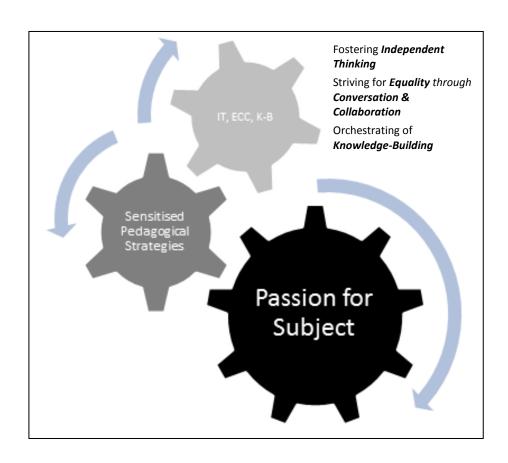


Figure 2. Themes in Creative Teaching, with Passion for Subject as Engine

Fig. 2 shows how *Passion for Subject* is the engine for creative teaching. Fuelled by passion for their subjects, each lecturer developed *Sensitised Pedagogical Strategies* that were informed by strong and sensitised awareness of student perspective and relationship with the subject, the lecturer, and fellow students. These pedagogical strategies were focused around three equally-weighted goals: *Fostering Independent Thinking*; *Striving for Equality through Conversation and Collaboration*; and *Orchestrating Knowledge-Building*. Each of these is now explored in turn, along with the pedagogical strategies associated with each.

3.2 Theme 2: Pedagogical strategies informed by student perspective and relationship

This theme denotes the sensitised concern by lecturers to consider students' varied perspectives, tailoring modes of engagement to cater for all and creating rapport and trust with their classes.

Student perspective was evident by lecturers striving to 'get into the students' shoes' to unpack their ideas and embed them into the topic being taught, creating relevance and meaning for the students. For example, Jennifer (Drama) argued that creative teaching should be provocative, and actively sought to push students out of their comfort zones, viewing taught material as there to be challenged, argued with, and debated over. Jennifer's students expressed respect and admiration for her understanding of their lives; she is said to cross boundaries that are often not mentioned within the student-lecturer relationship and to create an inclusive and accepting and open space in her classes. As one student put it: "she's like I don't care if you're hung-over¹, it's fine, you can come in, if you want to be sick you can run out and go and be sick, do you know what I mean, because she's down to earth, she knows that students go out, she knows that we're going to go and get drunk and be hung-over in the morning or whatever, and she accepts it" (JM Focus Group). The effort toward 'relationship' is shown in Fig 3 (drawn by Jennifer) which highlights dialogue and interaction in a heart-shaped space - and also Fig 4 (drawn by one of her students) which highlights the stimulus and personal touch in Jennifer's sessions.

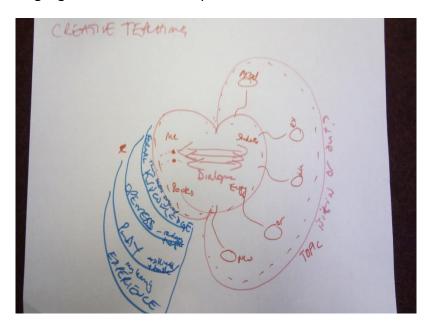


Figure 3. Jennifer's conceptual drawing

-

¹ Colloquialism meaning feeling unwell as a result of drinking too much alcohol the evening before

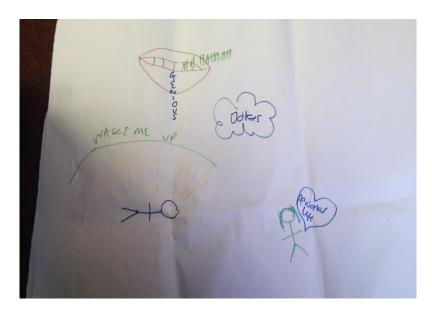


Figure 4. Conceptual drawing by one of Jennifer's students

Resilience was also modelled for students. For example, when a piece of technology failed in front of a large lecture theatre full of students, Mathematics lecturer Gladys Marionette [GM] maintained a relaxed and professional outlook, stating, "I guess this isn't going to work because it requires computer graphics" (GM Observation). The resilience and resourcefulness appeared as she overcame the problem by abandoning the broken equipment and drawing out the complex and multi-layered diagram by hand rather than abandoning it for that session.

Questioning was seen as another characteristic of lecturers' concern for students' building understanding of knowledge. Jack Mason (Accounting) explained, "I get them asking questions of each other as much as me asking questions of them so I would expect them to have enough understanding of the topic to be able to quiz someone else in the room about a topic and crucially understand if the answer is right as well" (JKM Interview).

Humour was mentioned by Gladys (Mathematics) and Jennifer (Drama) as a method of engagement. For example, Jennifer used humour to captivate students and guide them through thought-provoking issues. She explained: "...so then you go, 'so why aren't you all feminists?'then I tell a series of sexist jokes that blend through into feminist jokes, and just watch. And then we just reflect on why we laughed or didn't laugh, and how the laughter works in that process, and there we are" (JM Interview). Jennifer believes this approach helps students remember key issues: "... [the] whole point is that you make them laugh and then you have the moment to say, ' but let's think about the massacre ...' ... it's... dramaturgical in structure, you make them laugh, you get them on your sidethen you take them to the moment, and then the moment is charged and they never forget that" (JM Interview).

Informed by lecturers' concern for the student perspective and attention to building relationships with students to support their engagement in learning, a range of pedagogical strategies were detected in the analysis.

Some were idiosyncratic. For example, Gladys (Mathematics) used a pedagogic strategy focused around organic and seemingly spontaneous flow of ideas, which situated her passion, resilience and awareness of the students' perspective in a context which allowed for these attributes to blossom by modelling an integration of divergent and convergent thinking. Observations of her classes revealed a fluid flow and pace that kept students engaged and attentive in following new avenues with a critical as well as creative focus. Meanwhile, George's (Physics) teaching was underpinned by the belief that students should take responsibility for development of their knowledge. He enabled his students to succeed by giving them solid foundations to build on sequentially as well as creatively. Students, he indicated, had a shared responsibility in such preparation and foundation-building and he expressed concern about the need for students to work thoughtfully from a solid bedrock which meant taking their own share of responsibility for their learning: "... If they don't cooperate with you and they don't do their homework regularly, that also can be a bit of a hindrance" (GW Interview).

Other strategies were evident and the use of personal or real-life examples was an important pedagogic strategy for all lecturers to deliver information in an effective way and create a rapport with students. For example, Isaac (Business and Accounting) frequently used comic and everyday occurrences to illustrate a point. In one lecture he got down on one knee to act out a marriage proposal, demonstrating a concept that involved either a 'yes' or a 'no' answer, in the same way that such a proposal generally does. Students could relate to this universally-recognised gesture and found the example amusing.

As shown in Fig 2, driven by passion for their subjects, the examples above seek to illustrate how these lecturers foregrounded pedagogical strategies that were sensitive to students as discussed within themes 1 and 2. The following three themes were present in the varied pedagogical strategies used. Fostering independent thinking, striving for equality through conversation and collaboration, and finally orchestrating tools and resources for knowledge building, are each now discussed in turn.

3.3 Theme 3: Fostering independent thinking

This theme involved nurturing students' original ideas. Gladys (Mathematics) likened the independent thinking involved in creativity to becoming a 'Masterchef' of a subject, arranging components and building on existing knowledge to produce something original: "...the first few questions will be those recipe-like questions just so they can feel confident, 'yes I can do this'. Then you begin to ask more and more open ended questions where they can't simply apply a recipe...they're coming up with, 'I don't know, what could be some

really fancy, a gourmet, it's maybe a pizza cake, a pizza with a cake on top?' - which is horrible but at least they've come up with something interesting" (GM Interview).

Encouraging students to think from a different perspective was also an aspect of independent thinking. Isaac's use of music at the beginning of one of his Business and Accounting lectures was intended not only to engage students and welcome them, but he had chosen the lyrical content of the song carefully, to convey a message to the students relating to their topic of study. He explained in interview that personal and humorous examples encourage students to think from new perspectives. This strategy was also highlighted in the students' conceptual drawing; see example in Fig 5.

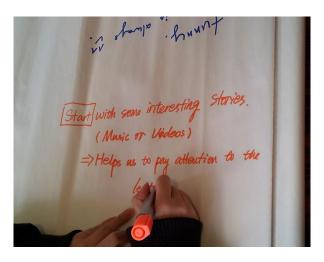


Figure 5. Conceptual drawing by one of Isaac's students

In Drama, Jennifer emphasises the importance of opening up dialogue to nurture independent thinking (as shown in Fig. 3). For example, she might allow a debate to diverge from the original topic of study, but closely observes to ensure students are communicating in a valuable way. She is concerned that students typically see teachers as the source of all knowledge and she argues that is not conducive to the independent learning needed in higher education and indeed, throughout adult life. She wants students to say: "I know how .. to get more than your opinion, everybody's opinion, and then to have my own opinion, and that that's worthwhile and I'm not just going to be a kind of, a rabbit in the headlights ... of the system...'" (JM Interview). This was exampled in one observed session where for example she opened the session using comedy before starting on the subject matter, to explain that her teaching is not deigned to give the students answers, but rather to get them thinking. She encourages them to be 'tantalised and outraged' by the lectures which are designed to spur them on to find out for themselves. The researcher's fieldnotes comment as follows: "By giving a hard-hitting message in a hilarious way, the students

seem to accept the challenge" (JM fieldnotes 1 p1). During this session Jennifer then proceeded to act out a solo role drama to challenge students about knowledge transfer and the desire for knowledge. The students roared with laughter. The fieldnotes document: "Because very complex ideas are explored and communicated through simple analogies and humour, it seems to help students to grasp the concepts and own their thinking on them. There is a hushed feel to the room and a sense that we are watching a fascinating performance. I notice that I can recall what she just said despite the concept being complex and not in my field." (JM fieldnotes 1 p 2). The discussion which followed encouraged debate, difference, individual engagement and Jennifer's pedagogic repertoire involved moving into close, dynamic, debate with students encouraging personal but justified response in each. This approach is borne out by what students said, for example "she kind of makes you do it for yourself... it does make you a bit more creative" (focus group page 8) and an emphasis on feeling empowered to enquire - "there's no wrong question, if you have a question ask it and then it can only be beneficial" (JM focus group p10). Students talk about how she connects with their individual journeys by sensing where they may be in their understandings.

Student 1: "she knows, she feels the room, like she feels how we feel at the moment.

Student 2: "Yeah, so if there's like a dead silence after she's finished, she'll know we haven't got it and she'll try and find out what we don't understand and then elaborate".

(JM Focus group p9)

They emphasise the ease at which she puts them in expressing their own ideas, saying how much "more engaging, more comfortable" they feel with her – "if you've got your own idea then you're going to be comfortable to even expand on that and not feel judged by it ... so you would keep pushing the creativity [in your own thinking]" (JM Focus group p10).

Thinking from students' perspective also encourages independent thinking. For example, Jack (Accounting) explains how he bases his teaching around the students' needs, so they stand a better chance of understanding a concept or theory, "If I was a student what would I not understand and what questions would I ask and then how would I explain, want somebody to explain that to me" (JKM Interview). This, in turn, may facilitate independent and original thinking, for example in problem-solving, as Jack put it: "what I would hope that they take away is if you're presented with a big problem that's complex you've got to break it into

something that you can understand so you can then latch on the next bit of the model or problem..." (JKM Interview).

3.4 Theme 4: Striving for equality through conversation and collaboration

This theme represents lecturers' efforts to foster equality through conversation and collaboration between students and also within the lecturer-student relationship.

Gladys' (Mathematics) students noted how she brings her personality and honesty into taught sessions, so students felt they could talk to her with confidence: "I could ask [her] when I didn't understand things in a lecture, whereas I definitely wouldn't do that with a lot of the other people here" (GM Focus Group). Gladys also shares humorous stories about her private life away from the University, enabling the students to relate to her on a more human level; the conceptual drawing of a person in a tree in Fig 6. illustrates one of Gladys' stories.. Students felt inspired to be taught by somebody so young, yet so well-respected in the field, and positioned her approach as quite different from that of other (older) staff, identifying with her in a way which matched her aspirations for them as young mathematicians: "... [she is] someone that we can listen to and understand and we feel like that could be us in about five years' time, rather than 50, whereas not with the other lecturers." (GM Focus Group). Gladys is keen to encourage fellow enthusiasts in the subject: "... the main thing is to think of the students as being equals, just a younger equal. So not to put myself up on some kind of pedestal and ... the person who knows everything ... and to treat the students as ...young mathematicians" (GM Interview).



Figure 6. Conceptual drawing by one of Gladys' students

Jennifer (Drama) believes her pedagogical background is shaped by the way she questions the prescriptive teacher training that she received: "It was really babyish kind of stuff... that actually one innately feels slightly sceptical about because it's presented to you in such a non-rigorous way, you know, that actually you sort of think well this is simply pop psychology, do you know what I mean, what use is this to me?" (JM Interview). Jennifer's teaching style has been developed through her own sense of what is right for her students; she shows a desire to question the pedagogy she has been introduced to through training programmes and in so doing manifests another aspect of her approach to creative pedagogy; reflective practice. For her, the lecturer-student relationship is forefront as she evaluates and reflects on her practice. Her students echo this; they mentioned how impressed they were when within the first two days of term Jennifer had learned all 100 students' names. One student stated that her doing this made them feel special and more motivated and this sense is shown also in Fig 4 above.

Jack (Accounting) too maintains that honesty and openness through reflective practice are important. Much like Gladys' (Mathematics) embodying of resilience, Jack's ability to admit when he feels like he has not done a good job at teaching something means that his students are much more likely to be honest with him when they feel their performance has not been as good as it should be. "I would be happy to say to the students I didn't think that went very well today....If I've done a bad tutorial I would not run off, like you know, so I'd be happy enough to stand there and go I don't think I got that across today...I would expect that from them, so if they do something that's not good enough I would rather they said I'm sorry Jack I didn't get it right today. That's good. It's just openness really" (JKM Interview). His students feel as though they are on the 'same level' as him, as they see that he loves teaching and they love his lectures because teaches them in an interesting way. This sense of engagement with students alongside them is represented in the students' conceptual drawings, for example the one in Fig 7.

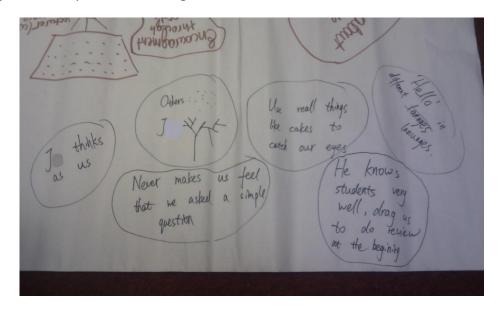


Figure 7. Conceptual drawing by one of Jack's students

3.5 Theme 5: Orchestrating the building of knowledge

This theme highlights lecturers' awareness of the raw materials, physical and mental, needed to expand students' knowledge and highlights tools and resources lecturers draw upon in their orchestration of learning toward this goal.

Gladys (Mathematics) explained her concern for students' understanding and capability with mathematics (Fig 8) means she does not utilise technology as much as other staff.

From observations, researchers noted her teaching used large whiteboards and OHP's rather than computer presentations. Gladys stated that: "It takes a long time to digest it so the point of writing on the white board is that I am slowed down to the speed at which I can write out mathematics.... if I use the projector I could just flick through a bunch of slides really quickly and they would have no idea what's going on. So ... it's forcing me to slow down so that hopefully enables the students to understand what's going on" (GM interview).

Sometimes the orchestration tools are not as obvious as one might expect. For example, Jennifer (Drama) lists experience, play, openness and knowledge as foundations that enable her to teach creatively, and uses the analogy of 'playing' when talking about planning her lectures. She speaks about collating material for a taught session and having to strategically position herself from a specific vantage point in order to teach the session in as effective a manner as possible, stressing the need to carefully consider "...what you're going to try and sell as the game to be played" (JM Interview). Playfulness allows Jennifer to present herself to her students from many different perspectives to teach different topics, which then in turn feeds into her wider pedagogical strategies such as provocation and connection-making.

Isaac (Business and Accounting) recognises when his students need a short break from difficult subject matter. Stemming from his capacity to empathise and think from his students' perspective, he chooses to occasionally provide an interlude for students to feel refreshed and ready to re-engage with the taught session. These short breaks can take the form of getting students to stand up and stretch, or sometimes other more inventive methods are used to give a shift of focus: "Today, it was a bit different, because I told a story... to get their minds off, ... and then they come back... with a message, hopefully" (IA Interview).

The lecturer's knowledge can also be seen as an orchestration tool. For example, Jack (Accounting) sees knowledge as crucial; when a lecturer knows their subject extremely well, they have the confidence to play with it to vary their teaching and tailor it to specific students' needs. Without that depth of subject knowledge, Jack argues, being adventurous with teaching is impossible, as you can only teach that small amount that you know.

4. Discussion

The study sought to explore lived experience of creative teaching in higher education from the perspectives of lecturers and students. The analysis revealed that these five lecturers and their students experienced creative teaching as a powerful dynamic in their lives at Aspirational University. Lecturers and students reported very positively on their experiences and the observed sessions reflected this.

Thus the difficulties and barriers, such as perceptions that such teaching involves extra work and resources that some researchers have identified (eg Chao, 2009; Clouder *et al.*; 2009, Gibson, 2010; McWilliam *et al.*, 2008) were not evident. Nor was the sense of creative teaching being taken for granted (Dawson, Tan and McWilliam, 2011; Livingston, 2010) or of it being unrecognised or of creative teaching being in some way 'against the grain' of the University's business, or even subversive (Clouder et al, 2009; Dawson et al, 2011, Gibson, 2010).

The analysis revealed little of the tension between creativity and performativity highlighted by other researchers (e.g., McWilliam *et al.*, 2008), although our participants were concerned with relevance and applicability in all subject domains, and some of the approaches used were more akin therefore to work-based learning approaches used in many higher education contexts. Although there was a notable absence of concern that approaches that are more work-based may be perceived to erode academic standards (Clouder *et al.*, 2009), this may be because within this study students were being taught in an academic setting and the stretch toward relevance thus occurred within that context.

In every case, lecturers engaged students through their passion and enthusiasm and by finding ways to make the content highly interesting and relevant to their students. Learning was happening through passion rather than through external reward and thus students demonstrated commitment, curiosity and depth of engagement. Students' own creative engagement was harder to document in this study, although lecturers valued this highly and sought to find ways for students to learn generatively, rather than passively.

The absences of these challenges documented by other researchers is perhaps unsurprising given that each of the lecturers studied had been nominated as strong in creative teaching. On the other hand the absence of challenges articulated by these lecturers contrasts with studies of other sectors in England, for example that undertaken by Craft *et al.* (2013) and Jeffrey and Woods (2003, 2009) of primary teachers in England, where performative tensions in particular are frequently mentioned by creative teachers as a challenge to their practice even though the studies reveal how strongly they overcome these in their creative teaching.

It was noted earlier in the paper that some researchers highlight contrasts in the ways that creativity is manifest in education in the East and in the West (Kim, 2005; Lim, 2004; Ng &

Smith, 2004) with implications not only for teaching but also assessment in higher education (Gibson, 2010). With its focus on Aspirational University in England only, this paper does not yield findings on this issue which will be explored in other papers in development from this study. However, one aspect of culture which struck this research team as intriguing was the capacity of each lecturer to seek to reach into the lives of students to make the learning enticing and relevant to them, and that this spanned a very wide range of student population. For example, the two lecturers located in the Business School were teaching classes that were 80% Asian students compared with the Drama class which was 90% white Caucasian, mainly European with some US students. The Lecturers seemed to be able to reach their students in relevant ways by adapting to the students' own context and expectations. Intriguingly, creative use of technology did not feature in this set of data; indeed one lecturer (as discussed) chose low-tech above high-tech, arguing mathematics demanded this.

The analysis captured ways in which creative teaching was enacted and perceived by students and lecturers in diverse subject domains at Aspirational University. The particular themes which emerged chimed closely with Sousa's (2007) Portuguese study of creativity in higher education, in which creative teaching is seen as close to effective teaching. This may explain why there was much less evidence of teaching for creativity (i.e., of student creative outcomes) than of teaching creatively (i.e., teaching in stimulating, compelling ways).

Sousa's (ibid) study highlighted two types of creative teacher in higher education: the "innovative-type" with a focus on igniting passion for their subject, or the "facilitator-type" with a focus on students' ideas and voice (Gibson, 2010). It is notable that in the present study, both innovation (lighting passion) and facilitation approaches (student-focused) were seen strongly. Further, the varied facilitative pedagogic strategies identified were informed by lecturers attending closely to students' perspectives and seeking to engage them in the subject matter. Nurturing independence, fostering conversation and collaboration and striving for equality with students were all goals supported by a range of tools and resources for building knowledge. Yet in every case studied, there is a strong innovation engine, since lecturers at Aspirational University were driven by their subject passion. Passion, then, seemed in this study, to be the all-encompassing engine for creative teaching although there is also an awareness of the performative, and marketised, context of their work.

This finding may provide some answers about why these lecturers do not manifest challenges to creative teaching found by other researchers. Perhaps passion for one's subject enables these staff at this English University to blend the performative with the creative, and to harness limited resources in productive ways.

5. Conclusion

This qualitative analysis of lived experience in an English University highlights passion for subject as a powerful and encompassing driver – or engine - of creative teaching in a range of diverse discipline areas. It is striking that despite the range of subjects (spanning the arts, humanities and STEM), passion for subject was so important. As educators around the world grapple with how to enhance creative teaching, mining further the distinctions between creative and uncreative teaching, the characteristics of creative teaching will be important. A key area that remains unexplored from this study concerns understanding better the role played by technology in creative teaching in higher education elsewhere.

6. Acknowledgements

This international research study, which was led overall by Principal Investigator Dr Ananda Kumar Palanappian (University of Malaya) was funded by the University Of Malaya to whom we express our gratitude. Thanks are due to Dr. Palaniappan, for his initial input on the methodology section and for comments on later drafts of this article. We are grateful also to Dr Chanisa Apichatabutra with whom we have discussed and developed, along with Dr Palaniappan, the project-wide approaches to analysis of data and its interpretation. Finally our thanks are due to the wider team of colleagues in Malaysia and Thailand: Dr. Pradip Kumar Mishra, Dr. Adelina Asmawi and Dr. Lau Poh Li, whose perspectives informed these discussions.

7. References

Amabile, T.M., Barsade, S.G., Mueller, J.S. & Staw, B.M. (2005). Affect and creativity at work. *Administrative Science Quarterly*, 50, 367–403.

Belluigi, D. Z. (2009). Exploring the discourses around 'creativity' and 'critical thinking' in a South African creative arts curriculum. *Studies in Higher Education*, *34*(6), 699–717.

Boden, M. A., (2004). The *Creative Mind: Myths and Mechanisms*. (Second edition). London: Routledge.

Boud, D. & Solomon, N. (Eds.) (2001). *Work-based learning: A new higher education?* Buckingham: Society for Research into Higher Education and Open University Press.

British Educational Research Association. (2011). *Ethical guidelines for educational research*. London: BERA. Retrieved January 5, 2012 from http://www.bera.ac.uk/publications/guidelines/

Chao, C. (2009). Dimensions of innovation and creativity in TESOL: Views in eight teachers from Taiwanese Higher Education. *English Teaching and Learning*, 33(2), 147-181

Chappell, K. & Craft, A. (2011). Creative learning conversations: Producing living dialogic spaces. *Educational Research*, *53*(3), 363-385.

Chappell, K., Rolfe, L., Craft, A., Jobbins, V. (2011). *Close encounters: Dance partners for creativity.* Stoke on Trent: Trentham Books.

Clouder, L., Oliver, M. & Tate, R. (2008). Embedding CETLs in a performance oriented culture in higher education: Reflections on finding creative space. *British Educational Research Journal*, *34*(5), 635–650

Cramond, B. (1999). The Torrance tests of creative thinking: Going beyond the scores. In A. S. Fishkin, B. Cramond & P. Olszewski-Kubilius (Eds.), *Investigating creativity in youth: Research and methods* (pp. 307-327). New York: Hampton Press.

Craft, A. (2001a). *An analysis of research and literature on creativity in education*. London: Report for qualifications and curriculum authority. Retrieved October 16, 2013 from http://www.euvonal.hu/images/creativity report.pdf

Craft, A. (2001b). Little c creativity. In A. Craft, B. Jeffrey & M. Leibling (Eds.), *Creativity in Education* (pp. 45-61). London: Continuum.

Craft, A. (2005). *Creativity in schools: Tensions and dilemmas*. Abingdon: Routledge Falmer.

Craft, A., Cremin, T. Hay, P. & Clack, J. (2013.) Creative primary schools. *Ethnography and Education*, *9*(1), 16-34.

Dale, C. (2008). IPods and creativity in learning and teaching: An instructional perspective. *International Journal of Teaching and Learning in Higher Education*, 20(1), 1-9.

Dawson, S., Tan, J. P.L. & McWilliam, E. (2011). Measuring creative potential: Using social network analysis to monitor a learners' creative capacity. *Australasian Journal of Educational Technology*, *27*(6), 924-942.

European University Association [EUA]. (2007). *Creativity in higher education: Report on the EUA Creativity project 2006-2007.* Brussels: EUA.

Fautley, M. & Savage, J. (2007). *Creativity in secondary education*. Exeter: Learning Matters.

Firestone, F.A. (1993). Alternative arguments for generalizing from data as applied to qualitative research, *Educational Researcher 22*(1993), 16–23.

Gibson, R. (2010). Points of departure: The 'art' of creative teaching: Implications for higher education', *Teaching in Higher Education*, 15(5), 607-613.

Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New York: Aldine de Gruyter.

Hennessey, B. A. & Amabile, T. M. (2010). Creativity. *The Annual Review of Psychology*, 61, 569-98.

Holcombe, M., & Shonka, A. (1993). Conceptual mapping: A tool for self-reflection. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, *67*(2), 83-84.

Jeffrey, B. & Craft, A. (2004). Teaching creatively and teaching for creativity: Distinctions and relationships. *Educational Studies*, 30 (1), 77-87.

Jeffrey, B., and P. Woods, (2003). *The Creative School: A Framework for Success, Quality and Effectiveness*. London: Routledge Falmer.

Jeffrey, B., and P. Woods, (2009). *Creative Learning in the Primary School*. London: Routledge.

Karakelle, S. (2009). Enhancing fluent and flexible thinking through the creative drama process. *Thinking Skills and Creativity*, *4*(2), 124-129.

Kaufman, J. C., & Beghetto, R. A. (2009). Beyond big and little: The four c model of Creativity. *Review of General Psychology*, 13, 1-12.

Kim, K.H. (2005). Learning from each other: Creativity in east Asian and American education. *Creativity Research Journal*, 17(4), 337-347.

Lim, H.A. (2004). Creativity, culture and entrepreneurialship. Symbiosis (February), 4-10.

Little, B. & Brennan, J. (1996). *A review of work based learning in higher education*. Sheffield: Department for Education and Employment.

Lincoln, Y. S. & Guba, E. G. (1985). Naturalistic inquiry. Beverley Hills, CA: Sage.

Livingston, L. (2010). Teaching creativity in higher education. *Arts Education Policy Review*, 111, 59-62.

Madjar, N., Oldham, G. R. & Pratt, M. G. (2002). There's no place like home? The contributions of work and nonwork creativity support to employees' creative performance. *Academy of management journal*, 45(4), 757-767.

McDonald, R. (2011). No substitute for the real thing: A discussion paper on vocational education and training. Melbourne: National Quality Council Secretariat

McWilliam, E. & Dawson, S. (2008). Teaching for creativity: Towards sustainable and replicable pedagogical practice. *Higher Education*, *56*(6), 633-643.

McWilliam, E.L. & Haukka, S. (2008). Educating the creative workforce: New directions for 21st century schooling', *British Education Research Journal*, 34(5), 651-666.

McWilliam. E., Hearn, G. & Haseman, B. (2008). Transdisciplinarity for creative futures: what barriers and opportunities? *Innovations in Education and Teaching International*, 45(3), 247–253.

Merriam, S.B. (1998). *Qualitative research and case study applications in education,*. San Francisco: Jossey-Bass

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA: Sage.

Morgan, D. L. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research*, 1(1), 48-76.

Moran, S. (2010) Commitment and Creativity: Transforming Experience into Art. In C. Connery, V.P. John-Steiner & A. Marjanovic-Shane (Eds.). *Vygotsky and Creativity: A Cultural-Historical Approach to Play, Meaning Making and the Arts* (pp. 141-160). New York: Peter Lang.

Moran, S. (2011). Creativity in school. In K. Littleton, C. Wood, & J. Kleine Staarman (Eds.), *International handbook of psychology in education* (pp. 319–359). Emerald: Bingley.

Ng, A.K. and Smith, I. (2004). Why is there a paradox in promoting creativity in the Asian classroom? In L. Sing, A., Hui, G. Ng (Eds.), *Creativity: When East Meets West* (pp. 87-112). Singapore: World Scientific Publishing:

Onwuegbuzie, A.J., &Teddlie, C. (2003). A framework for analyzing data in mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), Handbook of mixed methods in social and behavioural research (pp. 351-383). Thousand Oaks, CA: Sage.

Pink, S. (2006). Visual methods. In C. Seale C., G. Gobo, J. Gubrium & D. Silverman (Eds.), *Qualitative Research Practice* (pp. 391-406). London: Sage.

Robinson, K. (2001). Out of our minds: Learning to be creative. Oxford: Capstone.

Robinson, K. (2006). *Why schools kill creativity*. Retrieved November 2, 2012 from http://www.ted.com/talks/ken robinson says schools kill creativity.html)

Rhodes, M. (1961). An analysis of creativity. The Phi Delta Kappan, 42, 305-310.

Rose, G., (2004). Visual methodologies: An introduction to the interpretation of visual materials. Thousand Oaks, CA: Sage.

Rosenstein B., (2002) Video Use in Social Science Research and Program Evaluation. *International Journal of Qualitative Methods*, 1(3), 22-43

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

Sawyer, R. K. (2006). *Explaining creativity: The science of human innovation*. New York: Oxford University Press.

Shenton, A.K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22 (2004) 63–75.

Simonton, D. K. (1994). *Greatness: Who makes history and why*. New York, NY: The Guilford Press.

Sousa, F. C. (2007). Teachers' creativity and effectiveness in higher education: Perceptions of students and faculty. *The Quality of Higher Education*, 2007(4), 21-37.

Starko, A. J. (2010) *Creativity in the classroom: Schools of curious delight*. (4th edition). New York, NY: Routledge.

Sternberg, R. J. & Lubart, T. I. (1999). The concept of creativity: Prospects and paradigms. In R. J. Sternberg (Ed.), *Handbook of Creativity* (pp. 3-15). New York, NY: Cambridge University Press.

Thomson, P. (2008). Children and young people: Voices in visual research. In: P. Thomson, (Ed.), *Doing visual research with children and young people* (pp. 1-19). London: Routledge,

Vernon, P.E. (1989). The nature-nurture problem in creativity. In: J.A. Glover, R.R. Ronning, and C.R. Reynolds (Eds.), *Handbook of creativity* (pp. 93-110). New York, NY: Plenum Press.

Vosberg, S.K. (1998). The effects of positive and negative mood on divergent-thinking performance. *Creativity Research Journal*, *11*(2), 165-172.