Encouraging Creativity in College Students as a Skill for the 21st Century

Helen Pearce

Fanshawe College, London Ontario, Canada

Abstract

As governments and employers worldwide call for a more creative workforce, pressure mounts on higher education to deliver graduates with the requisite skills. Creativity can be viewed as both an economic driver and as a set of humanistic competencies needed to survive in the 21st century. A study of 13 students in their final year at an Ontario college explored the students' perceptions of creativity and how it was reflected in their most and their least creative experiences in college. The results suggest the students have a humanistic view that associates creativity primarily with autonomy. The role of the teacher was significantly different in the students' most creative experiences compared with their least creative experiences. The timing of when the experience occurred and whether it reflected an authentic learning environment were two curriculum factors that influenced whether the students interpreted their experience as their most or least creative.

1. Introduction

Creativity can be viewed as both an economic stimulant and as a set of humanistic competencies for survival in the 21st century. The economic view has been evident since the turn of the century when governments worldwide began putting forward platforms linking economic growth with innovation and a creative workforce. Links between creativity and the economy have also been evident in media reports and in popular books such as Howkin's [8] *The Creative Economy*, Torr's [21] *Managing Creative People: Lessons in Leadership for the Ideas Economy*, as well as Richard Florida's [6] *The Rise of the Creative Class* and [7] *The Flight of the Creative Class*.

The humanistic view sees creativity as embedded in the development of the individual towards self-actualization and the acquisition of skills to survive and thrive in a rapidly changing society. In 1993, the United Nations Education, Scientific and Cultural Organization (UNESCO) recognized the increasing attention that was being given to creativity and innovation and so it established the World Commission on Culture and Development [23] to

explore cultural issues worldwide. The Commission, which was made up of 21 countries, concluded that "it is ever more necessary to cultivate human creativity" to prepare people to adapt to a changing society. The committee also cautioned that "the notion of creativity itself must be more broadly used, not just to refer to a new artistic object or form but to problem-solving in every imaginable field" (p.23).

Higher education has traditionally played a key role in ensuring graduates develop the skills that are increasingly in demand by society and the workforce. The European University Association (EUA) [5] has warned that unless European universities create an environment "that favours the creativity of the human potential...the very goal of a European knowledge society would be at stake".

However, creating an environment that enables the development of students' creativity is not easy. Defining, teaching, and assessing creativity is challenging, particularly amid other economic and quality assurance pressures currently being felt in higher education. While the amount of literature about creativity in education is increasing, research specifically about creativity in higher education is still in short supply. A particular gap exists in literature and research about higher education students' views of creativity (Petocz, [12]; Smears & Unsworth, [19]).

This qualitative study explored the most creative and the least creative experiences of 13 students in the final year of four different academic programs at an Ontario college. The goal was to gain insight into how the students perceived creativity and what kind of teaching and learning environments enhanced or hindered their creativity.

This paper summarizes the research methodology, explores definitions of creativity and then focuses on the three main themes that were consistently evident in the students' narratives. It concludes with suggestions that may assist educators and administrators to design and deliver education that supports creativity as a skill for the 21st century.

2. Methodology

This phenomenological study explored the lived experiences of creativity of 13 students' enrolled in four different programs at an Ontario college. The

primary method of data gathering was narrative inquiry, with each student telling the story of their most and their least creative experience. The students were not influenced by being given a definition of creativity prior to their narrative, nor were they prompted in particular directions by preset interview questions. Key themes were identified during analysis of the narrative transcripts, and these themes were explored in more detail during follow up focus groups.

The methodology used was narrative inquiry because understanding the students' experiences based on their stories was more likely to get to the essence of how they felt than by asking their opinions based on predetermined survey or interview questions. Savin-Baden and Van Niekirk [16] proposed that in "narrative inquiry...storytelling tends to be closer to actual life events than other methods of research that are just designed to elicit explanations" (p.464). Opinions may reflect what a person thinks is the expected, correct, or safe response whereas stories are more likely to provide rich reflections of the lived experiences.

All students were in the final year of a three year program in Fine Art, Business Administration – Marketing, Architectural Technology, or Child and Youth Worker at an Ontario college. Six of the students were female and seven were male. Most students were 21 or 22 years old, and one of the male participants was 26 years old.

3. Results

The study results suggest the students have a humanistic view that links creativity almost exclusively to self-expression and self-determination. What was generally missing in the students' views however was any acknowledgment of the role of external influences such as the audience, the teacher, or experts in the field, in determining whether something is accepted as creative. The study results also show three themes, autonomy, the curriculum, and the role of the teacher, that were common among all the students' narratives and focus group discussions.

Autonomy was evident in all of the narratives primarily through the students' talking about whether they were able to express themselves and make their own decisions. The students described the role of their teachers as being supportive and not intrusive during their most creative experiences and restrictive or controlling during their least creative experiences.

The curriculum theme emerged because all of the students described their most creative experiences occurring during their final year of study while their least creative experiences were during earlier semesters. The curriculum theme was also evident through the students saying that creativity emerged

when they applied course content during 'real life' experiential learning activities.

The following sections explore the students' perceptions and definitions of creativity, followed by a discussion about each of the three themes that emerged from this study.

4. Definitions

When asked to tell the story of their most and least creative experiences none of the students asked for clarification about what was meant by 'creative'. The only hesitancy from any of the students was in deciding which of their experiences would qualify as 'the most' creative, and several students tried to present two as being equally their most creative experience.

The narratives and focus group discussions strongly reflected a humanistic understanding of creativity associated with self-determination and self-expression. Creativity has traditionally been associated with the arts and aesthetics, however that view was not reflected among the students in this study, not even among those in the Fine Art program who might be expected to make stronger links between creativity and the arts. One student in the Child and Youth Worker program referred to creativity as having both a 'craft' as well as a 'problem solving' interpretation, but none of the other students made any reference to associating creativity with the arts. Each of the students spoke about creativity predominantly in terms of autonomy and self-determination.

Definitions of creativity have been debated for decades, but consensus is currently centering on creativity as something that is 'novel' and 'appropriate'. (McWilliam, Dawson & Tan, [10]; Craft, [3]; Watson, [22]). 'Novel' incorporates the idea of being new or unique, while 'appropriate' refers to being suitable or fitting for the circumstance. 'Appropriate' ensures that creativity doesn't simply mean bizarre or random. For example, if someone with no musical training randomly presses piano keys the result may be novel but it would not likely be considered appropriate by listeners.

During the narratives and the focus groups all of the students described creativity as novel but they didn't suggest any connection with creativity being appropriate. Instead, they linked the novelty of creativity with an individual's self-expression so that creativity was seen as something that is a new, original expression from an individual regardless of whether it was appropriate for the circumstance.

4.1 Creativity as novel

Despite the apparent certainty they expressed in their individual narratives, all of the students were

hesitant during the focus groups when asked for their definitions of creativity. They gave vague definitions of creativity individually, and as a group they reached a consensus that creativity defied definition because it was unique and personal for each individual.

I think we all have our own definition of creativity, it's one of those words you can't put a definition on (Rita).

Creativity could be cooking, could be drawing, could be creating buildings, could be working with kids. It's all individual but there's all sorts of different avenues for it (Erin).

My personal one (definition) is pretty much just envisioning it and trying to get someone else to see the same thing that's going on inside of my head whether it be through writing or drawing or painting or whatever it is (Buddy).

The students all agreed that a key component of creativity was that it was represented by something being novel, new, or unique.

I think it's just going beyond anything you've seen before in creating something absolutely new, and that's creativity the way I look at it (Lynn).

Creativity for me, I guess, would be creating something new or creating something from my own thoughts (Kate).

Although the students agreed that creativity was represented by something new they were less certain about how faculty defined, valued, or assessed creativity. All of the students said that they were unsure how their teachers viewed creativity because they never talked about it in class. However, they also said they thought their teachers valued creativity and most likely understood it as being something new or different. They also thought their teachers gave better marks if they thought a student's work was creative even though creativity wasn't included in the grading rubric.

I don't think they ever really use the word creative (Erin).

Well I guess they tell us to be creative when we're doing stuff in our field but we don't really get examples (Kate).

It's just subtly interpreted with the rest of the rubric (Erin).

They don't actually put creative or creativity on the rubric but there's a little statement like 'is it different from something used in class' or 'it's your own idea' kind of thing (Kate).

The results from this study are similar to what Oliver et al [11] found in a study of university

students' views of creativity in the Imaginative Curriculum project in the UK. The students in that study showed confusion and inconsistent ideas about definitions of creativity, leading researchers to conclude that the lack of classroom discussions about creativity was holding the students back from having a frame of reference to understand their own emerging creativity.

It may be possible that even a small change – helping students learn how to talk about creativity, particularly in the context of their study – would have an important effect enabling students to lay claim to creativity in a way that currently eludes them within academic context (p.58).

Discussions about creativity could help the students better understand how the faculty value and measure the students' creativity as well as help the students see their own emerging creativity in the context of the subject being studied.

Classroom discussions about creativity could also help students better understand the role of appropriateness in creativity and its association with pushing boundaries and taking risks. As outlined in the following section, appropriateness is a critical factor in creativity but it was rarely reflected in the students' narratives or focus group discussions.

4.2 Creativity as appropriate

Understanding creativity as being 'appropriate' carries a sense of external validation or boundaries. An individual, a group such as a profession, or an entire society may decide whether something is creative based on whether it is considered appropriate or fitting. Such a view of creativity also implies changing boundaries. For example, an artist whose work is considered inappropriate and therefore not creative by one society may be considered to be a creative genius when viewed by a different society.

The boundaries of creativity can move slowly over time as the understanding of what is appropriate changes gradually. However, if numerous factors align at the same time, the boundaries of creativity can sometimes move further and faster with widespread acceptance of a new understanding of what is appropriate. Radical changes can occur and move boundaries when the majority of people in a profession or culture agree with a new view of what is considered creative. The new boundary then becomes the norm of creativity until the boundary is pushed once again.

The students in this study saw creativity as embedded in self-expression and they did not make reference to external validation or to boundaries. In

their narratives and in each of the focus groups students expressed an understanding that something was creative because they created it themselves regardless of the opinions of others.

Dillon described creativity as being so centered on individual self-expression that it isn't determined by boundaries of being appropriate.

Creativity is just something that is somebody's, it's their own creation...My dad asked me 'How do you think your design is?' and I said 'Well I think it's the best because it's mine'. But that's because I created it, it's mine. It's like Frankenstein creating a monster, an ugly old monster but he loved it because it was his, it was his creation (Dillon).

Such a view of creativity is challenging in an educational setting which, by its very nature, includes boundaries and determinations of appropriateness through evaluations and grades. If creativity is only determined by being an original creation by an individual then faculty would have no room to distinguish among degrees or types of creativity demonstrated in students' work. In fact, virtually all students' work would get full marks for creativity if each student said that they came up with it on their own and produced it themselves. It may be that this fuzziness around deciding what is and isn't creative explains why creativity is seldom taught, discussed, or evaluated in higher education.

The Four-C model of creativity (Beghetto & Kaufman [1]) is a framework that may help faculty guide students through progressive stages of creative development. The model consists of mini-c, little-c, pro-c and big-C levels of creativity which cover the continuum from novice through to expert and exceptional.

Early creativity literature focused primarily on eminent individuals who showed highly unusual abilities and who made major unique contributions to society. Such geniuses were considered to have big-C creativity. (Simonton, [18], Beghetto & Kaufman, [1]). More recent literature has introduced the idea of little-c creativity which encompasses a range of problem-solving and original thinking in daily life. (Simonton, [18]; Richards, [14]; Craft, [3]).

Beghetto & Kaufman [1] have proposed two additional categories, mini-c and pro-c creativity, which may be particularly beneficial to supporting the creative development of higher education students. Mini-c represents creativity that is personally new, original, and meaningful to the individual even though it may not be unique within a broader domain. Pro-c creativity represents creativity at a level of expertise that distinguishes that person from others within a particular professional domain even though they have not yet reached the big-C creativity level.

The students in this study generally showed a mini-c understanding of creativity that was personally meaningful but that didn't require their teachers, peers or others to agree. While there is value in mini-c creativity the students could benefit by moving towards pro-c creativity so that they could better understand the role of their peers, experts, and others in determining the boundaries of creativity. Educators could help students to see creativity as a continuum that moves from mini-c to little-c, pro-c and big-C creativity so that graduates might be better able to move into their chosen discipline aware of the role of external validation and boundary pushing in producing creative work in a professional context.

The students' definitions and understandings of creativity discussed thus far provide an overview of how they perceive creativity in higher education but further insight comes from a closer look at the themes that were common among all the narratives and focus groups. The following sections explore the three themes of autonomy, curriculum, and the role of the Teacher which were evident in the students narratives and focus group discussions.

5. Autonomy

Autonomy was evident through each student's narrative about their most and their least creative experience, and these expressions were almost always apparent within the first few sentences. Autonomy is defined in this study as expressions of being self-directing and able to make independent decisions.

Each student's narrative of their most creative experience focused on their feelings of freedom from restrictions particularly in the sense of self-expression and the ability to make their own decisions.

There's no limits, so you're allowed to go ahead and research...we could use any means necessary to achieve our goals (Chad).

You're given a client and they give you kind of a problem that their business is dealing with and...you're allowed to use everything that you've learned throughout your time at school and put it to use (Dawn).

This is not to suggest that the students wanted a 'free for all' environment that allowed them to do whatever they wanted with no restrictions. One student described a group assignment to design a dream home that seemed to allow for unlimited creativity but that turned out to be one of his least satisfying projects because it was too unrestricted and wasn't based on reality. He said the final product could never actually be built, and he threw the assignment away because it was of no value to him.

He would have preferred if the project required students to come up with creative solutions within realistic boundaries.

The autonomy that the students valued in their most creative experiences was also associated with problem solving and making difficult decisions.

It's really difficult, but it turned out to be a really good experience (Dawn).

It slowly developed...it's been a lot of trial and error (Ann).

We had a lot of hiccups and a lot of spots where we were stuck, so we had to find ways around that and branch out in new directions and come up with ways to solve the problems (Jon).

The students valued the challenging aspects of autonomy associated with creativity rather than seeing it as a careless, unrestricted environment to simply do whatever they wanted.

Their expressions of autonomy also included a sense of self-identity and self-expression. They valued their opportunities to make their own decisions, but tied in with that was a strong sense of valuing the ability to express themselves and develop their identity.

I think it's important to let students be creative especially at this age when you're ultimately finding who you are...your opinions change, and you see things differently and then it brings out a different side of you (Rico).

We have a lot of different options we can choose from, so it's a really good opportunity to flourish and really see where you can end up at an end result and be really surprised by yourself (Cameron).

The students' expressions of self-identity associated with autonomy reflect concepts similar to those put forward by psychologist Abraham Maslow, perhaps best known for his work on the hierarchy of needs of humans. He felt that an individual's awareness of their own nature or self-identity was necessary in order to become self-actualizing, which was representative of reaching their highest potential. Maslow [9] felt people who reached their highest potential had characteristics that included creativity and a keen awareness of their individuality or self-identity.

My feeling is that the concept of creativeness and the concept of the healthy, self-actualizing, fully human person seem to be coming closer and closer together, and may perhaps turn out to be the same thing (p 57).

Maslow [9] was critical of the traditional education system and felt that the primary purpose of education should be to help learners move through

stages of exploring their self-identity to becoming self-actualizing individuals who achieve their full potential.

The goal of education – the human goal, the humanistic goal...is ultimately the “self-actualization” of a person, the becoming fully human, the development of the fullest height that the human species can stand up to or that the particular individual can come to. In a less technical way, it is helping the person to become the best that he is able to become (p. 169).

The importance of autonomy to the students' sense of creativity was also dominant in their narratives of their least creative experiences. The students described their least creative experiences as being those in which they had limited choices and were expected to produce work or express themselves in particular pre-determined ways.

I really feel that they're not allowing the students to be themselves and to portray their personality in class, and rather they're just looking for a specific type of student to sit and think (Rita).

I feel that if they do try to make this into, you know, what's that novel, 1984? And everyone is, you know, just 'under the man' and we're all robots, that's bad. We need individual creativeness to find solutions and answers to things we don't know already (Rico).

Although autonomy was a predominant theme for all the students in talking about both their most and their least creative experiences, it was intertwined with the other themes that emerged in this study as well. As outlined in the following sections, the students' associations of creativity and autonomy were dependent on factors related to the structure of the curriculum and the influence of the teacher.

6. Curriculum

Two common curriculum themes were evident among all the students' narratives. First, the students' most creative experiences occurred during their final semesters while their least creative experiences occurred during the early semesters. Secondly, most of their creative experiences occurred during authentic or simulated authentic learning environments.

6.1. Timing of Creative Experiences

In telling the story of their most creative experience each student referred to it happening at the end of their program and they referred to “my entire final year” or “this year” or “my last semester”. Similarly most students began the

narrative of their least creative experience by referring to their first semester or their entire first year.

The blending of the curriculum theme with the autonomy theme was frequently evident in the students' expressions of freedom in their final year compared with restrictions in the first year.

We have basically no guidelines that we can follow (in the final year)...it's pretty much completely open for creativity, it's great. In past semesters there have been a lot of restrictions (Cameron).

I found that in fifth and sixth semester they let you be very creative in the sense of design and own thought...It wasn't that good in the beginning, creativity was very limited (Rico).

All of the students said they thought the reason for the difference between creativity in the early semesters compared with their final year was because the faculty wanted students to learn the rules or foundations before going out on their own. Although the students didn't like this approach they were not able to suggest alternatives. They expressed a sense of resignation that this traditional form of educational delivery was not likely to change.

Boden's [2] framework of combinational, exploratory, and transformational creative thinking may be one way that faculty can help students overcome some of their frustration at needing to learn the rules before breaking them. Boden suggests starting students with combinational creative thinking in which they interact with artifacts and concepts already accepted in the discipline and experiment with recombining them in different contexts. She says such activities help a student to understand what is currently accepted in the field and that this type of creative thinking supports the students developing self-confidence by proposing new combinations of existing ideas. This approach supports creativity and experimentation among novices while they are learning the rules.

Exploratory creative thinking, which is the second type of creative thinking in Boden's [2] framework, occurs when an individual knows some of the rules and begins to experiment within the parameters of the boundaries of what is accepted and appropriate within the discipline. By encouraging this type of creative thinking faculty may be able to support the students taking risks and testing boundaries in the relative safety of a higher education environment before heading out into the profession after graduating. This type of creative thinking is more appropriate to students who are beyond the early semesters of their program after they have acquired fundamental skills and are progressing towards demonstrating the skills used in the discipline or profession.

The third type of creative thinking in Boden's [2] framework is called transformational and is represented by the altering of one or more previously accepted aspects of the discipline to result in something that has not previously occurred or been accepted. Transformational creativity implies a level of expertise of someone who knows the rules but who pushes the boundaries to move their discipline to a new acceptance of what is appropriate. This type of transformational creative thinking is demonstrated by individuals who have gained a degree of expertise beyond a novice level and who are closer to a big-C level of creativity.

Boden's [2] framework may help educators introduce creative thinking at early stages and progressively develop students' abilities to take appropriate risks and push boundaries. Such an approach could help students develop creativity progressively rather than being restricted in their early semesters followed by sudden freedom and the teacher's expectation that they become creative in their final year.

Although most students welcomed creativity in their final year, a few of them found the sudden freedom disconcerting.

The freedom actually is kind of hard because you're so used to the first two years them telling you 'paint this', 'draw this', and now they say 'do what you want' and you have no idea what to do, so you're very lost (Ann).

However, the majority of students welcomed the switch to a more creative environment and described it in terms of "what I've been waiting for" and "it feels great now".

6.2. Authentic Learning Environments

Authentic and simulated authentic learning environments provide students with experiential activities that require them to apply the knowledge, skills, and abilities that they are learning in their courses to 'real life' situations. Authentic environments include work placements off campus or projects involving an external client. Simulated authentic learning environments occur when students are given examples or simulations of existing problems in the community to try to solve, even though the students don't work directly with community partners.

We get to do placement, so the skills that we have learned in class we get to figure out how we want to interpret that. We get to formulate our own kind of questions (Erin).

Getting that real world experience and coming up with creative solutions and analyzing information and putting our own perspective on issues (Jon).

While it would be tempting to conclude that since students associate creativity with authentic projects and real world applications then perhaps they would associate theory/lecture courses with a lack of creativity. However, that wasn't the case. While it's true that students frequently mentioned theory/lecture courses as associated with their least creative experiences, there were exceptions when the theory/lecture courses included autonomy and self-expression.

Several students mentioned their 'runner up' most creative experience was a lecture/theory course which required them to discuss traditional theories while also giving their own interpretation of how the theory applied to current society, or to give examples of how the theories apply to their own experiences. The students felt empowered to express their own views and to make decisions about how the topics they were studying could be adaptable to 'real life'.

Although authentic learning environments were evident in each of the student's most creative experiences, such learning activities did not automatically produce creative environments. In fact, about half of the students said their least creative experiences occurred during authentic learning projects. The determining factors were the interwoven themes of the role of the teacher and a sense of autonomy.

For example, Dawn's most creative experience was a group project to design a marketing campaign for a community client. The students worked long hours and although the experience was challenging the students said they learned more than in other projects because they were forced to draw on everything they had learned in their courses and use a trial and error approach to find solutions.

You're given a client and they give you kind of a problem that their business is dealing with and...you're allowed to use everything that you've learned throughout your time at school and put it to use (Dawn).

Dawn said the teachers were supportive, but they also pushed the students to keep trying to improve their work and look for more solutions.

Dawn's least creative experience was also a project for a community client and although it was similar to the project in her most creative experience, it differed because she felt the teacher restricted the students' opportunities to discover their own solutions and to make mistakes. Dawn felt that her autonomy to make decisions while applying what she had learned in class to a 'real life' situation had not been valued by the teacher.

The students' narratives clearly point to experiential learning in authentic and simulated authentic environments as being strongly supportive

of their creative development. However, an authentic or simulated authentic learning activity is not seen as creative on its own unless it also allows the students to make decisions and take risks with the guidance of a supportive but not controlling teacher.

7. Role of the Teacher

Although the students talked about the role of their teacher in both their most and their least creative experiences, they referred to teachers more often during the narrative of their least creative experience. They described their least creative experiences as lacking in opportunities for autonomy and self-expression, largely due to the controlling nature of the teacher.

Chad's least creative experience in Architectural Technology was a project to redesign an existing building using a specific style for the exterior. He followed the requirements of the assignment even though he didn't particularly like the architectural style he was required to use. He also tried to do extra research and to include original elements in the interior of the building that went beyond the requirements of the assignment. He described spending extensive time researching solar walls and thermal energy but when he sat down with his teacher he didn't have a chance to talk about his work.

It was pretty much the most negative experience I could ever have in my life. He didn't know what a solar wall was. He wasn't willing to talk about it, and that was the most difficult part because he sat down and right away with a red pen starting crossing things out...I was just so shut down (Chad).

Chad said he wouldn't have minded if the teacher had explained why his ideas wouldn't work, but instead he felt devalued and didn't know if or how he went wrong in applying the ideas he had researched.

Chad's expression 'being shut down' was also used frequently by other students in their narratives and during focus groups to describe how they felt when teachers weren't open to hearing their thoughts and opinions. In contrast, in their most creative experiences, the students consistently described teachers as having a guiding, mentoring role that inspired them to work harder and try out new ideas.

I had two fabulous teachers and the knowledge I learned just from having conversations with them and them telling stories and just working through problems with them was incredible. I learned more in those 12 hours a week I had with them than I did in most of my two years in my undergrad (Jon).

He allowed me to explore new ideas...he pushed me to change...so I guess that feeling he had that there's always something better sort of was instilled in me and now I take that with me in everything I do (Chad).

The students' comments related to teacher control were often linked to grades and assignments. Only one student mentioned grades during the story of her most creative experience, and she spoke positively about how the project grade was determined. However, during the narratives of their least creative experiences the students frequently expressed conflicted feelings. They described feeling torn between trying to be creative and risking getting a poor grade if the teacher didn't like their work.

Buddy described wanting to take risks and be creative but he added that it became increasingly difficult as he progressed into courses with multiple teachers.

You have three different opinions coming at you and you have to try to make all three of them into your work in order to get good grades and to satisfy the teachers. That's a challenge in itself because it's hard enough to get one opinion into your own work let alone two or three. It can drive you crazy (Buddy).

Rico described feelings that were reflected by many of the students when he described losing grades if he pushed the boundaries set by the teachers.

I think that they impede upon people being creative cuz they build you up in a box and they say 'stay in this box', and fill it up, but as soon as you step out of it, you know, 'we're going to start taking marks away' (Rico).

Similarly, Dillon and Stephanie talked about not pursuing their own ideas because of the influence of their teachers.

It's mainly been 'no, no, no, stay away from that'....they don't let us be extremely creative, they kind of just want us to be all the same, you know (Dillon).

Sometimes I've suggested something and it's been like 'oooh nooo, don't do that' and right away it's been shot down. I've had that happen to me a few times and it's like 'Well ok, right, I guess they know what's right so I won't do that'. But if they were more open and letting me explain more why I want to do this or if they would think it over, not just shoot it down, perhaps that would improve creativity among students (Stephanie).

The students showed conflicted feelings about the relationship between grades, creativity and the influence of their teachers. On the one hand they felt that they needed to do what the teacher wanted in order to get good grades, and most of the students were hesitant to take risks or try something creative because it could impact their marks. However, most of the students also said that there were times when they did take a risk and do something that was really important to them to try even if it meant getting a lower grade.

The students also showed conflicted feelings about getting good grades for easy work that didn't require them to show autonomy or decision making abilities. For example, most of the students referred to assignments in their first year as being unsatisfying because teachers told them exactly what to do and how to do it. They said that even though it was easy to get good grades for those types of assignments they didn't value the work and didn't feel that they learned much without the challenge of making their own choices and decisions.

8. Conclusions

The three common themes that were dominant in each of the student's narratives of their most and their least creative experiences were autonomy, the curriculum, and the role of the teacher.

The students in this study understood creativity in college as having the autonomy to express themselves by making their own decisions. The students did not interpret creativity in line with the traditional view of creativity as primarily associated with arts and aesthetics or the more recent interpretations linking creativity with emerging technologies, innovation, and economic gain. They perceived creativity as being something new for each individual, but they did not express any consideration that creativity might be dependent to any degree on the opinion of society or other individuals.

Creative experiences for the students in this study included a guiding, but not controlling, teacher who inspired students to work harder and to explore new ideas, even at the risk of making mistakes. Students felt controlled and 'shut down' by teachers during their least creative experiences.

Students wanted to express themselves and to make decisions while applying their learning in authentic learning situations. Also, each of the students talked about feeling restricted during the first two years of their three year program and only having creative experiences in their final year.

The results of this study suggest that creative learning experiences may be more likely if educators consider the following:

- Provide authentic or simulated authentic environments which require students to apply course content to real life or simulated real life situations.
- Ensure authentic learning experiences allow students the autonomy to express themselves, take risks, problem solve, and make their own decisions with support from a teacher who guides but doesn't control them.
- Provide opportunities for creativity from the start of the program rather than only in the final semesters. For example, Boden [1] suggests a model for developing creativity that includes progressive stages of combinational, exploratory, and transformational creative thinking that supports creativity even as novices are learning foundational skills in a subject.
- Have discussions in the classroom about the role of creativity in society and in the student's chosen profession to help students explore and value their own developing creativity.
- The Four C model of creativity is a helpful framework to guide faculty discussions with students to view creativity as a developmental and lifelong process that includes mini-c, little-c, pro-c, and big-C types of creative thinking. These four stages value and support creativity on a continuum ranging from creativity that is personally meaningful to the creativity of eminent individuals who make major contributions to society.
- Aim for transparency with students about if or how creativity is linked with grades. Assessing creativity is challenging, however transparency may help students think independently and reflect on the creative aspects of the work they are doing rather than only doing what they think the teacher wants.
- Allow opportunities for students to express their ideas, take risks, and make mistakes. Sternberg [20] offers 12 strategies to encourage student creativity, including encouraging sensible risk-taking, self-efficacy and tolerance of ambiguity.

Creative competencies empower individuals to thrive in a society that requires them to change, learn, and adapt at a speed not experienced in previous societies. (Richards, [13]; Richards, [14]; Runco [15]; Sheridan-Rabideau, [17]). In the past when society changed more slowly it was possible for higher education to train graduates with skills that would carry them through predictable progressions of a career. Given the current pace of

change the most valuable skills and abilities that educators can impart to graduates may be empowering them to be creative thinkers who can be flexible, adaptable, and open to change and ambiguity. Creativity expert Mihali Csikszentmihalyi [4] summed it up well when he said that "In the Renaissance creativity might have been a luxury for the few, but by now it is a necessity for all."

9. References

- [1] Beghetto, R., and Kaufman, J., "Toward a Broader Conception of Creativity: A Case for "Mini-c" Creativity", *Psychology of Aesthetics: Creativity and the Arts. 1* (2), 2007, pp. 73-79.
- [2] Boden, M., "Creativity and Knowledge". In A. Craft, B. Jeffrey and M. Leibling (Eds.), *Creativity in Education*, Continuum, London, UK, 2001, pp. 95-102.
- [3] Craft, A., "The Limits to Creativity in Education: Dilemmas for the Educator", *British Journal of Educational Studies. 51* (2), 2003, pp. 113-127.
- [4] Csikszentmihalyi, M., "Forward: Developing Creativity". In N. Jackson, M. Oliver, M. Shaw and J. Wisdom (Eds.), *Developing Creativity in Higher Education*, Routledge, New York, NY, 2006, pp. viii-xx.
- [5] European University Association, *Creativity in Higher Education*, European University Association., Brussels, Belgium, 2007, p10.
- [6] Florida, R., *The Rise of the Creative Class: And How it's Transforming Work, Leisure, Community and Everyday Life*, Basic Books, New York, NY., 2002.
- [7] Florida, R., *The Flight of the Creative Class*, Harper Collins Publishers INC, New York, NY., 2005.
- [8] Howkins, J., *The Creative Economy*. Penguin, London, UK., 2001.
- [9] Maslow, A., *The Farther Reaches of Human Nature*. Viking Press Inc, New York, NY., 1971.
- [10] McWilliam, E. Dawson, S., and Tan, J. "From Vaporousness to Visibility: What Might Evidence of Creative Capacity Building Actually Look Like?" *The UNESCO Observatory, 1* (3), 2008, pp. 1-19.
- [11] Oliver, M., Shah, B., McGoldrick, C. and Edwards, M., "Students' Experiences of Creativity". In N. Jackson, M. Oliver, M. Shaw and J. Wisdom (Eds.), *Developing Creativity in Higher Education*, Routledge, New York, NY, 2006, pp. 43-58.
- [12] Petocz, P., Reid, A., and Taylor, P., "Thinking Outside the Square: Business Students' Conceptions of Creativity", *Creativity Research Journal, 21*(4), 2009, pp. 409-416.

- [13] Richards, R. "Millennium as Opportunity: Chaos, Creativity, and Guilford's Structure of Intellect Model", *Creativity Research Journal*, 13 (3&4), 2001, pp. 249-265.
- [14] Richards, R. "Everyday Creativity". In J. Kaufman and R. Sternberg (Eds.). *The Cambridge Handbook of Creativity*, Cambridge University Press, New York, NY., 2010, pp. 189-215.
- [15] Runco, M., "Creativity", *Annual Review of Psychology*, 55, 2004, pp. 657-687.
- [16] Savin-Baden, M., and Van Niekirk, L., "Narrative Inquiry: Theory and Practice", *Journal of Geography in Higher Education*, 31 (3), 2007, pp.459-472.
- [17] Sheridan-Rabideau, M., "Creativity Repositioned", *Arts Education Policy Review*, 111 (2), 2010, pp. 54-58.
- [18] Simonton, D., "Creativity in Highly Eminent Individuals". In J. Kaufman and R. Sternberg (Eds.). *The Cambridge Handbook of Creativity*, Cambridge University Press, New York, NY., 2010, pp. 174-188.
- [19] Smears, E., and Unsworth, M., "Silent Witness: Student Voice and Creative Approaches to Learning", *Centre for Excellence in Teaching and Learning Journal*, 2 (1), 2009, pp.84-90.
http://www.jmu.ac.uk/ECL/ECL_docs/CETL_Journal_Dec_09_web.pdf (Access date April 10, 2012).
- [20] Sternberg, R., "Creativity as a Habit". In A. Tan (Ed.) *Creativity: A Handbook for Teachers*, Singapore: World Scientific Publishing Co Ltd., Singapore, 2007, pp. 1-25.
- [21] Torr, G., *Managing Creative People: Lessons for Leadership in the Ideas Economy*, John Wiley and Sons Ltd., Wessex, England, 2008.
- [22] Watson, E., "Who or What Creates? A Conceptual Framework for Social Creativity", *Human Resource Development Review*, (6), 2007, pp. 419-441.
- [23] World Commission on Culture and Development, *Our Creative Diversity*, UNESCO Publishing, Paris, France, 1996.
<http://unesdoc.unesco.org/images/0010/001055/105586e.pdf> July 28, 2010 (Access date April 3, 2012).