

## Integrating Creativity into Online University Classes

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## Pre-Discussion Paper

### Introduction

The author will provide a concise discussion on creativity, defining the term, sharing theoretical background information and offering insights into promoting creativity in online university classes. Emphasis will be placed on relevant ways to integrate creativity into instructional activities across the academic disciplines.

### Defining Creativity

The term creativity often will focus on individuals producing novel or original works. Sawyer (2006) believes "...that all creativity includes elements of imitation and tradition. There is no such thing as a completely novel work. To explain creativity, we have to examine the balance of imitation and innovation, and the key role played by convention and tradition" (pp. 24-25). Sawyer's argues against placing a too much emphasis on being novel. Yet, educational psychologists often recognize the novel element in their definitions. Sternberg (2005) relates that "Creativity refers to the skills and attitudes needed for generating ideas and products that are (a) relatively novel, (b) high in quality, and (c) appropriate to the task at hand" (para#6).

The term creativity can be an illusive term to define because writers do not want to undermine or diminish the positive aspects that are often associated with the word. A basic definition of creativity is the ability to produce novel (original/unexpected) work that is high in quality and is appropriate (useful). A survey of definitions of creativity highlights the intriguing qualities of this term. Harris (1998) provides one of the best descriptions of creativity:

- **An Ability:** A simple definition is that creativity is the ability to imagine or invent something new.
- **An Attitude:** Creativity is also an attitude: the attitude to accept change and newness, a willingness to play with ideas and possibilities, a flexibility of outlook, the habit of enjoying the good, while looking for ways to improve it.
- **A Process:** Creative people work hard and continually to improve ideas and solutions, by making gradual alternations and refinements to their works (para 2, 4 & 5).

The description highlights the multidimensional nature of creativity while stressing that individuals must realize that it involves hard work and a flexible mental attitude. There seems to be some misconception about the need for hard work but it is affirmed by today's writers. Howe (1999) has conducted a biographical analysis of people who were considered in the category of being a genius (e.g. Einstein) due to their exceptional work. A detailed historical examination of their lives has shown that most were characterized by having a tremendous work ethic. This enabled them to have the diligence and patience to use problem solving techniques to reach brilliant solutions with their ideas

### Theoretical/Conceptual Framework

There is a degree of mystery associated with the subject of creativity that challenges educators to continue investigating how individuals translate their imaginations and ideas into innovative projects. Unfortunately, educators have often been influenced by pragmatic approaches that place a strong emphasis on practice with a lower

priority on theory. Edward De Bono's work on lateral thinking has been a commercial success by promoting two types of creativity strategies: Positive-Minus-Interesting (PMI) and thinking hats. Von Oech's focus is to encourage people to adopt a variety of roles: explorer, artist, judge and warrior. Practical approaches have a certain appeal due to their simplicity but they often lack scientific testing and validity (Sternberg et al, 2005).

Researchers argue that a comprehensive assessment of creativity is a complex task because it involves considering the field of study and temporal context of work. It includes looking at a diversity of variables such as cognitive processes, personality, motivation and the individuals background (Sternberg et al, 2005). Therefore, a major challenge for educators is how to effectively offer relevant instructional activities. Teachers can provide valuable knowledge and advice to their students that will promote enduring creativity in their lives. For instance, creative people must be willing to overcome resistance to their ideas and plans. Sternberg (2003) relates that "I have often wondered why so many people start off their careers doing creative work and then vanish from the radar screen. I think I know at least one reason why: Sooner or later, they decide that being creative is not worth the resistance and punishment" (p. 113). Teachers can prepare students to face and overcome obstacles by relating personal narratives on when they encountered people who were not supportive and reacted negatively to their best ideas. Instructors should have students read materials (e.g. articles and instructor lectures) that will enhance their awareness of issues associated with the creative process. Students should learn that obstacles can appear in different forms such as external issues (e.g. fearing the opinions of others) or reflect internal battles with performance anxieties. Teachers can use vigorous group discussions that mentally equip students to handle adversity during their creative projects (Sternberg, 2003).

The social-personality and social-cognitive approaches have focused on three major sources of creativity: personality variables, motivational variables and sociocultural environment. Carl Rogers and Abraham Maslow emphasize self-actualization connected with self-acceptance and a supportive environment. Researchers have identified numerous creative individuals who had weak people skills and struggled to cope with their daily routines. The 1950s-1970s saw psychologists striving to develop a test to measure creative potential similar to the modern IQ tests. Various personality tests were utilized to measure creativity but they tended to reveal information on social achievement. Creativity research during this era did affirm that creativity was related to individuals having a strong work ethic, dedicated to completing tasks, being motivated and have a good working knowledge of their job. Yet, the researchers were not able to develop a personality test that could effectively identify exceptional talent in children or identify particular personality traits that were characteristic of creative people (Sawyer, 2006).

During the 1970s, cognitive psychologists began to emerge with new approaches for examining creativity. Researchers focused on studying mental processes instead of the creative personalities. Cognitive studies led to undermining the idealists theory that stressed once a creative concept was produced, it is not essential to implement the idea. In contrast, action theory advocates the execution of ideas as being a key part of the creative process. Therefore, creativity happens over time and while the individual is working on using their ideas in a project (e.g. artwork). The creative process has four primary stages: preparation, incubation, insight, and verification (Sawyer, 2006).

The 1990s saw researchers seeing the need to account for the multidimensional nature of creativity. Lubart and Sternberg's (1995) investment theory argues that certain people will investigate unknown or unpopular ideas if they reflect potential value. These individuals will study and promote their new ideas even when others fail to support them. In fact, they have the confidence and determination to continue their investigation of new ideas until they gain more favor in the public arena. Then, they will move on to another unpopular idea. This is called a "buy low and sell high" (Sternberg et al, 2005, p. 361) strategy and it highlights how a certain category of ideas can represent a unique but welcome challenge for some people.

Cognitive psychologists have recognized an important paradox found in creative accomplishments involving both personal playfulness and discipline. Creative individuals work very hard and continue their work with a level of persistence which is rarely matched by others. They often possess playful attitudes which help them deal with ideas with an abandonment and imagination. It provides a definite break from seriously pondering complex ideas and can foster a receptive mental outlook for considering novel concepts or ideas. Online educators should include activities such as interactive puzzles that are more playful and represent a change in daily learning routines and stimulate creativity (Csikszentmihalyi, 1996).

Creativity researchers are taking a variety of new theoretical approaches such as Sawyer (2006) who is an advocate of the emergence metaphor. This reflects an effort to provide a more dynamic picture of the creative process. It offers a practical way to interpret phenomenological information during the actual process. Secondly, it allows for more comprehensive and multidimensional perspective toward creativity. Moran (2002, para 31) relates that the metaphor "...makes explicit a prospective role for time, and emphasizes works-in-progress and iterations, which Gruber purported to be critical to any study of creative process...it changes our focus from entities—creative works and people—to process, not in terms of techniques or steps, but as a continuous transformation: of finding not edges but rather gaps within. Finally, it increases our sensitivity to interactions of properties, not just the properties themselves. In sum, the new metaphor orients our attention to different aspects of creativity, or ways of thinking about creativity, than does the boundary metaphor."

### **Online Instructional Approaches**

Teaching creativity and higher order thinking skills transcends any specific formula. The author advocates integrating creativity objectives into the curriculum which offers a subject oriented basis for reflective activities. Teachers will find that it is wise to devote time investigating creativity models which play a vital role in helping students acquire reflective skills. Van Tassel-Baska (2006) observes that "...a few selected models used over time enhances learning more strongly than eclecticism" (p.299). The author recommends viewing creativity models by using a framework involving four categories (Mosley et al, 2005, p. 298):

#### *Domain*

- area of expertise
- subject area

#### *Content*

- types of objective
- types of product (including knowledge products)

#### *Process*

- steps/phases in a sequence or cycle
- complexity
- level in a hierarchy
- type of thinking or learning
- quality of thought/action

#### *Psychological aspects*

- stage of development
- structural features of cognition
- nature and strength of dispositions
- internalization of learning
- orchestration and control of thinking
- degree of learner autonomy
- level of consciousness

Teachers should note in their lectures and class discussions that creativity can arise from people with a diversity of backgrounds and personality characteristics. Researchers have used correlational studies involving both well known people and everyday individuals and they identified seven traits of creative people:

- independence of judgment
- self-confidence
- attraction to complexity
- aesthetic orientation
- openness to experience
- risk taking
- self-actualization (Sternberg et al, 2005. p. 358).

Motivation can play a major role in people being creative. Extrinsic motivational techniques can be financial incentives in the business world and grades for students. Yet, these have a limited influence on individual performance because people could continue engaging in activities that are not interesting to them. In contrast, intrinsic motivation to do various tasks can reflect a passion or strong interest and often it is something an individual enjoys doing. A major criticism of contemporary education is the emphasis on curriculum conformity which begins in child's early schooling experiences and continues throughout their higher education course work. Gatto (1992, p. 75) advocates meaningful educational experiences and is deeply concerned about efforts to standardize American instruction. "Whatever an education is, it should make you a unique individual, not a conformist; it should furnish you with an original spirit with which to tackle the big challenges; it should allow you to find values which will be your road map through life; it should make you spiritually rich, a person who loves whatever you are doing, wherever you are, whomever you are with; it should teach you what is important, how to live and how to die."

Amabile (1999) stresses six strategies that can have a positive impact on intrinsic motivation:

- **challenge-** creating learning activities that stretch the student but do not overwhelm them. The individual should be effectively tested beyond their current knowledge and skills.
- **freedom-** instructor can enhance reflective skills by having clearly defined goals that give students the opportunity to complete an assignment in a variety of ways (e.g. Power Point slides or a detailed outline) foster self-directed learning. Changing goals during a project will undermine creativity (Amabile, 1999). Researchers have noticed that great scientists are able fuel their imagination by breaking out of logical human narratives and established ways of thinking about solving problems. Hudson (2006, p. 226) states "we must be willing to subvert the conventional wisdom on which our everyday competence depends."
- **resources-** this can involve the quality of interpersonal relationships between students and between students and their instructors. Also, online academic resources such as access to universities' digital libraries and computer staff. The University of Phoenix has over 20 million full text articles in their online library (UOP Fact Book, 2005). Teachers can access Internet sites such as Cave's (2005) Creativity Web for an assortment of instructional aids such as advice on recording ideas.
- **work-group features-** learning teams who have a diversity of cognitive skills, professional, cultural and educational experiences can enhance creativity. Teachers who create online learning teams can use information from personal biographies at the start of their classes to integrate a degree of diversity into their learning teams. Additionally, if instructors could have students share their learning style with them, it could be useful data to develop more effective and productive course work. Conceicao's (2005) online research discovered that "...a mix of learning styles in a group can make the learning experience more balanced" (p. 5)
- **supervisory encouragement-** teachers play a vital role in helping students work through anxiety when tackling difficult assignments. Professional judgment is needed to know when to give more detailed instructions to students who are struggling because part of the process is learning to be patient when working through complex problem solving issues. Students who lack confidence in their learning skills or fear failure can be encouraged by allowing them to make mistakes and experience the joys of being successful in their work.
- **organizational support-** teacher and students need to feel that their work is important. Teachers can become discouraged about integrating innovative instructional methods into their online classes if the work is rarely affirmed by their organizational leaders. Distance educators can feel isolated at times and it is wise for them to develop professional relationships with other educators to cultivate best teaching practices.

The author utilizes a variety of instructional methods to enhance creativity in online classes. Students enjoy studying ethical case studies such as Hinman's (2002) scenario on a university teacher who lied on their resume about their academic degree. The author has created a series of Jeopardy games on a variety of academic subjects (e.g. American history and leadership theories) and online students are challenged with a diversity of questions. Students can save the Jeopardy Games as a Microsoft Power Point presentation and use it as a learning tool on their computers. The difficult people assignment is another example of fostering creativity and problem solving skills by using work based scenarios (Muirhead, 2006b).

### **Difficult People Assignment**

Your task is to create effective strategies to handle difficult people at work. You are to provide two strategies for effectively working with each of the following types of difficult people. Please write approximately 40-50 words for each of your narratives on the six types of difficult individuals (approximate total of 240-300 words).

### *The Know-It-Alls*

They're arrogant and usually have an opinion on any issue. When they're wrong, they get defensive.

### *The Passives*

These people never offer ideas or let you know where they stand.

### *The Dictators*

They bully and intimidate. They're constantly demanding and brutally critical.

### *The Complainers*

Is anything ever right with them? They prefer complaining to finding solutions.

### *The Yes People*

They agree to any commitment, yet rarely deliver. You can't trust them to follow through.

### *The No People*

They are quick to point out why something won't work. Worse, they are inflexible (Dealing with difficult people, 2006, para 2).

Educators who are seeking to develop constructivist instructional plans and increase their emphasis on creativity should consider reading research studies on those who have tried to implement constructivism into their classes. Black and McClintock (1995) have created an educational paradigm based on the principles of constructivism. The model, called the Interpretation Construction (ICON) Design Model, reflects how cognitive psychology, technology and constructivism can be integrated into instructional activities. There are seven steps to the ICON model (Black & McClintock, 1995, para 2):

- **observation:** Students make observations of authentic artifacts anchored in authentic situations.
- **interpretation construction:** Students construct interpretations of observations and construct arguments for the validity of their interpretations.
- **contextualization:** Students access background and contextual materials of various sorts to aid interpretation and argumentation.
- **cognitive apprenticeship:** Students serve as apprentices to teachers to master observation, interpretation and contextualization.
- **multiple interpretations:** Students gain cognitive flexibility by being exposed to multiple interpretations.
- **multiple manifestations:** Students gain transferability by seeing multiple manifestations of the same interpretations.

The ICON model is appropriate for larger instructional projects which contain the level of complexity and the necessary time to adequately engage in each of the steps. Smaller assignments would probably require deleting the cognitive apprenticeship step due to time constraints (Muirhead, 2006a).

Teachers can foster a spirit of exploration by using difficult and complex online questions based on course readings of articles or textbook chapters. Online discussions represent valuable opportunities for students to make new learning connections to their personal and professional lives. Reflective questions create situations for students to critically examine the subject matter through additional research or carefully reading over their course materials. Discussion questions should reflect a logical alignment with the subject matter. Instructors play a key role in maintaining a disciplined, meaningful and dynamic online dialogs. Students can be anxious or fearful about their online postings because they worry about losing participation points. There is debate about assigning grades to weekly discussions due to concerns over subjective teacher grading procedures (Brookfield & Preskill, 2005). The author has found that students appreciate having their discussion work count toward their course grades. Instructors must establish a clear set of criteria in their syllabus such as the basic number of posted online comments and perhaps the approximate word length of their first responses to assigned questions. Teachers can supply additional guidelines and suggestions to help students better understand the academic expectations and increase the intellectual depth of their remarks.

“It is important to interact with other classmates online by reflecting on their observations and ideas. Your online comments should make a significant contribution to the discussion and that can be demonstrated in one or more of the following ways:

- suggest alternative solutions,
- identify potential or real problems,
- explore new theories,
- offer sound rationale from textbooks or articles when disagreeing with someone's comments, and
- share relevant work and research experiences/knowledge during the weekly discussions” (Muirhead, 2006c, Weekly Participation, para 1).

Educators can affirm the importance of the student’s ideas by their online remarks and sharing specific comments in their weekly grade reports. Establishing creative discussions will not occur if instructors demonstrate either an excessive desire to control student interaction or failure to adequately participate. There are distance education models where teachers are not expected to participate in the weekly discussions (e.g. Columbia University) and this greatly reduces the sharing of expertise between teachers and their students. Brookfield and Preskill (2005) encourage instructors who are from traditional educational settings to take an online course to help them have a better understanding of student needs.

Distance educators can assess and affirm student creativity by utilizing weekly grade reports. The University of Phoenix has an electronic grading system that offers an excellent tool to share detailed feedback on written assignments, Power Point presentations, quizzes, tests and online discussion work. It should be recognized that the instructor will need to devote more time to creating a grading rubric for creativity assignments. Assessment can be more difficult due to the qualitative nature of the creative activities which could increase the level of subjectivity during evaluation and grading of student work. The teacher’s educational philosophy and assessment practices must affirm that adult learners do vary in their needs due to such factors as having different cognitive experiences and educational backgrounds. Therefore, it is important that learning should be more individualized and offer significant connections to their personal and professional lives. Assessment procedures must offer a meaningful bridge between academic knowledge, skills and experiences in online course work to the student’s daily life. Rubrics should be designed to reflect respect for student’s experiences and knowledge while promoting growth (Collison et al, 2000).

The literature stresses the importance of individuals devoting significant amounts of time to a specific knowledge domain to cultivate creativity and expertise. Psychological studies involving grand chess masters reveals that motivation and practice are vital factors which transcend innate ability (Ross, 2006). This has major implications for creativity training and educators who want to encourage creativity opportunities in their classes. Students must have faith in pursuing long term learning goals and projects which might not be rewarded or acknowledged within their academic community. Online universities are not known for placing a high priority on faculty research which can create barriers for starting major projects which require financial assistance (Csikszentmihalyi, 2006).

Perhaps, people are too quick to use the term "expert" which has diminished the original intent of the word. Cognitive psychologists stress that it often takes ten years for a person to become an expert (Anderson, 2005; Schacter, 1996). Schacter (1996) relates that individuals who have “...a highly refined and powerful form of elaborate encoding that enables experts to pick out key information efficiently and to imbue it with meaning by integrating it with preexisting knowledge” (p. 49). Anderson (2005) notes that experts are skilled at accessing information from their long term memories. The template theory stresses the storage of relevant knowledge that chess experts can access to recall more and larger chess patterns than that of novices. It should be noted that chess experts possess two kinds of expertise: routine and adaptive. The routine expertise enables the individual to do problem solving in an effective and timely manner. Adaptive expertise skills are those which help people to develop strategies that fit the particular situation (Eysenck, 2001).

Research studies on experts have found that skill development and developing expertise were tied closely to the timing, quality and quantity of the deliberate practice. The use of mentors played a vital role by providing guidance, monitoring progress and establishing appropriate goals that would promote optimal growth. Bruning, et al (2004) notes that research indicates that deliberate practice can help less talented people surpass the achievements of those who are more talented. Skill acquisition among young athletes, mathematicians and musicians indicates that individuals followed a similar learning process. The key is having the appropriate guidance and intentional practices

that cultivate superior performance. "The best practice occurs under the watchful guidance of a skilled mentor who helps the developing expert set goals and monitor improvement" (Bruning et al, 2004, p. 177).

Today's online universities focus their mentoring efforts on doctoral students to assist them in their dissertation work. Individualized instruction and mentoring are reserved for only a small segment of the distance education student population (Blum & Muirhead, 2005). The author recommends that teachers can use blogs to supplement their classes. Blogging communities are diverse and vary in their purposes and reflect a growing intellectual and creative frontier. Farrell (2005) argues that "academic blogs, like their 18th-century equivalent, are rife with feuds, displays of spleen, crotchets, fads, and nonsenses. As in the blogosphere more generally, there is a lot of dross. However, academic blogs also provide a carnival of ideas, a lively and exciting interchange of argument and debate that makes many scholarly conversations seem drab and desiccated in comparison" ( B14).

## **Conclusion**

The author has briefly touched upon the subject of integrating creativity instruction into online teaching. Instructors are essential to insuring that students have the opportunities to demonstrate creativity in their online discussions and assignments. Student curiosity should be continually encouraged by developing a learning climate that stimulates risk taking and exploration of ideas. "...*If the next generation is to face the future with zest and self-confidence, we must educate them to be original as well as competent*" (Csikszentmihalyi, 1996, p. 12 ).

## **Discussion Questions**

1. What are the instructional challenges associated with having online classes of 5-8 weeks in length when striving to promote creativity in student work?
2. What are some of the ways that online education can have a deadening effect on creativity?
3. What types of educational training, experiences and web based authoring tools do online teachers need to better promote creativity in their classes?
4. Why are the basic differences and similarities between critical and creative thinking?

## **Post-Discussion Summary**

### **What are the instructional challenges associated with having online classes of 5-8 weeks in length when striving to promote creativity in student work?**

Distance educators advocate a self-directed learning philosophy because it encourages personal and professional growth. The concept of self-directed learning is vital to creating an educational setting or environment that promotes creativity and higher order thinking skills. This educational objective is challenged by the reality that the level of cognitive maturity will vary among students and teachers will have teachers to make creative adaptations to their teaching plans and activities. Curriculum changes should not reduce the academic quality of the course work. Online degree program administrators must avoid the temptation to dumb down their curriculum standards to increase their student enrollment numbers. The lowering of educational standards appears to help more students experience a measure of academic success. It really represents a patronizing view of people that questions their ability to effectively take on new intellectual challenges and it reflects an ambiguous view of equity. Furedi (2004) relates "... by treating people as weak and vulnerable individuals who are likely to stumble when confronted by intellectual challenge, such cultural attitudes serve to create a culture of low expectations" (p. 138). Distance education administrators, admission personnel and teachers need to work together to maintain high intellectual expectations for their students and uphold the academic integrity of their institutions.

Charles Adamson acknowledged that geniuses are known for their work ethic but stated "I do not understand why creativity MUST include hard work." There is a degree of playfulness involved in the creative process where

individuals reflect on ideas during their leisure moments. For instance, individuals who struggle with writer's block will switch their focus from writing to recreational activities (e.g. take a walk) as a practical way to resolve their writing problems. Therefore, there is a legitimate place for people taking breaks and enjoying relaxing times but creativity is built upon a good work ethic. Sarfo Kwaku Frederick affirmed the value of hard work in fostering creativity but believes educators need to be clearly define the term. Cognitive psychologists reveal that research studies affirm that "creativity does not occur in magical moment of insight; rather, creative products result from long periods of hard work that involve many small mini-insights, and these mini-insights are organized and combined by the conscious mind of the creator" (Sawyer, 2006, p. 74).

Christopher Eliot argued for placing creativity within the context of larger educational goals such as preparation for future work. Eliot believes that online instructors should help students understand the kinds of creative ideas and products that are worthy of respect. A major challenge is guiding student creativity without crushing the spirit of adventure in the learning process. Additionally, he provides instructional advice "I think that one way to liberate creativity is to provide some structure so that students know where to focus their creative energy, which is not infinite. Spelling and times tables should be just memorized, so they are effortless and people can focus on composition of ideas and creative proof of theorems."

### **What are some of the ways that online education can have a deadening effect on creativity?**

Online education holds the potential for vibrant interaction and rich dialog. Unfortunately, online instructional experiences can become quite wooden and lifeless at times. Distance educators and their students can become disillusioned with the teaching and learning process when it lacks a dynamic interactive character. Degree programs can reflect a tightly controlled system that affirms a uniform curriculum and required teacher facilitation techniques but it can drain the life from the learning process. During Muhammad Betz's online teaching experiences, he has found that "the monotony for students towards the end of a 30-hour program is obvious. One group of students recently voiced their frustration with the stifling format of their course assignments in a graduate course on e-learning."

Garrison & Anderson (2003) relates, "a problem with many forms of student to student interaction theory is that they nearly always assume that individuals share a content interest within a shared time space" (p. 44). Students will select certain distance education programs and institutions because they enjoy the freedom to pursue independent studies. Group discussions can be counter productive at times due to misinformation, group think mentality, dominating learners who undermine dialog and conflicts with individual learning styles. Hopper (2003) raises concerns about an excessive emphasis on consensus within learning teams that can foster mediocrity and fail to affirm the creative contributions of independent thinkers. Hopper's graduate online group experiences were very frustrating. "I expected graduate work to put me in close contact with more learned minds, accomplished and respected in the discipline, who would challenge and guide me. I felt disappointed and frustrated to feel so often awash in the bland discourse of novices like myself" (p. 27).

The author believes that part of the problem involves having a rigid learning environment that fails to acknowledge the need for individualized and context sensitive learning. Scott Gray (1999, paragraph 7) offers insights into the nature of online interactions:

"Good – even great – online teaching will not be –will never be built- because you can not build interaction. You enter into it, like a warm bath (shades of McLuhan) like a familiar suit, like a comfortable home. The online materials are only the tools and components of online instruction hammers and screwdrivers and saws and doorframes and kitchen cupboards and furnaces and wall-to-wall carpeting. They do not – cannot- constitute a home. The pausing, the pacing, the pushing, the pulling, the selection, maybe of this movie, that online resource project, such-and –such project – all of these occur in a dynamic fashion in the classroom, and indeed even to a large degree in online learning. Great teaching adapts and flows. The more personalized, the more context-sensitive such adaptations become, the more full the educational experience becomes, the more like a home, the less like a pile of tools."

Gray's (1999) comments reflect a keen awareness of the importance of having an educational model that provides adequate flexibility for instructors and students to freely interact. Several discussion participants (Williams, Betz

and Bolman) advocated online instructional strategies that enabled students to have the freedom to pursue a diversity of learning opportunities.

### **What types of educational training, experiences and web based authoring tools do online teachers need to better promote creativity in their classes?**

Students want intellectually and emotionally engaging dialogs which have connections to their current and future jobs. Integrating creative activities into the online setting remains a challenge for today's instructors who must deal with issues of student readiness and institutional barriers (e.g. course structure). Peters (1998) believes distance education is often delivered within the context of an industrial organizational paradigm. He views distance education institutions as having tightly structured courses with lectures and instructional activities that foster passive students learning patterns. Muhammad Betz and Mark Karstad expressed similar concerns about the business focus of contemporary e-learning organizations can create boring courses that stifle student creativity. Kastad observes that universities are embracing financially cost saving approaches to quickly develop online courses that reflect more of a "cookie cutter" approach. He has worked on computer simulation projects that were based on constructivism principles and students were encouraged to explore their ethical decisions through dialogs on their individual choices while cultivating opportunities for group consensus.

Muhammad Betz has noticed how a growing number of online students are motivated to obtain a degree but demonstrate less interest in genuine learning. Garrison & Anderson (2003) relates, "a problem with many forms of student to student interaction theory is that they nearly always assume that individuals share a content interest within a shared time space" (p. 44). Students will select certain distance education programs and institutions because they enjoy the freedom to pursue independent studies. Group discussions can be counter productive at times due to misinformation, group think mentality, dominating learners who undermine dialog and conflicts with individual learning styles.

There was lively dialog among the IFETS participants about the role of lectures and reading assignments in the online environment. Alfred Bork argued that lectures, long videos and reading passages should be avoided because they create a more sterile learning climate. Sabine Payr rejected the idea of abandoning long texts because reading should be considered a creative form of knowledge construction; "drowning reflection in interactivism can be fatal to creativity: it hinders students in interacting with their own minds-where creativity is to be found, after all." Ros Brennan Kemmis stressed the importance of course content should be viewed as an integral part of the entire teaching and learning process. "Delivering content alone will sustain only the most persistent learners whose tolerance for boredom is reinforced by high levels of motivation to complete."

Muhammad Betz and Katherine Bolman shared how they strived to make online assignments relevant and interesting. Betz related a major problem is the absence of creative expectations and a good student is described as one who has good writing skills, completes written assignments and shares in the asynchronous dialogs. "...I am finding that students are not taking classes online to express their creativity; they are taking online courses for convenience (saving travel, for example) and to get a degree to earn more money." Betz and Bolman acknowledged that online discussions encouraged the production of novel ideas because students can share life experiences and insights from the weekly required readings. Creativity arises from the combination of reading, writing papers and interacting with other students.

Sawyer (2006) stresses meaningful group interaction as a foundation for creativity in education and business organizations. In the educational realm, instructors can foster creativity through building vibrant online learning teams, asking thought provoking questions and encouraging students to take risks in their work. It is important that instructional designers and curriculum staff avoid creating courses that fail to affirm best practices in the teaching and learning process.

Distance education literature advocates teacher training to facilitate best practices and encourage the use of diverse instructional methods and approaches. Janet Salmons suggests instructors should consider being an online student to increase their understanding of online education. Frances Bell commented on the need to view the online setting from the student's perspective. The author has completed various online classes and degree programs from different

institutions and has found it to be a valuable resource for communicating with students. Salmon's shares the following practical advice for fostering creativity:

- "Organize learning activities for "structured controversy." Involve learners in discussions and debates, which tackle more than one side of an issue and require them to support arguments with evidence."
- "Organize learning activities for problem solving. Ask learners questions with multiple answers or several equally correct answers. As learners to solve real life problems where there is the possibility of more than one acceptable solution and where several different types of information are required."
- "Organize learning activities that ask learners to present answers using diagrams, concept maps or other visual representations."

### **Why are the basic differences and similarities between critical and creative thinking?**

Terri McNichol works as an artist and historian and expressed frustration with the academic "emphasis on 'rationality' at the expense of creativity." The strong emphasis on student testing is an example of how rationality has been integrated into the curriculum. He mentioned Damasio (1995) who has written *Descartes Error: Emotion, Reason, and the Human Brain* and several books on neurobiology research and the interaction of feelings with human rationality. Cognitive psychologists are recognizing that critical thinking and creativity are connected to an individual's passion for a subject. There are emotional elements in the creative process such as the decision to take risks. Why are students not taking more intellectual risks? Sternberg (2003) argues that students have not been given adequate instruction about how to assess risks and they fear the possibility of failing grades which causes them to "play it safe" (p.115). Sternberg recommends helping students to take sensible risks and teachers should reward their risk taking.

Critical thinking and creativity should be viewed as being part of higher order thinking skills and not mutually exclusive. Walters (1990, pp. 456-457) notes the dynamic relationship between critical and creative thinking

"Logical inference, critical analysis, and problem solving are fundamental qualities of good thinking, but only if they are complemented by the cognitive functions of imagination, insight and intuition-essential components of the pattern of discovery. The latter serve as necessary conditions for innovative speculations, intellectual and artistic creativity, and the discovery of alternative conceptual paradigms and problems. They facilitate flexibility and adaptability of new ideas as well as novel situations and are thereby essential to the nurturing of responsible, free, and reflective adults and citizens."

### **Implications for Educators**

Today's students want online classes that are enjoyable places where learning expectations are built upon meaningful activities and discussions. Online education is not immune from negative social or business trends which can undermine the teaching and learning process. Christopher Eliot warns "there is a danger in my view; which derives from political and economic reality. It is very easy for funding sources to decide that the easy (and cheap) parts of education are the only things that will be supported, leaving students very poorly served."

Contemporary instructors play a vital role in shaping the intellectual depth of their online communities by helping their students become reflective and self-directed learners. There are definite gaps in the theory and practice of distance education. Alfred Bork accurately highlighted a vital issue, "learning should continuously adapt to the individual learner. This has been possible for over 30 years with technology, but is still rare." Bork recommends more research on the effective use of computer technology to tutor students. He has developed workshops on adaptive tutorial curriculum and is currently working on new book that addresses this important topic.

Bill Williams observed how innovations are known after they are produced but it is much more difficult to understand the processes underlying the creative products. "As educators, I believe we have to more flexible in our thinking and language when trying to encourage these kinds of processes (Williams)." The phrase "fostering creativity" does reflect a greater emphasis on establishing a learning climate that offers students opportunities for cultivating their creative skills (e.g. problem solving). The facilitating element would involve introducing a variety of

activities that represent a holistic perspective on the teaching and learning process (e.g. both individual and team work). Williams mentioned the possibility that innovators might have a different set of competencies in qualitative ways. Weisburg (2006) relates that Edison's light bulb and the Wright brothers' airplane had "...components of innovation were based on general rather than domain-specific expertise" (p. 34). Therefore, the qualitative differences between some creative individuals could be certain general skills and knowledge.

The discussion highlighted the need for cognitive research that offers more specific information on how teachers can foster and nurture creativity in their online courses. Future IFETS discussions could devote more attention to critical thinking and addressing qualitative differences between innovation and creativity.

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