

The debates involving and surrounding creativity have been occurring for many years. Creativity refers to the originality or innovative thinking and expression of abilities, displayed by human beings. How are teachers to go about instructing students in order to aid their levels of creativity? How can researchers inspire teachers to break from the normal to change their teaching methods in order to develop a more creative environment? For years these have been some of the questions that researchers have delved further into. Certain breakthroughs in research have identified a separation of creative talents. Also, an effective test has been devised to measure the creative output of students. Advancements in music, business, and art have been influenced greatly by the creativity of individuals such as Albert Einstein, Miles Davies, and Martha Stewart and further progress depends upon the creativity of those currently in the field. The conversation surrounding creativity still continues, but is aided by the understandings gained by researchers of the past.

Creativity has a higher value in our current economy among the businesses than in the past, where the main focus was placed on the arts. Creativity is not limited to a writer or a painter. In every sphere of life there are opportunities to be creative. The Gale Encyclopedia of Psychology defines creativity as, "The ability to juxtapose ideas in a new and unusual way to find solutions to problems, create new inventions, or produce works of art." ("Creativity", 157) New equals creative, not different. While many individuals can take a dish and alter it to some degree, true creativity would be inventing an entirely new and distinct dish. Kandiko expresses that there are opportunities to be creative or 'innovative' in the business industries, "Businesses are increasingly looking to recruit, support and retain 'cleavers', the people who bring a unique strategic advantage to

the firm." (Kandiko, 193) In order to keep industries progressing and expanding the need for new and better is a constant. Kandiko is expressing that businesses need individuals who are creative in a multitude of areas in order to keep up with the times. Stellan Ohlsson and Trina Kershaw add this insight about creativity, though they use the word innovation, "Towards the end of the twentieth century, the importance of innovation for economic production was widely recognized among business leaders." (Ohlsson et al, 507) Similar to Kandiko's statement, the future of many businesses depends on the creativity of those of the rising generation. Thus, we see, the expanse of creativity is reaching more strongly to business and industry, giving innovation that much more importance in our day and age.

Further understanding of what "creativity" really is, comes with familiarization of big-C and little-c creativity is important. These two fields are what make up the groupings in the realm of creativity. Gene Cohen mentions the distinguishing factors between big-C and little-c as found by Harvard Professor Howard Gardner. Cohen expresses that the impact this type of creativity has on society is large and sweeping, "These forms of creativity not only changed entire fields of thought...but also influenced other fields of thought and, in some ways, world history." (Cohen, 101) Those who employ this type of creativity change, not only their own sphere, but also the sphere of everyone. The scale to which big-C creativity extends essentially has no limit. On the other hand, little-c creativity is displayed in the common day-to-day tasks of life. For most, the capacity of their creativity will be limited by little-c. Camille Kandiko offers her insight about the commonality of little-c in the world, "...education focused on exceptional or big-C creativity has been overshadowed by conceptions of ordinary,

'everyday creativity' or 'little-c creativity'." (Kandiko, 193) This exhibits the current trend of the world, wanting solely big-C, but having to settle for little-c. Although big-C has a more wide-spread effect on the world, little-c has importance among those not classified as “genius” to influence their personal sphere of life.

In order to more fully understand how best to teach creativity, understanding what influences creativity is extremely important. Like the ingredients that make up a stew, there is a plethora of influences that act upon the development of creativity. One of the most important influences on creativity is motivation. Iain Maclaren stated that, "[It] does appear that intrinsic motivation is a more powerful indicator of creative commitment and output than, for example, purely monetary incentive." (Maclaren, 164) Rather than dangling a check in front of someone in order to come up with something new and different, Maclaren claims that simple genuine motivation can aid creative process in a more potent way. Along side Maclaren, Brinkman makes a claim as well involving the importance of motivation. He states, "Support for creativity from school administrators or a colleague is helpful, but such motivation is intrinsic." (Brinkman, 49) Both Maclaren and Brinkman state that motivation to create is essential. Maclaren quoted Hennessey and Amabile reasoning that, "... people are at their most creative when motivated by the interest, enjoyment, satisfaction and the challenge of the work itself." (Maclaren, 164) Clearly, if someone is interested in what they are doing, they are more likely to think harder and give the project more attention. As all of these influences come from individuals who are usually of higher authority than those creating, the main responsibility to influence creativity falls upon the superiors. Whether it is a work place, or school, those in leadership positions make or break the creative environment through

the way motivation and incentives are offered or withheld.

Understanding the two types of creativity and what influences creativity aided researchers in the design of tests to measure creativity. Designs of these tests allow for creativity to be gauged based on output. Outputs meaning, the uniqueness of the answers to questions, as well as creations of unique items such as paintings or music. Brinkman offers an opinion of testing in the normal classroom routine, "Resist the notion that standardized tests will answer all our problems in education. The beauty of the arts is that more than one answer can be correct." (Brinkman, 50) Brinkman is saying that standard testing is an unclear indicator of how the student is progressing since these tests limit the possible correct answers to one. Thus, suggesting that an alternate way of testing is required for measuring creativity. Kandiko mentions tests that were developed since the 1950s to aid in the gauging of creativeness. The tests she mentions are "trait-based" without a firm foundation to test on. This presents the idea that perhaps creativity is difficult to teach because it is likewise difficult to test. (Kandiko, 192) However, in recent years a test has been devised that has proven to be more effective. The Torrance Test of Creative Thinking is a series of verbal and nonverbal components to view the way creativity is exhibited. Aspects of this test involve a verbal section that consist of six word-based activities, including devising alternate uses for common items, answering hypothetical what-would-happen-if questions, generating questions and improving products. The nonverbal sections require students to draw multiple pictures using a repeated shape, take forms and make them into pictures by adding lines and complete a picture through drawing. (White et al, 322) Jill White and Gregory Hanley state, "The Torrance Test has excellent content and construct validity compared with most other

creativity tests." (White et al, 322) This opinion from these psychologists gives credit to the effectiveness of this test when compared to the other methods being exhibited to measure creativity levels of students around the world. The manner in which the Torrance Test measures creative levels allows the student to freely express their creativity while being free from generic answers and fill-in-the-bubble sheets. The Torrance Test, for now, will allow creativity to be measured and thus, help teachers and other educators assist students to maintain a desire to create.

Hand in hand with developing concepts on how to teach creativity, should be an understanding of what superiors do in halt creativeness in youth. There are many inhibiting factors that play a large part in the blocking of creativity that exist inside schools and businesses. Ronald A. Beghetto repeats a startling indicator from E. P. Torrance, which emphasizes where creativity is hindered, "We have seen many indications in our testing of first and second grade children that many... have been subjected to concerted efforts to eliminate fantasy from their thinking too early." (Beghetto, 448) Torrance refers to these youngsters as having "impoverished imaginations." (Beghetto, 448) Malpractices in the classroom are many. Beghetto observes, "[students]... wait for the teacher to ask a question... raise [their] hand... share [their] response (usually by trying to match [the] response with what [they] think the teacher expects to hear)..." Beghetto speaks against this practice stating that it is "a game of 'intellectual hide-and-seek'." (Beghetto, 450) This game of guessing does not offer any opportunity for the students to be creative because they are constantly trying to divine the contents of the teacher's head. On the same hand, these days, creative limitations are common in businesses. Kandiko, citing Fryer and Smith-Bingham, describes a workplace

where employees are broken into groups and assigned a task. Instead of experiencing innovation, however, the level of creativity is crippled and drops off, "Rather than allow individuals to run free with their ideas, spewing creative genius, organizations shackle their creators down, burdening them with pre-assigned tasks." (Kandiko, 196) Quoting Perutz, Kandiko gives a great insight into the thoughts of a creator, "Creativity in science, as in the arts, cannot be organized." (Kandiko, 196) This quote by Perutz perfectly illustrates the flaw in academia and business. In order to keep records, there needs to be organization. In order to track progress, there needs to be organization. Perutz, however, feels differently and claims that organization should not, and cannot be attached to creativity. Rather, "[creativity] arises spontaneously from individual talent." (Kandiko, 196) Freedom to create may be the most productive way to teach creativity. Limitations and inhibitors are many and too common among the institutions that claim to be the main sources of innovation. In order to break free of these restrictors, these facilities will have to evolve and establish fresh practices in order to allow individuals to display their creativity without deterrence.

The actual process of teaching creativity is a unique and important factor that individuals have examined for many years. Many concepts and ideas exist in the discussion of how to best teach creativity that can be put into practice in the classroom for the student's benefit. Brinkman points out a specific style of teaching that is seeing results in the nurturing of creativity in the class. He divulges, "we devise new ways to accomplish the same goals, but we also leave room for unplanned and unpredictable goals to develop..." (Brinkman, 49) Brinkman, in a sense, warns that teachers can be too stale and too common with their teaching approach by following the same routine. But

also, Brinkman is stating that teachers have room to breathe and experiment with the style in which they teach, allowing for more student participation. To emphasize this point, Brinkman explains how, in a musical setting, teaching creativity comes into play. He notes that a teacher is experiencing a problem with a band; too many percussionists and a shortage of trumpeters. In order to solve this Brinkman announces, "To encourage creativity in her students, the music teacher must get them involved in the solving of the problem." (Brinkman, 50) An important factor for nurturing creativity is allowing students to be creative. Brinkman's band situation is a perfect example of how out of the box thinking on the teacher's part can aid the students display their creativity. Beghetto, likewise views the main issue of teaching creativity as, "...the way teachers teach." (Beghetto, 450) A possible solution that Livingston sees to this is to, "[turn] the technological expertise of our students into a greater asset." (Livingston, 49) A simple idea that could improve the way that classrooms cultivate creativity; allow the students to learn in and experiment with, mediums they are familiar with. Livingston adds this suggestion, "Making the curriculum about interpersonal exchange and exchange opens the experience for every student to express, share, and test his or her creative instincts." (Livingston, 50) Livingston's ideas, for the moment suggestions, may require a slight alteration of current classroom trends, however, the affects would offer students more freedom of creative expression than exhibited in modern classrooms. Brinkman showed that incorporating the students in a new way did have a positive affect on the creativeness of those band students. For, we see, creativity is best taught through experimental and non-scheduled methods. Experts have pointed out aspects in the traditional classroom

approaches that do function, yet, offer ideas on how to better create a creative environment for the student.

As expressed above, creativity is an attribute the world needs to be able to use. In the coming years there will be the need for more Einsteins and Van Goughs. In order to better harvest the creativity that exists within our youth and continue the development of it, drastic changes are needed. In the future, I predict there being a movement toward ideas suggested by Brinkman, Beghetto, and Livingston being implemented more in academia. Superiors will be more informed and taught that less control equals more freedom. I hope that Livingston's idea altering classroom traditions in order to keep students engaged and interested will come to pass. Likewise, motivation will be more widespread in academia. I expect there to be a movement, a shifting, from the student's side as well. If the students remain complacent with the education they are receiving and the numbing effects of teachers, there will never be true creativity nurtured inside of a classroom. Students have just as much a right to demand for change than the researchers who bring these points to light. In these articles there were multiple examples of flaws with the current practices in academia, although few did make mention of successes in the business sector. I imagine this will continue, for business will sputter and die, if there is not a creative individual that pushes innovation and imagination. These concepts are ones that I feel passionately about and can see myself becoming involved in. Though, for now, they have given me a better understanding about how to aid my own creativity and create situations for others to likewise maximize their educational experience.



## Citations

Brinkman, David J. "Teaching Creatively and Teaching for Creativity." *Arts Education Policy Review* 111 (2010): 48-50

Maclaren, Iain. "The contradictions of policy and practice: creativity in higher education." *London Review of Education* Vol. 10 No. 2 (2012) 159-172

Beghetto, Ronald A. "Creativity in the Classroom."

Kandiko, Camille B. "Leadership and creativity in higher education: the role of interdisciplinarity." *London Review of Education* Vol. 10, No. 2 (2012) 191-200

Livingston, Larry. "Teaching Creativity in Higher Education." *Arts Education Policy Review* 111 (2010) 59-62

Cohen, Gene "The Creative Age." *Aging Concepts and Controversies* Ed 5, (2006) 100-102

White, Jill M., and Gregory P. Hanley. "Creativity." *Encyclopedia of Human Development*. Ed. Neil J. Salkind. Vol. 1. Thousand Oaks, CA: SAGE Reference, 2006. 320-322. *Gale Virtual Reference Library*. Web. 4 Mar. 2014.

OHLSSON, STELLAN, and TRINA C. KERSHAW. "Creativity." *Encyclopedia of Education*. Ed. James W. Guthrie. 2nd ed. Vol. 2. New York: Macmillan Reference USA, 2002. 505-507. *Gale Virtual Reference Library*. Web. 4 Mar. 2014.

"Creativity." *The Gale Encyclopedia of Psychology*. Ed. Bonnie Strickland. 2nd ed. Detroit: Gale, 2001. 157-159. *Gale Virtual Reference Library*. Web. 4 Mar. 2014.