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Raising Creativity Consciousness in Post-Secondary Education

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Buffalo State College
State University of New York
Department of Creative Studies

Raising Creativity Consciousness in Post-Secondary Education

A Project in Creative Studies

By

Dixie Hudson

Submitted in Partial Fulfillment

Of the Requirements

For the Degree of

Master of Science

Submitted May, 2015

Abstract

The knowledge of creativity, what it is, and how one applies it, is a valuable tool that all post-secondary students should be taught. Understanding and managing creativity is one of the most significant competitive advantages of business leaders, entrepreneurs, and students. With the current fast-paced changes in our lives and workplace today, creativity is becoming as necessary a tool as any life skill.

The knowledge and skill of creativity should be taught as a core competency in post-secondary institutions. Most students have had minimal if any training in deliberate creativity. In many cases, it may have in fact been just the opposite.

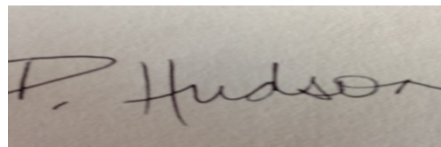
In my institution I am engaging in practices that position myself as a creativity expert. To springboard to greater knowledge and understanding of creativity as a core competency, I have developed a training workshop focused on the basics of creativity as part of a professional development series that included aspects of student interviews I conducted. This is one aspect of my larger goal of continuing to engage my cohorts at the British Columbia Institute of Technology in creative thinking practices with each other and their students to raise the creative consciousness of my institution.

Key Words: deliberate creativity, post-secondary curriculum

Date

_04/27/15_____

Candidate

A photograph of a handwritten signature in dark ink on a light-colored surface. The signature appears to be "P. Hudson" written in a cursive, flowing style.

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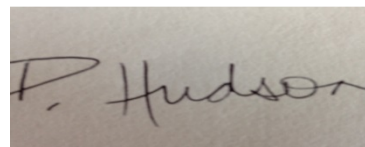
Dates of Approval:



_04/30/15_____

Susan Keller-Mathers, Ed.D

Project Advisor



_04/27/15_____

Dixie Hudson

Candidate

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Dedication

I have so many people to thank because I have ventured into this program later in life and so have had much support to get to this point. My parents started me on this path by giving me every opportunity to pursue my passions in life and always encouraging my sense of adventure that led me to many creative endeavours.

My family, my husband, and three boys, willingly participated in our “family adventures,” games nights, and road trips to unknown parks.

My current workmates, who have offered support, encouragement and had continually asked how I am doing. I knew I wasn’t forgotten around the office and that they were interested in what I was learning.

My cohort, the Wizards of Os(borne) have constantly made me laugh and have provided incredible insights into thinking, respecting, motivating and playing. What great new friends, the most valuable asset in life.

The professors and faculty at ICSC, Buffalo, having set up a rewarding environment, have shown me the most exceptional teaching that I have ever encountered. This modeling has given me the stimulus to improve my classroom experience for others.

You never know when you are going to be handed a gift in life. I never knew that embarking on my master’s program would stretch my imagination into such novel shapes while offering so much joy.

Table of Contents

Abstract Title Page.....	i
Abstract of the Project	ii
Title Page	iii
Signatory Page	iv
Copyright Notice	v
Acknowledgments	vi
Table of Contents	vii
List of Figures	viii
Section One: Background to the Project	1
Section Two: Pertinent Literature	4
Section Three: Process Plan	12
Section Four: Outcomes	23
Section Five: Key Learnings	51
Section Six: Conclusion	57
References	60
Appendices	64
Digital Commons Online Permission	68

List of Figures

Figure 1	Introduction, Interior Design	28
Figure 2	Introduction, Biomimicry	28
Figure 3	Introduction, ICSC	29
Figure 4	Definition	31
Figure 5	We All Have the Ability To Be Creative	32
Figure 6	Seven Years Old	33
Figure 7	Dr. George Land	34
Figure 8	Brainstorming	36
Figure 9	Myth, Creativity is mainly in the Arts	37
Figure 10	Myth, Creativity cannot be taught	38
Figure 11	Characteristics of Creative Behavior	39
Figure 12	IBM Global Study	40
Figure 13	Research, declining creativity	41
Figure 14	Student Interviews	42
Figure 15	Local Programs	43
Figure 16	Creativity is an Investment	46

SECTION ONE: PROJECT DESCRIPTION

PROJECT PURPOSE

Vision Statement:

“Raising creativity consciousness through passion, playfulness, and integrity.”

D. Hudson

The overall purpose of this project is to raise the creative consciousness of my peers and cohorts at the British Columbia Institute of Technology; the Institute where I have worked for over thirty-five years. At the centre of my project, I created a comprehensive two-hour workshop on the topic of creativity and the need for creativity in post-secondary education. One significant outcome of providing such a workshop was to promote me as the key creativity expert at BCIT to whom other departments might turn to develop the creative abilities of their staff and to enhance their curriculum.

PROJECT DESCRIPTION

The workshop focused on an introduction to creativity; why creativity should be a key curriculum component within all disciplines and how to embed creativity within a course. The purpose of this introductory workshop was two-fold; one reason was to hone my broader knowledge of creativity into a condensed package and thus build my confidence to present on the expansive topic of creativity. The second reason for the workshop was to engage with others on the topic so that I might begin to create a buzz on campus. I wanted to create the desire or need for colleagues to engage me as their excitement for using creativity increases. As I wish to speak at other conferences, the workshop materials forms the foundation for other presentations of varying lengths.

I wanted to push myself to learn new digital tools, videotaping and editing student responses to a few, simple questions on the topic of creativity in their lives. The student responses formed a component of the workshop leveraging the student’s perspectives to enhance the instructor’s understanding.

I wanted to present my material in a fun, captivating manner while I provided insight into a broad topic. In order to create my lecture material, I:

- reviewed and evaluated current lectures by others introducing creativity,

mostly from TED Talks and YouTube videos.

1. analyzed the format as to how they introduced the topic and what they spoke to next.
2. evaluated which components would best suit my workshop in order to make an impact.
3. wrote up my findings.

In the presentation, I included cited research into the importance of embracing creativity (Puccio, Mance, & Murdock, 2010), the 4 P's of creativity (Rhodes, 1961) and how it impacts the student's growth (Hennessey, B. & Amabile, T., 2005). These references address the integrity portion of my vision as people need to recognize the fifty plus years of research behind the study of creativity. The research validates the actions and environment I wish to establish.

The project provided an opportunity to explore activities to use in a workshop to demonstrate different aspects of creativity. The activities, which I describe later, allowed for a safe environment where participants were free to speak or add to the discussions. The activities reinforced the topics and provided movement and fun within the session.

The workshop ran March 26, 2015 as part of a professional practice seminar series at BCIT. I chose this venue as it attracts participants from a variety of disciplines and the head of the Learning and Teaching Centre always attends.

RATIONALE FOR SELECTION

I wish to pursue new avenues of work within my current Institute, the British Columbia Institute of Technology, in curriculum development and possibly as a facilitator. This project will enable me to gain recognition at BCIT as a creativity expert. I chose to deliver a workshop that allowed me to focus on the critical information that I wished to present in order to entice others. Running a workshop required a high level of

competency in presenting and modeling creativity.

Compiling the vital creativity information for myself keeps me current with my teaching skills, and encourages me to improve my classroom environment in order to ensure student engagement. I believe in the concept articulated by Torrance (1995) that those who are creating must have a mentor to engage and motivate their discovery. I also wish to take this a step further; I wish to help other instructors witness student engagement when they practice creativity in the classroom. By providing tools and personal examples of the growth in student motivation and excitement, I will connect with others.

I passionately believe that creativity plays an important role in developing successful students and a rewarding course. I will become a transformational leader by speaking and modeling this compelling vision. I believe that the British Columbia Institute of Technology is ready for change; there is a new president who is reassessing the current status and there are many excellent, motivated teaching staff. I believe that incorporating creative problem solving within a supporting environment will aid our students in thinking and innovating; they will be “more than ready” (www.bcit.ca, 2015).

SECTION TWO: PERTINENT LITERATURE AND RESOURCES

PERTINENT LITERATURE

The workshop is meant to be a broad overview of the topic of creativity so I reviewed many articles, current popular books, and videos. I focused on the definition and myths surrounding creativity in general. I reviewed the need for creativity in the workplace and, therefore, the need as one of our student's core competency skills. I reviewed the processes behind deliberate creativity. This selection informed the basis for my workshop presentation.

The difficulty I encountered is knowing when to stop researching a topic. The subject of creativity is broad involving different media such as videos and readings from current books, blogs, newspaper/magazine articles and research journals. I have spent hours trailing off into interesting reads and have tagged many articles to use in lectures or workshops in the future. I have compiled my findings into select headings for my workshop. I have included only the pertinent literature that fit my workshop agenda; the rest is filed for future use.

Three Key Books

Although I have many references to discuss, there are a few that stand out on their own; ones that have spoken to me or have focused on my workshop topics. I will discuss my top three selections first and then list other literature afterward.

Beghetto, R. & Kaufman, J. (2014). *Nurturing creativity in the classroom*. New York, NY: Cambridge University Press.

Nurturing Creativity in the Classroom edited by Beghetto and Kaufman has been one of my primary references. It is a compilation of papers written by some of the most prominent creativity scholars. This is a serious collection of current works relating to education by such well-known authors as Renzulli, Piirto, Sawyer, Runco Craft and Hennessey.

One article, in particular, *Creativity in College Classrooms* by D. Halpern states why we should care about creativity from several perspectives such as open

innovation, serious learning games, cross-cultural learning groups and critical thinking. As Halpern (2010, p.392) contends, “With so many possibilities and ever-growing need for creative solutions to old problems, we cannot afford to leave the development of creative potential to chance.”

At the end of the book, Beghetto and Kaufman sum up twenty key points from the articles noting some of the recurring themes and ideas such as Hennessey’s argument that individual teachers must support creativity at “a grass-roots level.”

Sawyer, K. (2012). *Explaining creativity. The science of human innovation*. New York, NY: Oxford University Press Inc.

Another similarly comprehensive book on creativity is, *Explaining Creativity, the Science of Human Innovation, 2nd ed.* by Keith Sawyer. Sawyer’s goal is to present a holistic, multi-disciplinary view synthesizing different findings and perspectives from the cognitive, personality and sociocultural research. I would highly recommend this book as a source for tackling the broad arena of creativity. Sawyer believes, “creativity will continue to increase in importance, due to several broad societal and economic trends.” (2012, p.3).

Usher, D. (2015). *Let the elephants run: Unlock your creativity and change everything*. Toronto, Ontario: House of Anansi Press

Apart from the scientific research, a current book, *Let the Elephants Run, Unlock your Creativity and Change Everything* by David Usher, (Canadian) was a pleasure to read. Usher speaks to two main foundations of creative thinking: freedom and structure.

The layout modelled creativity in illustrations, colour, text, font, and quotes. I read through it in a short period of time and felt Usher’s passion and joy in his creative endeavours. It is a book that I will refer to to jolt my passion and to stimulate me to present my work creatively.

I constantly referred to the three books above over the course of my project. They are varied in subject matter and provided grounded theories and stimulation for thought. In the future, I will continue to keep these books by my desk for easy reach. I would recommend these three books to any reader of creativity.

The following sources were useful for material in my workshop as I addressed the what, why and how of creativity. In order to organize the sources below I chose to divide my findings into three headings as follows: The Need for Creativity in the Workforce, the Definition of Creativity, and Deliberate Creativity.

Creativity is needed in the Workforce

Many current books on the topic of creativity start by claiming that creativity is a critical skill needed for success in the 21st century. (Beghetto and Kaufman, 2014, Sawyer, 2012, Usher, 2015). They discuss the dynamic, evolving workforce and how traditional procedures or methods of running a business or coping with change are not adequate in today's disruptive economy.

Business magazines repeat this paradigm shift in the business model relating research and examples of the new approaches to today's challenges. The 2010 IBM study as reported in the Newsweek article, *Creativity is the New Black*, conveys that not only will creativity play a critical role in the future success of a corporation, but creativity is also regarded as a core competency for those in a leadership role. How we generate new ideas is a critical skill in any field.

If we were to develop a culture of creativity in post-secondary education, it might form the basis of this corporate transformation. This poses the question, "Are creativity skills, processes or knowledge of creativity being taught in post-secondary education?" From her research, Kim (2011) relates that for the past two decades creativity scores in U.S. children are on a decline. There appears to be a gap between the skills required in the workplace and awareness of the importance of creativity in our student's tool kit.

Florida, R. (2012). *The rise of the creative class*. New York, NY: Basic Books.

Florida (2012) notes that "in late 2011, the social media site LinkedIn reported that the word most used by its members to describe themselves was "creative." Florida reasons that creativity is the driving force of economic growth and thus the creative class has become the powerhouse. Old norms no longer work in our society and so the creative class will be responsible for developing a better future, engaging the full creative potential of all. This book is a comprehensive look at our society, past, present

and future and the need for creativity.

Definitions of Creativity

By many experts, a general definition of creativity is the development of something that is novel or unique and useful (Amabile, 1996). Ken Robinson (2011) pushes the definition suggesting that it is idea generation and then persistence to stick with the ideas through challenges and dead ends. Next I will focus on two books that discuss the make-up of creativity.

Robinson, K. (2011). *Out of our minds: Learning to be creative*. Oxford: Capstone.

Through talks and books, Sir Ken Robinson is well-known for his opinion that education kills creativity. Ken Robinson (2001) argues that everyone has creative capacities and that creativity and ideas are one of the greatest resources available to organizations. Rather than separating the creatives or believing that only a select few are capable of the innovation that their company needs, Robinson maintains that a holistic, systematic approach to creating a culture of innovation must be developed. If we were to develop this culture of creativity in post-secondary education, it might form the basis of corporate transformation.

This book outlines three questions that help to define creativity; Why is it essential to promote creativity? What's the problem? and What should be done? The answers define creativity from several perspectives.

Amabile, T. M. (1996). *Creativity in context: Update to the social psychology of creativity*. Boulder, CO: Westview Press.

The author, Amabile, a well-known researcher on the subject of creativity, begins the book by defining creativity and describing how to assess creativity. Motivation, extrinsic and intrinsic, is discussed in detail. Amabile's view on creativity and motivation is that there is a direct link between creativity performance and intrinsic task motivation in all age groups. Most classrooms and workplaces destroy intrinsic motivation through the use of rewards, evaluations, and competitions.

Many books and literature that discuss creativity will start by defining the topic as there are many theories and definitions in the field and the public's view. Amabile's definition is widely accepted in the scientific community, and her theories are proven.

Deliberate Creativity

Creativity may be fostered in the classroom, however, deliberate, proven creativity processes are not likely to be part of the curriculum. There may be many examples of personal creativity found in post-secondary education, however, I believe what Davis (1986) contends; there may be many examples of creativity, but few are deliberate, conscious or proven.

In interviewing students at my Institute, they spoke of incorporating creativity because, “just working through projects requires creativity” or, “ my instructor lets us use different colours or fonts, not just the ones the textbooks tell us to use.”(Personal communication, March 3, 2015). One student said, “Our instructor shows us examples of creativity, but not how to use it.”

One of the main points of my workshop is to speak to the idea of deliberate, proven creativity. My workshop brings attention to the four P’s of creativity (Rhodes, 1961), focusing on the processes and tools available to enhance one’s ability.

I speak of the thinking skills model of Creative Problem Solving (Puccio, Mance, & Murdock, 2010) with the hope that the participants will want to grasp a tool or process that will support their student’s quest for developing innovative thinking skills.

Through the current books listed below one will find many easy to use tools for deliberate creativity.

Michalko, M.(2001). *Cracking creativity: The secrets of creative genius*. New York, NY: Ten Speed Press.

Michalko maintains that we need to teach people how to think, not what to think. He lays out different thinking strategies to become more creative. He provides many techniques so that one doesn’t approach problems reproductively. One must reconceptualize the problem by viewing it from many perspectives. There are many exercises and instructions to follow listed under his two main headings: seeing what no one else is seeing and thinking what no one else is thinking. This book would be an excellent source for creative thinking exercises for a classroom, corporate training or workshop.

Berger, W. (2014). *A more beautiful question: The power of inquiry to spark breakthrough*

ideas. New York, NY: Bloomsbury.

W. Berger provides a fundamental approach that fearlessly looks at challenges with a sense of wonderment and curiosity found in the naïve exploration of a young child. How might your inner child find space in your life for daily questioning? Throughout the book, as you read the research, findings, case studies and insights from many expert questioners, you begin to see the value in following a simple process for finding the right question. The Why, What if and How process will help one to identify where opportunities lie and how to embrace them.

De Brabandere, L. & Iny, A. (2013). *Thinking in new boxes*. New York, NY: Random House.

The premise behind the name is that we all think within a box which makes day to day life easier and manageable. In order to deal with the changing world of today, one needs to deliberately think in new boxes. A five-step guide is offered to develop fresh perspectives and freedom from pre-existing beliefs. De Brabandere and Iny provide examples of divergent and convergent tools such as Crushing, which is to take your list of ideas and change them in interesting ways. They provide a list of verb commands such as,

“make it lighter, reverse it, and make it collapsible “that may be applied to the idea. This can be done several times providing more and more twists as you continue. Thinking in new boxes promises you sustainable creativity.

Van Wulfen, G. (2013). *The innovation exploration. A visual toolkit to start innovation*. Amsterdam, Netherlands: BIS Publishers.

In this book, Gijs Van Wulfen laid out a visual toolkit for innovation by creating an analogy to some of the great explorers in history such as Columbus and Neil Armstrong.

Van Wulfen discusses the obstacles they overcame and provides insights into their success.

He starts by referring to Columbus and the conditions that gave him the courage to sail off

the map. These conditions are urgency, courage, new technology, teamwork and

perseverance. Such characteristics will point your team in the right direction to start the innovation process.

As an additional support for the book, checklists and tools are available by download from www.forth-innovation.com. The creative layout and images are inspiring and make the exploration easier to follow. Although there are similar tools found in many current creative thinking books, there are also different ones such as “The Trash Can” which is a tool used to help people check their past baggage at the door. This book is a creative approach to working through an innovation process.

Puccio, G., Mance, M., Switalski, L., & Reali, P. (2012). *Creativity rising: Creative thinking and creative problem solving in the 21st century*. Buffalo, N.Y.: ICSC Press, International Center for Studies in Creativity.

Puccio, et al. speak to the topic of creativity by presenting the arguments for creativity as a core competency skill for all. Describing the higher-order thinking skills required for creative problem solving: “thinking creatively, working creatively with others and implementing innovations” the point for adopting a deliberate practice of such skills are made (2012,n.p.).

The authors unwrap the mystery behind myths such as creativity is the result of a genius, creativity is mainly associated with the arts, and children are more creative than adults. The creative problem solving process is explained and that creativity is a way of living.

There are many good videos covering the broad topic of creativity. I am going to list a few below which provide different perspectives on the idea and tools for practicing deliberate creativity.

General Electric (2014). Ideas are scary. Retrieved from

<https://www.youtube.com/watch?v=sfmQvc6tB1o>

Johnson, S. (2010). Where good ideas come from. Retrieved

from <http://www.youtube.com/watch?v=NugRZGDbPFU>

Puccio, G. (2012). Creativity as a life skill: Gerard Puccio at TEDxGramercy. Retrieved

from <https://www.youtube.com/watch?v=ltPAsp71rmI>
 Segev, E. (2013). When there is a correct answer. Exercise in creative thinking. Retrieved
 from <https://www.youtube.com/watch?v=9TskeE43Q1M>
 Sampson, T. (2013). Redesign my brain: Make me creative. Retrieved from
<http://www.abc.net.au/tv/programs/redesign-my-brain-with-todd-sampson/>

A broad range of tools is easily found in current books, blogs or through
 creativity

websites. I believe that having a large repertoire of tools for deliberate creativity will
 support you as a facilitator and lecturer and may help to promote oneself as a model for
 creativity. Through this pertinent literature, I drew key concepts and tools to implement
 in my workshop presentation.

Reviewing all the tools from current sources, I intend to compile a workbook or
 binder that demonstrates tools and tips for enhancing creativity. This would be a big
 undertaking but a valuable resource for me to work towards in the future.

Creativity is a higher order thinking skill, and I believe that it is necessary for the
 workforce today. Post-secondary students need to practice deliberate creativity in order to
 be prepared for the dynamic challenges facing society today.

SECTION THREE: PLAN AND TIMELINE

PROCESS PLAN

This section details the process I followed in order to transfer me back to an institutional workplace where I intend to spread the power of creativity. With passion and playfulness, I:

1. Reviewed, analyzed and noted my findings in current videos and literature.
2. Set up interviews with students and edited the work.
3. Compiled the material I wanted to cover in my workshop and developed an agenda.
4. Created a power point presentation for the workshop as well as other tools, toys and visuals needed.
5. Concurrently kept track of my reflection and insights.⁶
6. Ran the workshop and garnered feedback.
7. Completed the writing of my paper.

Nature is able to grow and flourish only if the development and structure is there to support it. The support structure makes for healthy, resilient growth. In post-secondary institutions we are often given new programs and areas for growth without the support required to initiate robust growth.

I laid out the plan above in order to prepare a professional development workshop at the British Columbia Institute of Technology on March 25, 2015. BCIT is a large institution which has over the last decade transformed from offering a wide variety of trades apprenticeship training, certificates, diplomas and degrees to adding master programs and Ph.D research. This change has brought about new challenges creating many opportunities.

I intend to raise creativity consciousness on the BCIT campus engaging staff and students in our new future. Developing an introductory workshop will promote the meme of creativity as well as myself as a resource. This scenario is ripe for creative thinking, practice and behavior; one that enables us to move dynamically forward with a process and attitude to enable the changes required.

Reviews

In order to create my workshop presentation, I reviewed current videos on creativity found on YouTube and TED Talks to understand what others were pinpointing as their focus on a broad topic. I did find that most videos spoke to a specific aspect or subject within creativity such as *Ten Mental Blocks* by Roger Von Oech, http://www.powershow.com/view/a5ff6-MWM3N/10_Mental_Blocks_Roger_von_Oech_powerpoint_ppt_presentation who speaks to overcoming your mental blocks and developing new ideas.

Many talks were discussing where creative ideas or innovations come from and the process or tools used to produce disruptive ideas. For example, in Erik Wahl's video, *Deliberate Creativity*, <https://www.youtube.com/watch?v=qPrKiTPx8H0> (May, 2011) he speaks to the fact that we need to think differently in order to let go of our assumptions.

Blogs and websites, usually by those who are in the industry as a consultant or facilitator, often address creativity as it relates to business. Some are developed further to bring current research to the viewer. www.basadur.com is a comprehensive website by Basadur Applied Creativity who uses Simplexity Thinking as their creative problem solving process. The website, in addition to promoting their business, offers current insights and research as well. It's simplicity in definitions and insights has informed my approach to my workshop. I wish to speak to the topic of creativity in a simple, pure format yet also to add some of the science and research behind my discussion.

The blog, *Creativity at Work*, www.creativityatwork.com, developed by Naiman intrigued me because of the responses she received from her blog posts. Most of the responses were from those who seemed fairly new to the topic of creativity, and it

allowed me to see the types of questions or responses that I might receive from my workshop. Naiman responded to all posts providing more insights and deepening the on-line conversation. I was not aware of Naiman before discovering her website.

I am also impressed that her blog garners responses from well-known creativity experts such as Keith Sawyer, author of the 2012 *Explaining Creativity, the Science of Human Innovation*. Naiman lives in Vancouver, BC. where I live so I am going to reach out to her. I was hoping to do this before my workshop so that I might gain some insight into how others respond to the idea of learning to implement creativity in their workplace and curriculum, however, we were unable to connect. I will pursue this meeting in the future.

The Creativity at Work website provides “free resources” which are very useful. They may be articles or tools divided into categories such as, “Creativity and Innovation: Tips and Tools, Arts-Based Learning for Business, Art of Leadership and “The Creative Economy” <http://www.creativityatwork.com/> . The topics should appeal to a variety of interests.

In developing my workshop, I discussed a wide range of topics so that, at one point in my presentation, I will have something that speaks to each individual attending. Encouraged by the free resources offered on Creativity at Work, I offered a take-away with some key sites, books and literature for my workshop participants. In so doing, I intended to extend the learning.

In the future, I believe that if I set up a blog at work, posting articles and posing open-ended questions, I will open another avenue to promote creativity consciousness at BCIT and continue to provide a focus on cutting edge creativity resources as an internal creativity expert in my organization.

I incorporated literature into my workshop to provide data that demonstrates the research behind my words. Several main pieces of literature stood out in my education which apply to my workplace: the holistic definition developed by Rhodes (1961) that discusses the 4 P’s of creativity: person, product, process, and press, Amabile’s and Hennessey’s research that argues that there must be a comprehensive approach to creativity to obtain success, and Land & Harmon (1993) who discuss the fall

of creativity towards adulthood and pinpoints how divergent and convergent thinking skills change as we mature. Studies by Forbes (IBM 2010) notes the importance of creativity for business in the future. All of these provided me with a story to tell and allowed me to engage the audience with statistics in an entertaining format.

Interviews

I wanted to interview students at BCIT across many disciplines to find out their view on creativity. What is their definition of creativity? Do they think that creativity is needed in the workforce today? Do they practice creativity currently in the classroom?

I had originally wanted to videotape students for responses to the above questions, however, there was much resistance to the idea of being taped. I approached instructors to ask if I could interview their students during lab times or at their break. They were receptive until I said that I might use a video camera. The use of a camera seemed to complicate the process and instructors felt that students may not want to be taped. When I asked a few students, they said they would answer questions but hesitated when asked if I could also tape them.

Due to time constraints I decided to interview the students without taping them. Everyone seemed happy about this approach. I discussed my method of interviewing with Marta Villanueva, owner of Villanueva Qualitative Insights, as she is an expert on the interview process. Mrs. Villanueva suggested that the students answer a written questionnaire first, and upon completion, I could open up the discussion. By having the students write their responses down first they would not be affected by the answers of their peers.

During my first session, I asked three students at a time to fill out a questionnaire with the above three questions only. After they had all finished, I sat with them for about five minutes and had a casual discussion about creativity. I quickly realized that I needed to ask several more questions on the questionnaire.

This insight came from my discussions. I would start by asking the students if they knew that creativity can be taught. The majority were surprised by this. I talked to them about the creative problem solving process and the use of tools which can enhance

one's creative abilities.

Since most of the students felt that they used creativity in the classroom, I asked them to expand on that. It turns out that they feel that they use creativity themselves, in solving problems or mainly in their style of presentation for an assignment. Their instructors might discuss examples or case studies supporting their subject that are creative, but none of the students had creativity explained to them or were provided any tools to use to help them.

The original questions I asked were: 1. what is your definition of creativity? 2. Do you think students will need skills in creativity for the workplace? If so, what creativity skills might you need or for what job? 3. Do you use creativity in the classroom at BCIT? If so, how?

I added three more questions to my questionnaire for the next interviews. 1. Did you know that creativity is a thinking skill and can be taught? (Your creativity can be enhanced.) 2. Have you ever specifically discussed creativity behavior, process or tools in any of your classes? If so, please describe. 3. If BCIT offered an elective course in creativity and creative problem solving, would you be interested in taking it?

By adding these three questions, discussions opened up around the idea of training in creativity. I wanted to see if any student was currently experiencing any guidance in how to come up with an innovative idea (or how to be creative). This opened up an opportunity to see if any student would be interested in taking a course in creativity. The overwhelming response was, "yes." This information fuels my initiative to propose an undergraduate course in creative studies at BCIT.

The intention of interviewing students was to have some relevant information to deliver in my workshop presentation. I selected a few common student definitions to add to my presentation. In my presentation, I also asked the participants what their definition of creativity is. This question opened up a fruitful discussion of creativity near the beginning of the workshop.

In my presentation, I added student comments regarding the use of creativity in the classroom to add to my point that we need to implement the practice of deliberate creativity to our courses. Deliberate creativity has the power to ignite your imagination,

make connections and realize solutions. (Puccio, personal communication, June, 2014).

Compiling Information

Compiling information to include in my workshop presentation was an exercise in divergent thinking. I spent too much time reading current articles-who wouldn't as each one was so fascinating. It was either new information, statistics or case studies that I may want to include in my power point or it was backing up information that I intended to use.

I gathered the information digitally and made copies of pertinent articles which I then highlighted crucial portions that I wanted to return to to read again. I have two binders broken into loose headings of business, education, tools/processes, case studies/examples, research, and miscellaneous. I purchased current books to add to my library and made a list of videos that I might use in the future.

If something hit me as crucial to my workshop, I made a list. Compiling this list was so much fun, and really I could have gone on forever exploring in this fashion. However, time dictated that I converge on my list of ideas. As it turned out, there was a pattern or similarity to much of the information, and I was able to narrow the topic to three key points; What is creativity? Why do we need it? How do we approach it?

Power Point

I have created power points for many classes and lectures. I am aware of the downfall of many power point presentations: too much information on a slide and too many slides. So, the next step was how to provide enough information on such a broad topic in a succinct format? I am a storyteller and knew that I wanted to be able to talk about different stories throughout the presentation. I wanted to include case studies or research as they always give me the opportunity to speak informally and hopefully with some humour when appropriate.

To keep my audience's attention, I selected images that would really reflect what I was saying and hopefully in a humorous or clever way. Selecting images took a long time. In fact, I have never spent so much time putting a power point presentation together. I believe that it is so important to me to pass my knowledge of the importance and potentially life-changing potential of creativity on to my co-workers and students that I struggled with the overwhelming amount of material that I had gathered. It was

difficult to decide what to remove. My workshop was two hours long, and I had several group activities throughout, so the lecture material needed to be concise.

As my power point presentation was only part of my workshop, I spent time reviewing exercises, asking my cohort for their suggestions and playing with a few new ones. I settled on three activities that I was comfortable with and would enhance the learning.

Activities

I handed out coupons at the door as the participants entered. The coupon allows Each participant to make 20 mistakes during the workshop. I let the participants know that if they ran out I had extra coupons as well. This started the workshop on a fun note. I made the coupons and printed off extra to try at my preview workshop.

I spoke about making connections that are new, come from a different perspective or build on other ideas. Making connections is a recurring dialogue in many of the current books on creativity. I developed a quick activity to demonstrate that anyone is capable of seeing new connections between disparate illustrations.

I had the participant's select two images from a pile on their tables. After they viewed them for a couple of minutes; I had one person come up to the front and I displayed their two images on the Elmo. The Elmo machine projects the image onto the screen so that everyone is able to see it. I asked the participants if they could suggest a connection between the two images. I then asked the audience to make some suggestions. I had another person bring their illustration up and make connections among all three illustrations.

This activity demonstrated an exercise they can try themselves every day to enhance their ability to see new perspectives and connections. Making connections that others don't see may create a new product or innovation. I showed the video clip for the ad about pajama -jeans as a humorous example.

The next activity was a precursor to stick'em up brainstorming. In order to prepare everyone to have fun, I had a quick exercise around "fear of failure." This exercise came from one of my students this past term. In my class, we had had discussions around the topic, fear of failure, and had brainstormed, what might be all the

possibilities if we were not afraid to fail?

Later in the term, a student was doing a presentation on a well-known designer, Bruce Mau, who advises that everyone should have fun with failure. My student had five volunteers come up to the front of the classroom. She explained that we would all tell a story of an example in the last two months where we had failed at something. It could be anything. She started by relaying her story. She was very tired driving home from a hard day at school and had to get gas. She paid for the gas and then drove without pumping the gas. She had forgotten to fill up her car!!

After each story, everyone in the room was directed to shout out, “Woohoo” and cheer for that person. It was a lot of fun and people weren’t afraid to speak about their failures. In fact, this little exercise has carried on throughout the year and often you will hear students cheering, “Woohoo” in response to a mistake. It was so successful that I wanted to try it in my workshop as well.

I moved into the stick’em up brainstorming exercise which revolved around the question, “What might be all the ways to improve a bathtub? I had discussed divergent and convergent thinking as well the guidelines for each before we embarked on this activity.

The last exercise during the presentation was from the Torrance Test for Creativity. I handed out a sheet full of squares with two parallel lines in each. I gave everyone two minutes to make as many objects or pictures with the boxes on the sheet. By doing this activity I was able to explain another way to enhance one’s creativity; to practice developing fluency and speed. These activities broke up the lecture material and engaged the participants in the learning.

Environment

In order to create a relaxed environment, I purchased simple hand toys such as squishy balls, play-doh and pipe cleaners for those who wished to play or doodle during the workshop. I had water, nuts and candy on the table as well. I had purchased all the pens, paper, post-it notes, etc. that may be needed during the workshop. I had prepared copies of any exercise and had extras if any participant wished to take some with them. As the participants arrived, they were surprised to see a table so prepared and

remarked that it looked like they were going to have a lot of fun.

Feedback

After finishing my power point and schedule for the workshop, I sent my power point to a few Buffalo cohorts to receive feedback. Jack Hernandez, who works in post-secondary education has presented a one- hour workshop several times now. He was kind enough to send me his presentation and to answer any questions I might have. We are going to keep in touch as we appear to be on the same path; we want to raise creative consciousness across the campus. Jack will be an invaluable ally in this endeavour.

I did a practice run of my workshop with several cohorts from my department at BCIT. I gave them a print-out of the power point so that they could make suggestions next to the slide. We had a great workshop where we discussed ideas as they came up. Their feedback was invaluable, and I saw where I needed to be clearer in some areas. This run-through definitely gave me a comfort level that I would not have had without doing it. My friends gave up three plus hours on a weekend to help me, and I am very grateful.

I continued to interview students up to and after the workshop. The student information is key to developing a proposal to initiate a course on creative studies.

After the workshop, I sent out a digital evaluation to all the participants for feedback. I had prepared the evaluation questions and had asked for feedback from my advisor, Dr. Sue Keller-Mathers. See Appendix D for the evaluation questions. At the time, I was not sure what to expect in response. This was my first presentation regarding creativity at BCIT and I did not know most of the participants.

During this process, I have kept a small reflection journal and have completed a couple of POINT assessments. See Appendix B for one of my POINT assessments.

Timeline

Following is my initial timeline. I feel that it is important to leave my initial timeline and then discuss the areas that were not in sync to reveal more information. I spent three times as many hours developing the power point. As this was my first time presenting a broad picture of creativity, it took so much longer than planned to cut out and synthesize the material. I also took triple the amount of time to complete the writing

of my paper. I struggle with writing and need to review constantly and add more detail at every level. I would like to have had more time to revise my paper, however I attended the CREA Conference in Italy during a crucial time period. In spite of giving myself a time crunch, there were benefits to attending CREA so schedules/timelines may not always be perfect.

Timeline

Date (2015)	Action	Hours
Jan. 25-Feb. 2	A-review course outline, research adopt a paper and select B- work on the rough copy of the concept paper, refine idea (edit, pare down) for the final project	A- 3 hours B- 16 hours
February 2	send a rough copy of the concept paper to Marta for review, skype call at 5:00 pm to discuss	1 hour
Feb. 2-9	A- revise rough draft of the concept paper, work on next sections, B-review/analyze videos	A-3-4 hours B- 20 hours
Feb. 9** Feb. 16**	Hand in the rough copy of the concept paper (or earlier) Hand in Final copy of the concept paper	
Feb.9-16	A-revise concept paper and hand in sections 1-3 B- review literature, make notes	A-3 hours B- 20 hours
Feb 16-23	A- develop workshop agenda B- create power point for the workshop	A-4 hours B- 20 hours
Feb. 23 **	Adopt a project due	
Feb. 23-30	A- look into video-tape procedures, set up location, date, practice with the camera B- finalize sections 1-3	A-5 hours B- 5 hours

Mar.1-7	videotape students and edit clips, add to power point	20 hours
Mar. 9	run practice workshop and garner feedback	4 hours
Mar. 16**	A- Hand in final copy of section 1-3 B- make revisions to workshop, power pint	B-5 hours
Mar. 26	run workshop	3 hours
Mar. 27-Apr. 3	A- send out surveys, write up findings B- write up POINT analysis and reflection C- work through sections 4-6 write-up	A- 3 hours B- 4 hours C- 15 hours
Apr. 3-10	write-up sections 4-6, get feedback from Marta and Sue	15 hours
Apr. 10-17	work on the final copy of the project	5 hours
Apr. 11-21	Attend CREA, little time to work on the project	
Apr. 13 **	hand in a final copy of section 4-6 try to hand in before April 11	
Apr. 22-27	work on the final paper	15 hours
Apr. 27**	final project due	
Apr. 27-May 4	Prepare final presentation	5 hours
May 4, week of	sign off and presentation	
Total 194 hours		

SECTION FOUR: OUTCOMES PRODUCTS

The main outcome of my project is a workshop with a comprehensive overview of the subject of creativity: what, why and how. In addition, the research and development of the workshop allowed for conversations with peers, students, and new acquaintances across the campus furthering my connections. Developing and expanding my reach into other disciplines through the use of creativity was a desired outcome of the project.

Workshop

The workshop was developed to inspire, educate and create an enthusiasm for creativity. The goal was to start to broaden the awareness of the importance of engaging in creative thinking and doing. How might creativity enhance our students experience at BCIT and provide them with skills so that they will meet BCIT's competency tagline, "More than Ready?" In order to introduce the wide topic of creativity I focused on what is creativity, why we and our students need it in our lives and at school and how we might implement it into our curriculum and teaching.

The idea was just to introduce discussions around these three areas and to tease the participants into wanting to know more. In the future, I would like to run workshops

on creativity and climate, as well as the Creative Problem Solving Process. I wanted to model creativity throughout the workshop by introducing the topic and then engaging the participants in a short quick exercise to demonstrate a key insight. By adding activities throughout, the power point presentation component would be broken up allowing for movement, fun or play, and casual discussions once the activity was completed. At the end of the workshop, I was hoping that the activities would trigger the participants to remember the what, why, and how of creativity.

As one approached the workshop room, I taped paper to the floor with a hopscotch layout drawn on it. I placed a few candy stones at each end, so it didn't matter which direction you approached the room; you would have the ability to play the game. No one tried it out. Everyone walking down the hallway tried to squeak by the side of it. One participant asked me why it was there, and I told her, "to set the tone for the workshop; we are going to be having some fun."

Once the participants entered the room, they saw a table full of toys such as pipe cleaners, small cars, squishy balls, bubbles, etc. There were bowls of snacks and water for everyone. At each place, there was several post-it pads in different colors, pens, and pencils. As we waited for the participants to arrive, I explained that they were free to play or explore with anything on the table. No one had seen a table that looked like so much fun. People were beginning to relax a little, and there were lots of smiles.

Following is a basic schedule for the two-hour workshop as a reference for anyone wishing to run one. It provides a sequence and overview of the content that might be able to be cover in a similar workshop.

Workshop Schedule

- Greet everyone and a round robin introduction and what department they are from.
- Briefly go over the agenda for the workshop.
- Introduction of myself and my experiences with creativity. (Interior Designer, Biomimicry Specialist, Master of Science in Creative Studies program.)
- Topic: What is creativity? Exercise: Ask everyone for their definition. (Relaxed, general idea).
- Discuss the idea of making connections as this seems to be a popular discussion around creativity. Exercise: making connections between illustrations selected from a pile on the table. Watch a two minute YouTube clip on a funny connection.
- Topic: We all have the ability to be creative, why we struggle with it as adults. Personal childhood story to demonstrate how we might be discouraged from being creative.
- Example: Land and divergent/convergent thinking and the guidelines for each.
- Exercise: Fear of Failure. An activity to relieve fear is done so that we can move into some brainstorming without worrying about not doing it right.
- Exercise: Post-it up brainstorming.
- Topic: Myths of Creativity

- Topic: Creative behaviors
- Topic: Creativity can be taught.
- Topic: Why do we need creativity? You Tube clip on when one is the right answer. Discussed some statistics on the need for creativity in business and careers.
- Topic BCIT student questionnaire responses. Local and Canadian schools creativity offerings
- Topic: How do we enhance creativity? Introduce CPS. (two-minute introduction.)
- Conclusion: “Creativity is an investment.”
- Open Discussion.

The workshop is front-loaded with exercises as it provided an opportunity to laugh and relax. The exercises helped to create a safe environment to discuss the topic and ask questions. They helped everyone to feel comfortable with each other. The exercises were also meant to be unique and hopefully ones that no one had experienced before. I had made up two of them myself, so they were new, and the other examples proved to be new to the participants as well. The relaxed atmosphere and unique activities helped to model the use of creativity in learner engagement.

The timing of the workshop worked well. I did have to cut some discussions short in order to keep moving through the presentation. A presenter would have to decide which is more important, staying longer on a specific topic, or moving on with the schedule. I decided that I wanted to cover all my material so that I could get feedback on the three main discussion areas: what, why and how.

The workshop ran for two hours, and it concluded right on time. If there had been more people in attendance, it might have taken slightly longer to move through the exercises. The workshop was run at the Learning and Teaching Centre at the Institute as part of a professional development series running every Wednesday afternoon for the month of March. I chose to be part of this series because it draws people who are interested in on-going learning opportunities, and the LTC advertises campus-wide.

There were ten people in attendance, which was lower than I expected. The room had been changed three times, and so a few contacted me afterward to ask where it had been held and to let me know that they were still interested in attending another one. Logistics are always a concern. I had gone to the room the day before to try the projector out ahead of time and to see where I would place everything. The day of the workshop, I was moved to a different room. I am fine with changes and adapted quickly to the small changes required to run the exercises.

Overall the schedule worked well as I had practiced beforehand to fine tune the timing and I had spoken to another cohort who had run a one- hour workshop for a similar audience. I would like to run a couple more workshops with the same schedule and gain more feedback before I make changes.

Power Point

I would like to address the layout or flow of the power point presentation. I reviewed the agenda for the workshop, and then I started with a short introduction of myself and my engagement in creativity. Whenever I mention that I am an interior

designer, everyone always wants to ask about my house, so I included two photos and discussed the “original or unique” features (see Figure 1). This discussion addresses the product portion of the four P’s presented and researched by Mel Rhodes (1961).

Interior Design



Figure 1.

I continued with my completion of a Biomimicry Specialist Certificate where I described how nature offers creative solutions to us. This discussion addresses product and process where one can view a challenge from another perspective or make connections between seemingly unrelated ideas or objects (see Figure 2).

Biomimicry



Figure 2.

The third slide spoke to my last two years studying at The International Centre for Studies in Creativity and how I brought the creative problem solving process to my current classes (see Figure 3). I also included a short discussion on setting up the right environment and what might motivate the students to engage in creativity. This dialog addresses the process and press or environment. I was able to speak to the idea that tolerance for ambiguity and taking risks allowed me to try new techniques in my classes.

Buffalo State
University College



Figure 3.

This short overview of my background introduced several concepts of creativity in a casual format. It demonstrated my willingness to expose personal accounts of my growth in the study of creativity. I was pressed for time but noticed that this personal introduction would have allowed for several deeper discussions on the four P's of creativity.

Power Point: Definitions

I moved into the definition of creativity first asking the participants for their definition of creativity or what does creativity mean to them. The responses were simple,

such as, “something different” and hesitant, mainly suggesting that it is something unique. Students were hesitant to answer because they thought it might be a trick question. The modest question, “What is creativity?” seems as if we all know what it is but when we are asked to define it, we stumble. Creativity takes on a much larger scope than one first thinks and so, I found there was a hesitation while they stopped to take the time to think about it.

I proceeded by discussing the commonly accepted definition of creativity as something that is novel and valuable. Then I provided the definition by Mel Rhodes, which looks at the four P’s of creativity that is a holistic approach to the topic. I finished with my personal definition that was developed as part of the Current Studies course at Buffalo State College (see Figure 4). I followed with a few definitions by students that I had interviewed at BCIT that provided a view into their creativity and current classwork.

I feel that starting with the definition of creativity provided several different viewpoints and posed an opportunity to discuss a variety of ways to look at creativity. I believe that this relieved some of the fear of not knowing the topic or allowed participants to realize that creativity is studied from many angles. The discussion also gave the group a common understanding and vocabulary to move forward in the workshop.

How Would you Define Creativity?

Creativity is two-fold.

On the one hand **creativity is freedom**: freedom of thought, risk-taking, possibilities/opportunities, playfulness and attitude. ("I have not failed. I've just found 10,000 ways that won't work." Edison)

On the other hand, **creativity is the result of hard work** where convergent analysis, development and implementation are evaluated and processed in order to deliver tangible results.

Dixie Hudson
May, 2014

Figure 4.

I briefly discussed the idea of making connections as one of the key activities found in creative engagement. I developed a quick exercise to demonstrate that making connections may provide a new way to see something. I had laid out illustrations on the table and now asked the participants to select two of them. Once they had chosen their illustrations I asked one person to come up to the front where I had an Elmo machine that projected the images onto the screen. I asked the participant if they could make a connection between the two unrelated images. Others joined in and provided several more connections. Then I asked another person to bring their two illustrations up to the front, and we all tried to make connections between the four images. It proved to be fun and opened discussions on how so many people saw things that others never saw. We were able to make unexpected connections between unrelated images broadening the angle with which to look at a subject. The exercise was simple yet very clear to the participants.

Next I wanted to emphasize that we are all creative and that creativity can be enhanced. I spoke to the idea of creativity being squashed in our education system as well as our experience and expertise, playing with the idea that we form habits and preclude many ideas due to our experience. Habitual thinking is developed and we know what worked in the past and how to implement it so we often just stay there.

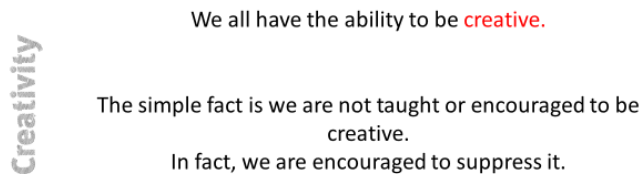


Figure 5.

I provided a personal example, when I was seven years old, of creativity unknowingly being squashed by adults. I was attending a Brownie and Girl Guide camp. We were asked to rake a section of dirt in front of our cabins in order to prepare it for grass seed. The soil was dense, lumpy and had a lot of rocks in it. I tried to rake it with the heavy rake (shown in figure 6) but it kept getting stuck, and I wasn't able to pull it towards me. I thought perhaps if I tried it on the side without the teeth I might be able to smooth out the dirt better.

While I was doing this, I overheard two of the adult leaders discussing my attempt. They were saying that I mustn't know how to use a rake. They thought that I might come from a family where I didn't have to do any chores so I wouldn't know what a rake was. I was very embarrassed. I did know how to use a rake, I just thought that I would try something different to see if it would work better. I was young and too embarrassed to speak up. One adult then asked the other if they should tell me that I wasn't using it properly. They agreed that they should tell me that I was wrong; it would be better if I knew how to use it. I remember that I was so embarrassed, and I felt badly that I was using it improperly.

The adults decided there was only one right way to use the rake and made me know that I was wrong to use it differently. The idea that there is only one right way or one right answer is a common practice in school and our personal lives. We are taught only to view things from one perspective. However, we can practice tools that develop alternative viewpoints. Attitude may also play a role in releasing one from judging alternatives right away, allowing one to be free to generate ideas.

7 Years Old



Figure 6.

This dialog led into Land's (1968) longitudinal study that shows the percentage of high-level creative abilities (or genius level) found at ages 3-5, 10, 15 and adult. The statistics are so powerful as his study showed a high-level of creativity at 98% in young children decreasing to 2% in adults (see Figure 5). Land and Jarman (1993) note that the educational system was set up during the industrial revolution to train us to become good at following instructions. Differing opinions or alternative perspectives were not encouraged.

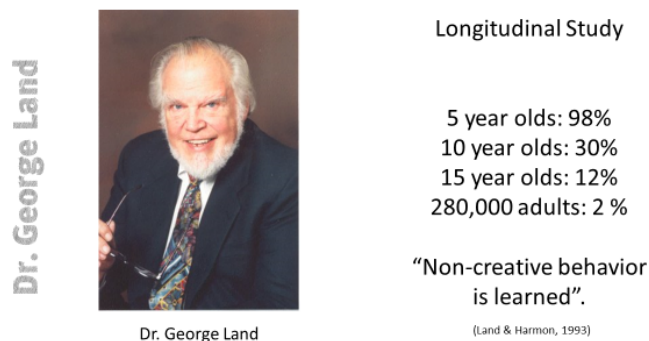


Figure 7.

Power Point: Divergent, Convergent Thinking

The discussion on one right answer steered me to speak about divergent and convergent thinking skills, as discussed in Land's TEDxTuscon 2011 talk, *The Failure of Success*, <https://www.youtube.com/watch?v=ZfKMq-rYtnc> . The separation of divergent and convergent thinking may be one of the significant elements to engaging in the creative process. The guidelines for divergent thinking: defer judgment, strive for quantity, seek novel ideas and build on other ideas, may set the groundwork for creating

an environment conducive to exploration, curiosity and a tolerance for risk-taking. I inserted a couple of fun exercises here to address the fear of failure and to participate in practicing divergent thinking.

One of my students at BCIT created the first exercise. I had several discussions about the fear of failure with my students and then my student researched Bruce Mau, a Canadian designer, who speaks about having fun with fear. In order to demonstrate this, she created an exercise for her presentation. I adopted it for my presentation with her permission.

I called four willing participants to the front of the room and asked them if they would each give an example of a recent time when they failed at something. I gave the example first of making a very simple meal, a grilled cheese sandwich, which I burned. After each of us gave our example, everyone should yell, “Woo Hoo.”. Cheering after someone tells their story of making a mistake lightens the atmosphere of the room and makes it seem alright to make a mistake with this group. We are not going to get upset; rather we are going to cheer you on and support you. This exercise is so much fun and so simple to execute.

We were then ready to tackle post-it up brainstorming with another fun challenge, “How might we improve the bathtub?” The participants were not afraid to call out their ideas or to think of alternative suggestions.

Brainstorming



What might be all the ways to improve the bathtub?

Figure 8.

Power Point: Myths

I continued with dispelling some of the common myths of creativity such as the lone genius, creativity is mainly in the arts, only some people are creative, the myth of merriment and the myth that creativity cannot be taught. The myths of creativity are discussed in many blogs and current publications such as, *The Myths of Creativity* by David Burkis,(2014), *Ten Myths of Creativity You Need to Stop Believing Now* by Martin Swilling, (Entrepreneur, 2013) and *Within You, Without You: The Social Psychology of Creativity and Beyond* by T. Amabile.

Dispelling myths was a fun portion of the presentation and allowed for some connecting between the participants who were able to admit to thinking some of the myths might be true. Again, the portion can open up great discussions and allows you to bring in research to defend against the ideas. Following are two slides from this section (see figure 9 and figure 10).

If you ask someone to tell you who they think is creative, they will often respond with someone famous in painting such as Picasso or an architect such as Zaha Hadid. There is a misconception that only people who create paintings, sculpture, dance or work in the theater are creative: those in the realm of arts. In reality, we are all born with creativity and are capable of creative thoughts, ideas, and behaviours.

Although many of these behaviours have been squashed, there are tools and a process that can boost one's creativity. Often one feels stuck, and they don't seem to be able to think creatively or know where to continue with an idea. The iterative Creative Problem Solving process walks you through the deliberate act of creativity, through divergent and convergent phases using tools when necessary to guide you through the visioning, ideation and implementation phases of a challenge. In addition to the process, mindfulness, taking a walk in nature or allowing for incubation time will help one get unstuck.

Myths



Figure 9.

Creativity Cannot Be Taught



Scott, G., Leritz, L. E., & Mumford, M. D. (2004). The effectiveness of creativity training: A quantitative review. *Creativity Research Journal*, 16(4), 361-388, p. 382.

Figure 10.

Power Point: Creative Behaviors

I moved into the behavior or characteristics of a creative person and then reinforced that everyone is creative, and creativity skills can be taught (see Figure 11). I feel a drive to promote what Torrance calls the attributes of creative people: confidence, risk-taking, energy, adventurousness, curiosity, humour, playfulness, liking for complexity, independence, reflectiveness, etc. (Torrance, 1995). Recognizing and encouraging these characteristics in our students will help to promote confidence in their creative undertakings.

I ran another quick exercise to demonstrate a technique to enhance fluency and variety of thought. Throughout the workshop, I used the term deliberate creativity to establish that there are methods, tools and atmosphere that will enhance one's creativity.



Figure 11.

Power Point: Need for Creativity in the Workplace

I continued into the reasons why we need creativity in the workplace, and therefore it is a skill that we must implement with students. I informed the participants through statistics from several research studies. Several quotes that I included were: “Research has shown that creativity is 3x as strong an indicator of lifetime achievement than is intelligence (Plucker, 1999), For two decades, U.S. children’s creativity scores have been declining (Kim, 2011), and Forbes magazine reported on a 2010 IBM Global CEO Study -1500 business executives, 60 countries, 33 industries “Found that creativity was the most desirable competency in leaders and that creativity was the most crucial factor for future success” (see figure 12).

“Creativity is the New Black”
Forbes Magazine 2010



Forbes magazine reported on a 2010 IBM Global CEO study -1500 business executives, 60 countries, 33 industries

“Found that **creativity** was the most desirable competency in leaders.


Creativity was the most crucial factor for future **success.** “

Figure 12.

These slides caught everyone’s attention. I believe that including research validated my presentation and knowledge. Questions arose about the studies as it was of an interest to everyone. I did have the studies listed in the literature that I provided for each participant to take away with them.

Under the Need section of the power point I spoke to the Adobe, *Creativity and Education, Why It Matters Study* (2012) which states that,” 71% of college-educated professionals say creative thinking should be taught as a course like math and science and 82% wish they had more exposure to creative thinking as students.” Many professors teach using the same methods as were used to teach them. We must teach the teachers as well as the students if we wish to provide proper creativity training (see figure 13).

NEED



For two decades, U.S. children's creativity scores have been declining.
Kyung Hee Kim, 2011

Research has shown that **creativity is 3x as strong an indicator of lifetime achievement** than is intelligence.
Jonathan Plucker, 2008

Figure 13.

Power Point: Student Interview Questions

Next I showed some statistics from the questionnaire that I used to interview thirty students on their knowledge of creativity (see Figure 14). The students I interviewed were from a wide variety of disciplines. Following are the four main questions and the results for each shown on the power point slide. I brought each question in one at a time to note them separately.

NEED



4. If BCIT offered an elective course in creativity and creative problem solving, would you be interested in taking it?

Yes - 95%

1. Do you think students will need skills in creativity for the workplace?

Yes - 95%

2. Do you use creativity in the classroom at BCIT? If so, how?

Yes - 89%

"Yes, to solve tech problems"

Yes, using different formats in excel."

"Yes, different ways of presenting projects."

"Our teacher shows us examples of creativity but not how to achieve it."

3. Have you ever specifically discussed creativity behavior, processes or tools in any of your classes? If so, how?

Yes- 80%

"Yes, they analyze many websites."

"Yes, how different font types and colours enhance human emotions."

BCIT Student Survey, 2015

Figure 14.

The first two questions are simple, and the responses appear clear, although as I progressed with questions, the answers to questions one and two became compelling. I wanted to start with a simple question, "Is there a need for creativity in the workplace?" to feel out their awareness of the need. Everywhere you look, magazines, current top selling books, job postings, etc. are using the words creativity and innovation. The challenges we face today are urgent, risky, unknown and dynamic. What we know now will not be enough to address future changes and challenges. You will need to be creative in solving those problems as it will involve a lot more than just having more information. (Brabandere, 2013; Martin, 2010; Robinson, 2011).

Students are aware of the economic uncertainty, environmental concerns and the term, disruptive innovation. Are they aware that the need for creativity skills are in demand as a response to these challenges? I dig deeper into this in the next few questions.

In response to question one, students overwhelmingly agree that creativity is needed in the workplace. In question two, “Do you use creativity in the classroom?” they responded, “yes.” In discussing how they used creativity, it became apparent that they thought they, themselves, were creative in how they presented their projects or assignments. Their creative skills were generally found in presentation techniques,(the art of presentation), not creative problem solving. The students felt that they, themselves, used creativity in working on the presentation of their projects. The students spoke of the creativity that they personally employed when developing their student presentations or projects. Creativity was found mainly in the presentation methods of their work.

The students did not mention creativity used by teachers in order to teach or if teachers specifically asked for unique or novel solutions to their work. One telling response, “our teachers show us examples of creativity but not how to achieve it” eludes to the fact that discussions on the how to of creativity is not present. This idea provided an opportunity to discuss deliberate creativity and that most teachers are not providing a process or tools that would guide the students through their project beginning with the challenge.

Question number three,” Have you ever specifically discussed creativity behaviour, processes or tools in the classroom? If so, how?” had an unexpected result. Eighty percent of the students answered, “Yes” yet I knew from the previous questions that most students were not aware that creativity could be taught, and most students felt

that notable creativity in the classroom was used on their part for student presentations. The examples the students gave to this question revealed that through case studies, they may have discussed how others implemented creativity, however, they were not trained or schooled in the creative process themselves. The student response to how they were exposed to creativity behavior or tools, “yes, how many font types, or colors enhance human emotions.” relates to the idea of discussing creativity as someone else applies it. Students need to be aware of their creativity in order to be motivated. (Hennessey & Amabile, 2005) and to further develop their skills. Discussion and reflection need to be part of the classroom activity around creativity.

I asked the last question because in the near future I would like to create a Liberal Studies course in creative studies at BCIT. Recognition and desire by the students is a powerful tool to present my case for the value of such a course. See Appendix C for student questionnaire.

Power Point: Creativity and Education

I continued the education track with Bloom’s Taxonomy, a tool developed in 1950 by a group of educators trying to clarify educational objectives. It places the order of difficulty from the bottom of the pyramid to the top. In 2011, the taxonomy was revised placing “creating” as the highest order thinking skill because it engages students in multiple thinking skills such as analyzing, evaluating and applying (Krathwohl,2002).

Blooms Taxonomy is often referred to for writing course outcomes and for defining objectives for course work. Most teachers are familiar with its intent and use it as a guide. If creating has been added as a key element and is positioned at the top of the thinking skills, teachers, and institutions should embrace the subject within all curriculum.

At this point, I included a slide noting local and Canadian post-secondary institutions who have embraced the topic of creativity (see Figure 15). I pointed out that if I searched for “creativity” on the BCIT website, there was only one finding: Media and Creative Communications. The list of local schools turned out to be the most powerful information in the presentation. Everyone seemed to sit up and take note. The first

comment was, “Wow, we are so behind. How did we miss this?” The other participants were in agreement.



Figure 15.

I then added a few comments regarding American Universities. Stanford requires all incoming students to take at least one course in creative expressions. The University of Kansas, City University of New York and University of Kentucky requires that all students take a course in creative thinking. Carnegie Mellon students must satisfy a “creating” requirement. Again, this had a significant impact. Why were we not doing this?

The last portion of the presentation focused on how one might engage in creativity in the classroom. I gave an overview of the Creative Problem Solving process, (Puccio, Mance, & Murdock, 2010) and where it might be used. I wanted to end with a powerful slide that spoke to the reason we should embrace creativity at BCIT. I believe that I did. Following is the last slide of the presentation (see Figure 16). I believe that creativity is an investment in ourselves, in our students and our future.



Figure 16.

STUDENT ENHANCEMENT

The objective of the workshop was two-fold. I wished to produce a workshop to convey the ability of creativity to enhance student learning and engagement and to provide students with skills to take forward into their future. I developed the power point presentation and workshop by converging on the topic of creativity and narrowing it to what I believed was key to engaging interested parties at my institute.

The two- hour format is flexible in that it would be fairly simple to expand it into a longer workshop or to shorten it into a one- hour introduction. This built-in flexibility would provide opportunities to present variations of this workshop to departments across campus and as part of the professional development series at BCIT. In the future, I wish to present the workshop at conferences or through university exchange opportunities.

CONNECTIONS

The second objective was to meet others on campus who would be interested in adding creativity to their curriculum or to meet people who might be instrumental in promoting creativity at BCIT. Although there was not a large attendance, there was a variety of departments and staff present representing the School of Business, Fish and Wildlife, the School of Construction and the Environment, the Library and the Learning and Teaching Centre.

The interest from the workshop was overwhelmingly positive. A key participant was one of the Learning and Teaching Centre's managers. He was particularly interested in adopting the idea of creativity in all curriculum at the Institute. He suggested to add creativity as "a fifth pillar" of education. (The four pillars of education are learning to know, learning to do, learning to live together, and learning to be. UNESCO authors the four pillars.) The idea of a "fifth pillar" sounds very strong and bold to me, certainly worth exploring. How is creativity a foundation of education?

The manager gave me information on the new vice-president of education at BCIT, whom he felt would be keenly interested in developing creativity at BCIT. This positive reinforcement has empowered me to contact the vice-president in the near future. Keen early adaptors are key figures in the adoption process. I wish to connect with those directly responsible for how the curriculum is taught; this is the teachers themselves. However, it is crucial to gain interest and support from the higher bodies in the education and curriculum development arenas as they may be the key figures to fund curriculum and instructor development. These key figures are also connected to industry and

business, who are employing our students. If our vice-president of education is able to acknowledge the need for creativity and innovation by speaking to the deliberate creativity tools and processes our students are offered, the BCIT tagline, “More Than Ready”, will be reinforced.

Several other connections were made throughout the process. One key relationship was that of one of my cohort, who works at a post-secondary institute and has similar goals. He has presented a shorter workshop and was keen to speak to me about his experiences. Unknowingly we developed power point presentations that were similar in format. I was able to discuss how his audience responded and felt confident in moving forward with my presentation format. We both agreed that we might borrow from each other as we each had some key statistics relevant to our delivery (see Figure 12, 13). We are going to stay connected and help each other in our progress as we move forward with the implementation of creativity awareness on campus.

EVALUATIONS

Feedback

I garnered critiques on my workshop from close cohorts three weeks before the main presentation. Collecting feedback allowed for a review of each slide, its clarity and quality, feedback on the flow of the workshop and if there were any gaps in the content. I appreciated the feedback and immediately set to work to improve, revise and restructure aspects of the presentation. There was a variety of problem solving preferences in the

group so it provided insights into my activities and the depth of instructions that I should provide. I am so grateful to my friends for taking the time to be so diligent in their comments and feedback on my power point and workshop schedule.

This run-through also allowed me to gauge the timing of the workshop, and I seemed to be on point. Of course, one never knows what side discussions will arise or how long some of the activities might take, but I was much more confident. The feedback was very positive.

Survey

I sent out an evaluation form through survey monkey after the workshop and received positive feedback within two days. In answer to the question, “What topics would you most like to learn about or discuss at a future workshop?” the answers were similar to the plans I have for future workshops. I would like to provide training with CPS and tools to enhance creativity. A couple of responses were:

- instructional strategies to encourage creativity in the classroom.
- It was my first time to attend this kind of workshop.
- Any new information with some tools on how to develop creativity in yourself would be useful.

Other evaluative comments from workshop participants are:

- The workshop totally met my expectations and interest.
- It helped me understand that creativity is required to succeed in any kind of work, from strategic thinking to solving problems.

- People are creative by nature and in the right atmosphere with the right training, everyone can use their existing talent.
- The workshop gave a good overview of creativity. It was very informative and inspiring.
- The workshop deepened my understanding of the importance of creativity and innovation in education and work. Creativity is a mindset that everyone (not only artists) can develop.

I am pleased with the feedback on the workshop and believe that it was successful. Ultimately, the measure of my success will be to help my community at BCIT raise their creativity consciousness whether it be through the use of tools, language, process or behaviour.

PERSONAL GOAL

A final outcome was personal; I needed to gather succinctly together my understanding of creativity and how I was going to explain it to others. This concise idea was the most difficult portion of the project as I highlighted and redefined how creativity spoke to me and what value it might bring to others. The process was long and arduous. I could keep reading and gathering literature forever. At this point in my career, having taught for over 34 years and actively worked in the creative field of interior design, I am again re-energized and stimulated. I am excited to move forward with new tools and knowledge that will help me to engage with students and embrace learning together.

SECTION FIVE: KEY INSIGHTS

THE PRODUCT

Putting together a two-hour introduction workshop seemed so little and too easy. I have presented ideas and topics to students and others all my life. Was this really enough to take on for a master's project? Why did I feel that I had to "tackle" this? Why did I sense that this would be a struggle? I knew it was a project to take on because I had "speed-dated" many ideas for my project and after editing and revisiting many, such as the idea of producing a mile-long table of creativity at my institute, I always settled on a workshop. I didn't know why or how important the workshop was to me until I started to work on it. Knowledge is power and by compiling my view of creativity and the research behind it, I feel powerfully confident in the next steps of my journey.

THE ENVIRONMENT

For a number of reasons, there was a drive, a desire to represent Buffalo in a way that was respectful of all the research they have done and have presented to me. I wanted to do for my students what my professors at Buffalo had done for me. My master's program has been a whirlwind of information, synthesizing, collaborating and just having fun. Never had I experienced teachers so in tune with what they were teaching.

THE PERSON

Now, how I do that with a topic that is dear to my heart? Creativity has hit me where it hurt as well as being one of the joyful experiences in my life. It has brought to mind experiences when I was young and was put down for my exuberance, or my experimentation was not understood. As an adult working in a confined environment, I felt the hurt and frustration of the child in me. I now recognize my creative behaviour as a new insight for me and one that will resonate in my heart when I teach others. At this point though, I would like to thank my parents for acknowledging and encouraging my creativity throughout my life.

The program has brought to my attention my strengths and where I survive and

grow; that the opportunities to flourish are around me. It has helped me to recognize where my creativity is stifled and more importantly why others play a role in this, unknowingly, at times. This new self-awareness is very powerful and healthy.

So, my desire was to present a workshop for my colleagues, to speak to the importance of raising our creativity consciousness, in ourselves, our students, and our environment. Through the recognition of creativity and the role it played in my personal transformation, I feel a need to bring the significance and development of the 4P's, person, process, product, and press or environment (Rhodes, 1961) to the students and those I work with at BCIT.

When I began to think about how to organize Section Five, I thought that I would follow Rhodes (1961) four viewpoints with which to study creativity, person, product, process, and press (environment). I had difficulty because the discussions are so inter-related that there is always an overlap, which you will find as you read each of the sections. The natural overlap adds to my view that one should approach creativity with all four areas in focus at the same time.

THE PROCESS

One great insight was to acknowledge my anxiousness to present the subject of creativity to others. At the beginning of the project, I was overwhelmed and floundering, collecting and collecting ideas, resources and research. I ordered ten new books to read. I was afraid to finish my workshop schedule and power point presentation because I was afraid to put it out there to my peers at BCIT. What if I didn't present creativity in a manner that was inventive? Engaging? Important ? Relevant? Most of all I wanted to present it with the integrity that it deserved.

About one-third through the process, I decided to listen to my inner self, one that is becoming self-actualized into the field of creativity. I needed to reset and review the process: do a little meta-cognitive review of where I was in the process. How fortunate that I have such a great set of tools to help me reconnect and realign my position.

Over the last two years of study, I have recognized that for me, one of the greatest instruments is the reflection/assessment tool, POINT. I took some time to reflect and filled out the pages using the POINT assessment. This thought process helped tremendously to gain insight as to where I was and what I needed to focus on next. As David Usher says, “Creativity is an action sport. We are taking ideas and putting them in motion” (p.145, 2015). I was now in motion again. I developed a workshop that is unique to my perspective containing exercises that I have developed myself or built upon from others. So, my desire is to present a workshop to my colleagues, to speak to the importance of raising our creativity consciousness, in ourselves, our students, and our environment.

I began to realize that the actual final product, my workshop, and powerpoint presentation is not the point of this project. The point is to embrace the creative process and mindset in order to produce my powerpoint/workshop. I need to gain a comfort level with the creative process itself. I had been focussing on the end result ignoring the twists and turns that will eventually lead me to an unknown solution, the format of the workshop.

At the beginning of the process, I was focused on what others presented on the topic of creativity. How did they approach the subject and on what did they focus? Watching experts speak about creativity filled lots of enjoyable time. It reinforced what I knew, and it provided new information or examples for me. However, as someone who

loves collecting information, I spent too much time in this endeavor. I also realized that I was becoming more concerned with what others wanted to say rather than what I wanted to say.

I realized that I had to step back and decide that this was my presentation; what was most important for me to say and why was it important to my participants? I needed to speak to the issues that spoke to me when I was learning. What stood out most and why? If I approached the presentation from this angle, I would be able to be sincere and passionate while presenting.

THREE KEY COMPONENTS OF CREATIVITY

Today, the most important aspects of creativity to me are: 1. everyone is creative and creativity can be taught or enhanced, 2. the aspect and power of divergent and convergent thinking within the problem solving process and 3. approaching creativity holistically by including discussions of the person, product, process and environment.

I can speak clearly and passionately about the above areas of creativity after researching and refining my knowledge. Approaching this project from my perspective and by presenting the topic in my style, through storytelling and humour, resulted in a free-flowing and fun presentation.

KEY SLIDE – LOCAL CREATIVITY ENGAGEMENT

In reviewing how to present, the common thread was that you must present subject matter that is meaningful to the participants and then keep reminding them why it is important to them. I did this throughout the presentation by divulging the power of

creativity to help both instructors and students. The slide that gained the most interest was a slide that noted all the local and Canadian Universities that engage in embracing creativity. This slide hit home.

While preparing the presentation, I created this slide from personal research into local programs offering creativity training. I was surprised to find so many intense programs on creativity that were already developed. I decided to include it in the presentation thinking that I would move quickly through it. The response was real and urgent. Some comments were:

- I definitely think that students at BCIT should have some training in deliberate creativity.
- This would help them in their studies and the work field in the future, why are we so behind in this?
- It has obviously been picked up by all the other schools in B.C., and taglines from different institutions –exercises, were the best feature of the presentation.

FUTURE PLANS

In the future, I would like to contact those involved in local programs and interview them about their goals, needs and tips for introducing creativity at their institutes. In what ways did creativity speak to them and how were they able to garner support from their institutions? In doing so, I will be widening my realm of creative practitioners, and I hope it will introduce me to new-found friendships and mentoring around creativity.

In the future, I would like to work on an elevator pitch that addresses the 4P's of creativity in a succinct, simple statement. As you meet people, either on campus or off, it is important to be able to explain the idea of creativity in a way that teases them to want to want to ask you more about it. I need to develop a simple statement that divulges the power of creative engagement.

A portion of the presentation that was of great interest was the slides that provided statistics and data. I now realize that if I am going to quote statistics I need to understand the study in full and be able to speak to other points in the study as well. I was able to answer the questions this time. However, I feel that I need to know the research and studies in depth and should revisit them before any presentation. To be fully versed in the research presented is a good lesson to learn in the beginning. I will now be fully prepared in the future.

I am going to compile a notebook with some key research and statistics so that I might refresh my memory before a presentation or so I might share the information easily with others. I believe that bringing such a notebook to meetings or presentations would provide those who want to know more details a tangible tool to hold and read.

PART SIX: CONCLUSION

FUTURE IDEAS

Over the course of this project, I have gained a great deal of confidence. I can recognize the creativity of my childhood and how I have manifested it in my adulthood. I am a life-long learner and will continue to embrace my creative self throughout many new adventures.

I wish to be a transformational leader at BCIT (and beyond) as I model the creative behaviors that I recognize as my strengths: tolerance for ambiguity, tolerance for risk, playfulness and curiosity. There are many possibilities to model these traits as I engage students in the classroom, converse with teachers and continue to present creativity workshops.

Overall this project allows for future development of presentations and workshops. The introduction to key players through these workshops provides opportunities to work with others in the development of creative skills in their domain and interest.

In the future, I would like to start a blog. The blog may be a personal blog so that I might be able to vary the conversations that would enable me to bring in Biomimicry and speak to the connections between creativity and Biomimicry. It might be a blog within the BCIT community where I establish a presence around my skills as a creativity expert. A blog might reach a larger number of people than workshops. The information might include some comments on my applied learning in the classroom as well as

tweeting current articles on creativity. My professor, Cyndi Burnett, started me on the art of tweeting as an assignment in her Current Issues course, and I now see the value of connecting with others and newsfeeds around a common interest.

CONNECTIONS

In the future, I have several new connections to approach. As I am a life-long learner, I would like to meet and discuss creativity in general as well as garnering tips and advice on how to move forward with the implementation of creativity across the curriculum at my institute.

In my research, I found a creativity website called, *Creativity at Work*. I am impressed with the author, Ms. Naiman's articles and the in-depth responses to her articles. I now look forward to contacting Ms. Naiman to learn more about her approach and personal development as a creativity expert. I am fortunate to have this connection in my backyard.

Several possible connections might be the program heads or teachers of creativity courses currently running locally, in addition to Ms. Naiman of Creativity at Work. They include the dSchool within the University of British Columbia, my Buffalo cohort, Jack Hernandez, who is currently on the same path at his post-secondary institute, and my cohorts at BCIT who currently engage in creativity in their courses.

I will continue to make connections with others with the same desire to use and share the knowledge of creative thinking. I will attend the European creativity conference, CREA, this month and so will look forward to observing new perspectives and embracing new community members.

RAISING CREATIVITY CONSCIOUSNESS

In conclusion, I wish to raise creativity consciousness across my campus. I believe that I am a transformational leader ready to engage the early adaptors in this movement. I see myself as a pioneer species setting roots and developing pockets of growth and nutrition allowing creativity to take hold. Bringing this change to my institution will create a positively charged organization where people want to work there, and students want to study there.

My creative awareness will produce opportunities for positive change and an institution engaged in a dynamic that continues to create and evolve. I will continue by engaging the students, modeling the language and attitude, and creating an environment that allows for personal creative discovery.

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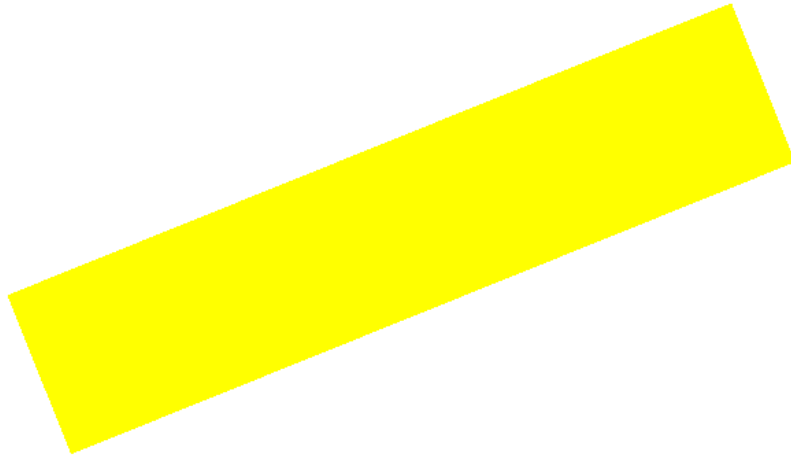
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APPENDIX A

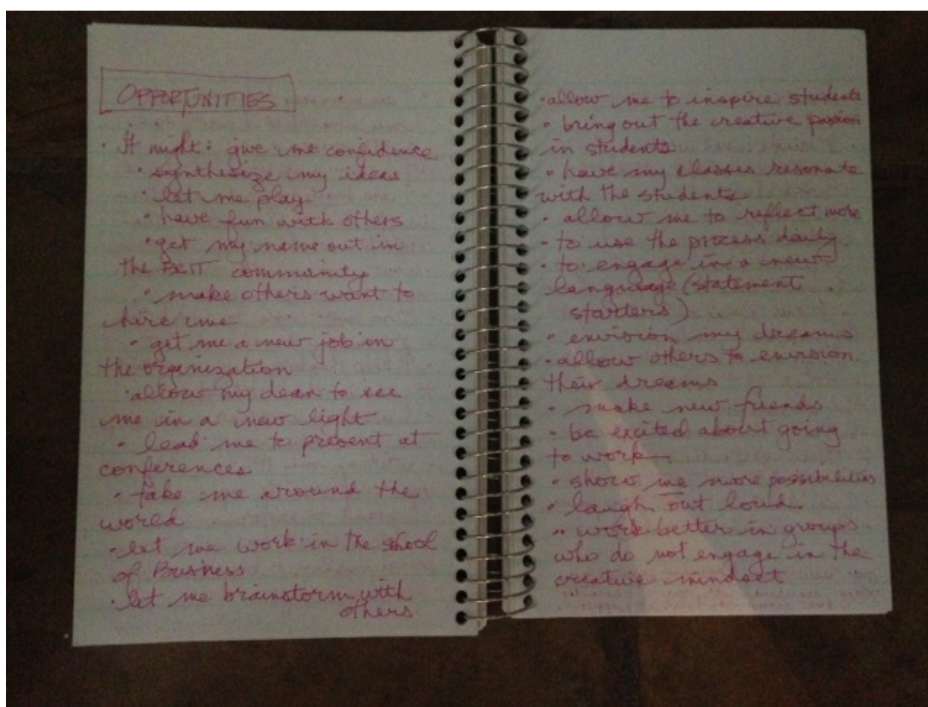
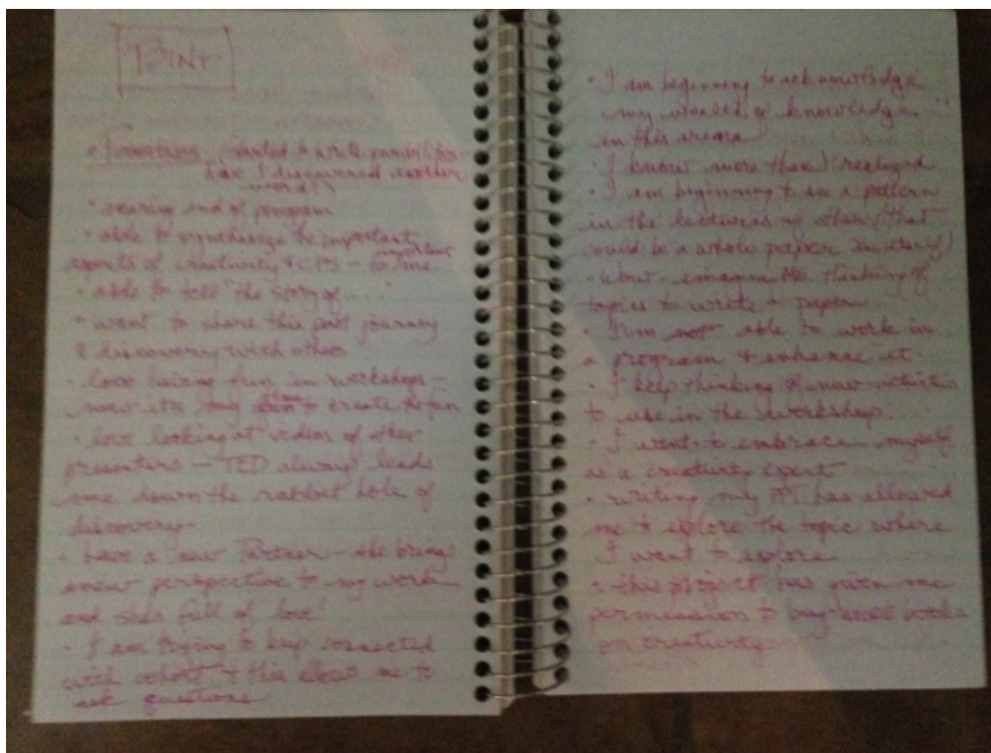
Power Point Presentation for Professional Development Workshop on Creativity.

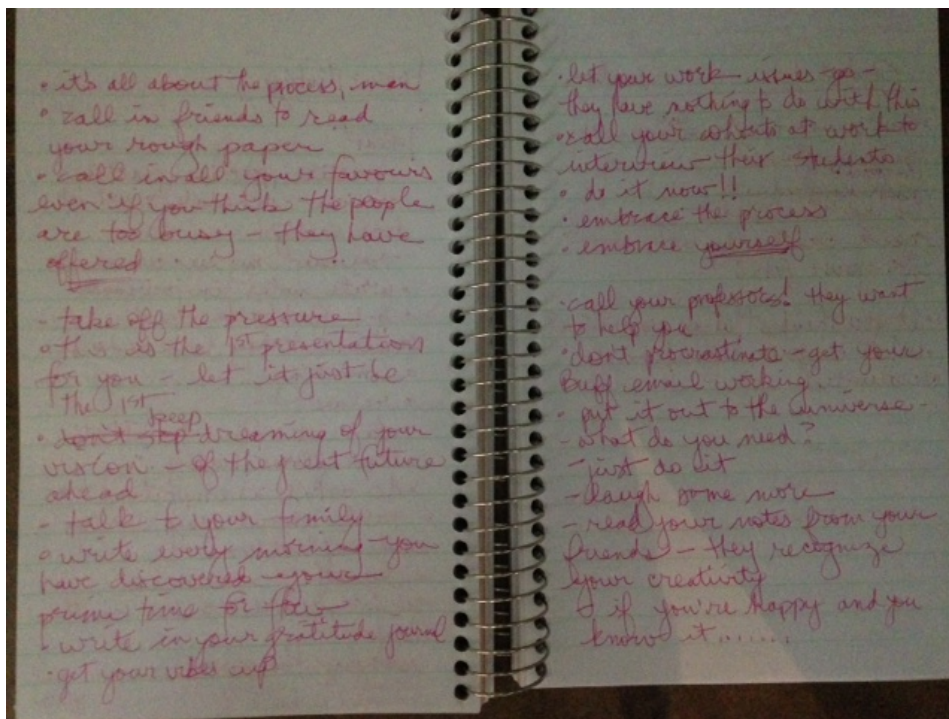
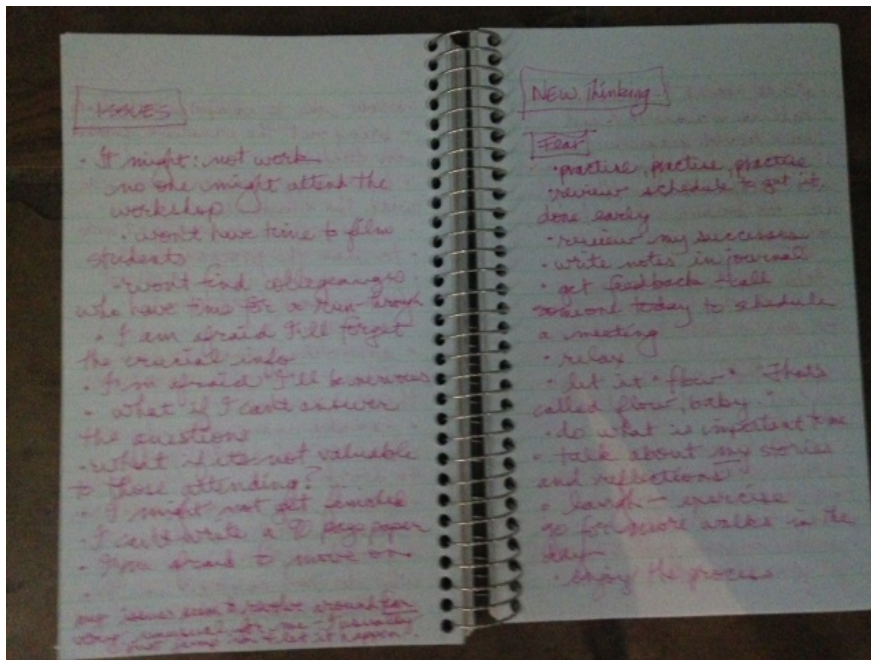
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APPENDIX B

Point Assessment





APPENDIX C

Student Questionnaire-Creativity

discipline_____

1. What is your definition of creativity?
2. Do you think students will need skills in creativity for the workplace?
If so, what creativity skills might you need or for what job?
3. Do you use creativity in the classroom at BCIT? If so, how?
4. Did you know that creativity is a thinking skill and can be taught?
Your creativity can be enhanced?
5. Have you ever specifically discussed creativity behavior, process or tools in any of your classes? If so, please describe.
6. If BCIT offered an elective course in creativity and creative problem solving, would you be interested in taking it?

APPENDIX D

Workshop Evaluation Survey

I sent this out through Survey Monkey.

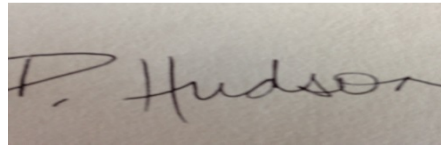
1. In what way did this workshop deepen your understanding of creativity?
2. To what extent did the workshop meet your expectations? Please explain.
3. How knowledgeable in the course content was your instructor?
4. How clearly was the information presented at this workshop?
5. What were the best features of the workshop?
6. What suggestions do you have for improving this workshop?
7. What topics would you most like to learn about or discuss at a future workshop?
8. What feature of creativity might you try to fit into your courses?

What feature of creativity might you try to fit into your courses?

9. Do you think that students at BCIT should have some training in deliberate creativity? (Knowledge of the topic, processes, creative behavior)

Permission to Place the Project in the Digital Commons Online.

I hereby grant permission to the International Center for Studies in Creativity at Buffalo State College permission to place a digital copy of this Master's Project, *Raising Creativity Consciousness in Post-Secondary Education* as an online resource.

A photograph of a handwritten signature in dark ink on a light-colored surface. The signature appears to read "D. Hudson".

Dixie Hudson

4/30/2015

Date