Encouraging Student Creativity in Art Education

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ENCOURAGING STUDENT CREATIVITY IN ART EDUCATION

by

Naomi I. Ellsworth

A Thesis Submitted in Partial Fulfillment of the Requirements for a Degree with Honors (Art Education)

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Abstract

In this thesis, I explore the concepts and means through which art education can better understand and encourage creativity as a central aspect of their approach to teaching. More specifically, I seek to respond to the question: How might art educators support and facilitate the development of creativity within their students. To answer this question, two forms of research were utilized. The first portion includes a literature review, conducted to find major concepts associated with creativity and art education. From this research, themes such as processes, interdisciplinary connections, assessment, student declines in creativity, giftedness, if creativity can be taught, threats to creativity in schools, and methods for encouraging creativity emerged. These concepts are elaborated within the literature review. In partnership with this review, a pilot case study was conducted to explore how five different prompts affected the creative process. The researcher created six paintings according to five prompts, each with its own potential for encouraging creativity. During the two month process of painting, I recorded the process in a journal, sketchbook, and through photographic evidence. This data was then evaluated using grounded theory and content analysis to find major concepts that emerged. Conclusions and their implications for teaching will inform my future practice as an art teacher.
Dedication

To friends and family, and the never ending spring of compassion, motivation, and inspiration that is Laurie. Thank you.
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Introduction and Description of Thesis

Creativity is often conceptualized as a muse, a lovely being who blesses the gifted with moments of pure inspiration and innovation. These moments come and go, uncontrolled by anything tangible. It seems that a certain mysticism surrounds creativity and how to evoke it. As a future art educator, this method of thinking isn’t satisfactory. For students, creativity should not be a rare moment of inspiration, caused by some unknown influence; it should be a part of every day life. I want it to be the result of meaningful education, the result of creating and learning about art in my classroom.

To find answers about how to encourage creativity in my future classroom, I have explored, through the structure of this thesis, the major themes associated with creativity in the context of art education. As a method of achieving what I’ll call genuine results, and opening opportunity for multiple themes to emerge, the research process began without a predetermined thesis. This was done through two forms of research.

A review of literature began the process. After consulting dozens of sources on creativity, several key concepts consistently reappeared. These key concepts are discussed in relation to creativity. The literature review was a first step to understanding creativity in a broad sense. The next step was to understand creativity and its relationship to art education on a personal and practical level.

The second form of research was the development of a pilot case study. Although there is currently no plan to develop further research, this study took on many of the characteristics of a pilot case study, and so it will be referred to as such. This case study used the researcher as subject to explore how five different prompts would affect creativity when producing six paintings. This element of studio experience as research
was a form of learning about creativity that allowed personal and practical involvement. During the two-month process of responding to the five prompts through painting, I maintained a journal to record thought processes and notes on the creative results produced by each individual prompt. I also kept a sketchbook and took regular photographs to document the development of each painting. These are used as data.

This data was then considered using a form of content analysis to identify key concepts or patterns. This allowed themes to emerge naturally. This data was then used to generate theory and to draw conclusions about how the prompts affected creativity.

The last portion of this thesis is to consider how the knowledge acquired from the review of literature, case study, and resulting data affects my future students in the context of an art classroom. Although this data is not generalizable for several reasons discussed in the Limitations section of the thesis, (see page 11) it can be applied through other methods. Through a process often used by educators called naturalistic generalization (Stake, 1994), I am able to use the details and specifics of the data analysis of this case study, applying it to situations in my future art classroom.
Statement of Problem and Rationale

This thesis has two sets of rationale to accompany it. One is personal and practical to my future career as an art educator. The other is a generalized statement on the need for continued research on creativity, so that we may one day embrace it as a central tenant in all education.

On a deeply personal level, this thesis started out as a simple question. How can I be an effective and valuable art educator? I identified creativity as one of the critical practices for an art educator to encourage in an art classroom as part of the larger answer to this question. My question then narrowed into how might I encourage creativity in my students? This thesis is an effort to answer this personal question, and is a critical part of my larger journey to becoming an art educator.

On a much more general and large-scale level, the rationale for this thesis is part of a more substantial call to include creativity in the classroom. Creativity is important to the future of our world. The more research that is conducted on creativity, the more we will be able to produce innovative and responsible solutions to the world's problems. Understanding how creativity works can help us identify and realize every human being's specific talents and potential. Understanding creativity can lead us to more positive mental health through flow-based experiences, and helps us understand how we create the kinds of education that nurture an active and engaged involvement on the part of all children, in working toward a brighter future. Maslow (1963) believes that creativity is essential for becoming a full person, for happiness and for leading a meaningful life. How
to be happy is one of the oldest questions known to humankind, and Maslow (1963) and Csikszentmihalyi (1996) believe that creativity is a key factor in human happiness.

Creativity can help our leaders to respond more effectively to challenges facing modern society. Our world is changing. The current state of the world is one we have never experienced. There are more people on the planet than ever before. Our environment is irreversibly changed, and there are many questions to which we yet have no answers. Ken Robinson (2009) says,

"Our world's are straining, financially, politically, environmentally, our populations are large, we're using vast amounts of resources, we need answers for healthcare and education. This is a time we need good answers. Creative answers to big problems. These are new issues, and we need ingenuity to get through them" (p.8).

Robinson holds the same belief on this subject as did Maslow 50 years ago, and yet we are still seeing a need for more change. Maslow (1963) states, "Creativity is important to a rapidly changing world like the one we are living in" (p.4). His words are as true today as they were in 1963. Change is needed and Robinson, along with many others, believes that schools are the primary place to start rethinking how we use creativity in every day life.

If creativity is important to how we live our lives, it seems that it should also be important in our education, in our schools. We can help prepare our students for the uncertainty of the future by working to enhance their creative potential to respond responsibly and with new possibilities to whatever comes. For the reasons listed above, we need to start making creativity a part of every person's lived experience, and not just for artists. Some countries outside of the U.S. have already started movements that place creativity at the center of curricula.
"Governments across the world are investing in providing a creative learning environment. For example, in Scotland, the four capacities of the Curriculum for Excellence; successful learners, confident individuals, responsible citizens and effective contributors all have key aspects that are in line with skills for creativity such as openness to new thinking and ideas, and applying critical thinking in new contexts (Education Scotland, 2013)"

Davies also explains that teachers can have a positive influence on producing more creative students.

"The findings from this review suggest that teachers indeed have an important role to play in the development of creative learning environments to foster the creativity of learners. They can do this through building positive relationships, modeling creative behavior, longer-term curriculum planning, striking a balance between freedom and structure, allowing flexible use of space, understanding learners’ needs and learning styles, creating opportunities for peer collaboration and assessment, and effective use of resources. For this to happen, teachers need to have a positive attitude towards creativity and feel confident about their own skills base." (Davies, et. al, 2014, p.39)

This is why this thesis and ultimately more research in the field of education and creativity are important.
Limitations

The purpose of this study was to explore how art educators could encourage creativity in their students. This study specifically explored methods of encouraging creativity that utilized prompts. It used a pilot case study approach in which the researcher also functioned as the subject. This semi auto-ethnographic approach provided insight into how prompts function as part of creative process and as a result, informs my future experiences as a K-12 art educator. However, there are potential limitations that need to be remembered in relation to the study.

The Limited Generalizability of a Case Study

The nature of this research as a case study means that the data cannot easily or reasonably be generalized. This case study included only one subject within a specific environment. The conditions of this inquiry do not have the opportunity to be recreated, and the context under which the research occurred is specific to this study. Therefore, the results cannot be applied directly to other situations. This is the nature of case studies. Although this limits the generalizability of the study, it allowed an intimate and in depth exploration of the topic, that would otherwise not have been possible with another form of research.

Potential Bias of the Researcher as Subject

Another limitation of this study is the bias that is a result of having the researcher also perform as the subject. It means that my internal bias may have an effect on the specific outcomes and conclusions that are drawn from the data. As a result, the data
needs to be viewed within the context of my experience as the subject of the study. This may limit the ability of the study to be generalized by others, but that was never the intent. My experience as both researcher and subject allowed me to both gain first-hand experience of creating within these prompts, as well as to engage in reflective and analytical practices, both of which have value as a future teacher.

**Honors Thesis**

Another limitation of this study was the constraint of working within the structure of the Honors Thesis. The Honors Thesis, although a year long process, did not allow for an in depth exploration of all of the resulting data. As a result, some data had to be set aside for future consideration. This allowed a focus on only the most critical concepts of the study. It simply wasn’t possible to take everything into account within the time and experience levels available. Some of the data had to be made a priority and those larger concepts became the focus of this research.

**Subject vs. Audience**

As a fourth year art education student, my experiences in this study are different than those of an elementary, middle, or high school student in an art classroom. My previous experience in upper level art courses affects my creative process. This enables my reaction to prompts to be more fully developed. It also requires a more involved prompt to challenge my process. Although my previous experiences in art education affected my responses to the prompts, and limited the generalizability of the results, the data can be applied in different ways.
Of particular interest to this study is what Stake (1994) categorizes as "naturalistic generalizations". In this view, I am able to use my experiences from this study and bring them into the educational lives of my future students. This is an appropriate and useful form of applying data from one context to another. In my future career, I will be able to apply what I have learned in a form appropriate to the learning and creativity of my future students.
Statement of Terms

The language used in this thesis often has multiple interpretations within scholarly contexts. As such, it was necessary to define some of the terms used frequently for the sake of clarity.

Creativity: As explained in the Review of Literature (see page 16), creativity has several interpretations. However, for the purposes of this thesis, creativity should be understood in terms of what some call “Little c” creativity. This is the type of creativity that is used on a daily basis. It is also the kind of creativity most children encounter. The alternative, “Big C” creativity is the type of innovation that has domain, cultural, or human-scale implications. Although every teacher hopes their students will go on to be creative in a way that alters a domain, this is not the reality for most people. Given that this thesis is an attempt to understand creativity on a scale applicable to my future students, it focuses on the nature and nurture of everyday creativity. Forms of everyday creativity have applications within the lives of individuals and are often subjective. A thought might be considered creative when it comes from a five year old, considering their age and previous knowledge, yet if someone 40 years old were to have it, it might not be considered as creative, as the expectation for what is seen as creative changes from person to person, depending on their previous experiences and knowledge. This is a critical part of this theses’ definition of creativity. In order for an idea, concept, or resolution to be considered creative, it must be new, outside of previous experience, appropriately related to the task, and of value to the person creating it.

Prompt: The use of prompts in this thesis was critical to understandings of how creativity is produced. For these purposes, prompt is a collection of words, often strung
together to give the creator either a sense of direction, or strict limitations within which to work. A prompt could define the product, process, or concept of a work, and either attempt to spark inspiration without setting strict rules, or could do the opposite, and require certain elements of the work to address concepts, techniques, materials or other limitations. The intent of a prompt is to guide or encourage the creator to work in ways that require new possibilities.
Review of Literature

Definition

Creativity is a word, much like art, that is difficult to define. Even amongst contemporary western experts and scholars, there is no one definition. Across cultures it becomes even more difficult to define. Creativity is a culturally anchored concept, and cultural beliefs dictate how creativity is measured and valued. For example, according to Morris and Leung (2010) Western social norms value novelty whereas Eastern norms value usefulness when evaluating creativity. It is differences such as these that make finding one common definition of creativity impossible. So for the purposes of this thesis, only contemporary western literature will be taken into account, yet even within this context some of the most well known researchers on creativity have varying definitions.

Often in the west, the definition includes the concept of a novel idea with value. Ken Robinson (2006) defines creativity as the process of creating original ideas that have value. The National Advisory Committee on Creative and Cultural Education (NACCCE) also includes in their definition a requirement of value. NACCCE defines creativity as, ‘imaginative activity fashioned so as to produce outcomes that are both original and of value’ (National Advisory Committee on Creative and Cultural Education 1999, p. 30). This definition differs from Robinson’s (2006) because it places emphasis upon the relationship between thought and action, as well as includes the importance of imagination in the creative process. It claims imaginative activity as a prerequisite to creativity, which is then reformed into original and valuable outcomes. Davies, Jindal-Snape, Digby, Howe, Collier and Hay (2014) however, include no mention of value in
their definition, a characteristic more common in western definitions of creativity. They define creativity as the ability to make connections between ideas that previously had no connection. This definition emphasizes its cognitive dimension. Creativity is a higher order thinking process, and this definition relies on that status. Rather than the production of an original idea, which is very rare and uncommon for most people, this definition includes the connections made amongst previous ideas, allowing for a broader definition of creativity. The possibilities for interpreting creativity are endless, with a variety of breadth and depth.

**Categories of Creativity**

Ellen Winner is a well-known expert on giftedness and creative processes. Her definition of creativity includes three categories, distinguishing what Winner describes as the experiences of the average child from the creativity associated with domain breaking adult experiences. *Universal Creativity* characterized by the ordinary child, is a process that declines in middle to late childhood. Such creativity is distinguished by inventiveness, playfulness, and flow (Snell, 1996). Flow in this context can be defined as a state of mind that is uninterrupted, intrinsically motivated, and intensely focused. Winner characterizes *Gifted Creativity* as forms of enlightenment demonstrated by children identified as functioning above the norm. Just as universal creativity declines in the late childhood years, Winner has seen evidence that creativity in a gifted artist may also lessen with age. Gifted children break the domain for what is expected of them as a child. However, as they age and the domain expectations change, they do not necessarily break the domain expectations for an adult (Winner, 1996). Lastly, *Domain Creativity*
characterizes the adult who alters a domain. Picasso and Braque and their developments with Cubism are an example of domain creativity. The development of Cubism was a radical innovation that shook the art world. This type of creativity could also be compared to “Big C” creativity. Even incredibly creative people such as Picasso or Braque might still only have one or two moments of “Big C” creativity, such as the development of Cubism, that classify them as domain creative. Adults classified as domain creative are extraordinarily motivated to alter the domain in which they work. These adults cannot accept things the way they are, and work to change them. According to Winner (2006), before one can alter a domain, they must master it. She goes to say that a minimum of ten years of experience is required to create something that alters a domain. Snell (1996) references a discussion at the "American Creativity At Risk" Symposium in 1996 where anthropologist Mary Catherine Bateson commented that "domain creativity was a kind of 'meta creativity' that goes beyond the resources of civilization." (p.7). This statement exemplifies how domain creative individuals change the very fabric of a civilization. The creative results produced by domain creative adults are significant extensions of a civilization into new and unexplored territory.

Cowdroy and Williams (2007) determined that there are three different types of creativity that correspond to high and low levels of learning. The first, Actualization, is related to low level learning and uses procedural thinking and procedural memory to enable lower level crafting abilities. Schematization, the next level of creativity, uses declarative memory and intellectual abilities. In this category, the subject is able to work through sketches, analogies, and other concept development processes to produce an original idea. Conceptualization is the highest level of creative ability. It is exclusively
intellectual and produces imaginative original ideas. The lower levels of creativity are differentiated from the higher level by the types of thinking used during the process. According to Cowdroy and Williams (2007), “creativity included thinking and that high level creativity was closely related to higher order intellectual thinking” (p.105). Actualization and schematization are required to produce creative work, and all three types are required to produce high-level creative work.

Similar to Cowdroy and Williams's (2007) concept of different types of creativity comes the "Little C, Big C Creativity" concept. Researchers such as Csikszentmihalyi, Winner, and Gardner have all discussed this concept. “Little C” has been thought of as something akin to Winner's (1996) universal creativity. It is the creativity that we experience on a daily basis and that most, if not all children experience. Starko (2006) refers to it as the type of creativity that everyone is capable of, and experience regularly. These moments are the small “aha!” moments that accompany trying something new, or in a solution to an every day problem. Big C is similar to Winner's (1996) domain creativity. This is how we might describe the creativity we associate with artists, writers, and scientists such as Picasso, Einstein, and Edgar Allen Poe. Big C creativity is the type of creativity that changes the world forever. Starko (2006) adds that “Big C” creativity is rare because few people have both the characteristics and the opportunity to exercise creativity on such a scale that it changes a culture.

Necka, Grohman and Slabosz (2006) hypothesized similar levels. Fluid Creativity aligns with “Little C” creativity in that it is used on a daily basis, and doesn’t require a mastery of any particular domain. Crystallized may align with what Cowdroy and William’s (2007) define as Schematization. Crystallized creativity requires
knowledge and the intellectual ability to bring that knowledge to bear on a specific problem or area of concern. This is not unlike Cowdroy and Williams’ (2007) Schematization in which they focus on intellectual ability. Mature Creativity aligns with the general description of “Big C” creativity, although Eminent Creativity could also be considered Big “C” Creativity. Mature and Expert Creativity could also be categorized as Cowdroy and William’s (2007) Conceptualization. Although many researchers have several different ways of categorizing creativity, many of the categories overlap and have similar requirements. Cowdroy and William’s (2007) categorizations are a system of levels, just like Necka, Grohman and Slabosz (2006), but also include the actions that lead to those levels of creativity, something Necka, Grohman and Slabosz (2006) don’t define.

Intelligence

A common question that arises when defining creativity is its relationship to intelligence, as measured by IQ. Not all intelligent people have a high capacity for creativity, yet some researchers believe that in order to be creative you must also be intelligent. Guilford’s Structure of Intellect Model and Model of Creativity theorized that there was a close link between intelligence and creativity. Guilford viewed creativity as a part of intelligence. His model is an extension of Thurstone’s (1938) theory. It rearranges all seven of Thurstone’s (1938) mental abilities including verbal comprehension, verbal fluency, number, spatial visualization, memory, perceptual speed, and reasoning. Guilford theorized that all intelligent functioning is composed of an operation, content, and a product. Guilford’s model breaks Thurstone’s (1938) processes up into five
variations of operation, six kinds of product, and four kinds of content. Divergent production is one of Guilford’s methods of operation, and he defines creativity as a part of problem solving and divergent thinking. Therefore, the stronger one’s intellectual abilities are, the stronger their creative abilities. Today however, most researchers disagree with Guilford’s model.

Sternberg (2001) highlights some disagreements with Guilford. Zimmerman (2010) discusses how Sternberg (2001), considered intelligence as advancing societal norms and creativity as opposing societal norms and proposing new norms. This means that our current methods for measuring intelligence and creativity are not comparable. Intelligence can be conceptualized as excellence within cultural norms, and creativity as excellence outside of cultural norms. Using current cultural norms and expectations to measure intelligence is appropriate, because intelligence works within those norms. Creativity however, expands beyond cultural norms, and so according to Sternberg, it is impossible to apply normal cultural measurements and expectations. As a result of a case study of adults who achieved success in the arts and sciences, Feist (1999) concluded that “giftedness, measured by high IQ scores, might not be a good indicator of adult creative achievement, and that the relationship between creativity and intelligence was small as most creative people do not conform to conventional ways of knowing.” (p.386). It seems that creativity and intelligence may be linked, but the current processes for measuring intelligence are not compatible with the intensely creative mind.

Clark (1983) purposes an inclusive definition of creativity that reflects several theories associated with different scholars, including an association with intelligence. She believes creative thought is comprised of four categories, thinking, sensing, feeling, and
intuition. According to Clark, thinking is reasonable, measurable, and can be developed by conscious, deliberate practice; sensing is a state of talent and requires high levels of physical or mental development as well as skill in the area of talent; feeling is a process of self actualization, and is a release of emotional energy from the creator, eliciting an emotional response; intuiting is related to the unconscious mind and is enhanced by growth toward enlightenment. Clark (1983) believes that this model includes all creativity enhancing practices. Rather than trying to define a partial and narrow view of creativity, she views all of the categories as part of a whole. This inclusive definition includes intellectual abilities in the form of “thinking”. In contrast to Guilford’s definition, which includes creativity as one aspect of intelligence, Clark (1983), approaches this concept from the creativity perspective, and includes intelligence as a part of creativity. However, it is important to note that, according to Clark, creativity is also influenced by sensing, feeling, and intuiting, not just thinking and intelligence.

**Processes**

The processes that an artist goes through when producing a work are interwoven with creative practices. Wright (1990) describes how artists use accumulated skills, knowledge and effort when creating a work, even if their work appears spontaneous. Jackson Pollock is one such example, John Canaday (1983) states, "The apogee of gestural painting. Each splash, drip, or spatter is a controlled accident, the result of the artist's sensitivity-developed through experience. " (p.53). Pollock’s creative process, despite its spontaneous appearance, utilizes previous knowledge and experience. Jackson Pollock’s *Autumn Rhythm* is an example of the appearance of unplanned chaos in many
of Pollock’s works. He splatters various paints over the canvas, as well as including other materials such as paperclips and cigarette butts. To an inexperienced observer, it may appear clumsy and unintentional. However, all of Pollock’s previous experience and understanding is at work as he creates. Wright (1990) argues that creative works of art are the result of the process of utilizing previous experiences, knowledge and resources.

Various types of processes, some more defined than others attempt to explain the act of creating. Pollock’s loosely defined process that takes the appearance of spontaneity yet relies on previous experiences contrasts with Kaiser Aluminum’s specifically defined process of creation. Fabun (1968) discusses Kaiser Aluminum’s interdisciplinary creative process.

“1. Desire, the want to create something original. 2. Preparation, the collection of materials, ideas from pertinent and seemingly unlikely sources; 3. Manipulation...playing around...the collected materials are looked at from innumerable perspectives; 4. Incubation...frequently the problem is set aside while others are pursued; 5. Intimation...a feeling of premonition that the solution is near; 6. Illumination...the solution is revealed (it is this moment that is sometimes called the ‘Eureka’ moment); and 7. Verification...the idea is examined and valued to see if it works” (p.9-12).

These processes are applicable to artists, as well as other professions. This process represents a linear perspective to the creative process. Once one stage of the process is complete, the creator does not have the opportunity to come back to it and revise. Many would argue that creativity is not a linear process, but is more cyclical and reflective. In many proposed processes, a reflective stage is built in, encouraging a more cyclical form of creative engagement. One such example of this is Marshall’s (2010) creative process, which she directly applies in the art classroom.

Marshall (2010) describes a ten step sequential system of stages that is specific to creativity in art education. The first phase, Name, is where the subject identifies the
problem. In a classroom setting, this is typically the teacher introducing the concept to the class. The second phase, Distill, entails grasping the essence of the concept or problem. Analysis is a key aspect of the process. Thinking deeply about the concept and considering it from all sides is an important piece to this phase. Phase Three, Hunt, Gather, and Collect, involves a focus on research, reading, exploring, gathering data, brainstorming, remembering, relating personal experiences to the topic, and connecting it to other ideas. Phase four, Mine and Extract, is the last preparation phase. This is where underlying concepts are analyzed, where questions are asked, and attention is paid to thinking deeply about all the information received during the previous three phases. The focus is, in the end, on how what is known might be applied to the upcoming art-making project. Phase five, Connect, Synthesize, and/or Juxtapose, correlates with Wallas' (1926) incubation stage. In this stage, the ideas from stage four are pulled apart and combined in multiple different ways to create new possibilities. This challenges students to think of new ideas and make new connections. Phase six, Cast or Frame, is a process of analyzing and creating meanings. It involves the student thinking of multiple interpretations, as well as thinking metaphorically and analogously. This phase and Phase Seven are associated with play. This is because the student is encouraged to experiment with multiple interpretations in this phase. Phase Seven, Project and Extend, pushes the ideas from the previous stage to the limit, or making it extreme. Phase Eight, Construct, is where the ideas begin to take on their physical form. This is similar to the Illumination stage for Wallas (1926) as it also includes physical construction. Phase Nine, Reflect, is the stage where the notion of creative process as inquiry and learning is accentuated. This step corresponds to Wallas’ (1926) Verification Stage and involves a process of student
critiques or analysis of the work. It focuses on the physical qualities of the work, the meaning of it, and the learning that took place in the process. Phase Ten, *Elaborate and Extend*, is where students revisit the learning that they experienced and the ideas of the artwork, finding new ways to push them to another level. Marshall (2010) used this process with a high school class and came to the conclusions that these steps, although not always linear do reflect the steps that most learners go through when creating art. She says, "my conclusion is that creativity theories, from Wallas' (1926) steps of creative process to theories about creative thinking can supply critical wisdom that should inform practice" (p.23). Marshall (2010) used these theories to inform her practice by following these phases to complete a project with students in her classroom. From the initial phase where she introduced a project to identifying a problem and creating a tool to solve it, she followed each of the stages, constructing appropriate classroom parallels, and concluded with students revisiting their tools to create packaging and instructions to extend their analysis and understanding of the tool further.

**Interdisciplinary**

As creativity is a process that everyone is capable of accessing, the next question is how? In what area of our lives will we experience creative thought and action? A common misconception is that creativity is primarily associated with the arts. In reality, creativity is a thought process that is used across disciplines. Creativity is a skill that can be applied to art of course, but it can also be seen in science, math, construction, education, etc. Lowenfeld (1987) says, "Art and creativity are not one and the same. Creativity applies to the sciences, math, and other subjects. Art can be uncreative and
purely technical as well." (p.80). Educational creativity research has its roots in art education, but it is applicable to all subjects. Sir Ken Robinson (2009) says, "You can be creative in math, science, music, dance, cuisine, teaching, running a family, or engineering" (p.1). This is important because in order to start integrating pedagogy that encourages creativity into schools, it must first be recognized that creative thought is a practice that belongs and is important, to all aspects of life. Robinson (2009) argues that creativity is an every day action that is integrated into all aspects of our lives. Therefore, education that supports creativity should be woven into the entire curriculum, and not just the arts. Robinson is addressing creativity in schools in a much larger context of change than just what a single art educator can do in their classroom.

However, some scholars would say that art lends itself to more creativity than other subjects. Colin Symes (1986) says,

"whereas artists have almost unlimited freedom to exercise their creativity, scientists are far more circumscribed, being limited to the world of the possible, to the domain of the discoverable...science, because of its circumscribed epistemological character, tends to be a less creative activity" (p.108).

Symes statement assumes that artistic creativity is a result of having no limitations.

Symes is clearly in a minority. Along with Lowenfeld and Robinson, Mihaly Csikzentmihalyi takes a much broader view of where creativity is manifest. To Csikzentmihalyi (2014), creativity is much more applicable to a vast range of disciplines. He believes creativity involves discovered problem solving. In discovered problem solving, neither the problem, methods of solution, or correct solution are known, and the creative individual must find the answers to all of these components. One of the most important keys to this is that the problem itself isn't known. This may be one of the most difficult parts of the scenario to identify, and it involves a creative person thinking
outside the box to recognize and articulate it as a problem. This discovered problem solving process is a creative process that could easily be applied to all types of knowledge. Therefore, it is not limited only to art. Csikszentmihalyi’s (2014) theory of discovered problem solving is an example of the many ways that creative methods can be applied to all disciplines, and not just art.

**Common Traits**

Ellen Handler Spitz (2013) examines how some of the most talented creative individuals in science, music and art, all had similar experiences that contributed to their childhood creativity. Her retroactive study of Nobel Prize winning physicist Richard Feynman (1918-88), virtuoso pianist and composer Clara Schuman (1819-96) and surrealist painter Rene Magritte (1898-1967) demonstrates that creative individuals across disciplines are much more alike than different. Spitz (2013) says, "Too often, the arts and the sciences, as well as music and visual art are unwholesomely segregated from one another." (p.2) Her study of these three intensely creative individuals found common threads in their lives, threads that she believes led them to their creative contributions in their varied disciplines. All three of these professionals encountered a serious childhood trauma, and she theorizes that these individuals create as a way to process and understand that trauma. She also proposes that all three were, as children, intensely curious risk takers, and that they experimented within their interests, learning at their pace and allowing questions and curiosities to naturally unfold. She draws the conclusion that these intensely creative individuals,

"remind us of the need to allow risk taking; the need for plenty of patience so as to allow a mental processes to unfold; the need to cherish the role of pleasure in
creative activity- mental and otherwise- the needs for discipline, practice and skill; and, finally, the need for a better understanding of the ways in which even devastating major trauma in childhood can serve as a spur for 'creating in order to try to understand'' (p. 12).

Her list of shared experiences reflects an attempt on the part of scholars to identify common elements or factors that make people think and behave creatively. Spitz’s work has built upon that of Csikszentmihalyi (1996) and Gardner (1993), who have worked to determine common traits in intensely creative people as a method to uncover how they produce their creative ideas.

Csikszentmihalyi (1996) identified ten common traits of creative people regardless of discipline. He observed that creative people have considerable physical energy, that they work long hours with a great deal of concentration. This could be considered a kind of flow state, also referred to by Csikszentmihalyi (1996). However, when they are not focusing and channeling their energy, they are resting and recharging for the next round. He also found that such individuals are often both intelligent and childish at the same time. How much intelligence plays a role in creativity is up for debate. It has been suggested that an IQ of 120 is a cutoff point. An IQ below it would make it difficult to have genuinely original ideas, but beyond an IQ of 120 does not imply higher creativity. With this in mind, he went on to say that creative people must also show the ability to use both convergent and divergent thinking skills, as these have both been attributed to higher levels of creativity. They must have the ability to think divergently to explore new possibilities, but also the convergent thinking skills to know which possibility is the best one.
Csikszentmihalyi goes on to describe how creative people hold a balance of playfulness and responsibility. They play with new wild ideas and have active imaginations, but also contribute many hours of concentrated, hard work in order to bring their idea to fruition. Related to this, he has observed that creative people have good imaginations. They can explore beyond the current reality to create something new. The ability to imagine beyond what currently exists is an important skill in creative individuals. This connects to Csikszentmihalyi’s (1996) theory on discovered problem solving and identifying something as a problem. In order to identify something as a problem, the individual needs to think beyond the current state of reality.

The fifth attribute identified by Csikszentmihalyi is that creative people are both extroverted and introverted. Most people tend clearly to one side, but creative people often exhibit both traits simultaneously. Similarly, creative people tend to be both proud and humble at the same time. They are aware that their accomplishments are important, but they are also aware of the luck and work of the people who came before them that resulted in their accomplishments. Csikszentmihalyi’s research also revealed that creative people often escape gender role stereotyping. When tests of masculinity/femininity are given to them, the men are more sensitive and less aggressive than their peers, and the women are tougher and more dominant than their peers. This psychological androgyny is an example of how creative people are able to interpret ideas from multiple perspectives.

Through his research, Csikszentmihalyi also found that creative people are both rebellious and conservative. In order to master a discipline, you must spend 10,000 hours dedicated to it, which takes roughly ten years according to Gladwell (2008). In order to produce something informed and of value, you must first have an appreciation and
understanding of it. But in order to create something new, you must be willing to challenge the conventions of the day. His ninth common trait among creative individuals describe most creative people as extremely passionate about their work but they are also able to detach themselves from it in order to evaluate it objectively. Finally, Csikszentmihalyi has found that creative people tend to be open and sensitive, which often causes them pain. When an artist works on a sculpture for several years or a scientist on a theory, and then no one cares, it can be quite disheartening. Many creative people claim to have had only one or two good ideas in their whole career. That is a lot of failure to endure, and pain is a common result. These ten traits are some of what Csikszentmihalyi has observed as common traits among his 30 years of studying creativity. If researchers can understand the ways in which creative people behave, they may be able to gain insight into their behavior and more broadly, into the nature of human creativity.

Clark (1983) also believes there are common attributes among the especially creative. She lists several qualities that are identical to Csikszentmihalyi’s (1996), but she also names a few additional traits. Her list includes creative people as having a zany sense of humor, being adventurous, having little tolerance for boredom, having higher than normal capacity for memory, having good attention to detail, being sensitive to environment, having a broad knowledge background, and being able to resist group pressure. Clark (1983) however, also noted some differences between gender. Common qualities of females listed were, "liked school, especially courses in sciences, music, and art, liked their teachers, [and] were daydreamers" (p.35). Common qualities for males were, "disliked school, disliked their teachers and thought they were uninteresting, did
little homework, and often wanted to be alone to pursue their own thoughts and interests" (p.35). This implies that not only do creative children behave differently and have different needs than their peers, but also that there may be different needs for adaptive instruction between genders.

Assessment of Creativity

According to Beattie (2000), over 200 forms of assessing creativity have been identified. This is largely due to the fact that assessing creativity is dependent on how it is defined. Based on the definition upon which a test is developed, each instrument measures creativity in a different way and with various levels of success. Robinson (2009) says,

"The regime of standardized testing has led us all to believe that if you can't count it, it doesn't count. Actually, in every creative approach some of the things we're looking for are hard, if not impossible, to quantify. But that doesn't mean they don't matter. " (p. 26).

One of the reasons that there are so many different attempts to assess creativity, and so much disagreement on the subject is because assessing creativity is hard, but that doesn't mean that no attempt should be made. Below are some of the various methods used to assess creativity within a large cultural setting.

Cowdroy and Williams (2006) believe that by evaluating the final result or the product, the thinking process, and the creative idea, we can assess creativity. After conducting an analysis of several different assessment systems designed for creativity, they concluded that there are three distinct parts of creativity that can be broken down and analyzed separately. One is the final product or actualization. In the arts this would be the work produced at the end of the process- a painting, sculpture, etc. They identified
the process of developing an idea as a separate aspect of creativity, conceptualization. However, they ultimately came to the view that this is a process that can be conducted entirely intellectually, and as such is difficult to assess given current methods. Lastly, the thinking process, or schematization, is the process of developing a work, and the idea development and problem solving that accompanies this process.

Torrance (1966) developed the most widely used tests of creativity that are still in use today. Named the Torrance Tests of Creative Thinking (TTCT), these tests have been utilized across disciplines and in scholarly research around the world to measure creativity for the past fifty years. However, Torrance never claimed that his tests measured all elements of creativity, or that they provided a comprehensive summary of creative ability (Hee Kim, 2006). The tests come in two varieties. The TTCT- Figural and the TTCT- verbal. The TTCT verbal has two forms, A and B, which are both comprised of five activities: ask and guess, product improvement, unusual uses, unusual questions, and just suppose. Each task is prompted by an image to which the test subject responds in writing. The TTCT figural also has two forms, A and B. Each consists of three activities, with ten minutes allotted for each activity. Activity 1 requires the subject to create a drawing using a pear shape already drawn on the page. The only requirement is that the shape must be incorporated into the drawing. Activity 2 requires the subject to use 10 incomplete shapes to create a drawing. Activity 3 requires the subject to create a drawing using three pages of circles. Activity 3 is a common test, and one of the most frequently used in education. The tests were then scored based on five criteria, Fluency (the number of relevant ideas), Originality (the number of statistically infrequent ideas), Elaboration (the degree of development of ideas), Abstractness of Titles (the degree a title moves
beyond the concrete labeling of the picture), and Resistance to Premature Closure (the
degree of psychological openness) (Hee Kim, 2006). The TTCT criteria laid groundwork
in the field of assessing creativity, both outside and inside the context of school settings.

**Assessing Creativity in Schools.**

The TCCT started as part of a long-term research project focused on creativity in
a classroom setting. Torrance originally created the tests in order to identify which
children needed differentiated lessons based on their creativity levels. This test, within an
educational setting, could play a major role in the development of creative education and
how to assess creative student learning. However, its validity has been seriously doubted
by several studies, and although it continues to be used in educational settings, experts in
the realm of assessing creativity have serious doubts about its validity. (Beattie, 2000)

In an extensive review of the results of different methods of assessing creativity in
an educational setting, Beattie (2000) uncovers that the vast majority of current methods
of assessment are unsatisfactory and often fail to assess effectively the criteria associated
with the creativity test. Beattie believes that it is possible to assess creativity within the
context of schools but characterizes it as taking “great creative effort.” (p. 188). She goes
on to describe the tasks associated with such assessments. These include: clarification of
purposes; identifying examinees; domain content; tasks or strategies; the number of
measures, tasks, and administrations needed to validate an interpretation of creativity;
task exercises; a scoring and judging plan; and a reporting plan. All are necessary steps to
creating an assessment that is reliable and effective to assess creativity in an educational
setting (Beattie, 2000). This is still not a comprehensive plan for creating a perfect
assessment of creativity, but these components represent flaws in previous tests. As more research is conducted on the subject, tests will become more reliable, therefore allowing creativity to become a measurable aspect of the curriculum, and encouraging its place within a school setting.

**Cultural Creativity Crisis**

Torrance (1981) concluded that culture influences the nature of creativity, how it is developed and understood. He concluded, as cited in Clark's *Growing Up Gifted* (1983), that "cultural factors strongly influence the course of creative development, the level of creative functioning, and the type of creativity that is most evident" (p. 38). Under this assumption, what cultural influences are affecting student creativity?

Robinson (2006) discusses how our cultural values affect the way students encounter creativity in the modern educational system. Our present system of operating is to develop students that are skilled and prepared for a life of industrial work in mills and factories. Most public school systems in the United States were developed in the Industrial Age and, as a result, writing, reading, math and science were declared the most important subjects for the education of future workers. This is a model that continues to permeate contemporary education. In the Industrial Age and model, it was unlikely that you would be successful in a job that was focused on the arts. It also left little room for creative practices, (Robinson, 2006). However, as the United States leaves the Industrial Age and moves through the Knowledge Age, our education system and focus must also change. As previously stated, the new world has a new need for creativity, and yet a so
called "Creativity Crisis" sends the United States in a direction that is opposite from that proposed by psychologists, educators, artists, musicians, and other scholars.

In 1996 the Alliance of Artists' Communities' "American Creativity At Risk" symposium was held at Brown University to discuss the apparent decline of creativity in the arts, individual innovation, and research. Six speakers, 24 panelists and 85 registrants discussed different concepts of creativity. These discussions ultimately led to new innovative strategies for encouraging the United States to be creative again through new public policies, cultural philanthropy, and education (Snell, 1996). Snell argues that the United States currently undervalues creativity's long-term contributions to society. For example, in 1996, California's spending on prisons outweighed their spending on education. Further, the argument for the benefit of the arts has only been supported by short-term effects, such as tourism economy. Given the demand for short-term results, something that education and the arts see as not only short-sighted but also something they are at a loss to provide, funding is being cut and existing support decreased or lost altogether.

The 1996 budget of 99.5 million for the National Endowment of the Arts (NEA) represented a 30% reduction from the previous year. In 1995 the budget was 162.3 million. Since 2000, the amount has steadily climbed, but it still remains below the 1995 amount of 162.3 million. In 2015, the budget was only 146 million.

**Can Creativity Be Learned?**

There is much debate about whether creativity is an innate gift, spontaneous, and uncontrollable, or if it is something that can be supported and enhanced through specific
processes in a classroom. The answer may even lie in a combination of both. This is a 
debate that affects how we incorporate creativity into all classrooms and not just within 
art education.

Traditional beliefs on the nature of creativity often follow the romantic and 
spirational models (Cowdroy and Williams, 2007). If we adhere to the inspirational 
model, we characterize creativity as being based on divine inspiration and a process of 
long term agonizing over an idea.
This thought was originally attributed to Plato, but it continues to permeate thoughts 
about creativity in pop culture, as seen in this comic

Figure 1. Jim Benton, *The Muse*
However, if we see creativity through the romantic model, we believe it to be based on the belief that creative individuals have an innate gift. This model is a Kantian notion that sees extremely creative people as transcending mere mortals (Cowdroy and Williams, 2007). Both of these models suggest that creativity is not something that can be encouraged or learned, and that it is not applicable to everyone. Fortunately, most contemporary scholarly views of creativity no longer believe in these models.

However, there is a distinction between teachers encouraging creativity, and teaching creativity. Although creativity includes a certain set of learned behaviors, its development may be part of an implicit or explicit curriculum. Within the arena of education, creativity has been defined as a process of learning by Freedman, (2010). Marshall (2010) holds to this view because it requires reflection as well as a component of experience. She defines creative processes as a special kind of learning.

Wright (1990) agrees with this sentiment. He writes, "creativity is the essence of true learning, is valid of all subjects, and is fundamental to making, viewing, and understanding art. However, creativity viewed as undirected spontaneity is a misapplication and misunderstanding of the creative process." (p. 52.) He considers art education and creativity to be "learned and practiced activities that are directed to purposeful expressive ends" (p.52). When stating this, he emphasized the learned nature of creativity, rather than something that develops without guidance or encouragement among most children. This has clear implications for art education practice. Sir Ken Robinson (2009) seems to agree with Wright that everyone has the capacity to be creative, and that capacity can be developed through instruction. Thinking about misconceptions of creativity, Robinson states that
"the third misconception is that creativity is just about letting yourself go, kind of running around the room and going a bit crazy. Really, creativity is a disciplined process that requires skill, knowledge, and control. Obviously, it also requires imagination and inspiration. But it's not simply venting: It's a disciplined path of daily education" (p. 22-23).

According to these scholars, creativity is something, which for the average student, can be encouraged with the proper educational techniques.

For Feldman (1970) however, creativity is something that occurs whenever a child is engaged with making art. It is something that will come naturally, given the opportunity. He believes that creative development begins as soon as a child begins making marks. A child’s lack of skill does not mean they do not have the ability to be creative. Feldman's (1970) viewpoint would imply that creativity is not something we need to teach, because it already happens naturally by simply giving students the opportunity to create. He believes that every child is born creative and that it is possible to improve one's creativity through instruction. In Feldman's (1970) opinion, creativity can be improved, but it is not learned in the way that Robinson (2009) or Wright (1990) might suggest. Feldman believes that, children will learn just from creating, with no instruction necessary. To him, simply giving the opportunity for the child to engage in a creative experience is enough to encourage creativity. Robinson and Wright believe that creativity, although innate, needs the encouragement of a teacher to develop stronger creative abilities. A majority of contemporary scholars believe that creativity is something that can and should be encouraged in a classroom through different instructional techniques.

Enid Zimmerman (2010) takes the stance that a blending of the two beliefs is the most accurate. She writes, "Teachers and students need to be risk takers and allow bodies
of work to evolve over time through self-directed learning because this is where true creative self-expression can be supported and valued." (p.88). She suggests that self-directed learning is the most beneficial way to encourage creativity. This would mean that the student is embracing their innate creativity as Lowenfeld would believe, but that a teacher is also engaged in the process, more engaged than simply providing opportunities. She believes that teachers play an important role in the development of creativity, meaning that with a teacher's assistance creativity can not only be developed, but enhanced.

Alter (2010), Hennessy and Amabile (1988), and Csikszentmihalyi (1996) believe that social and environmental factors play a more major role in creative performance than innate biological and personality attributes.

**Who Can Learn Creativity**

So, if creativity can be taught, which many contemporary scholars believe to be the case, to whom should it be taught? Do all children have the capacity to be creative? Is it most applicable for students who are talented in the arts? Are some students more creative than others?

Lowenfeld (1987) says, "Every child is born creative." (p.70). This belief is also associated with the work of Freedman (2010), Zimmerman (2010), Robinson (2011), Csikszentmihalyi (2006), and Clark (1983). Robinson (2011) underscores this view when he states that, "Everyone has huge creative capacities. The challenge is to develop them" (p.2). Many people might say, "I'm just not creative" as if they were born without the potential. This is a misconception, and a belief that was abandoned by most educators, psychologists and other experts in the early 1900's, yet the idea still continues
to permeate popular culture. This demonstrates the lack of creative encouragement that most people receive in their lifetime. The truth is, that most scholars, such as those listed above believe that anyone is capable of developing their creative abilities.

A common problem that arises when scholars discuss enacting curricula that encourages creativity on a large scale is the challenge of students having or being able to access different levels of creativity. In other words, are all students equally creative, and if not, how do educators address the needs and demands of diverse capacities? Roger Mandle, President of the Rhode Island School of Design asked,

How do we nurture creativity in people who are not specially gifted or ‘domain creative?’ Education must rise to the challenge of maintaining the connection between those who 'give us the signals of civilization and push us forward' and those who 'are more average...' who turn out to be appreciators or nurturers' (p.7)

Sir Ken Robinson (2011) addresses the same idea in his book, Out of Our Minds-Learning to Be Creative. He states, "A culture of creativity has to involve everybody, not just a select few." (p.2). Robinson’s statement reinforces that creativity is not only applicable to artists or the gifted, but that everyone has the capacity to develop their creative skills. This is an important distinction to make when considering the role creativity should play in a school environment with every student.

**How We Use Creativity in Art Education**

It is sometimes taken for granted by the public that involvement in the visual arts means focusing on creativity. This is not always the case, visual art practice can also be purely practical, and skill based. Therefore it is worthwhile to explore exactly in what ways creativity can partner with the visual arts, and how they work together.
When students explore messages or meanings that are ambiguous they are forced to think of a variety of possible answers and engage in divergent thinking. This is a thought process that often occurs in art classrooms through critiques, analysis, research, collaboration, concept development, etc. Alter (2010), says that this kind of thought process is "according to Anderson and Krathwol's (2001) revision of Bloom's cognitive taxonomy, creative in orientation" (p.3). This creative thought process and others like it can be done through asking questions that push students beyond what they already know and to imagining more. Questions such as, "What if?" help students to engage in divergent thinking and go beyond what is in front of them and entertain creative new possibilities.

Problem solving is a phrase that is often coupled together with creativity. It is critical to how we define creativity and utilize it in a classroom. However, Csikszentmihalyi (2006) has shown that creativity is not just a simple process of problem solving but involves distinct forms and degrees. He describes different kinds of creative problem solving. Presented problem solving is when the question and method of solving the question are known, only the answer is unknown. This process allows for limited creative problem solving skills compared to discovered problem solving. Discovered problem solving is when the problem, method of solution, and the solution are all unknown. In this situation, an unclear problem requires the student to use his or her own problem solving methods according to Alter (2010). Students may employ problem solving methods in several different opportunities within the context of an art classroom.

Freedman (2010) suggests setting up critical exercises that present problems as potential conflicts to produce creative responses. She writes,
"When teaching lessons, setting up a conflict will be more effective in generating a creative response than just a descriptive introduction. Students' work can begin with some feeling of discontent and that discontent can stimulate a need to convey a message, express an idea, expose a feeling, or solve a problem" (p.11).

In this method, problem solving and intrinsic motivation are central to inciting a creative response.

When students create art, they are engaged in several types of problem solving and thinking processes that encourage creativity. Metaphorical thinking, flexibility, and visualization all require students to think beyond the context of what is currently their reality and that requires them to be creative. The use of abstraction, metaphor and analogy require innovative thinking (Alter, 2010, p.4). Metaphorical thinking, flexibility, and visualization are all important to students’ creative imaginations. These skills are utilized in art and require that students think beyond what they already know to imagine something new. Abstraction, metaphor and analogy are other forms of thinking that also play key roles in creativity. These thought processes blur concrete lines and open up more possibilities for innovation. These types of higher order thinking processes are a major part of both a comprehensive arts education and creativity.

Environment

Csikszentmihalyi (1996) discusses the importance of environment in encouraging creativity. He says, "It is easier to enhance creativity by changing conditions in the environment than by trying to make people think more creatively." (p.1) This reinforces the importance of environment in encouraging creativity.

According to Alter (2010) environmental conditions that encourage risk taking, curiosity, imagination, and complexity also encourage creativity. The degree to which
students feel comfortable taking risks and being curious, imaginative is determined by social conditions with peers, teachers, administrators, etc. Environmental factors were explored in four studies conducted across the US, UK and Australia, in schools that were failing to meet anticipated creativity in the curriculum. The results of these studies were, according to Alter (2010),

"lack of art knowledge or training, limited teacher philosophy or conception of creative aspects of art investigations, a domination of traditional pedagogies that limit opportunities for independent student inquiry, limited time to allow for in depth investigation of art topics, student's lack of confidence, wide variations in creative abilities between students, and a lack of metacognitive skills to develop strategies amongst students for improving creative performance" (p.6).

All of these elements were determined to be part of the lack of creativity in these studies. Some of these elements have to do specifically with student social and cognitive development. Other elements are centered on the teacher, such as lack of art knowledge or training, limited teaching philosophy or conception of creative aspects of art investigations. And, finally, some elements are related to larger school structures, such as limited time to allow for in depth investigation of art topics, wide variations in creative abilities between students, and domination of traditional pedagogies that limit opportunities for independent student inquiry. Practically speaking, these environmental conditions are under varying degrees of the teacher’s control, and some may be very difficult to change. For example, classes are currently structured by age, and not creative ability. This fact is an environmental factor determined by Alter (2010) to affect creativity in a classroom, but the average art educator doesn’t have the power to change that environmental system.
Gardner (1993), much like Csikszentmihalyi (1996) and Alter (2010), reinforces the importance of an environment that is supportive of creativity. He defines this type of environment as having three basic requirements: a place to take risks, a place that allows people to discover and develop their own natural intelligence and a place where there are no stupid questions or right answers. Snell (1996) says, "these three standards are likely to be present in any institution that nurtures creativity and innovation" (p. 8).

Studente, Seppala, and Sadowska (2014) also believe that environment is especially important in promoting creativity. Different from Gardner (1993), Csikszentmihalyi (1996), Snell (1996) and Alter (2010), their research focuses less on the social and more on the physical environment and its affects on creativity. More specifically, they looked at both the color green and access to nature in terms of their affect on creativity. They conducted a study with 108 business students at a British University who were divided into three groups. The control group was placed in a room with the blinds drawn in which they had no access to plants or greenery. The second group was placed in the same conditions as the first, but they were given green paper with which to work. The third group was placed in the same room as the other groups, but the blinds were up to reveal views of surrounding nature, live plants were also included in the room. Participants then completed both visual and verbal creativity tasks. The findings were that natural views, plants, and the color green improved visual creativity but not verbal. This suggests that environmental factors like access to nature have a positive effect on visual creativity.
Intrinsic Motivation

The literature describes different methods for encouraging the development of creativity. These methods focus on intrinsic motivation, self direction and choice, and developing a classroom in which students have the opportunity to pursue their interests.

Amabile’s (1983, 1996) Intrinsic Motivation Theory states that students that are intrinsically motivated to create will engage in more creative thinking and produce more creative results. This is because they are engaged and will genuinely enjoy the process. The individual is more likely to concentrate on the task when they are intrinsically motivated. Utilizing classroom techniques that intrinsically motivate students is one method to encourage creativity. This is similar to some of Csikszentmihalyi’s (1996) observations about highly creative people and their dedication and motivation to their work. He says that highly creative people are creative within their passions, and because of this they work very intensely to produce creative ideas.

Suggestions for improving school environments to foster creativity include encouraging students to pursue their interests, as people seem to be the most creative when engaged in something that they enjoy, (Csikszentmihalyi, 1996; Robinson, 2006; Freedman, 2010). When a student is passionate about a topic, he or she is more likely to engage in independent study, which is critical to creative development according to Freedman (2010). A motivator for creativity is passion and interest in a topic, Robinson (2011) tells us that, "realizing our creative potential is partly a question of finding our medium, of being in our element." (p.4). Robinson (2011) means that we must find and work within our passions and where we feel comfortable to reach our optimum creativity.

Clark (1983) outlines some of the factors that scholars such as Anderson and

"situations that present incompleteness, openness; allowing and encouraging lots of questions; producing something, then doing something with it; granting responsibility and independence; emphasizing self initiated exploring, observing, questioning, feeling, classifying, recording, translating, inferring, testing inferences, communicating, bilingual experiences resulting in development of greater potential creativity due to the more varied view of the world, a more flexible approach to problems, and the ability to express self in different ways that arise from these experiences; birth order; predisposing and focusing of the child's interests and attention by parents, the stimulation of the school environment, and by self motivation" (p.36).

These factors focus on students utilizing appropriate amounts of self directed learning and freedom in the classroom. Environment is also a concern, as well as personality traits and birth order. They also draw attention to the various ways of thinking about a topic, and the role that this plays in developing creativity. Such factors provide an accessible list of conditions that educators may be able to support as they seek to encourage creativity in their students

**Threats to Creativity in Schools**

Although unfortunate, it is possible for educators to have a negative influence on the creativity of their students. There is considerable research on the kinds of conditions often seen in schools that inhibit creativity. Researchers such as Anderson and Anderson (1965); Domino (1969); Drevdahl (1956); Eisenman and Schussel (1970); Gowan (1981); Hautz, Rosenfeld, and Tetenbaum (1978); Landry (1968) MacKinnon (1964); Nichols (1964); Torrance (1962,1966) and Clark (1983) have identified environments that focus
on the need for success over such critical factors such as creative risk-taking or imaginative explorations of the unknown as clear obstacles to creative engagement. They have also indicated that environments based on conformity, stereotyping, authoritarianism, and other forms of social pressures not only discourage but also actually suppress the development of creativity. Educators who do not work to counter such conditions can consciously or unconsciously obstruct the creative processes of their students. Although most educators do not intentionally curb creativity, many of the frequent expectations for appropriate engagement in classrooms – discouraging daydreaming or fantasy, for example – may have negative effects on a student’s ability to see beyond the ordinary, commonplace and conventional possibilities. Robinson (2011) believes that many schools are systematically turning students away from their true interests, and as a result turning them away from being creatively engaged in concepts, processes, and challenges that inspire or stimulate them. This was previously discussed as the concept of motivation. The establishment of core subjects, reading, writing, and math provides a limited choice to students, and for many children, their interests do not align with one of these three subjects. Students’ opportunities in art, science, history, physical education, outdoor education, music, dance, and an array of other subjects are not nearly as visible in many schools. As a result, students whose interests and passions lay in these areas are not given the opportunity to pursue the possibilities associated with the arts, science or humanities. Further, the areas that motivate or stimulate their most engaged problem solving and forms of exploration are often ignored or eliminated altogether. The outcome is diminished creativity across the spectrum.
One of the most common perceived threats to creativity is the overuse of technology, and yet technology continues to become a larger and larger part of students’ lives, both in and out of school. Csikszentmihalyi (1996) believes that children today are no longer bored. He believes boredom to be a key component in developing creativity. When children are bored, they are forced to find something they enjoy, and create ways to occupy themselves in which they find pleasure. This not only encourages them to find their passion, but also encourages them to create new ways of thinking, doing or playing within their passion. Due to the easy access of technology, children today never find themselves in a situation of having nothing to do. Technology provides an always-available activity. If there is ever a moment in a student’s life in which they find themselves bored, they are able to distract themselves with television, the internet, social media, video games, phones, etc. This means students are never given the opportunity to discover and create their own form of entertainment within their interests. In Csikszentmihalyi’s book *Creativity* (1996), he interviews some of the most creative minds of today’s world. He found many of them had a similar childhood experience of "a temporary change of lifestyle or restriction of movement due to illness or isolation. In this condition the child felt lonely and bored. Then an unexpected event—often quite ordinary—opened some opportunities to the child. If the child seized the chance, and if she was fortunate to have the support of caring adults, the child began a journey out of a boring reality into the freedom of a new world. Of course, once the journey started, the child needed a great deal of good luck and support before her interest could make a difference—before the play became creativity." (p.21)

He believes that children’s easy access to technology never provides them with the experience of finding an interest, developing skills in it, and eventually becoming creative out of that play. The every day opportunities to work in something we enjoy and develop skills in are disappearing quickly as students’ lives are filled with technological
distractions. The time that used to be spent on a desired activity is now spent with technology, which decreases the opportunities for creativity in a topic of interest. Of course, there are those children for whom technology has become a passion. For them, this increasing focus on technology provides an environment that is intrinsically of interest and highly charged. As a result, these students learn in conditions that offer opportunities for sparking and supporting their creativity. However, all too often technology is not a passion, but merely a convenient distraction for children.

**Conclusion**

This review only scratches the surface of the available literature about creativity. And more is published every day. However, this reflects the major concepts associated with current discussions concerning creativity within the context of art education.

With more literature coming out in art education that addresses the complexity of creativity, it seems we are approaching a creativity renaissance in research. The topic is resuming its place as a major source of inquiry for professionals in a variety of fields, and it could not be happening at a better time. As we stand in a “Creativity Crisis”, research about the subject will help to encourage its place within society and education.
Methodology

The purpose of the thesis is to explore how art educators can encourage creativity in their students. To do this, two techniques of research were used, a Literature Review and a Pilot Case Study. Details from both portions of research and their methodology are below.

Literature Review

The scholarship in the field of creativity is extensive. Although its history dates back as far as Plato across a variety of disciplines, it wasn’t until the 20th century that it emerged as a field of scholarship. Within the past fifty years it has attracted attention as an important aspect of learning and education. This review was limited to contemporary literature in order to provide a practical look at the state of creativity in art education today. It was also limited to those sources available through the University of Maine URSUS system and other scholarly databases via the Internet.

To better understand the nature of human creativity within this more contemporary context, an extensive literature review was conducted. Sources included a variety of disciplines, including psychology, general education, art, science and other fields, but focusing on art education.

Pilot Case Study

Case studies are often used in the social sciences, such as in education and specifically suit the needs of this thesis. Case studies should also be used according to Yin (2003), “when: (a) the focus of the study is to answer “how” and “why” questions”
(Yin, 2003). Both how and why questions are central to this study as it attempts to understand how students can become more creative, and why certain techniques work.

Given that no follow up research is currently planned, this study is not technically a pilot project. However, the nature of this study reflects the intent of a pilot case study as it seeks to establish a starting point for understanding certain approaches to creativity within the context of art education. More specifically, this study focuses attention on a single artist—the researcher—and attempts to understand creativity within the context of her (my) practice as an initial foundation for both teaching and future inquiry in the years to come. This study uses specific prompts based on concepts that emerged from the Review of Literature. The use of prompts as a method to understand the complexity of creativity in my own artistic practice is a basis for understanding how creativity and art education interact, before using that information to inform my teaching practice. The resulting findings will affect the structure of my future classroom. In many ways this study is a run-through to investigate concepts about creativity and art education before they are applied more broadly in a classroom setting.

As Baxter and Jack (2008) suggest, case studies are a good research method for developing theory, evaluating programs, and developing intervention. They write that a case study, “supports the deconstruction and the subsequent reconstruction of various phenomena” (p.544). This process was, in many ways, the goal of this research. It was my intent to deconstruct creativity in order to understand the various definitions, processes, and its role in an art classroom, as well as other important themes. The process of critically analyzing existing notions and views on creativity, led to a subsequent reconstruction of what was learned. This process of rebuilding my understanding of
creativity encouraged theory generation and an application of the conclusions of this study to my future art classroom.

This research uses a variety of data sources to explore various phenomena. This allows for varied perspectives and aspects of the phenomena to emerge. Case studies can epitomize a process or complex set of processes in context, thereby gathering data that can be theoretically applied to the social world. In this case study, the purpose was to explore how art educators can encourage creativity in their students.

**Prompts**

For this study, I determined five different prompts that came out of my consideration of the concepts associated with creativity in my review of contemporary literature. These prompts lead to the creation of six different paintings. The paintings were created in the following order:

1. **Limitations.** "Creatively, I thrive when I'm put in a corner and given limited resources and few options." (Himes, 2006, p.50). Such limitations come in different forms and restrict different aspects of the creative process, normally either through concept development or process limitations. For example, artist, Phil Hansen, developed a shake in his hands during art school. At the time he perceived this to be the end of his creative career. Eventually however, he found that he was more creative working under the limitation of his shake as he found new solutions to making art. (Hansen, 2013). Having to adapt to the shake in his hands, Hansen started to use materials and methods that deviated from his preferred style of pointillism. The results of these works are infinitely more creative by his definition than anything he produced before he started
working in response to his limitations. In an effort to explore how limitations influence the creative process of an artist, advisor, Dr. Laurie Hicks created a prompt that addressed both conceptual and technical aspects of painting. I only became aware of the limitations created by the prompt when I began the process of painting. The prompt is as follows:

“Respond to the concept of a Gordian Knot in such a way that it:

1. Includes text
2. Combines both representational and abstract forms
3. Responds to the following words: uncanny, tangible, and ambiguity”

2. Freedom. When discussing creativity, Ken Robinson (2011) believes that everyone has the potential to be creative. It is the view of many scholars in the field of creativity research, that all children start out as creative. Ainsworth-Land and Jarman (1992) conducted a longitudinal study, in which they tested 1,600 kindergarteners on their divergent thinking skills. 98 percent of them scored above genius level on the divergent thinking tests. Five years later, they tested the same children at age 8 to 10. Only 32 percent scored at genius level, a significant decrease from the previous test. Five years later than that, only 10 percent scored at a genius level. The results of this study demonstrate that divergent thinking, a necessary part of creative thinking, is an innate response for most children, and that as they age their abilities decline. This evidence would lead researchers to believe that creativity is a natural state, and that it is innate in all human beings. With this in mind, the second prompt was designed to offer the greatest level of freedom to create from my internal or innate creativity. Traditional views on
creativity even dictate that the more freedom there is in the process of creating, the
greater the creative outcome. The combination of the belief that creativity is innate, as
well as the lay belief that unrestricted opportunity to create will produce the most creative
results, resulted in a “no limitations/ no prompt” prompt. This “prompt” is open-ended
and has no requirements for product or process. The only limitation, time and materials,
were external to the prompt.

3. **Intrinsic Motivation Theory.** Amabile’s (1983, 1996) intrinsic motivation theory
states that students who are intrinsically motivated to do something will engage in higher
levels of creative thinking and produce more creative results. The underlying reason for
this is that when we engage in something that is of interest to us or that we genuinely
enjoy, we are more likely to be curious, spend quality, uninterrupted time working on it,
and enter into a flow state. Flow state being a focused, passionate state of mind that often
produces higher levels of creativity according to Csikszentmihalyi (1996). Based on this
research, this prompt is to create a painting based on something in which I am interested.

4. **Synectics.**

Gordon and Prince (1961) believed that the use of metaphor, creative analogy, and
juxtaposition of uncommon and strange things with every day life was a means of
encouraging creative thinking.

Karen Heid (2008) used the following process with her elementary students to
encourage their creative thinking and their use of surrealistic metaphor. She based the
process on Torrance and Safter's (1999) components of creativity. She found that this
process gave her students experience with creative thinking skills and helped them to gain a new perspective on their art.

Her process with her students was to form a table with ten columns and ten rows. At the top of each column is an animal. At the side of each row is an inanimate object. Students were to pick an overlapping square and think of a way the animal and the object could be combined. They repeated this process ten different times before selecting five of the combinations for further exploration in their sketchbooks. After working with the five images, the students identified one combination to develop through painting. Based on this method, the prompt is to follow the steps that Heid’s (2008) students took to explore the role of synectics in developing creativity.


Feldman (1970) believed that problem solving was an essential component of creative practice in the arts, something dealt with by every artist. There are different approaches to how creative problem solving is incorporated into the creative process but Parnes (1967) believed that the following specific brainstorming method would lead to creative results.

1. “Mess-finding: (Objective Finding) What is the goal, wish, or challenge upon which you want to work?
2. Fact-finding: What's the situation or background? What are all the facts, questions, data, feelings that are involved
3. Problem-Finding: What is the problem that really needs to be focuses on? What is the concern that really needs to be addressed?
4. Idea-finding: What are all the possible solutions for how to solve the problem?
5. Solution finding (Idea evaluation): How can you strengthen the solution? How can you select the solutions to know which one will work best?
6. Acceptance-finding (Idea implementation): What are all the action steps that need to take place in order to implement your solution?” (Hunt, 1998, p. 4)
According to Parnes, following this series of steps, the user should be able to produce a number of creative and workable solutions from which to choose. This specific process is unique in that each step utilizes both divergent and convergent thinking processes. This encourages the user to generate several ideas and then select the most promising for development. (Osborn 1963; Hunt, 1998)

As a result of Parnes’ (1967) and Feldmen’s (1970) theories, this prompt is to follow Parnes (1967) creative brainstorming method to solve a creative problem of my choice.

The above prompts provided the structure for exploring aspects of creativity and how it can be encouraged within the context of an art classroom. This form of creative research allowed a practical exploration of creativity and art education. A painting was created in the response to each of the prompts with the exception of the “Limitations” prompt. I created two paintings based on the “Limitations” prompt, which provided some valuable insight not otherwise possible with simply one painting. Regrettably, due to constraints of time, I returned to the original intent of one painting per prompt for each subsequent prompt. The paintings were created in the order in which they are presented here, and over a period of two months. Throughout the process, I photographed the development of every painting, used a sketchbook, and kept a written journal to document the thought processes associated with each prompt. Along with the actual paintings, these photographs, sketches, and journal entries constitute the data that came from this study.
Analysis of Data

Data collected through this study was analyzed using a grounded theory approach and involved both text-based content analysis. Grounded theory is a method of analysis in which theory is generated as a result of the data. In this process, theory emerges from the analysis of data, it does not precede it as is typical in a more theory testing approach to research. There is no initial hypothesis to be tested, instead, a study is conducted based on questions to be considered, and the data provides insight into these questions, allowing a theory to emerge. In a similar way to case studies, grounded theory is designed to investigate phenomena and its data to explore the topic and hypothesize around it. According to one of its strongest proponents, grounded theory “helps us to see things as they are, not as we preconceive them to be” (Glaser, 2014, p.48). This is an important quality in analyzing the research of this study, and one of the positives of using grounded theory. The motivations for this study were to explore how in my future career as an art teacher, I can encourage creativity in my students. In order to do this, I had to use a method such as grounded theory that allowed genuine observations, questions and theories to emerge from the data. If instead, I had started with a hypothesis, it would have intensely narrowed the possible results, and I would not have received a well-rounded breadth of the major concerns and themes of creativity in a contemporary art classroom.

Content Analysis

Content analysis is a form of research analysis used to make valid inferences from the data by interpreting material. Content analysis is a technique frequently used in the social sciences to analyze qualitative data or to convert qualitative data into quantitative...
data. The aim of using content analysis is to construct a body of research that describes a phenomenon. The Oxford Dictionary of Psychology defines content analysis as,

“a collection of techniques often used on qualitative research for the systematic and objective description and classification of the manifest or latent subject matter of written or spoken verbal communications, usually by counting the incidence or coincidence of utterances falling into several (usually predetermined) categories” (Colman, 2015)

It is an ideal method of analysis for this study because it allows concepts that are part of the larger phenomenon of creativity in an art classroom to be analyzed and converted into quantitative data. A systematic analysis of text, visuals, and audio recordings was used in this study to analyze and draw conclusions based on the data. The paintings were used in a form of visual content analysis as a form of visual data, and the journals were the source of text-based content analysis.

**Text Based Content Analysis.** The journal was kept over the 2-month period of the painting portion of the case study and included 27 entries, cataloguing the process of creating each painting. Once all of the paintings had been finished, I used content analysis to pull data from the text. I kept a running list of elements that affected the process or product of the paintings as I read through the journal entries, starting at the beginning. As themes started to repeat, I kept a tally of the frequency of times they repeated. For presentation’s sake, words like “anxiety” and “stress” were combined into “stress”. This was done for the entire body of work, and then separately for each painting. The words that had a frequency of 3 or above are considered major themes that arose from the data.
Analysis of Data

Positive and Negative Results of Concepts in Journal Data

Table 1.0

Data associated with this study has been organized in an effort to see patterns of influence and behavior associated with the creative process. The following table lays out the key factors in the data and is followed by a brief development of these considerations.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Negative or positive Influence</th>
<th>Statistics</th>
<th>Prompt/Painting</th>
<th>Critical Conditions</th>
<th>Other relevant factors</th>
</tr>
</thead>
</table>
| Stress  | Negative                       | Discussed 10 times in journal, in 37% of all journal entries. | Prompt 1 - Gordian Knot #1 Gordian Knot #2 | At the beginning of the study - the first painting. -stress as a source of distraction | • Time  
• Concern for Outcome  
• Intrinsic Motivation  
• Previous Experience  
• Risk |
| Stress  | Positive                       | Discussed 1 time in journal, in 3% of all journal entries. | Prompt 4 - Light | The pressures of the thesis were creating stress, but it pushed creating new solutions | • Risk  
• Previous Experience  
• Time |
| Comfort | Negative                       | Discussed 4 times in journal, in 15% of all journal entries. | Prompt 1 - Gordian Knot #1 Prompt 2 Attempting Porter Prompt 3 - Deer Skull | -Working entirely within comfort zone  
-Forced outside of comfort zone and experience produced forced results  
-Worked within comfort zone, wasn’t pushed to do anything new or experiment | • Interest  
• Previous Experience  
• Appropriation  
• Motivation |
| Comfort | Positive | Discussed 3 times in journal, in 11% of all journal entries. | Prompt 1- Gordian Knot #2  
Prompt 5- Rusty Ocean | Having the opportunity to focus on my interests landed me in an area I felt comfortable in to try new things  
-acknowledging my discomfort and lack of knowledge with abstract art, led me into exploring the subject and becoming more comfortable | • Interest  
• Motivation  
• Experimentation  
• Stress |
| --- | --- | --- | --- | --- | --- |
| Time | Negative | Discussed 2 time in journal, in 6% of all journal entries. | Prompt 1- Gordian Knot #1  
Prompt 2- Attempting Porter | -Having too much time, delayed the process  
-The pressure of getting all of these paintings done in time erupted during Attempting Porter and created a lot of stress. | • Stress  
• Limitation  
• Motivation |
| Time | Positive | Discussed 5 times in journal, in 18% of all journal entries. | Prompt 1- Gordian Knot #2  
Prompt 5- Rusty Ocean | -Time limitations encouraged working outside of previous process and exploring new creative solutions to problems  
-Having pressure to get a deadline done, time | • Stress  
• Limitation  
• Motivation |
<table>
<thead>
<tr>
<th>Outcomes*</th>
<th>Negative Discussed 15 times in journal, 56% of all journal entries</th>
<th>Prompt 1- Gordian Knot #1 Gordian Knot #2 Prompt 2- Attempting Porter Prompt 4- Light Prompt 5- Rusty Ocean</th>
<th>-Passing thesis concerns -Concerns about producing thesis level work -Failure in “Attempting Porter” outcome forced me back into previous experience and comfort zone -“Light” concerns about thesis level work -“Rusty Ocean” lack of time discouraged concerns about outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous Experience</td>
<td>Positive Discussed 4 times in journal, in 15% of all journal entries.</td>
<td>Prompt 1- Gordian Knot paintings Prompt 3- Deer Skull Prompt 4- Light</td>
<td>-learned from image flooding technique -Used ground that was learned in previous experience and then built upon it</td>
</tr>
<tr>
<td>Previous Experience</td>
<td>Negative Discussed 5 times in journal, in 18% of all journal</td>
<td>Prompt 2 - Attempting Porter Prompt 3- Deer</td>
<td>-Grading experience in undergrad discouraging risk -Worked quickly</td>
</tr>
</tbody>
</table>

without too much stress is a good limitation to have, little bit of pressure isn’t a bad thing

• Risk
• Experimentation
• Grading
• Previous Experience
• Time

• Interests
• Risk
• Comfort

• Outcomes
• Stress
• Risk
• Comfort
• Interest
| Limitations          | Positive    | Discussed 2 times in journal, in 7% of all journal entries. | Prompt 1 - Gordian Knot #2 | Prompt 5 - Rusty Ocean | -Limitations encouraged working in a new way, previously untried  
-“Rusty Ocean” placed limitations on time that forced working in new and creative ways | • Interest  
• Time  
• Previous Experience |
|---------------------|-------------|------------------------------------------------------------|-----------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Limitations         | Negative    | Discussed 4 times in journal, in 15% of all journal entries. | Prompt 1 - Gordian Knot #1 and Gordian Knot #2 | Prompt 4 - Light | -Interest determined subject for Prompt 1 paintings  
-Limitations in “Light” left a lot of flexibility | • Interest  
• Comfort  
• Time |
| Intrinsic Motivation| Positive    | Discussed 4 times in journal, in 15% of all journal entries. | Prompt 3 - Deer Skull | Prompt 4 - Light | -Made work easy, encouraged flow state in “Deer Skull”  
-Encouraged active thinking in “Light”  
-Encouraged focus and as a result often | • Interest  
• Comfort |
| Intrinsic Motivation | Negative | Discussed 2 times in journal, in 7% of all journal entries. | Prompt 1 - Gordian Knot #1  
Prompt 3 - Deer Skull | -Overwhelmed to start, lack of motivation in first painting  
-Motivation didn’t signify huge creative leaps in “Deer Skull” | • Comfort  
• Stress  
• Previous experience |
|----------------------|----------|-----------------------------------------------------------|-------------------|-----------------------------------------------------------------|-------------------|
| Appropriation        | Positive | Discussed 4 times in journal, in 15% of all journal entries. | Prompt 1 - Gordian Knot #2  
Prompt 2 - Attempting Porter | -Used internalized interests to design initial concept  
-Environment encouraged appropriation to try something new | • Interest  
• Motivation  
• Internalization  
• Environment |
| Appropriation        | Negative | Discussed 4 times in journal, in 15% of all journal entries. | Prompt 1, Gordian Knot #1  
Prompt 2 - Attempting Porter | -Painted over old painting in “Gordian Knot #1” after becoming frustrated with the first try and looked for inspiration elsewhere in desperation by image flooding  
- Relying on Porter’s style discouraged creative developments | • Outcomes  
• Concept  
• Stress |
| Concept, Process, and Positive | Discussed 4 times in journal, in | Prompt 1 - Gordian Knot #1 and Gordian | -Focusing on process and not product produces | • Outcome  
• Previous Experience |
<table>
<thead>
<tr>
<th>Outcome</th>
<th>15% of all journal entries.</th>
<th>Knot #2 Prompt 3- Deer Skull Prompt 4-Light Prompt 5-Rusty Ocean</th>
<th>more creativity -Creating the concept of Prompt 1 paintings was the most creative part of the prompt. -A focus on process and not concept or outcome encouraged creativity in “Rusty Ocean”. The creative problem solving method really only utilized concept creativity, it was my decision to use the time limit to affect the process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept, Process, and Outcome</td>
<td>Negative Discussed 3 times in journal, in 11% of all journal entries.</td>
<td>Prompt 1- Gordian Knot #1 Prompt 4-Light</td>
<td>Disappointment in concept for Gordian Knot #1 affected process -“Light” also focused heavily on concept, and less so on process -Focus on outcome only harbored negative results, as seen in outcome section</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Stress • Limitation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Time • Outcomes • Limitation • Previous Experience</td>
</tr>
</tbody>
</table>
| Risk Experimentation and Spontaneity | Positive | Discussed 5 times in journal, in 18% of all journal entries. | Prompt 1- Gordian Knot #1 | -Tempted to experiment and learn new things but difficult when at odds with outcome concerns  
-Produced a positive resolution to a problem spontaneously  
-Risk encouraged a focus on process that let go of concerns about outcome and encouraged new and creative work. |
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<tbody>
<tr>
<td>Prompt 4- Light</td>
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<tr>
<td>Prompt 5- Rusty Ocean</td>
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</table>

| Risk, Experimentation and Spontaneity | Negative | Discussed 1 time in journal, in 4% of all journal entries. | Prompt 2- Attempting Porter | Took a risk and chose to experiment with new appropriated painting style, risk failed in terms of producing creativity and aesthetic  
-Risks didn’t necessarily produce best work, but they were creative resolutions in new experiences |
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</tr>
</thead>
<tbody>
<tr>
<td>Prompt 5- Rusty Ocean</td>
<td></td>
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|  |  |  |  |  |
|  |  |  |  |  |

Table 1. Creative Process Data

*No positive effects were found to be associated with outcomes.*
The data provided in Table 1. Positive and Negative Results of Concepts in Journal Data (see above) is summarized below. These summaries reflect an understanding of the key concepts that emerged from the data.

**Concept One: Stress**

For the purposes of this research, stress should be understood as the emotional and mental state of being, caused by various factors in and outside of this study. Stress is an uncomfortable panic, and it has negative effects on focus, joy, and confidence.

Summary of Study: Stress was discussed a total of 11 times, and 40% of the journal entries. There was rarely a moment in this thesis that wasn’t stressful, but the days right before starting “Gordian Knot #1” were some of the most stressful. This was because the entire pilot case study was still ahead, a seemingly insurmountable task that caused stress. This lead to a creative paralysis that was described in the journal as, “I've been pushing it off and off and off because of this. The infamous blank canvas syndrome got hold of me.” (January 12, 2016). Not only was I unable to create anything new, I was unable to create anything at all. In some occasions I seemed to have spent more time stressing than actually painting. This journal entry is an example of this, “Stressing out of my mind. Don't know what I'm doing. Freaking out about getting these paintings done in the next 22 days. Like how? I have so many things to do and I'm freaking out and everyone needs my attention and I don't know what’s going on.” (February 10, 2016). This is an example of how stress can be a distraction, and not a motivator when working and being creative. Stress was however referenced one time as being a motivator to work in the case of
creating “Light”. The level of stress associated with a task affects whether the response was positive or negative. Low levels of stress were a motivator, but high levels of stress were a distraction. Stress seemed to be associated with the concepts of time, outcome, intrinsic motivation, previous experience, and risk. In the other paintings it was sometimes difficult to determine what was affecting stress levels the most. This is because of the complex connections to stress, as well factors that were external to this study.

**Concept Two: Comfort and Internalized Process**

Comfort is defined for the purposes of this study as working within the experiences and preferences of the student. It is a state of minimal stress and utilizes the previous abilities and knowledge of the student.

Summary of Study: Comfort was discussed a total of seven times in both negative and positive forms, being comfortable and uncomfortable. This amounts to 24% of all journal entries. Although comfort was not recorded frequently in the journal entries as a main concern, it did play a major role in the study. This could be because comfort levels are difficult to observe in the moment, and often became clearer in hindsight. Maintaining a balance of comfort and internalized process was important to fostering creativity in this study. Working too far outside of internalized process by attempting to replicate Porter’s style caused discomfort and discouragement in “Attempting Porter”. In talking about the painting, I said, “I have tried new things I have never done before” (February 18th, 2016), this shows evidence that I was working outside of my internalized process and comfort
zone. Later in the journal entry I go on to reference “Attempting Porter” as a “boring landscape” (February 18th, 2016). This demonstrated my discouragement with the work. Discouragement became a major factor in my decision to stop working on the painting and all creativity halted. This is an example of being pushed too far outside of internalized process and comfort, and the negative effects that it can have on creativity.

On the other side however, “Deer Skull” is an example of remaining within my internalized process and comfort zone, so much so that I failed to try anything new or to push myself beyond the expected. This was made clear in the journal when questioned the role of comfort in my creative process, “Now, is comfort a factor in being more creative? I'm not sure. I felt like I was working within the parameters of myself. Does that make sense? I wasn't really pushed outside of my comfort zone as a painter” (February 21st, 2016). Upon further analysis it is clear that remaining in my comfort zone for the entire process didn’t produce any new growth or creativity. The same process and results occurred in Prompt One with “Gordian Knot #1”.

In a compromise of two extremes, working just beyond my internalized process and comfort zone, but not too far, can have positive effects. “Gordian Knot #2” is a good example of this. Within my comfort zone, I chose to work with materials I had used before, acrylic paints, newspaper and mod podge, in addition, I chose a subject I had explored before, flowers. I also maintained a style that is within my internalized process. Outside of my comfort zone however, I leaned into abstraction, utilized words, skipped over image flooding - a portion of my process that is very typical to how I normally work - and worked without collaborative feedback. This was a good balance, and left me feeling comfortable, but still encouraged me to try new things and be creative. However,
these results were less products of the prompt and more products of my choices. The process of creating “Gordian Knot #1” remained well within my internalized experience and comfort zone throughout the entire production, although it had the same prompt as “Gordian Knot #2”. Comfort levels and internalized process seemed to be associated with interest, previous experience, appropriation, motivation, experimentation, and stress.

**Concept Three: Time**

Time was a concern in this study in terms of the deadline to submit the paintings as well as the self imposed time limit as a result of Parnes Creative Brainstorming Method in Prompt 5. Depending on the proximity of the deadline, the anticipation had different effects on creativity.

Summary of Study: Time was referenced on seven different occasions throughout the study. It seemed to be of great importance in the process of painting “Rusty Ocean”. This does not seem to be a result of the prompt itself; instead the two-hour time constraint came as the result of the problem-solving process associated with the prompt and created the two-hour time limit created interesting results. It encouraged working outside of my previous internalized process. As I said, “I couldn't rely on something I already had, I had to come up with new concepts to solve my creative problems” (March 1st, 2016). My typical process for creating would involve a much longer time allotment, as well as components of research and image flooding, sketching, collaboration, and revision. The two-hour time allotment did not allow for any of these steps to take place and drastically changed the process of creating. This new method encouraged creative problem solving.
and new learning, and clearly had positive results on my creativity. This is evidenced by the use of new methods, such as scraping off all of the wet paint and new techniques of abstraction.

Interestingly, having a sense of almost open-ended time proved to have negative effects on my creativity. For example, starting the process working on the first painting, “Gordian Knot #1”, was put off time and again because I had a sense of there being plenty of time. Even though I was aware of the long-term deadline for completing the paintings, it was far enough away that, unlike with “Rusty Ocean”, time hindered instead of providing motivation.

Time was also closely related to stress, and in that case it was detrimental to creativity. In between the making of “Gordian Knot #2” and “Attempting Porter” an entire journal entry was dedicated to discussing the stress of trying to work within the set deadline for all of these paintings, “Stressing out of my mind. Don't know what I'm doing. Freaking out about getting all of these paintings done in the next 22 days.” (February 10, 2016). This demonstrates how time can also be a main stressor, and therefore a distraction from creativity. It seems a balance of enough time, but not too much, is important for creativity. Time seems to be associated with stress, motivation and limitation.

**Concept Four: Outcomes**

Within this research, outcomes are defined as the physical product that resulted from the painting process. In this case, the six paintings were outcomes of six prompt-based creative processes.
Summary of Study: Outcomes was the most frequently referenced concept in the entire journal. It came up as a factor on fifteen different occasions. It was the only concept to have only negative effects on creativity. It played a role in my process as I set out to develop each painting. “It makes me extra hesitant to experiment during my thesis project, what if the paintings are bad? What if I fail because they are bad? I’m not sure!??!!” (February 7, 2016). This fear was so strong in the beginning of this case study that it bordered on being irrational. Of course the paintings were going to be analyzed for their contributions to the study on creativity, not their aesthetic value. Yet previous experience and a sense of preciousness affected my emotional reaction so strongly that it had negative effects on my creative process and creativity. Later I would say, “I am tempted to evaluate the value of the painting, but I have to remember that the purpose of these paintings isn't to be exhibited, but its part of a case study on creativity” (February 18th, 2016), confirming the concerns I had about outcome.

It is only in “Rusty Ocean” that a focus on process and lack of time to worry about the final product resulted in fewer concerns about the final product. Most of the journal entries associated with “Rusty Ocean” are filled with problem solving commentary such as, “I'm going to try to add more depth as I go on” (March 1, 2016), “I've also been working all over the canvas. If I do something to one part of it, I do it to all of it. Which I think I will change.” (March 1, 2016). The process used in “Rusty Ocean” utilized a short time frame, which did not allow for anxieties over outcome to influence the creative process, because there was not time to consider them. Outcome
concerns seem to be associated with risk and experimentation, grading, previous experiences, and time.

**Concept Five: Previous Experience**

In this study, previous experience is defined as any previous knowledge or engagement that a student brings to the act of creating. This could be in a conscious or unconscious way. Previous experiences could include previous knowledge or opportunities from education or even those associated with the study.

Summary of Study: Previous experience came up as a factor in nine journal entries, or 33% of all journal entries. This played out in both how my education influenced me as well as what I learned just from one painting to the next. Previous experience played an especially large role in my process in conjunction with concerns about outcomes. Due to my previous enrollment in studio art classes, I had grown to expect an evaluation of the outcomes of my creative works. Although this was not the case in this thesis, that expectation of being graded on my outcome was a part of my previous experience that negatively affected by creative abilities. As discussed in my journal, “I've been so focused on pleasing my professors and getting a good grade all though my undergrad, and now as an honors thesis student, and it definitely affects my process” (February 18th, 2016). My process was strongly influenced by concerns about outcomes and grading to which I have grown accustomed within the context of various classroom settings. This is clearly represented in the journal data as affecting all of the paintings.
Another example of this is related to my creative process, “I think that that snap decision to do whatever I like that comes to mind first, probably comes from being in school for so long, with deadlines and such. Once I find something I am excited to make, I get started, I don’t have time to lollygag and think of 5 other options.” (February 29th, 2016). By this I mean that traditionally in a studio class, the deadlines don’t allow for a lot of time to experiment and try out several ideas to decide which is best. Usually, the first idea that seems manageable is the one that is developed. This is probably because there simply isn’t enough time to do anything else. I found that in my experience with “Light”, I was quick to pick a concept and composition, and then not deviate from it. The experiences in my previous classes influenced my process in this situation as well. In this case, my unwillingness to genuinely consider other options was detrimental to creativity.

However, previous experiences even within the case study also had a more positive effect on my creative process. For example, after realizing how the process of image flooding was harmful to creativity in “Gordian Knot #1”, I altered my process for “Gordian Knot #2” to exclude image flooding. I talk about this in my journal, “I think that I will not do a series of image flooding. I think I was too influenced by other works so I am going to eliminate that step” (January 18th, 2016). I clearly learned from my previous experiences and tried to change my creative behaviors accordingly. The same can be seen when examining the relationship between “Deer Skull” and “Light”. In a journal entry made during the process of creating “Light”, I state, “I started with the background and I realized that I was naturally gravitating towards a same ground as the one I used in my previous painting and liked so much. I was borrowing from past experiences. To me this signals that past experiences are a huge part of the creative choices we make.” (February 29, 2016)
Previous experience seems to be associated with risk, interests, comfort, outcomes, stress, and time.

**Concept Six: Intrinsic Motivation**

For the purposes of this study, motivation should be understood as “the doing of an activity for its inherent satisfactions rather than for some separable consequence. When intrinsically motivated a person is moved to act for the fun or challenge entailed rather than because of external prods, pressures, or rewards” (Ryan and Deci 2000, p. 56).

Summary of Study: Motivation was referenced 6 times in the journal data, a total of 22% of all journal entries. A lack of motivation was tied to stress and an excess of time in the first steps of painting Prompt One’s “Gordian Knot #1”. Motivation also did not prove to be a predictor of creativity in “Deer Skull”. Although I was highly motivated to produce “Deer Skull”, I also worked within my internalized process and didn’t produce new and creative work when considered in the scope of my previous work. Motivation encouraged work, made work more enjoyable, and encouraged active problem solving and focus in the process of making “Deer Skull” and “Light”. In the cases where I was intrinsically motivated to work, I also found it difficult to remember to stop and document the process in both pictures and journal entries, as written in the journal, “it was difficult to remember to write things down and take photos when I was so involved in the painting” (February 29, 2016). This would suggest that intrinsic motivation encourages uninterrupted focus during the creative process. Intrinsic motivation seems to be associated with interest, previous experience, stress, flow, and comfort.
Concept Seven: Appropriation

In art, appropriation is the process of using outside sources to influence creative processes and products to varying degrees. Appropriation could be intentional, an exact transfer of an image or piece of an existing image to a final product, such as occurred in the painting, “Attempting Porter”, in this study. It can also be understood as a thought or concept that inspired another thought or concept, without any visual trace of the original appropriation. A variety of degrees of appropriation can be seen in this case study.

Summary of Study: Appropriation was discussed 8 times in journal data, a resulting 30% of all entries. Appropriation seemed to have a positive influence on creativity in the case of “Gordian Knot #2” as it utilized previously internalized sources. Appropriation also played a role in deciding to use a landscape as the composition in “Attempting Porter”. The landscape paintings that surrounded me as I painted in the Wyeth Center were internalized inspiration for that painting. However, this is where the positive relationship with appropriation stops.

“Attempting Porter”, where Porter’s style of painting was actively sought out and intentionally copied had negative influences on creativity due to appropriation. It seems that appropriation used for inspiration as in the case of “Gordian Knot #2” is a positive influence, but appropriation used for replication is a negative influence on creativity. This was also the case in “Gordian Knot #1”. I began the creative process for Prompt #1 by image flooding, a process I later determined to be harmful to creativity due to its reliance on appropriation and replication. In reflecting about the process of painting “Gordian
Knot #1” and discussing plans for the future I stated, “I will not do a series of image flooding. I think I was too influenced by other works” (February 18th, 2016). I was strongly influenced by imagery in other works and this influence allowed me to rely on that imagery, rather than creating my own, and as a result, hindered my creativity. Appropriation seems to be connected to outcomes, concept, process, and outcomes as separate conditions, interest, and stress.

**Concept Eight: Concept, Process, and Outcome as Separate Contexts for Creativity**

Concept, process, and outcome as separate contexts for creativity were discussed a total of seven times in journal data, or 25% of all journal entries. Concept, process and outcome were each conceptualized as separate entities where creativity could manifest. Concept includes the thought processes behind the initial development of a work. Process includes the thought processes and physical processes associated with the creation of a work after the initial concept development. Outcome, as previously defined, is the result of concept development and the process of making.

**Summary of Study: **Concept, process, and outcome as separate conditions were referenced a total of 7 times in journal data, resulting in a total of 26% of all journal entries. These three areas within which creativity might occur or be assessed reflect the complexity of trying to understand creativity. The behaviors identified as associated with creativity can be seen in the conceptualization of a work, in the processes of actually creating the image or form, and in the outcome of the conceptual development and creating stages. All three were reflected in this study.
A focus on process and not product or outcome was found to be a positive method for encouraging creativity in this study, as demonstrated in the journal, “Perhaps it isn't the limitation in subject matter as much as process” (February 18, 2015), in reference to how to encourage creativity. This distinction was made after completing the “Gordian Knot” paintings and observing that the concept development was the only part of the prompt that required creativity. However, parts of the concept development affected process, for example, the requirement to use text encouraged using new processes such as ink transfer onto the canvas in “Gordian Knot #1”, or how frustration with the initial concept of “Gordian Knot #1” sparked change in process. My dissatisfaction with the concept caused me to paint over half of the painting mid way through, drastically altering my process for developing the painting. A focus on concept development only as a means for encouraging creativity also occurred in “Light”, as the concept development including synectics was the most creative part of the process. Creativity associated with concept development can be seen as a result of the first prompt and fourth prompt in which limitations or criteria were imposed as a basis for the image. This is the type of prompt most similar to school assignments.

Creativity associated with process however, can be seen as even more successful than creativity associated with concept development in the case of “Rusty Ocean”. The time constraint imposed a new process that forced me to “come up with new concepts to solve my creative problems” (March 1, 2016) throughout the process of painting. In this case, imposing restrictions upon process was more successful in producing creativity than imposing limitations on concept.
A focus on producing creative outcomes only seems to have had negative results on my creativity levels. The negative impact of focusing on outcomes is further discussed in *Outcomes*. It also arose as an issue in the journal as a reflection after producing “Light”, “I think forcing creativity is a good way to not be creative” (February 29, 2016). This is to say that trying to force a creative outcome will be more of a distraction than an actual means of producing creativity.

Creativity can manifest in three forms, creative concept, creative process, and creative outcomes. In this study, prompts that encouraged a focus on process produced the most creative outcomes, as demonstrated with “Rusty Ocean”. Concept, process, and outcome as separate contexts for creativity seem to be associated with previous experience, stress, limitation, time, and of course, outcome.

**Concept Nine: Risk, Spontaneity and Experimentation**

Risk taking is a process of being exposed to what can be considered failure. Creative risk taking is associated with moving forward with a concept or process when failure is a possible or even likely outcome. Risk, as referred to in this study is a kind of safe risk. The risks taken within this context never endanger the physical, mental, or emotional safety of the student. Instead, these risks are taken when students are spontaneous in their choices, and open to experimentation. Experimentation is a concept closely associated with risk in that the outcome is unknown. Experimentation involves attempting to answer questions, trying new methods, techniques, interests, concepts, and exploring the unknown. Spontaneity, also associated with risk and experimentation, is a process of
taking actions that may have unknown outcomes, actions that were not originally planned, and moving forward with the results.

Summary of Study: Risk, experimentation, and spontaneity were discussed a total of six times in the journal data, amounting to 22% of the entries. They are considered within the context of each other because of their close connections and possible implications for creativity. Risk was found to have positive effects on creativity and encourage creative resolutions, experimentation, and spontaneity. There are numerous times within the journal that I reference a desire to take risks and experiment, but feel deterred by concerns about outcome, “It makes me extra hesitant to experiment during my thesis project, what if the paintings are bad?” (February 7th, 2016)

Concerns about the outcome of the painting process seem to have minimized the willingness to take risks, to chance failure. This is evidenced in the journal when I write: “It definitely makes me less likely to take risks” (Feb 18, 2016). Although risk taking does encourage learning and creativity, it may not lead immediately to the best work. Creative risk often means trying something for the first time even though initial attempts or lack of experience with a particular process may not always result in work that is desirable. In fact, it may result in work considered to be a failure. In my interpretation, this is the case in “Attempting Porter”. I was curious to experiment with another style and took that risk, but the appropriation and developing concerns about outcome turned the painting into what I perceive as a failed risk.

A similar situation occurred in “Rusty Ocean”. The time constraint and resulting process encouraged risk and discouraged concerns about outcome, which produced
creative results, but did not produce my most successful work. My entry in the journal about taking risks and jumping into the unknown discusses this, “I think that in creativity there is an element of the unknown, and that is why this process was good for me and this thesis and learning about creativity. I chose my problem as something that pushed me out into the unknown and I had to work with something I had little experience in” (March 1st, 2016). However, this choice to work in the unknown and take a risk didn’t produce the most successful results in the painting. It is important to note that successful outcomes may change as the processes or skills associated with a particular risk develop and become more refined.

In the case of Prompt 4 and the painting “Light”, the spontaneous risk to use the sharpie marker on the ground was a new process to a new problem that yielded successful results. Spontaneity, experimentation, and the willingness to take risks, all demonstrate a choice to move forward even if the outcome might fail. These concepts seem to be strongly connected to outcome, comfort, previous experiences, time, and appropriation.

**Concept Ten: Limitation**

Limitation requires a certain direction, element or form of restraint in the conceptual or creating processes. The use of limitations through spoken or written prompts is very common in art classroom assignments. For this study, prompts were used to create limitations by requiring specific elements in concept, process, or outcome.

Summary of Study: Limitation was discussed a total of six times in the journal data, amounting to 22% of the entries. In the case of Gordian Knot #2, conceptual limitations
encouraged creative thinking and new processes, such as utilizing the newspaper as a base. The process-based limitations of “Rusty Ocean” were a result of a problem-solving process and motivated high levels of creativity due to the pressure of time constraints. Limitations in both “Gordian Knot” paintings, and “Light” however, were not strict enough to force me outside of my existing interest. The limitations of these prompts were sufficiently unstructured or lacking in strict obstacles to make it possible to continue working through my existing processes and interests. In other words, I was able to navigate around the limitations with fluidity.

“I think I was drawn towards specific things already, and found a way to include them into the assignment. For example, I was drawn toward collage and black and white, and I needed to incorporate text, so I used the newspaper. I have also felt drawn toward the abstract and flowers, so I needed to make them ambiguous and textile. I think that more than anything what has been driving the subject of the painting isn't the assignment. My interests and passions have been driving the content, but the assignment limited them and forced me to consider how they would work together” (February 7, 2016).

This excerpt from my journal displays how I was able to work around the limitations and use my pre-existing interests. Therefore, it is difficult to determine the role that limitation played in producing creativity in these works. Limitation seemed to be associated with interest, comfort, time, and previous experience.

Data associated with the summaries above is presented in two different formats. Table 2. Frequency of Major Concepts in Journal Data is a summary of all of the previously discussed concepts and their total frequency in the journal. Tables 3 through 7 are individual graphs of each prompt including data for all of the major concepts as well as any other issues that were discussed in association with that prompt within the journal.
Table 2. Frequency of Major Concepts in Journal Data

Table 3. Prompt One Word Frequency
Table Four. Prompt Two Word Frequency

Table Five. Prompt Three Word Frequency
Table Six. Prompt Four Word Frequency

Table Seven. Prompt Five Word Frequency
Conclusions

The results of this research are more complex and extensive than previously anticipated at the onset of the study. To explore them all in equal depth is beyond the scope of this thesis. However, these conclusions note key concepts, patterns and observations that are critical to understanding the nature of creativity within the limits of this study. They are presented here as distinct concepts for the purposes of clarity, but should be understood as being highly interrelated.

Concept One: Stress

Stress seems to have played a very large role in the production of creativity. In the majority of references, stress was a distraction. It caused an inability to problem solve, take risks, and resulted in a heavy reliance on appropriation. For example, during Prompt 1, stress was noted six times. This painting also had a strong reliance on appropriation, potentially too strong, as noted in the journal, “I think I was too influenced by other works” (January 18th, 2016). This increase in stress caused a pressure, and rather than taking the time to work out my own ideas, I relied on others, because it was less stressful than trying to continue to develop my own and potentially failing. However, stress can have a positive influence on creativity when it is accompanied by an intrinsic motivation to create, and the ability to work through a process that is intrinsic to the individual. “Light” is an example of this. The time constraint to finish the paintings created a level of stress that was not unmanageable, and the production of the painting was accompanied by
motivation, which was referenced three times, and previous experience that was referenced twice in journal data.

**Concept Two: Comfort and Internalized process**

A degree of comfort was critical to my creative process. However, reaching too far out of previous knowledge and experience seemed to have caused self-doubt, and a feeling of discomfort that hindered the creative process. I discussed how the process of starting the first painting was uncomfortable in my journal, “So it feels a little uncomfortable today. I've been pushing it (beginning the painting) off and off and off because of this” (January 12\textsuperscript{th}, 2016). In that situation, feeling uncomfortable made even starting the process extremely difficult, hindering all creativity. However, too much comfort can also hinder creativity. “Deer Skull” is an example of how remaining within my comfort zone and internalized process didn’t push me to try anything new or creative. This was made clear in the journal, “Now, is comfort a factor in being more creative? I'm not sure. I felt like I was working within the parameters of myself. Does that make sense? I wasn't really pushed outside of my comfort zone as a painter” (February 21\textsuperscript{st}, 2016). Upon further analysis it is clear that remaining in my comfort zone for the entire process didn’t produce any new growth or creativity, and the techniques, process, subject, and outcome are all typical of my standard process. In the middle, it looks as though a balance of comfort and risk, experimentation, and spontaneity encouraged confidence, productivity, enjoyment, and decreases high amounts of stress. These are all positive influences on creativity. An appropriate level of comfort with process, concept,
workplace environment, and previous knowledge seems to contribute to the production of creative results.

**Concept Three: Time**

Time had a dual role in the production of creativity in this study. On the one hand, it was a strong external motivation to create. In some cases, a lack of time pushed risk and spontaneity. It encouraged working outside of my previous internalized process. As I said, “I couldn't rely on something I already had, I had to come up with new concepts to solve my creative problems” (March 1st, 2016). It was able to silence concerns about final product like no other concept was able to, which was significant throughout the process, and forced a new and creative response. In this respect, it was a positive influence. However, when time constraints weren’t abnormally short, it still allowed stress and final product concerns to influence the creative process. In the case of “Gordian Knot #1” an excess of time resulted in a decrease in motivation, as shown in the quote above, “I've been pushing it (beginning the painting) off and off and off” (January 12th, 2016). In these cases, it was a hindrance to the creative process as well. Time requires a balance. Most time limits were not short enough to encourage a new process, but not long enough to allow the natural development of ideas and calm experimentation in a stress free environment. This in-between time allotment is also quite similar to the time allowed for creating within a school environment.
Concept Four: Outcomes

Concerns about final products of the paintings had the strongest influence on my creative process and negative implications for my creativity. Concerns about the final results and being graded on those results discouraged experimentation, risk, comfort, and internal motivation. “It makes me extra hesitant to experiment during my thesis project, what if the paintings are bad? What if I fail because they are bad? I'm not sure!??!!” (February 7, 2016). Of course, all artists have a certain goal they strive to achieve in their art, but when this moves past goal setting and into unhealthy obsession, it seems to stifle creativity. This unhealthy worrying about outcomes is largely influenced by the grading process that was so common in my previous educational experiences. Although these paintings were not going to be graded for their aesthetic qualities, my lengthy previous experiences of being graded on my artwork created a mindset centered on outcomes that was difficult to shake. As stated in the journal, “I've been so focused on pleasing my professors and getting a good grade all though my undergrad, and now as an honors thesis student, and it definitely affects my process. It makes me stress, which makes me nervous” (February 18th, 2016). Stress and concerns about outcomes decreased creativity, and increased a reliance on appropriation.

Concept Five: Previous Experience and Knowledge

No one comes to the creative process as a blank slate. We use previous experience and knowledge as the starting point for processing information. They are essential in our ability to understand and respond to outside stimuli, and provide the foundation upon which new concepts and possibilities emerge. However, previous experience and
knowledge can also hinder creativity if they only set the parameters for what we understand as within the realm of possibility. In this study, there were times when previous experience affected concerns about outcomes, increased stress and, as a result, limited my creative process. However, it should also be noted that just within the case study, previous experiences encouraged learning and heightened creativity. For example, after realizing how the process of image flooding was harmful to creativity in “Gordian Knot #1”, I altered my process for “Gordian Knot #2” to exclude image flooding. “I think that I will not do a series of image flooding. I think I was too influenced by other works so I am going to eliminate that step” (January 18th, 2016). I clearly learned from my previous experiences and tried to change my creative behaviors accordingly. Throughout the process I was able to gain confidence and reject some of my previous ideas and experiences. This allowed a heightened engagement with creativity.

**Concept Six: Limitation**

The prompts used in this study were intended to provide a structure for creative engagement. It was frequently noted in the data that although the prompts sent the painting in a general direction, either through process or concept, it was also relatively easy to work around the prompt. Therefore, it is difficult to know whether or not these structures and the limitations that presented affected creativity, either negatively or positively.
**Concept Seven: Intrinsic Motivation**

Intrinsic motivation seemed to be an important part of the process of creating. It encouraged thought, focus, and creative problem solving in the development of “Light”, which in turn fostered creativity. Motivation, a seemingly important condition associated with “Light”, appears to be an important first step in artistic creativity. Without a sense of motivation, it can be difficult to begin the process, as was the case in “Gordian Knot #1”. Factors such as stress, limitation, lack of interest or relevance, comfort, and focus on outcome seem to affect motivation in negative ways. However, motivation also did not prove to be a predictor of creativity in “Deer Skull”. Although I was highly motivated to produce “Deer Skull”, I also worked within my internalized process and didn’t produce new and creative work when considered in the scope of my previous work. The outcome of this is that intrinsic motivation is not always a guarantee of creativity. Intrinsic motivation seems to be affected by other conditions associated with the creative process.

**Concept Eight: Appropriation**

Appropriation seems to play two roles in creativity. The nature of these roles depends on the level of its involvement. Appropriation can be positive for the creative experience; it can be used as a place to begin. Appropriation used as a source of creative inspiration is different than appropriation used for replication. Creative inspiration still requires the user to shape or consider the appropriated work in a way that is personal to them. Replication doesn’t necessarily require this. It can allow the user to rely on the appropriated work at the detriment of their creativity. Although replication may be useful
for some purposes in art, it isn’t always. Replication can be seen as a lack of creativity because it focuses on one answer and does not require the creator to produce original alternatives. A reliance on appropriation means that creative results aren’t being independently produced or produced through genuine collaboration. “Attempting Porter” is an example of this in that using Fairfield Porter’s style meant that I did not create any stylistic choices of my own. The difference between just enough appropriation and too much exists in internalized knowledge. In cases such as “Gordian Knot #2” previously seen images had been internalized and continued to inspire me from the back of my mind. I then used these ideas, but regenerated them in my own way to formulate a creative solution. The process referred to as “image flooding” however, is an example of looking for resolutions that appropriate what has not been internalized. This is the difference between appropriation as a source of creative inspiration and appropriation used to simply copy an existing image.

**Concept Nine: Concept, Process, Outcome as Separate Conditions**

Concept, process and outcome were each conceptualized as separate entities where creativity could be manifest. Some prompts, such as the “Limitations” prompt relied heavily on conceptual creativity and focused on creating a concept that was innovative and of value.

Other prompts such as the Parnes (1967) Creative Brainstorming Method, focused on concept initially, but the act of creating a painting in two hours or less brought attention to a form of creativity manifest in the actual process of making art. I remarked in my journal several times that I believed process played a larger role in developing
creativity than concept, “Perhaps it isn't the limitation in subject matter as much as process” (February 18, 2015),

All of the paintings were concerned with outcome creativity, as initially the paintings were intended to be part of the measurement of the creativity of each prompt. Outcome creativity is also typically how we measure creativity within a school setting, because it is the easiest to recognize. The thought processes involved with creativity may not always display themselves in writing, word, or any other form but they may remain inside the mind. As a result, they are very difficult to evaluate. The same could be said for process, a teacher cannot observe every student’s creative process and associated thoughts because they simply do not have access to them. The final product or outcome of a creative process typically takes a physical form, and so is the most feasible to evaluate. However, as evidenced in this study, a singular focus on the outcome of art making has the potential to undermine the creative process itself.

**Concept Ten: Risk, Spontaneity, and Experimentation**

Spontaneity and experimentation are central factors in risk-taking. Although previously thought of as separate, their strong connections to each other are one of the conclusions of this study. The ability to be spontaneous, to experiment and take risks is related to a balance of feeling comfortable, having an appropriate amount of time, and being intrinsically motivated. These three concepts were influential in my painting. They, as a group, urged me to move outside what I consider to be my normal experience and find new possible solutions to problems or challenges that emerged during this study. “Rusty Ocean” is a perfect example of how risk, spontaneity and experimentation can
encourage a creator to experience new processes, content, and concepts. I chose to work abstractly, a style of painting unfamiliar to me, and in a new process where limitations of time made my usual form of engagement impossible. By making these decisions, I intentionally forced myself to work in the unknown. In this case, the risk, experimentation, and spontaneity associated with working in a new subject and in a new way encouraged creativity. However, it didn’t produce the most successful painting, which is an important note to remember.

Based on the data, risk was highly connected with other key concepts, perhaps even the most connected. A greater willingness to take risks was the result of various factors including but not limited to:

1. Higher intrinsic motivation
2. Preparedness in previous knowledge and experience
3. Focus on process and not outcome
4. Low stress levels
5. Limited distractions
6. Comfort
7. Working from internalized inspiration
8. Appropriate amounts of time.

These all materialized as influences on my willingness to take risks, be spontaneous, and experiment.
Concepts That Emerged Through Post Research Reflection

Through the process of analyzing the data, it became clear that there were things that had clearly affected my creativity and reaction to the prompts, but did not show up in the data. In other words, they were not functioning at a conscious level during my process of painting. In fact, their presence was actually made visible by their omission. Through the process of reflecting back on both the act of painting and the data, two concepts emerged that, though not actually in the data, clearly played a significant role in my creative process and, ultimately, creativity.

Concept Eleven: Personality

There is no mention of personality in the data, but in the process of reflection I realized that I had been too close to the process of creation to see the influence of my personality on the way I reacted to the prompts. The best example of this is the “Attempting Porter” painting. Let me preface this by saying that I crave schedules. I like standards and expectations; I like knowing what I am getting involved with and having a direction. As a result, when I was faced with the lack of a prompt and the whole world of painting lay open to me for the first time in years, I was overwhelmed. I responded by assigning myself a very narrow concept, that in the end limited the creative outcomes of my painting. This is something to which different personalities would react differently. Another example is the role that stress played throughout the entire study. I am a very high stress person, and moments of relaxation and calm are very few and far between. I believe this is an aspect of my personality. As a result, this had negative influence on my creative process. Stress became a distraction from creativity as it consumed my thoughts.
and disabled me from creative problem solving, convergent and divergent thinking, etc.

“Stressing out of my mind. Don't know what I'm doing. Freaking out about getting these paintings done in the next 22 days. Like how? I have so many things to do and I'm freaking out and everyone needs my attention and I don't know what’s going on.” (February 10, 2016). This journal quote is an example of how stress often took over my mind and abilities, hindering me from engaging in the types of behavior that usually associated with creativity.

**Concept Twelve: Balance**

Balance is another concept that did not come up directly in the data but became quite clear through the process of analysis. By balance, I mean to say that most of the factors I’ve associated with creativity required a level of equity. If one side of the scale became too heavy, it made the creative process much more difficult. The concepts above emerged as more interrelated than I had expected. As a result, this interconnectedness seemed to establish a system of checks and balances that were necessary to achieve optimum creativity. For example, a balance of stress was important. Too much stress would produce a lack of focus and motivation, as in the case of “Gordian Knot #1” yet a small amount of stress was found to be a positive influence on creativity, as seen with “Light”. The balancing act of these concepts is easily visible in Table 1, as most concepts have both a negative and a positive associated with them.

These conclusions reflect the delicate balance that creativity requires of various interconnected concepts. This data suggests that there is no one clear path to creativity, and that the variables involved are far too complex to draw definite and generalizable
conclusions. However, these observations do provide a structure to continue to explore creativity and its many interconnected routes.
Implications

Based on the conclusions made form this pilot case study, there are practical implications that can be applied to an art classroom setting.

Implication 1: Although the mental and emotional conditions of students is beyond the control of any teacher, there are certain conditions that can be established in the classroom to minimize or prevent student distress. This is important as stress has the potential to severely influence a student’s ability to work creatively. Given that issues of comfort, stress, time and process are interrelated, conditions for addressing them in the classroom can be seen as responding across this spectrum of needs.

Application: Every classroom requires structure, but often that structure takes control, and as a result, a sense of comfort away from the student. Comfort is clearly an important factor in creativity, and one of the ways we become comfortable during the process of creating is having control and choice over our physical environment. Students should be able to work within their internalized process by choosing the working environment in which they feel most comfortable and productive. This flexibility would allow students who prefer to collaborate in groups to do so, or provide students who require more independence the opportunities for them to be their most creative Decision-making is important not only in terms of the environment but also in relationship to materials. Giving students a sense of control and comfort can be accomplished through offering a set of different materials and encouraging student to make decisions. This
allows students to have more influence on their process, how they respond to creative problems and ultimately, enact solutions.

Application: Stress is inherent in formal education. Any context where expectations for performance play a major role is a stressful environment. However, establishing an art room that reflects an understanding of stress and how it both hinders and can, in some circumstances, enhance problem solving and risk-taking is essential to encouraging creativity. Further, it is critical that the teacher has insight into how stress is manifest and, to some degree, remediated, and that these insights are deeply considered in their teaching processes. Students need to experience the art room as a safe and welcoming space, a space in which exploration and taking risks is supported. Such a space provides every opportunity for success yet also allows and, in fact, values “failure” as an essential aspect of the creative process. Associated with this is the need to establish an atmosphere of respect and collaboration.

Application: Structured time, like stress, is impossible to avoid in classroom settings. Time is segmented into blocks by larger school structures that have little to do with what the teacher decides. Flexibility or the opportunity to take time when needed for creative development is uncommon in a school setting. Creativity requires uninterrupted time in order to manifest. As a result, time needs to be flexible to the degree that it is possible within the constraints of a school setting. This may happen in the structure of assignments or in relationship to due dates.

Implication 2: The concerns associated with the outcome of a work and the resulting grade in an educational setting can have severe effects on a student’s willingness to
experiment, to be spontaneous in their work, and take creative risks. The assessment of work and the assignment of a grade are eventualities that all students anticipate, some with great anxiety. The assignment of grades is unfortunately, a basic structure of most contemporary schooling and, as such, cannot be avoided. However, sensitivity on the part of the teacher to the worries that students face over their graded outcomes can help minimize the kind of stress that affects creativity. Such sensitivity can be built into classroom processes such as formative critique, where students engage in reflective analysis and conversation concerning their work while it is still in the process of development. Involving students in this form of critique can help create a culture of shared reflection in the classroom. Shared reflection and, ultimately assessment at both the formative and summative stages has the potential to give students a sense of investment and control in how their work is evaluated, and graded. With such investment and control often comes decreased levels of stress.

Application: When students are less concerned about outcome and more willing to accept failure in outcome, they will experiment, take risks, and be spontaneous. Building into an assignment aspects of risk taking, spontaneity, and experimentation are important for encouraging students to use these as part of their regular practice. This incorporates these processes into their grade, so that outcome is no longer the most important result of their learning. Risk taking, spontaneity and experimentation can be graded through the procedural response to assignments that ask students to suddenly and spontaneously manipulate their work, or challenge them to experiment in certain ways unfamiliar to them, or take a risk.
Application: Encouraging students to understand why they associate their work with certain feelings of preciousness, where that meaning comes from, and how to overcome it can be helpful in encouraging them to let go of the stress that is often the result of focusing primarily on outcomes. Students very frequently develop intense emotions of attachment to their work without exploring why or how. Once students are aware of these feelings, and why they have them, they might be more likely to see them for what they are and find alternative ways of finding value in their artistic processes.

Application: An essential part of rubrics should include evaluation of spontaneity, risk taking, and experimentation within the student’s process, along with the acknowledgement and acceptance that the first experiment with something will not always produce the best results. These processes are made visible through student actions, and sometimes their recorded thought processes. Prompts that encourage or even require spontaneity, such as changing an assignment half way through the making, may foster this. Allowing for potential failure and understanding what it can offer in terms of insight can help students embrace the possibilities that may come from spontaneity, risk and experimentation, and may help students develop a deeper sense of engagement with the process of creating itself.

Application: The goal for many students isn’t to explore new concepts or processes but to create something with an outcome that is successful. This outcome-based motivation is harmful to learning in that not only does it take the focus off the process, but it also encourages anxieties about outcome, which have negative effects on creativity. Learning the process is important and more likely to promote creativity than worrying
over the outcome. The goal should not be to produce an image or form, but to learn HOW to conceptualize, imagine possibilities and create an image or form.

**Implication 3:** Appropriation can have truly positive effects on creativity when used properly. Knowledge and admiration of art is a cornerstone of any art education. Such knowledge and engagement with the art of others often results in the internalization of information and images that emerge as a result of the creative process. This is not only to be expected but can be a positive influence on an individual's creativity. However, it can also be a hindrance to creative processes if it becomes the whole solution and not just an inspiration or means of stretching one's own ideas. In today’s schools we make a distinction between copying and appropriation, but often this is a rhetorical difference and not something upon which we reflect in detail. Working to help students understand how the art of others can facilitate their own creative process is important to enhancing creativity but only if they see it as a starting place or point of inspiration, not as the desired outcome.

Application: Students are encouraged to draw inspiration from internalized sources. Being exposed to art is such an important part of any art education. Encouraging students to admire, explore, and be inspired by art from historically and culturally diverse sources is foundational to understanding how information we take in from the world around us inspires and broadens our creative possibilities.

Application: To both discourage appropriation as replication and encourage appropriation as inspiration, students might use sketchbooks on a regular basis to
document the development of their ideas and demonstrate where internalized appropriation plays a role in their images. Although in many ways it would be incredibly difficult for a teacher to know the process inside of a student’s mind and the nature of appropriation, encouraging students to utilize documentation of their development is a way of visualizing their thought processes.

**Implication 4:** Personality and previous experiences change how each student learns and creates. To some extent, these are variables outside of the teacher’s control. Personality for example, is not something that a teacher can change. However, being aware of the role personality plays in a student’s creative process is important. This is similar to how being aware of a students’ personality in their process of learning is important. Previous experience is also, to a certain extent, out of the control of the teacher. However, the experiences a student has within a classroom become previous experience. Learning and creative development can be seen even from just one assignment to the next, and building on previous experiences in such a way as to facilitate problem solving and creative risk taking can be extremely helpful in encouraging creativity.

Application: Designing a curriculum that not only builds on itself and uses concepts that carry throughout the class but that also is grounded in the processes that further the development of creative engagement can help to develop creativity. Students remember and reuse their previous successes and avoid their previous failures, this knowledge can be very valuable when developing creativity.

Application: Students will have their own successes and challenges and will need differentiated instruction as a result of this. Even though a teachers time is often stretched
extremely thin, prioritizing the need for time within a class to speak with students one-on-one can help reflect on and use their previous successes and challenges productively. Further, utilizing journals may help create a two-way dialogue through which students can engage in reflective dialogue with themselves and with the teacher. Such dialogue not only enhances that culture of shared reflection I previously mentioned but also focuses their attention on process.

**Implication 5:** There are three opportunities for creativity to manifest in student work: concept, process, and product. Concept involves the initial development of the idea, process, emphasizes engagement of creating the visual or form, and product, attends to actual visual or form.

Application: The assignments that facilitate learning, as well as learning itself, should reflect these three categories. Often in art classrooms, concept is the only aspect of these three that is addressed. This is unfortunate because so many creative opportunities lie in process, and when used appropriately, outcome. Utilizing assignments that place an emphasis on the creative engagements associated all aspects of art making - concept, process and outcome – encourages students embrace creativity in all its modalities.

Application: Assessment should reflect these modalities. Outcome is traditionally the most often evaluated facet of a work of art, but is only one aspect. Process and concept are both important ingredients of a creative process. Evaluating only the outcome of a student’s creative process narrows not only how a work can be valued but also limits the students field of learning. It tells the student that the only way to be creative in an art class is to make a successful outcome. This discounts all of the learning and creativity
that may still take place even if the outcome is unsuccessful. Creative concept and processes can be observed and evaluated through sketchbooks, journals, drafts, revisions, collaborative discussions, critiques, and the observation of the student utilizing new materials, new methods, new techniques, new styles, and new processes.

**Implication 6:** Educators are constantly discussing student engagement and how to encourage students to be actively involved in school. Intrinsic motivation is a clear way to engage students in learning and creativity. Students who have the opportunity to explore and work in what they are genuinely interested in will be more focused, creative and engaged in higher thought processes than if they are apathetic.

Application: Assignments and examples should always include an aspect of the student’s lived experience. This helps to ground the concept being learned to the student’s life and helps them gain insight into how new concepts are relevant to and can be applied within their lived experience. Using connections to lived experiences can help the student both gain interest and a stronger understanding of the topic.

Application: Providing learning opportunities within which students can apply the concepts and forms that emerge from their creative processes helps them invest in and understand the real world effects of creativity in art. Taking the results of their creative engagements out into their communities helps give meaning to what they’ve done and reinforces their connections to the processes associated with creativity.

Through this thesis, I set out to explore issues associated with creativity and how it might be enhanced within the context of art education. Key concepts, conclusions and
implications emerged, taking me another step closer to understanding how I, as a future art teacher, might go about creating an environment that supports and facilitates the development of creativity. Even though I have only made small strides toward understanding the complexity of creative engagement, I see a clear path before me and know that deeper knowledge is only possible as I have the opportunity to learn about creativity from my future students.
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Appendices

Appendix A: Documented Painting Development

These are photos taken during the development of each of the prompted paintings. They serve as a visual record of the process and aid in demonstrating and defining how each work developed.
Prompt 1: Limitations
Painting Title: Gordian Knot #1

Prompt 1, Painting 2:
Painting Title: Gordian Knot #2
Prompt 2: No Prompt
Painting Title: Attempting Porter
Prompt 3: Intrinsic Motivation Theory
Painting Title: Deer Skull

Prompt 4: Synectics
Painting Title: Light
Prompt 5: Parnes (1967) Creative Problem Solving Brainstorming Method
Painting Title: Rusty Ocean
Appendix B: Prompt and Concept Data Cross Analysis

Appendix B is an in depth analysis of each of the major concepts that arose from the data, each broken down by its relevance to each prompt. Due to the depth and occasional redundancy of this analysis, this was chosen to be included in the appendices, and the body of the data analysis reflects a more polished and clear presentation of the data.

Motivation

**Prompt One: Limitations.** The relationship between motivation and the first prompt was especially interesting because it was the first. The idea of completing all of the paintings was still incredibly overwhelming. The situation that unfolded resulted in high stress and feelings of being overwhelmed, which discouraged motivation. The task before the researcher seemed overwhelming. Many artists refer to the “blank canvas syndrome” meaning that simply the open possibilities and amount of work that lay ahead leave the artist overwhelmed and unmotivated to move forward. This was certainly the case with the first prompt.

Eventually the researcher was able to move forward by simply painting a wash on the canvas. After this point, the researcher found it was much easier to continue working on the paintings (both Gordian Knot #1 and Gordian Knot #2) and motivation levels rose.

**Prompt Two: No prompt.** In the “no prompt” situation, original levels of motivation were quite high. The researcher had just completed the two paintings from the
previous prompt, and the goal of finishing the paintings now seemed plausible. The opportunity to paint anything was appealing, and the researcher was excited to start and had high aspirations. They wanted to experiment with Fairfield Porter’s style, something that had been quite interesting but hadn’t yet provided the opportunity to be tested out. The researcher picked one of their own landscape photographs and tried to adapt it to Porter’s style with excitement and motivation. However, it should be noted that once the process of painting started, the researcher felt confined in the painting they had chosen, with little room to experiment. As the painting continued down a path that was not originally what the researcher had expected, motivation decreased. It became evident that the researcher’s skill set did not yet enable fluidity with the style, and as a result the painting aesthetically failed. This alone was enough to strongly discourage motivation in the researcher, and maybe even prompted a premature end to the process. This is interesting because the researcher could have completely changed the style of the painting, or otherwise drastically changed it, because there was no prompt. This inability to move outside of the previously defined lines could be do to a lack of motivation.

**Prompt Three: Intrinsic Motivation Theory.** In the Intrinsic Motivation Theory Prompt, the researcher was encouraged to make art about what they were motivated to do. To the researcher, this translated into what they were interested in. If they were interested in the content, process, and style, then they enjoyed the painting process and were motivated to work on it. The Intrinsic Motivation Painting, or “Deer Skull” became a process that they looked forward to and felt very engaged with. The researcher consistently found themselves utilizing creative problem solving processes. As they
adjusted one piece or added a color here or there, they had to respond and actively consider the implications of that change, and how the rest of the painting would be affected.

The researcher purposefully chose content that they were excited to work with, the themes of nature and color schemes were aspects that they enjoyed and were motivated to work with and explore. They also reverted back to their traditional style of painting in this work. The familiarity of this style was what they felt comfortable with, and after the negative emotional reaction to the attempted and failed painting style of their previous painting, I felt excited to revert back to what they already knew. This, although enjoyable, was not necessarily different or pushing the researcher outside of their comfort zone. I think the overall satisfaction with the end result of the painting has less to do with the creativity involved and more to do with the positive experience of painting it and the positive emotional connection to the final appearance of the product.

**Prompt Four: Synectics.** In the process of developing the concept for this idea, motivation became an important part of the creative process. Ideas flowed freely as the researcher was excited to begin painting. The portion of the process that requires fluency of animals and objects moved forward quite rapidly, and even the five sketches of the combined animal and object came quite easily and fluently. This could very well be because the researcher was motivated to work on the issue. As the painting, named “Light” moved forward, motivation started to diminish from its previous high. This could
be the result of stress, deadlines, lack of ability to fluctuate with the painting, or any other number of reasons.

Prompt Five: Parnes (1967) Creative Problem Solving Brainstorming

Method. Motivation was a large issue with this painting. Stress and a time deadline were definite factors that made it difficult for the researcher to feel excited about the work and motivated to paint. Other factors that affected the painting were the stops that happened every half hour during the process that allowed the researcher to record the process of making through journal entries and photographs. This start/stop method made the painting process feel forced and regulated, and therefore decreased motivation to work on it. As a result, it also negatively affected the creativity of the process, as the researcher was not motivated to attempt other, potentially more successful techniques or methods. This painting was also “finished” prematurely within the 2-hour time constraint, and this was most definitely an effect of low motivation.

Limitations

The distinction between creativity in concept and creativity in process is analyzed below.

Prompt One: Limitations.

The “Gordian Knot #1” painting and its limitations encouraged creative problem solving in the concept development portion of the process. Yet, beyond that point, nothing within the limitations set rules for process. Some parts of the prompt did influence process, for example the requirement to use “text”. The researcher had decided not to paint words due to certain aesthetic desires, and so newspaper was employed in the painting to achieve the requirement of text. The initial prompt did require some creative
problem solving, but the prompt was also open enough that the painting could have been just about anything, and the researcher could justify it. For the concept prompt to encourage real creative problem solving, the prompt would need to be much more specific.

**Prompt Two: No prompt.** “Attempting Porter” had no limitations on either prompt or process initially. As a result of this wide open assignment, the researcher narrowed down the concept significantly when deciding the content. Ironically, it became the most restrictive. This could be because of personality, or environment, as the researcher recorded in their journal,

> “I was so heavily inspired by the landscape class that I think when I had no restrictions and everything was left open, I just naturally was influenced by my environment. I think that if I had been around figure drawings then I probably would have drawn figures, if I had been taking a hyper realism class, instead of abstraction, I would have been making realistic paintings. Its clear that I have obviously hopped onto whatever bandwagon was circling me, and was heavily influenced by my environment in deciding what to paint when it was left up to me.” (February 18th, 2016).

The limitation of concept also limited the process, making it difficult to try anything new in the process when the intended style was meant to resemble Fairfield Porter. This inability to be flexible discouraged creativity, rather than painting in a new style, the researcher simply tried to copy a style in techniques of painting that they were familiar with.

**Prompt Three: Intrinsic Motivation Theory.** This prompt’s only requirement was that the researcher be intrinsically motivated to complete the work. As a result, there
were neither concept based limitations or process based limitations. It also didn’t require that the researcher be pushed outside of their comfort zone to seek creative resolutions.

**Prompt Four: Synectics.** This was another prompt that solely focused on limiting concept development. Once the composition and idea for “Light” had been established, there was nothing else about the process that prompted creativity. As the researcher noted in their journal, “It also seemed like the creating the idea was the most creative process and not the actual making, at least not so far.” (February 29th, 2016)

**Prompt Five: Parnes (1967) Creative Problem Solving Brainstorming**

*Method.* This was the only prompt that had limitations based on process. This encouraged constant creative problem solving and creative engagement. It did lack however, a prompt for concept, other than the limitation to abstract and non-representational art, which is still incredibly broad. The limitations on process produced very interesting results however, risk taking, creative problem solving, and spontaneity.

**Appropriation**

**Prompt One: Limitations.** The space in which “Gordian Knot #1 and Gordian Knot #2” were created was in the Wyeth Center painting studio. During the time period of their creation, there was a landscape class and an abstract and non-representational painting classes happening in the same room, because of this, bot abstract and landscape paintings covered the easels and walls. Elements of abstraction are visible in both
“Gordian Knot” paintings, and this could be a result of appropriation of the abstract paintings on display in the Wyeth center.

 Appropriation was a huge element of “Gordian Knot #1” and it had negative effects on the creativity of the painting. The researcher started with a process that they had utilized in lots of other work, image flooding. In this process, the researcher explored artistic works from a variety of artists to find something to “inspire” them. After painting “Gordian Knot #1” however, it became obvious that the appropriation used in this painting was heavily relied on. Creativity was minimal because the concept was largely borrowed from another painting, and not produced from the researcher.

Figure 1. Forbidden Orchard oil painting by artist Wylie Beckert

On the other hand, in the process of creating “Gordian Knot #2” the researcher completely avoided the method of “image flooding” and instead took inspiration only from artwork that they remembered, and not artwork that they had gone out seeking for inspiration. This is the difference. The creative results of “Gordian Knot #2” come from a genuine appreciation for an artwork that has held a place in the memory of the researcher; not from an active search for something to reproduce. In the case of “Gordian Knot #2”
the researcher has seen a painting of roses months ago, and it had held its place in their mind as a source of admiration and inspiration. Elements of the painting inspired the aesthetic of the roses, but their intent was not to create the same aesthetic.

**Prompt Two: No prompt.** After the interesting conclusions about appropriation that resulted from the “Gordian Knot” paintings, the researcher continued on in thinking about the line between appropriation and creative interpretation, or appropriation and reproduction. In a class about abstract and non-representational art, the researcher had been exposed to the work of Fairfield Porter. The combination of this, as well as the exposure to several peer’s landscape paintings in the Wyeth Painting studio lead to a desire to create a landscape in the style of Fairfield Porter for this assignment. In an effort to avoid complete recreation, the researcher chose one of their own photographs to paint in the style of Fairfield Porter. The decision to work from a photograph and to replicate Porter’s style left little room for the researcher’s interpretation and creativity to emerge. As a result, the creative process was stifled with limitations, demonstrating that direct appropriation and recreation leaves little room for creativity.
Prompt Three: Intrinsic Motivation Theory. “Deer Skull” ’s only appropriation was the use of a photograph of a deer skull. Aside from that image, the rest of the painting’s qualities can be attributed to the researcher.

Prompt Four: Synectics. “Light” was also a creation of the researcher’s mind. It had no specific image in mind, and perhaps it was unnecessary to have such an image at this point in the creative exploration process.

Prompt Five: Parnes (1967) Creative Problem Solving Brainstorming Method. “Rusty Ocean” is another example of some of the positive characteristics of appropriation. This painting original started out as a completely different painting. However, the time deadline meant that the paint had to dry quickly if there were multiple
layers. After laying on a lot of paint in the first 20 minutes, the researcher realized that it
would not dry in time, and as a result, scraped most of the wet paint off. In a moment of
panic and snap decisions, the researcher recalled a painting they had seen weeks ago, and
drew inspiration from that. This may be in part creative problem solving and in part a
reach for something that is already successful to draw from, in an effort to also create a
successful painting. This painting was unlike anything that the researcher had painted
before, and lead to creative development. This, much like “Gordian Knot #2” is an
example of the positive ways appropriation can positively influence creativity, but also
raises questions about why artists may appropriate, out of need and desperation, or out of
fascination?

**Final Product Concerns and “Preciousness”**

Prompt One: Limitations

“Gordian Knot #1” was the first painting of the entire series, because of this, the
researcher especially struggled with letting go of the idea that these paintings were being
used for research, and not for exhibition. The concerns about the final product of
“Gordian Knot #1” definitely affected both the process of making and the composition.
Preciousness held back risk taking and spontaneity in this work, which reduced creative
exploration. The fear of being wrong or producing a bad painting was one of the most
powerful influences on the works.

The same fears affected the researcher’s willingness to experiment with “Gordian
Knot #2”. The researcher recoded in their journal, “It makes me extra hesitant to
experiment during my thesis project, what if the paintings are bad? What if I fail because
they are bad? I'm not sure!??!!". This fear was so strong in the beginning of this case study that it bordered on irrational. Of course the paintings were going to be analyzed for their contributions to the study on creativity, not their aesthetic value. Yet previous experience and preciousness affected the researcher’s emotions so strongly that it had negative effects on creativity.

Prompt Two: No prompt

“Attempting Porter” marks a transition in this process. The researcher was able to move past preciousness concerns enough to venture into an unknown field of art. However, the experimentation produced a poor final product, a discouraging setback for any student.

Prompt Three: Intrinsic Motivation Theory

Certain aspects of a formal arts education can discourage students from trying new painting styles, and the researcher’s reaction to this has been to develop a “style” as a mechanism to prevent producing an aesthetically unappealing product. With that said, because “Deer Skull” adheres to this specific style of painting, it isn’t clear whether or not the result was more creative. The ground was a new method, and a part of the painting I could easily paint over and experiment with again and again until the researcher found something that was appealing. Yet for the skull portion of the painting, the researcher reverted right back into their old ways as they worried about the ability to
portray something naturalistically. Although the end result is still quite “painterly” and abstract, concerns about naturalism were still present in the process of making, and they discouraged any extreme risks.

Prompt Four: Synectics

Final Product concerns and preciousness were a small concern with “Light”. The concept of the painting remained the same throughout the developmental process, and the researcher did not doubt their ability to produce the idea. The risks that were taken involving the sharpie lines came about in a moment of spontaneity, and in order for that to be allowed, the researcher had to have moved forward in letting “preciousness” go, compared to the “Gordian Knot” paintings.

Prompt Five: Parnes (1967) Creative Problem Solving Brainstorming Method

“Rusty Ocean” is an example of how by the end of this process, the researcher had learned enough to let go of some concerns about preciousness and allow risk taking and spontaneity to encourage creativity. The time limit also forced some of those concerns about the final product to dissipate, there simply wasn’t enough time to hesitate. Every instinct reaction had to be played out in order to keep moving forward. This process was very similar to gesture drawings, quick, and without concern for creating a perfect work.
Previous Experience

I found that my previous experiences influenced a lot of my actions throughout the creative process. Both through a long term history in art as well as the short term experiences within just this pilot case study.

Previous Education

Prompt One: Limitations

One of the most difficult things in this portion of the study was moving away from the typical format in which the researcher had created most art for years. The first two paintings, “Gordian Knot #1” and “Gordian Knot #2” resemble a period of transition in this way. Previous experience in art lead to certain expectations of creativity and process that were not present in this study. For example, the collaborative classroom environment, or the requirement of attaching a grade to the work based on its aesthetic qualities, or image flooding. Image flooding is a process frequently used by the researcher in previous works to establish a concept and composition. As a result, this was how the first painting started. However, after the first painting, the researcher realized some of the detrimental effects of this process on creativity, and avoided it for the nest
piece. Concerns about grading were also a difficult thought process to leave behind. Although these paintings would not be graded on content, it was extremely difficult to let go of that thought because of all of the years of previous experience with grades. Throughout all of the paintings, it was difficult to remember that the purpose of their creation was not exhibition, and that they would not be judged based on their aesthetic qualities as they would be in a classroom.

Prompt Two: No prompt

“Attempting Porter” was viewed as an opportunity by the researcher. It was the chance to explore into something that had never been developed by previous education, and now the opportunity had come. It is interesting that in the “no prompt” assignment, the researcher chose to explore something not previously covered by their education, recognizing a hole and wanting to fill it with experience. Previous education also had a role in helping to select the concept for the painting. “Attempting Porter” is very much about attempting to adopt Fairfield Porter’s style. Fairfield Porter is an artist that had been talked about in the researcher’s painting and art history classes. The classes resulted in knowledge and admiration for him, and that influenced the researcher’s decision making about concept. Creativity holds a certain element of combination of previous knowledge and willingness to jump into unknown knowledge. The researcher in this case, relied on previous knowledge, but perhaps too much so, and when the painting needed to venture into the unknown and try something that went beyond previous knowledge, the
researcher was unwilling to do so, for reasons such as fear of risk taking, lack of motivation, and tight limitations.

Prompt Three: Intrinsic Motivation Theory

After the perceived failures of “Attempting Porter”, and given the prompt of intrinsic motivation, the researcher returned back to something they felt comfortable in and motivated to work on. The previous experiences in painting influenced what they felt comfortable with, and as a result, influenced the style and content of “Deer Skull”. Previous experience influenced comfort levels with certain processes and painting techniques, which in turn influenced the work and intrinsic motivation. The researcher heavily relied on previous experience to produce “Deer Skull”, and although they took some creative leaps in process to create the ground, the skull itself is typical of the researcher’s body of work. This would suggest that there wasn’t a lot of significant creativity present in this work. Previous education and experience, although comfortable, if relied on too heavily could discourage working from outside of the box and creativity.

Prompt Four: Synectics

In this prompt, the previous experiences of the researcher as a fourth year art student meant that the activity was much easier, and less creative than perhaps what they were capable of. The initial activity of combining an animal and an object in a unique way is most likely a concept more appropriate for an elementary school level, where it was originally used. For a fourth year college level art student, the concept seemed
somewhat simplistic, and could have had several other requirements to make it more challenging and encourage more creative and innovative thinking at a higher level. The idea may seem strange and new to an elementary school student, but in the researcher’s previous experience studying surrealism and creativity, it was an old concept, and as a result didn’t push any boundaries that would result in creative problem solving and synectics.

Prompt Five: Parnes (1967) Creative Problem Solving Brainstorming Method

Previous experience with various brainstorming methods clashed with Parnes (1967) method in the process of producing “Rusty Ocean”. Parnes (1967) method is linear and methodical, contrary to the normal process of creative brainstorming previously utilized by the researcher. As a result, it was difficult to accommodate to Parnes (1967) process. Previous experience conflicted with this method, and as a result made it more difficult to use, making its creative brainstorming processes less productive. The most creative results of this painting were likely less connected to this method and more connected to the willingness to explore into an unknown field of art.

Previous experience in education was also a huge factor of influence in choosing a problem to brainstorm for with the Parnes (1967) method. The researcher’s previous experience with abstraction and non representation was minimal, and so yet again they chose a field in which they had limited experience to explore. At the time this study was being conducted, the researcher was also enrolled in an abstract and nonrepresentational painting course, introducing them into the field and raising important questions that needed answers. Parnes (1967) method was used to brainstorm and find answers to those
questions, mainly being “what is the relationship between time and non-representational painting?” and “where does the value of non-representational painting stem from?” The previous experiences of the researcher prompted these genuine questions, which then prompted curious exploration and creativity.

Pilot Case Study Experience

Prompt One: Limitations

This prompt is especially interesting because it is the only prompt that has two paintings associated with it, and as a result has some interesting additional data. “Gordian Knot #1” was the first painting of the entire study, and so there is no previous experience within the case study for this piece.

In the second painting, the researcher used everything that they had learned from “Gordian Knot #1” and then changed their process, as there were no limitations set on process, only concept. As previously stated, the researcher learned that processes like image flooding could have detrimental effects on creativity in work from “Gordian Knot #1”, and so in “Gordian Knot #2” the researcher adjusted their process based on that learning, and left out image flooding. The results of “Gordian Knot #2” are evaluated as
more explorative, and adventurous, and so fitting the definition of creativity as used in this thesis. This is most likely in part due to the removal of “image flooding” from “Gordian Knot #1” to “Gordian Knot #2”.

Prompt Two: No prompt

There is no to minimal connections between what was learned in “Gordian Knot #1 and #2” and “Attempting Porter”. This could be due to the researcher’s desire to venture into something absolutely unknown and completely different from the two previous paintings. As a result, there were not nearly as many connections. This could also be of importance when evaluating the success of the painting aesthetically. The lack of experience in both long term education, as well as the lack of short term experience within the study meant that the researcher was unexperienced with the style as a whole, and the results of the painting reflect that. The lack of experience produced aesthetically mediocre results, yet the explorative nature of the intent should have produced a creative risk taking process, and it did not. This may be due to the excessive limitation, as discussed in the “Limitations” analysis.

Prompt Three: Intrinsic Motivation Theory

After what the researcher perceived as both creative and aesthetic failure in “Attempting Porter”, the researcher reevaluated the creative process again, and swung to
the other side of the pendulum. “Attempting Porter” was highly structured (a structure imposed by the researcher, and a reaction discussed in the “personality” analysis), appropriation, and an exploration into an unknown area of art, and resulted in an aesthetic and creative failure. As a result of this, the researcher chose to deviate into the opposite direction. “Deer Skull” is within the comfort zone of the researcher both stylistically and concerning content, it had minimal limitations and structure, and was inspired only by what the researcher concluded was of interest of them. There was no process of image flooding, no specific painting used for appropriation, and no specific artist or goal in mind. This allowed for more flexibility and consistent creative problem solving, yet did not challenge the researcher to work outside of the box.

Prompt Four: Synectics

The ground in “Deer Skull” was a moment of creative problem solving for the researcher. The need for a specific aesthetic for the ground led to a creative use of materials previously not attempted by the researcher, featuring card stock and a new layering and mixing technique of paint. This fits the criteria for creativity in this study. The creative and aesthetic quality of the ground were both successes, and as a result a very similar process was used for “Light”. Creative successes in previous experience will lead to those successes being recreated in future projects, as demonstrated with “Deer Skull” and “Light”. The second time this was done however, it wasn’t nearly as much of a creative leap for the researcher, rather the reaffirmation of what they already knew.
Prompt Five: Parnes (1967) Creative Problem Solving Brainstorming Method

When examining this “Rusty Ocean” it seems to be the cumulative total of all of the risks and creative leaps taken during the making of the other five paintings. It is a culmination of all of the others, and the learning that took place during them. Towards the end of this case study, risk and experimentation began to emerge as central themes of creativity, even before any formal analysis had started. As a result, the researcher used the opportunity to experiment with those themes. The prompt allowed it, and it functioned with the format of Parnes (1967) Creative Problem Solving Brainstorming Method. The previous experiences in this study with risk and exploration culminated in this as the research explored completely uncharted territory and took major risks, such as using a very short time limit, not planning the composition before starting, and completely painting over the first painting half way through the time limit. These risks produced a work completely unlike any of the researcher’s previous work, as is discussed in “risk taking” analysis.

Risk
Prompt One: Limitations

“Gordian Knot #1” is important to note for its lack of risk. The painting originally started out as a portrait of Alexander with a very different composition, as can be seen in the photographs. When the direction of the painting changed, the researcher decided to maintain the placement of the face. This is because it would have been a risk to paint over and have to spend time drawing a new face. The fear that the researcher would not be able to recreate the same face deterred them from painting over the whole thing. The style
is also quite typical of the researcher’s painting, also indicating an avoidance of risk. The researcher stayed where they were comfortable. As a result of the lack of risks taken, the painting is quite similar to the researcher’s normal style of painting, and so it lacks the creativity that some of the other pieces have.

Prompt Two: No prompt

“Attempting Porter” is interesting because although it was a risk in the eyes of the researcher to create something completely outside of their experience, the creativity is minimal. The initial decision to paint in the style of Fairfield Porter was a risk, yet during the process of painting, the tight limitations left little room for any other risks. This is an important distinction, that perhaps risk during the concept development stage of the painting is just as important as risks taken during the process of making.

Prompt Three: Intrinsic Motivation Theory

“Deer Skull” involved a minimal amount of risk. The concept, colors, content, etc. were all within the researcher’s comfort zone and knowledge base. As a result, there are not a lot of creative contributions to the painting.

Prompt Four: Synectics

The risks taken during the process of creating “Light” were not during the concept generating, but rather as a part of the creative problem solving process done during the painting. The small fine lines that can be seen on the ground were a spontaneous risk. The detailed lines on the moth were not in unity with the ground, they seemed to be at odds
with one another stylistically. To solve this problem, I considered several solutions before I came to where the painting is now. Before I could consider the pros and cons, my hand had already made a line on the ground. It was a very spontaneous risk, that solved my problem creatively. I stopped and added more, observed how it changed the painting, added more in other places or thicker lines here and there, taking a moment every now and then to adjust. The success of the risk in this painting encouraged more risks in the process of painting the next painting, “Rusty Ocean”.

Prompt Five: Parnes (1967) Creative Problem Solving Brainstorming Method

“Rusty Ocean” features the most risks out of any of the set, it is interesting to note that it is also the most outside of the researcher’s typical knowledge and experience, and so that makes it the most creative. The risks of creating a painting in two hours with no preconceived are too many to verbalize, and it is important to note, that some of those risks did not pay off. This work, as with some of the others, took a lot of risks, and produced creativity in the eyes of the researcher. Yet, aesthetically, the painting is not very successful. Risk will not always be rewarded with positive results.

**Collaboration**

Prompt One: Limitations

This was the first experience in painting that the researcher ventured into alone, with no collaboration or feedback available. As a result of that process, the researcher
noticed several things. One was how unlike the process of creating in a classroom it was. In a normal classroom setting, students have both peers and instructors to gain formal and informal feedback and collaboration from. It wasn’t until this case study that the researcher realized how critical that process truly is to creative production. It was missed greatly. During collaborative processes, other concepts not considered get brought into the experience by others contributing their thoughts, and together the ideas generated are beyond what any singular person could have generated. That process is incredibly valuable when being creative. Collaboration brings together the creative efforts of multiple sources, creating even more creative possibilities than could have been generated by a single person. The researcher’s previous experiences in a classroom were therefore very different than this process, and these first two paintings were difficult without that creative feedback.

Prompt Two: No prompt

This landscape painting, “Attempting Porter” is a great example of the possibilities that were missed without collaborative contributions. Once decided what the painting was going to be, the researcher did not even consider alternate possibilities or resolutions to the painting. This may be due to several factors, but if collaboration had been a characteristic of this painting, then another more suitable resolution might have been found. As it currently stands, “Attempting Porter” is unresolved, and could benefit from the creative ideas that are produced during collaboration.
Prompt Three: Intrinsic Motivation Theory

At this point in the process, the researcher had assimilated into creating work in a solitary environment. That doesn’t mean however that a collaborative environment couldn’t have been of benefit.

Prompt Four: Synectics

Again, although the researcher had assimilated to this solitary environment, collaboration could have been useful in considering alternative options. The concept of “Light” was established early in the process and did not alter significantly from the original version. That might have been different if more collaborative processed had been used. The lack of collaboration however, did allow the researcher to know that all creative problem solving that resulted, for example the decision to add Sharpie marker lines to the background, was the result of only their thought processes. This was beneficial for the purposes of this pilot case study.

Prompt Five: Parnes (1967) Creative Problem Solving Brainstorming Method

The two-hour time limit of “Rusty Ocean” wasn’t a format that allowed a lot of room for collaboration, even if it had been possible in this study. The short time limit encourages snap decisions, rapid problem solving, and risk taking, which are all
techniques that may contribute to creativity. Yet collaboration and reflection are simply
time heavy processes, and in a two-hour time limit, are just not quite as feasible, nor
beneficial.

**Spontaneity**

Prompt One: Limitations

After the initial base of “Gordian Knot #1” was painted, the researcher made the
spontaneous decision to completely change the direction of the painting. The face
remained the same, but everything else around it was painted grey. The spontaneous
change affected the meaning, the process, and the aesthetic qualities of the painting, but
because the painting is so typical of the researcher’s previous work and experience,
spontaneity may not have positively affected creativity in this case.

Prompt Two: No prompt

“Attempting Porter” was the exact opposite of spontaneous. The composition was
carefully chosen, penciled on, and then filled in with paint. The lack of spontaneity is
almost palpable.

Prompt Three: Intrinsic Motivation Theory

Spontaneity came naturally in this work, possibly as a result of the flow state.
Spontaneity did not couple with risk taking as it did in several other works. Each stroke
wasn’t planned, so it held spontaneous qualities, yet it wasn’t a risk because of the
comfort level of the researcher. It seems counter intuitive, but this work has elements that were spontaneous, without necessarily being risks. Those spontaneous elements however, were not enough to pull the researcher outside of their comfort zone and into new territory, which disabled the creative capacity of the researcher.

Prompt Four: Synectics

   Spontaneity partnered with the creative problem solving process in the development of “Light”. The small lines added to the ground were part of a problem solving process to bring unity between the foreground moth and the ground. Just as I thought of the solution to place numerous, small fine lines in the ground, my hand had already moved and done it. This is a process that happens frequently in the researcher’s work, but hasn’t yet been consciously analyzed. After the initial mark was made, the researcher then reacted and considered the possibility of adding more and more, stopping frequently to evaluate what needed to be done to unify the ground and the subject. This spontaneous reaction produced a creative solution, that then lead to other creative problem solving.

Prompt Five: Parnes (1967) Creative Problem Solving Brainstorming Method

   This work had no predetermined composition, so the whole process was spontaneous. As a result, it is clear that much like risk, the results of being spontaneous will not always be the highest quality work. However, high quality work requires many hours of practice and experience. Creativity however, according to the definition used for this thesis, comes from working outside of the box and comfort zone to explore new
territory to the artist. This work, by that definition, was successful in producing creative results.

**Flow**

Prompt One: Limitations

Flow, as conceptualized by Csikszentmihalyi, is thought to improve creativity. In both paintings, there were periods of time where the researcher felt affected by flow. Yet, in “Gordian Knot #1” creativity did not seem to be a major part of the process. It is possible that other circumstances, such as appropriation and “preciousness” overpowered the creative aspect of flow. In “Gordian Knot #2” flow also played a role, and some of the other concerns from the previous painting were not as strong. The results of this painting appear to be more creative than “Gordian Knot #1” and it may be because the flow state was less clouded by other concerns about the painting. As a result, creative ideas were allowed to flourish.

Prompt Two: No prompt

The researcher believes that flow played a very small role in this painting, if any at all. The process felt clinical and cold, much like a paint by number, not allowing for motivation or flow to flourish.

Prompt Three: Intrinsic Motivation Theory
“Deer Skull” was intrinsically motivated, and as such, the researcher chose to paint in a style that they enjoyed and had experience with. This lead to the strongest of the experiences with flow state. It became clear during this flow state that the painting and problem solving processes became much more automated and less of a conscious struggle. However, it is not conclusive if the flow state produced more creative results at least by definition of creativity in this thesis. The choice of the researcher to stay within comfortable areas of color, style, subject matter, etc. lead to an enjoyable, motivated, flow state experience, but not necessarily an extraordinarily creative one.

Prompt Four: Synectics

It would be a stretch to say that flow played much of a role in this painting. The painting techniques used were outside of the researcher’s immediate comfort zone, and so lead to some stress and worry, which may have discouraged a flow state. The importance of feeling comfortable in a creative state seemed to be important in this work, and the researcher just was not able to achieve that level of comfort.

Prompt Five: Parnes (1967) Creative Problem Solving Brainstorming Method
The relationship between stress, flow and motivation became clear in this process. The 2-hour time constraint created a stressful environment, which decreased motivation and the likelihood for flow. The half hour interruptions also created a block for the development of flow. Just as a flow state might have started, it was then interrupted by the requirement to stop every half an hour and record the process. The ability to engage in flow was severely limited by that fact.

**Time**

Prompt One: Limitations

“Gordian Knot #1” was difficult to start for several reasons. One reason was what felt like too much time. In retrospect, it wasn’t that much time. But with the deadline a month and a half away, the researcher felt unmotivated to start. Time and motivation have a clear connection, but this may also be connected to personality attributes. Some people may start on something and finish it with a month to spare with no problems with motivation. Others may not feel the pressure to begin until the deadline is much closer. “Gordian Knot #1” is a good example of the latter. “Gordian Knot #2” was a good example of a healthy middle ground, created not with too much time, or not enough. This is the condition that many students would like to work under.

Prompt Two: No prompt
Time was not of huge concern during the making of “Attempting Porter”, either on one end of the extreme or the other, which seems to be the most comfortable space for creative processes.

Prompt Three: Intrinsic Motivation Theory

Again, timing was appropriate and manageable.

Prompt Four: Synectics

At this point in the pilot case study, the deadline was approaching and time started to arise as a source of stress. Stress, as is discussed in the “Stress” analysis can be either a positive reinforcement for creativity or a negative.

Prompt Five: Parnes (1967) Creative Problem Solving Brainstorming Method

Time was the main concern in the process of making “Rusty Ocean”. There was a time limit of 2 hours to produce the whole painting. This encouraged risk taking, spontaneity, creative problem solving, and it gave the researcher a challenge. Challenge can be a negative, if it seems overwhelming and impossible, yet this challenge seemed almost like a game because it altered the process of painting so much. It also encouraged stress and as a result of that stress, appropriation. Placing a time limit on a work caused the researcher to work in a new and different way. It forced the researcher to take risks that they wouldn’t normally, which encouraged creativity and new methods. The short
time allotment also encouraged creative problem solving. In some of the other works, it was easy for the only creative problem solving to happen during the development of the concept, and then let it fall by the wayside. In the case of “Rusty Ocean”, the short time limit lead to risks, which lead to constant reevaluation of the painting, once one thing changed, the entire work changed, and so it constantly needed new solutions. This process resulted in several creative resolutions for the researcher, such as new paint techniques, new combinations of color, new brush strokes, and a new way of thinking about art, specifically nonrepresentational art. As stated by the researcher in their journal, “I think that this process did push me beyond my previous understandings of art. This was hard. In a lot of ways, it was harder than a representational painting. How do you make smudges look good? A moth is already quite appealing, but how do you make colored smudges cohesive?” (March 1st, 2016)

The researcher had set out to come to a deeper understand of the value and process of making non representational art. The time limit encouraged new thought processes.

**Stress**

Prompt One: Limitations

There was rarely a moment in this thesis that wasn’t stressful, but the days right before starting “Gordian Knot #1” were some of the most stressful. This was because the entire pilot case study still lay ahead, a seemingly insurmountable task, and that caused a
lot of stress. This lead to a creative paralysis. Not only was the researcher unable to create anything new, they were unable to create anything at all. However once that initial fear was conquered, the rest of the process proceeded relatively stress neutral. The researcher cannot use the term, “stress free”, because that is simply impossible due to personality traits. The stress level during the process of creation may be due to several things, but personality is an important factor.

The process of creating “Gordian Knot #2” was significantly less stressful than “Gordian Knot #1” because the pressure of creating a reaction to the prompt was over. Although the painting was still created to satisfy the prompt, it was less stressful having already completed one, so much so that the second version felt much more carefree and open to experimentation and risk, as if the pressure had been removed.

Prompt Two: No prompt

Stress resulted not as a part of the painting process, but as a part of the end result. Although the purpose of these paintings was not for exhibition, it was still incredibly difficult for the researcher to accept the failure of “Attempting Porter”, which resulted in stress. This affected the process of making the next painting, “Deer Skull” more than it affected the production of “Attempting Porter”.

Prompt Three: Intrinsic Motivation Theory

The stress over the failed previous painting, “Attempting Porter” had an effect on the production of “Deer Skull”. It sent the researcher back into their comfort zone, into
what they were familiar with. In this case, stress discouraged innovation and creativity, instead it encouraged the researcher back into what they already knew.

Prompt Four: Synectics

Stress was not a significant factor in the creation of, nor in the reflection process of “Light”.

Prompt Five: Parnes (1967) Creative Problem Solving Brainstorming Method

Stress and time were closely tied in the making of “Rusty Ocean”. The time limit certainly caused a certain level of stress, yet it also created a feasible challenge. The combination of those two things lead to new techniques and encouraged creativity.

Personality

Prompt One: Limitations

As discussed in the “Stress” analysis, personality certainly plays a role in stress levels. In this case, influences from outside of this pilot case study, inflict a certain amount of consistent stress on the researcher. Stress in the case of “Gordian Knot #1” had a negative effect on creativity. Personality traits, including sensitivity to stress, can affect how creativity works with different people.

Prompt Two: No prompt

One of the most interesting things about the production of this painting is that it was the most unstructured. It had no limitations and no prompt. Yet, in deciding the
concept, the researcher made it the most restricting of all of the paintings. The researcher’s personality certainly influences the way in which they work. For example, if they prefer, order, knowing the expectations, due dates, rubrics, etc. then leaving an assignment completely wide open might be overwhelming, and they may feel the need to narrow it down. In the case of “Attempting Porter” it was narrowed down too much, which had a negative affect on creativity.

Prompt Three: Intrinsic Motivation Theory

Intrinsic motivation is specific to each person. What intrinsically motivates one person will not intrinsically motivate another, so personality plays a large role in the relationship between creativity and intrinsic motivation. The researcher’s personality is reflected in what motivates and interests the researcher. “Deer Skull” is a visualization of this.

Prompt Four: Synectics

Personality did not play a major role in the production of “Light”.

Prompt Five: Parnes (1967) Creative Problem Solving Brainstorming Method

Personality did not play a major role in the production of “Rustic Ocean”.
Appendix C: Journal

This journal is a record that was kept throughout the two-month painting process. It documents major concepts, thought processes, and techniques used during that time period. It is a resource in determining major concepts that arose during the process of responding to each prompt.

January 12, 2016, 11:35 AM

Well, it has taken longer than I had hoped to get to this point, but here we are now. It was much more difficult than I anticipated to get started on the painting series.

The first concept I struggled with was whether or not this series should be cohesive. The last thing I want, for practicalities sake, is a series of paintings that clash together and will never end up on a wall. I seem to be struggling with creating paintings that are interesting just on a canvas, and then finding a real place to put them in the real world. I'd like to start developing paintings that I actually want to hang up in my house, which is much more difficult than I expected. I thought that with this hope in mind, it might help me unify the series, while still leaving room for creativity in the parameters I've set for myself. I chose to keep to a neutral color scheme, lots of browns and tans and taupes.

I started by image flooding myself. I looked at all kinds of art I had found that I had liked in the past, thought about what it was that might make me like it? What made me want to put it up on my wall? Neutrals were a theme, as well as detail, nature, and people in strange circumstances.
Then I started working on my concept, and started asking myself, what is My Gordian knot? I decided it is a how to be A GOOD TEACHER. This thesis is essentially just me asking that question but in a specific area. It is another step closer to untying the impossible knot. Alexander "untied" the knot by cutting it in half. So, to combine those two concepts. Alexander is here, eating the gordian knot apple and cutting it in half with his bites. The piece is all about how my gordian knot is to find out how to be a better teacher, and the way to do that isn't quite clear? Do I cut it in half? Do I go the long way by trying to untie it? This painting and its soon to be partner are both gordian knots because like Alexander, I might be cheating a little in untying them. The assignment had several pieces, and I am reassigning some pieces to this painting and some to the other. Haha!

To be honest I'm not sure how confident I feel in my concept. I feel quite rusty in my painting and artmaking. Its been a long time since I've been so involved in it. I've spent the majority of my year and a half writing and reading, not painting. So it feels a little uncomfortable today. I've been pushing it off and off and off because of this. The infamous blank canvas syndrome got hold of me. I had been battling around concepts and compositions for a while now. This is also the first time I have not had a professor alongside me to tell me if its good or not, so I feel like a newborn fawn walking on its legs for the first time unguided.
So that is why I have decided to just start. If I don't like it I can do it over again. Its just a canvas and just a painting. The important thing is to start and to try. Although I have this looming thought in the back of my head that says, "no its your thesis! You have to pass!". So that puts me on edge.

Today I gesso'd and started the painting. I will be sketching on as I go, and hopefully will finish with the bones all laid out today.

Here's to trying!

January 12, 2016, 5:33 PM

Laurie turned down my series idea. Back to the drawing board. This is exhausting and I want to quit.

January 13, 2016, 4:42 PM

I painted over most of my painting. The more time I spent with it the more I hated it, and thought the concept was childish. So I went back to the drawing board. I liked the concept of Alexander, but I didn't want it to be so literal. It felt too simplistic, and the composition unbalanced. So I went back to image bombing and found an image by Wylie Beckert that reminded me of a Gordian Knot. I had already incorporated Alexander and
an apple into the painting, to represent how I feel about this thesis and being a teacher as my Gordian knot, but the painting just seemed dull after that. I feel quite lost and overwhelmed and surrounded by this project, and so it felt appropriate to incorporate that feeling into the painting with the dark apple tree branches, and Alexander emerging to bite into the apple. The branches extend out of the frame to represent Alexander and his relationship with the Gordian knot and problem solving, thinking outside of the box is a big part of creativity, and here we are visually pushing outside of the box. I think the color scheme and further development will push the "uncanny" quality, and I hope the painting style will be blurred in some areas, representing ambiguity, and then the newspaper incorporated will satisfy the text and tactile requirements. The branches will be both abstract and representational.

Rather than the fierce, angry Alexander I hoped to portray before, this one will be pale, rosy cheeked, and meek.

January 18, 2016, 2:34 PM

I finished my first Gordian Knot painting. After I decided on my concept I stuck with it pretty tightly. I think that I may live with it for a few days and then go back and change what needs to be changed, or push what needs to be pushed, I think it could stand for some more lights on the roots and apples. I just read Julia Marshall's Thinking out and on the box, and one of her last steps to a creative process is revisiting the work after evaluating it, and pushing it even further, so I may utilize that idea and give it another look.
I'm starting on the next painting today, getting my concept down and hopefully laid out. It follows the same ideas as the previous painting and the same requirements but I think that I will 1. not do a series of image flooding. I think I was too influenced by other works so I am going to eliminate that step and 2. Use more abstract representations. I think that the previous one left that piece out a little (that may be what I go back and change) so in this one I hope to use more abstract elements, as well as highlight rather than hide the use of text.

February 7, 2016, 11:19 AM
For the second Gordian Knot painting, I tried to stay away from image flooding, since I think it severely influences me for the last, and maybe didn't evoke the most creativity from me. So for this, I think I was drawn towards specific things already, and found a way to include them into the assignment. For example, I was drawn toward collage and black and white, and I needed to incorporate text, so I used the newspaper. I have also felt drawn toward the abstract and flowers, so I needed to make them ambiguous and textile. I think that more than anything what has been driving the subject of the painting isn't the assignment. My interests and passions have been driving the content, but the assignment limited them and forced me to consider how they would work together. For my highlighted text I included, "creating is a world changing. It's important. Arts work in schools is the blood this winter. Blood is needed. I've seen blood save her life at least ten times." I think this is reflective of this thesis. CReating is a world changing, either
everyone's world or your own personal world. The objects we create influence us, what we think about something or what we think about ourselves. It's important, this topic is important, it is the blood, or life blood. I think this winter, since its when im doing my thesis paintings, is an important part of the sentence. Blood, as a metaphor for art, has saved her life at least ten times. This is what I consider the role of art to be in my life.

February 7, 2016, 1:02 PM
Well, I got this far. I'm struggling with not pouring twenty hours into a painting in order to call it finished. I feel lazy. I'm new to this abstraction thing. Is it done? Should I make it more realistic? Do I like the way it looks? Does it need something else? All of my experience has been with realism so this is a whole new ball game to me. I'm not sure when to feel proud or to say its good. It makes me extra hesitant to experiment during my thesis project, what if the paintings are bad? What if I fail because they are bad? I'm not sure!??!!

February 10, 2016, 11:45 AM
Stressing out of my mind. Don't know what I'm doing. Freaking out about getting all of these paintings done. Like how? I have so many things to do and I'm freaking out and everyone needs my attention and I don't know what's going on.

Thursday, February 18th, 2016 11:37 AM
Reflection on Gordian Knot 1
The more I look at the painting the more I think it is really adolescent. I am tempted to evaluate the value of the painting, but I have to remember that the purpose of these paintings isn't to be exhibited, but its part of a case study on creativity.

I think my creativity on this project was stunted by the image flooding I did before the process. It severely influenced my own ideas, probably a little too much. This is always my fear when I'm teaching and I give examples, is that the students will just copy the examples, and now here I am doing it to myself. I think that I enjoyed the prompt, it narrowed down the vast expanse of possibilities and made it easier to produce a work.

I think there was still a lot left open though, and I found that I still worked in the things I wanted to do personally, despite the presence of a prompt

I think another thing that influenced me was that this was the first of this series. I was still struggling a little to figure out exactly what I was going to do, and what I wanted and was looking for out of this process.

February 18, 2016, 11:50 AM

Reflection on Gordian Knot 2

In this work I tried to not go looking for inspiration somewhere else. I think that that is really what I'm doing when I do this "image flooding" process. I think that this being hit by inspiration kind of process is something that has been engrained in me by this old school thought that a muse suddenly just pops into your head and then a light bulb goes
off. I seem to think that I need to go looking and suddenly find my muse. What I really think ends up happening is that I rely on my "muse" a little too heavily and then my creativity really isn't pushed very much. **Perhaps it isn't the limitation in subject matter as much as process**

I think that maybe a prompt that limited or change my process might be more effective in producing creativity, rather than requiring that the final product address this, this and this. It will be interesting to see what happens when I get into the prompts that address the process heavy methods for my paintings.

February 18, 2016, 12:25 PM

Making the "Fairfield Porter" painting

I was so heavily inspired by the landscape class that I think when I had no restrictions and everything was left open, I just naturally was influenced by my environment. I think that if I had been around figure drawings then I probably would have drawn figures, if I had been taking a hyper realism class, instead of abstraction, I would have been making realistic paintings. Its clear that I have obviously hopped onto whatever bandwagon was circling me, and was heavily influenced by my environment in deciding what to paint when it was left up to me.

Now, here is another thought. I have been so worried about these paintings reflecting my skills as a thesis level artist. I have worried over them. I have loved them, and then
realized I hated most of them. I have been tempted to experiment. I have tried new things I have never done before. I have worries and fussed and cried and melted down and wanted them to be lovely and amazing and intriguing and, I think most importantly, I've wanted them to impress my superiors. I've been so focused on pleasing my professors and getting a good grade all though my undergrad, and now as an honors thesis student, and it definitely affects my process. It makes me stress, which makes me nervous, which I'm not sure if that affects my creativity levels, but it definitely makes me less likely to take risks. I want to make something good, and so I think with this fairfield porter painting, that fear to underwhelm my superiors squelched me into boring landscape territory.

February 20, 2016, 4:06 PM

I am going to do my 1 painting based on artist interests.

Now the question is, what are my interests?

I don't even know anymore. What do I like? Who am I as a person? Who am I as an artist? Am I even an artist anymore? Its been so long since I made art on my own, just for my own enjoyment. Its hard to bring myself to even doodle any more.

What am I interested in as an artist? as a human being? I'm interested in my relationships with other people. I'm interested in love, I love the people in my life. But they can't be the ones who identify me right? What I;m interested in has to come from the self doesn't it?
Sooo, in paintings, what am I interested in? I like the mushy, messy paintings. The ones that feel painterly and loose. I like the colors blue and green. I like nature. I like antlers.

What about a dark, messy blue background, with a lighter deer skull front? Oooh what about deer skull with flowers? I'm thinking about that motif a lot lately, and I feel like I can never get the thought of something out of my head until I do it, so maybe this would be good.

I like the dark dark blue background idea a lot, and flowers that are mostly blue but also have coral and tan undertones. I love that color combo.

February 21, 2016, 3:16 PM

I've done the initial layer or so on painting #4, aka the artist interest choice. I chose to work with some imagery that I've been interested in lately, singular subject, messy strokes, blue tones, I left out the flowers so far because it felt like they were just a little basic. I felt like the first grader drawing a yellow sun in the corner, just because everyone else was and it was "cool".

I also found a painting that essentially was my idea after I had decided on it. Which made me feel like it was a good idea because someone else also did it and like it, but also made me feel like it was very unoriginal.

February 21, 2016, 4:51 PM
I think I am at a point where it feels done. With this painting I tried to stay more true to myself. The last painting (Fairfield Porter) felt really mechanical, and untrue to myself, like I was trying to be someone other than myself and do something that I wasn't as interested in. Although I was painting from my own photograph, it felt like copying, which I think of as being kind of mindless and uncreative. In fact it even felt mindless when I was painting it. This work felt much more engaging and interesting and like myself. Now, is comfortability a factor in being more creative? I'm not sure. I felt like I was working within the parameters of myself. Does that make sense? I wasn't really pushed outside of my comfort zone as a painter. Yet this is the one that I feel the most satisfied with. It isn't realistic, it isn't neat, but it feels finished and it feels like me. During the process, the painting felt more natural than any of the others, because before starting I said to myself, "all right, you've tried some new things, and they haven't quite been what you wanted. Go with the tried and true". I've been very focused on my end product and its hard to detach from that. I think I need to rememebr that asking students to try a new, more "creative process" might be hard for them to focus on the process, and not the end product, because here I am having a hard time with it myself!

February 28, 2016, 2:20 PM

For the next painting, I used a method that combined animals and objects in strange ways to encourage creativity. I think that because I already knew the method, when I started out I had an unfair advantage. In the actual process, the teacher has students name off 10 animals and 10 objects at random without knowing what they will be used for. I knew
what they would be used for, so I tried to pick animals that I enjoyed and that I would like to paint. If I hadn't known that I might have picked platapus, or naked mole rat, neither one of which are something I would like to paint and keep. Although it is important and hard for me to remember that the point of these paintings is creativity, not to produce something beautiful and for exhibition. But is it impossible to do both? I mean, I was interested in moths, so I chose moth knowing I would be painting it later. While I paint, I'm sure I will be much more motivated and excited to work on the painting and solve problems with it and be creative with it if I enjoy the subject. Would it be the same if it were a naked mole rat? Probably not, I would think, I'm just going to paint over this later, I don't even want to work on this, and I wouldn't enjoy it. That leads me to think that excitement for the process and product are important in creativity. Motivation is important in creativity. If you enjoy the problem you are solving, you are more likely to be engaged and think about it actively and have more creative thoughts. It might take more creative effort to think of how you are going to use a naked mole rat, but does that make it more creative? The definition and measurement of creativity is difficult, but I lean on the side of no, it doesn't.

February 28, 2016, 2:27 PM

Once I had chosen my ten matches, even before I started the sketches, I had really already decided what I wanted to do, the moth and light bulb. I liked the match. I was interested in it. It was what I sketched first because of that. I am itching now to go paint it, much
more than I would ever itch to write a literature review (aka not at all). Yet again, I really believe that interest and passion does play a huge role in creativity. Creativity is supposed to be a high order of thinking, the highest according to Maslow. I don't want to think about anything I'm not really interested in, let alone think about it deeply and with higher order thinking skills. Even within art, I find that. I was much more excited about the moth and lightbulb than the snake and stuffed animal. I immediately became invested in the idea. If someone told me I couldn't do that idea, I would be really upset. I wouldn't want to move on with other ideas. So is it better to let students use what they are interested in so they produce creative solutions on their own? Will they produce creative solutions on their own if they are motivated to work on it? Will all kids be motivated to work on it? OR would it be better to give them smaller parameters, push them outside of what they would choose? What are the implications about learning outside of creativity? Creativity cannot be the only thing we consider in a classroom. It can't always be the #1 priority, so where are the other priorities?

February 29, 2016, 12:51 PM

I started with the background and I realized that I was naturally gravitating towards a same ground as the one I used in my previous painting and liked so much. I was borrowing from past experiences. To me this signals that past experiences are a huge part of the creative choices we make.
I also thought that my idea, the lighbulb moth, didn't really stretch my creative mind very much. It didn't take very long. It was a pretty quick decision. It seems like the combination of two strange things didn't really challenge me. However, as a college student, I am obviously not challenged by the same things as a 2nd grader, so although it didn't stretch my mind, probably as much as the Gordian know and challenge me creatively, I think that this might be a good way to get younger children introduced to the process.

It also seemed like the creating the idea was the most creative process and not the actual making, at least no so far. I think that is another good question, is the creative concept development the important part, or the creative practice of making, or both? Is it fine to interchange them?

February 29, 2016, 1:01 PM

I still feel like the most creative part of this process was the initial concept development. There were no prompts, limitations, or requirements on how to use the paint, colors, techniques etc. As a result I think my moth was pretty standard. It wasn't crazy or unique or especially creative, other than the concept development portion.

I think that this is where I can see the reliance on art/painting as being inherently creative. As though if you give someone materials, creativity will just naturally happen on its own. I'm pretty sure that isn't how it happens. It might, but it isn't a guarantee. Every time you
paint it won't be incredibly creative. I think letting go of that is important. I think forcing
creativity is a good way to not be creative.

That said, towards the end of my time with this painting I felt like the sharpie in the moth
was standing out and it seemed unresolved. I had a problem. I wanted to make it seem
like it belonged there stylistically. So I needed to use creative problem solving to find my
answer. Although I can't really say much problem solving went on, or maybe it did. First
I added more sharpie, hoping it might define those characteristics more and give it some
unity. I added some, looked at it, added some more, looked at it some more, etc, and did
this several times and it still didn't really seem like the moth belonged in the ground yet.
Then, in a moment that I can't really describe very well as anything other than a
"lightbulb moment" and before I could even really think the concept through, my hand
was already moving and making the marks on the page. There wasn't even a moment for
me to think, now wait, is this really a good idea. It was like for a split second, all of my
was just instinct and no logic. I've experienced this a lot when I paint. Most of the time,
whatever my instinct is, is usually right. I know that most of the literature says that th
elightbulb moment isn't real, and I think they are right, but it does feel like that sensation.

February 29, 2016, 9:05 PM

I think overall, this activity encouraged some creativity, but not a lot. I didn't copy any
thing (style, composition, etc) but that was my choice, and it wasn't specified in the
process. I didn't image flood. It didn't really challenge me though, there wasn't a ton of
creative problem solving that I had to work through. Most of the problems I encountered were solved within an hour or less. It didn't take very long for me to think of a composition for my work. I think that is reflected in my sketchbook. Overall, I only created one sketch for each of the 5 ideas, and I already knew which one I wanted to do. Once I had that I really only did one more clear sketch and then that was it. Now, two things. 1. I'm not much of a sketchbook person to begin with. Normally, I already have something in my head that I want to do, or at least an element, and I will find a way to make that work into the piece. I'm also pretty quick to find something I like and then stick to it. Once I have an idea that I think is good enough, then that's it, that's the one I do. I don't stop and think about all the other possible options I could do. I guess this assignment did encourage me to consider other options, it definitely made me, but in the end I picked the one I liked the most initially. I think that that snap decision to do whatever I like that comes to mind first probably comes from being in school for so long, with deadlines and such. Once I find something I am excited to make, I get started, I don't have time to loligag and think of 5 other options. Maybe that is one of the ways that we discourage creativity in schools. Time. We don't allow enough time for experimentation and flexibility and fluency in ideas. Everything is always, altight hurry up, we have to switch to a new unit next class and we're really behind, you know? Which is somewhat counter-intuitive to the creative process I think, not even the creative process, the learning process. I've definitely felt the time pressure with this painting project, and I think it has definitely limited me. Once I find something good enough I roll with it, and that's that. Time has been a huge factor of this whole process, a massive limitation. I think I would have done different things if I had had more time. Now, based on the gordian
knot experience, limitation did encourage creativity. BUT the time limitation, I'm not
sure. It made me really stressed, anxious, tired. Working at all hours of the night to get
things done and when you're brain is half dead didn't really seem productive and creative,
but it also seemed like I had no choice. That was all I had to work with. I think that type
of limitation might have been detrimental. I mean, I know I work better with a deadline,
and that creative people work with deadlines all the time, but I think there is a difference
between having a deadline and working normally within that limitation, and killing
yourself crying stressing and freaking out until I am over the deadline. I think that type
of environment interrupts a flow state, which is something that I have personally noticed
a lot throughout this creative process.

I have been so involved in what I consider to be my flow state sometimes, that I work on
the painting for three hours and make a lot of progress and then realize I haven't
documented any of it. Thats why I think these entries are so limited. I originally planned
on having many more, but it was difficult to remember to write things down and take
photos when I was so involved in the painting. I think Flow is definitely a part of the
creative process. I was really nervous about these paintings and starting out on my own in
the beginnning of this process, but once I started getting into this flow, those worries
started to diasppear, and I just started to create and didn't stop. It felt like I didn't have to
force it as much. Is that creativity? When the work just pours out of you and the ideas and
actions just come? Or is it just being productive? I'm not sure. I think to answer that you
would have to look at the results of my paintings and say whether or not they are creative.
For the final painting, I am following a specific process, and 6 steps.

Mess-finding (Objective Finding)

Fact-finding

Problem-Finding

Idea-finding

Solution finding (Idea evaluation)

Acceptance-finding (Idea implementation)

I have already started the mess finding/objective finding phase, I have been chewing it over in my mind for the past few days, walking to class, driving to school, in the shower, making dinner, things like that. It asks, "What is the goal, wish, or challenge upon which you want to work? Hmmm, now that is a great question isn't it. Now of course, I am somewhat following this same process for this thesis. My first thought was, well my problem is I want to find out how to help my art students become more creative in their artwork and lives. But, I don't think I can answer all of that in one painting, thats why I am doing my thesis. I also thought, that problem isn't really something that my students would ever encounter most likely. So I turned to other things I had been interested in/struggling with in art recently. I had seen some paintings that I had really liked and thought I might try to spin them and fit them into this project. Specifically I had seen an abstract painting of a woman with flowers in her hair, I even did a sketch, and thought my problem might be how to balance abstraction and representation of the female form, but that just seemed too, I don't know, forced? It felt like I had already picked my
composition and I was just trying to make it fit into the prompt. So I'm letting that one
go. One thing that I have been struggling with this semester is involved with my abstract
art experiences from my class. Now, this is a struggle for me in and outside of class, and
is just a general issue I have with abstract art. When I create abstract art I struggle with
accepting non representation and creating a painting in five hours or less, and then calling
it finished. I am also intrigued by this idea because my experience in the last painting
with the time crunch was quite stressful.

This whole process also leaves methodology and limitations quite open, I am somewhat
setting the limitations for myself when I decide what the challenge is to be explored.

Any who, I just don't understand how you create an abstract painting in a really short
period of time, and then be done with it. Like, what? How? Why? Is it still considered
good? Don't you have to like, plan that out? Develop it? Refine it? Hate it and then try to
convince yourself you love it? I know it sounds really stupid but I really just don't
understand. So, I want to understand. I feel like this a huge portion of the art world that I
just haven't had a lot of experience with and am not really comfortable yet, and before I
become a teacher, I really want to change that.

These are questions that the process encourages you to ask:

What would would you like to get out of life?

What are your goals, as yet unfilled?

What would you like to accomplish, to achieve?
**What would you like to have?** a better understanding of abstract art for my future students

**What would you like to do?** be able to produce an abstract/nonrepresentational painting that is successful, creative and feel comfortable with it and the process of creating it.

What would you like to do better?

What would you like to happen?

In what ways are you inefficient?

What would you like to organise in a better way?

What ideas would you like to get going?

What relationship would you like to improve?

What would you like to get others to do?

What takes too long?

What is wasted?

What barriers or bottlenecks exist?

What would you wish you had more time for?

What do you wish you had more money for?

What makes you angry, tense or anxious?

What do you complain about?
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Okay, step 2 on the painting. Fact Finding. Gather Data. "What's the situation or background? What are all the facts, questions, data, feelings that are involved"

Questions from the process:

Use Who, What, When, Where, Why and How questions,

Who is or should be involved? Only me. This process is meant to be a case study of myself and how I find creative processes to be helpful or not at all.

What is or is not happening?

What is/isn't happening, well in a non representational painting there are no obvious representational forms clearly, so that is a big part of it. Also, obviously, there needs to be a painting as a product at the end of this, most likely a non representational one since that is the focus of my challenge, and one that I find is realistic to my future students. So there needs to be canvas and paint and me putting them together, that needs to happen.

When does this or should this happen?

It needs to happen in the next day and a half. Cutting it close to the quick. Unfortunately thats just the reality of being a very busy working college student who is also doing a thesis.

Where does or doesnt this occur?
This will occur in the painting studio at UMaine, which I do believe has quite an influence on me as an artist.

Why does it or doesn't it happen?

Why does non representational painting happen? Well I think the standard answer is that since the invention of photography, there hasn't really been a need for paintings to document everything in a naturalist manner. For me though, on a personal level, it doesn't happen. I think that's because I have developed this idea that paintings need well, lots of work, and I perceive abstract paintings as not taking that much skill and technique. Whether or not this is true, I am less hesitant to commit to, I know logically that it probably isn't. From what I understand of abstract art and my experiences with it, it's fun, and it's nice to let go, but can I really call something art if I've only worked on it for 2 and a half hours? That's what really bends my mind, and forces me to get creative hopefully.

How does it or doesn't it occur?

This is an interesting question, because it seems there isn't one answer. Robert Motherwell starts out with small sketches, and then maps them out on a grid onto large canvases exactly how they are on the sketches. De Kooning starts with a model and then deeply abstracts the figure. Some start with no model or object at all, and simply think about colors and forms. Materials and methods vary too, Jackson Pollock included cigarette butts in his paintings, some paint with precision and taping, others barely control their materials and embrace that technique. I think the thing with non representation is that it already "breaks the rules" there isn't a right or wrong way....I
think...and yet we still say there is good and bad non representation and abstraction. I think "good" just means it still employs the elements and principles of design, so we still react positively to it. I think there is also a certain level of emotional response that happens in abstraction. It isn't telling us what to think about, so we have to derive some of it on our own, and maybe our technique for doing that is feeling a response to it.
http://www.theartstory.org/movement-abstract-expressionism.htm

...and so on

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Step 3: Problem Finding, Clarify The Problem

What is the problem that really needs to be focuses on? What is the concern that really needs to be addressed?

PF - Listing alternative definitions of the problem

One principle of creative problem solving is that the definition of a problem will determine the nature of the solutions. In this step it helps to begin each statement with "In what ways might we (or I)...." (IWWMW).

What is the real problem?
The real problem is that I am going to be an art teacher. I want to understand creativity to be a better teacher. So I am going through this process and trying to attack a problem I
have that needs to be solved about art, and use creative problem solving methods to hopefully solve it. My problem is that I don't really understand non representational art and its value. I don't understand its creative properties. I don't understand how artists make it and feel confident in it. I don't understand how working on something for 2 and a half hours can make it finished. The problem is a lack of experience.

What is the main objective?
The main objective is to walk away from this having made a painting and feeling comfortable with both the product and the process it took to get there. I think that is what really hangs me up about abstract art. It isn't how it looks, I appreciate the looks. I can analyze it. I can see texture and unity and line and all of those things, it can be aesthetically pleasing, etc. it isn't the final product that I have an issue with. It is the process of making it that really confuses me, specifically the time aspect. Since time has been such an issue throughout this thesis product.

Process has also been what I've come to think produces the most creativity, so I think it is interesting that it is the process of creating abstract art that I seem to be struggling with.

What do you really want to accomplish?

I want to create a painting that is non representational in a short time period, and then gain understanding about the sometimes brief creative processes involved in non
representational art, and how and why that changes my perceptions of art and how to classify something as art.

I think this will also challenge something I have been struggling with throughout this process and that is the desire to make senior level work, rather than really throw myself into the process and analysis of examining creativity in what I am doing. I think that with this painting, I am forcing myself to work outside of those expectations I have of how to make "good work". I also think that expanding this definition will make me more creative as a person. If my definition of making art includes spending a minimum of five hours on something, that somewhat limits my techniques and processes. I think in this process I would like to break that.

Sidenote: I find it really difficult to analyze my creativity in this portion of the process.

Why do I want to do this?

Well, this is something I've always struggled with.

I need a stronger understanding of this to be a good art teacher.

I don't like struggling.

I think this will open up my processes options and make me more creative in that way.

I think that this is an important and large part of art that I don't have a good understanding of.

I think one of the best ways to learn is through experience and trying new things.
I think that expanding my definition of art could be interesting and also develop my creativity.

March 1, 2016, 12:36 PM

Step 4: Idea Finding, Generate Ideas, What are all the possible solutions for how to solve the problem?

The divergent-thinking, brainstorming stage. This is where a variety of idea-generation ("creativity") techniques can be use. Ideas are freely proposed without criticism or evaluation, for each of the problem definitions accepted in the second stage.

This seems to be the stage that involves the most creativity, at least before starting, so we will see if I think the same thing afterwards.

Okay, so brainstorming, obviously, the only requirement is that I make a painting, and that is is abstract/nonrepresentational.

I could do this by starting with an object and then completely deconstructing it.

I could do this by setting a time limit, creating a painting in 2 hours.

I could do this by making a sketch and then following through.

I could do this through a certain technique, like only using a palette knife.

I could do this through a completely unplanned process.
I could do this through a clearly developed notebook and thought process.

This stage is a little harder when there is no one else to bounce ideas off of. Its just me. There is no one to discuss with and to push the envelope. In this situation I can easily see how collaboration is an important part of creativity.

I'm struggling to come up with anything else here.

March 1, 2016, 2:57 PM

This process also feels really linear, like I keep thinking, am I allowed to go back? Can I continue research? Can I change my mind? What if I don't agree with something that I said earlier?

Step 5: Solution Finding, select and strengthen solutions, How can you strengthen the solution? How can you select the solutions to know which one will work best? Three related steps:

**Criteria for evaluation listed:**
- is the work non representational/abstract?
- is it a painting?
- did it change my perspective?
- did I learn about the qualities of nonrepresentational art?
-did I learn about the processes behind non representational art?
-did I open up new possibilities for creating new art with new processes?

**The ideas are evaluated (evaluation matrix is useful)**

These are the ideas to be evaluated:

I could do this by starting with an object and then completely deconstructing it. This could help me with transitioning from something I already know how to do and transfer it into unknown territory. It might change my perspective on how to think of abstract art. I think I have to be careful of the criteria, "will higher level administrators accept it" because if I focus too much on just getting the approval of others, then that will strongly influence my decision and I won't make decisions based on what I think is best for the process, I'll be doing something for my committee.

I could do this by setting a time limit, creating a painting in 2 hours. I think that this is one of the things that I get the most hung up on with non representational art. How quickly it can be produced. I have grown to think that in order for your work to be worth anything and have value, the effort you put into it has to play a large role. I think that might be because in my Drawing 1 class with Majo Kelesian, I think thats how you spell her name, she berated anyone who clearly only spent 3 hours on their painting instead of 6. Of course this is quite open, so it would be up to me to make sure my product is non representational. I've never created a painting in 2 hours, so I would imagine once I experience that, my perspective on painting will be different,
although I can't guarantee how. I think I would learn about the process behind non representational art that I have the most issues with. The processes that involve planning and sketchbook and all of that are quite similar to the work I normally do and I have an understanding of that. The process I have no experience with is that casual and fast art making. This would definitely lead to a new process thats available to me, if I feel comfortable with it, which admittedly may take more than one painting.

I could do this by making a sketch and then following through. This sounds a lot like my normal process, yet again, not really the element of abstract art that I struggle to rationalize and understand, much like the argument for idea #1.

I could do this through a certain technique, like only using a palette knife. This would be interesting, and definitely challenging my processes and opening up new possibilities. This would also address some of my confusion with non representational art and its use of abnormal materials sometimes. It would probably change my perspective on materials and what physically makes art. It would be interesting to see how I would narrow down what materials to use. Financially there are already some limitations. Maybe I wouldn't limit it, maybe I would just use whatever is in my environment.

I could do this through a completely unplanned process. This also really intrigues me and is one of the questions I have about some types of nonrepresentational art. See proposal 2 for argument.
One or more of the best ideas are selected

I like the solutions of making a painting either with a very short time limit or with no previous plan. I think those methods really address my reasoning and my question/problem. They seem to get at the heart of my questions much more than some of the other solutions.

Criteria might include:
Will it work?
Is it legal?
Are the materials and technology available?
Are the costs acceptable?
Will the public accept it?
Will higher-level administrators accept it?

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Final Step. Acceptance Finding: Plan for Action: What are all the action steps that need to take place in order to implement your solution?- ways to get the ideas into action. This may involved creating an action plan, which is a plan containing specific step to be taken and a timetable for taking them.

I think this step seems to be pretty straightforward, I already have the materials, the space, etc. So that is already set up. I will be combining my two methods of creating a
painting without a plan and in a brief time limit. These are two things that I don't have much experience with, and I think they will help me solve the issue of understanding one of the many non representational methods.

March 1, 2016, 8:17 PM
So I am 1/4 of the way through my 2 hour painting. I am forcing myself to use a timer and write every half an hour because it would be really easy to just breeze right through it all and not write anything. On that same note though however, I don't feel like I'm really in "flow" state with this painting. Maybe its because I'm aware of the time, maybe its because I'm not really happy with my result. It doesn't look like a painting to me, it look like a hot mess on a canvas. It seems blobby and wet and unorganized. So far I am not very impressed with myself. I've also been working all over the canvas. If I do something to one part of it, I do it to all of it. Which I think I will change. Here we go round two!

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Round two was interesting. I'm beginning to realize that it isn't very easy to get to something that I really like. I'm still not really in love with it and I'm not sure I ever really will be to be honest. The concept is just something I'm not in love with. I guess thats what happens when you just guess and see what happens. I tried to go out of my comfort zone with the red but now it just feels like it is biting me in the butt.
I'm going to try to add more depth as I go on and save this thing.

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Well, after a brief round three that only lasted roughly 20 minutes, I think that the painting is done? I say this with some uncertainty, how do you know when a non-representational painting is done? I think I'm at a point where I have become comfortable with it, so that to me, is done.
Appendix D: Curriculum

Upon completion, a copy of curriculum concerned with the encouragement of creativity will be included in Appendix D.
Author’s Biography

Naomi I. Ellsworth was born in Auburn, Maine on September 15th, 1994. She was raised in Greenwood, Maine for her entire childhood, growing up amongst the trees and catching frogs in rural Maine. Naomi graduated from Telstar Regional High School, after being a very involved member of the community. She then moved on to UMaine, continuing her involvement and becoming an active member of the UMaine community. She has been a proud member and officer of the international sorority, Delta Phi Epsilon, and a member of Alternative Breaks, Bangor Literacy Volunteers, and Kappa Delta Pi. Majoring in Art Education, Naomi also has minors in Art History, Studio Art, and Spanish. She has been fortunate enough to receive several honors from the Art Department and the Honors College, including the Robert Thomson Memorial Honors Award, Honors Center Award and Exhibition, High Honors Award for excellence in Art Education, and the UMaine Museum of Art Director’s Award among others. Upon graduation in December of 2016, Naomi plans to move to southern Maine to pursue teaching art in a public school and continue her development as a professional artist.