

THESIS

THE DEVELOPMENT OF CREATIVITY IN ADOLESCENTS:
A QUALITATIVE STUDY OF HOW AND WHERE CREATIVITY DEVELOPS

Submitted by

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ABSTRACT

THE DEVELOPMENT OF CREATIVITY IN ADOLESCENTS: A QUALITATIVE STUDY OF HOW AND WHERE CREATIVITY DEVELOPS

To best prepare current K-12 students for what will likely be an unfamiliar and changing future, teachers and educational professionals today consider “21st century skills” among the tools students will need, and chief among those skills is creativity. An understanding of how and where creativity happens, from the perspective of children and adolescents, could provide valuable information to educators who seek to prepare students for the work-force of tomorrow. This study seeks to answer the following questions through gaining the perspectives of a female and a male at the eighth grade level and their English language arts teacher: 1. What is creativity? 2. How does creativity happen? 3. Where does creativity happen? From the perspective of the student study participants whom I interviewed, creativity is an individualistic expression of one’s thoughts generated in an individual’s mind and then expressed in a visual or concrete media. Creativity is a process and a result of years of involvement, is aided by internal or external motivators as well as the presence of examples and feels good when it happens. Creativity does not happen if strict rules or constraints are imposed. For these interviewees, creativity can happen almost anywhere, and is aided by quite, alone time when the creator has time to process his/her thoughts. Allowing students the time, space, and resources they each require to encourage their creativity process will not only enable creativity to happen but will make the process more accessible and familiar, developing creative response as a habit, not an exception.

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Introduction

My curiosity around creativity stems from looking at my own childhood in comparison to children growing up today, appreciating the substantial differences in how children today spend their out-of-school time compared to how I did, and wondering what influence those activities have on the development of creativity. I grew-up a female, white, non-digital native, in the 1970s and 1980s, a time before “stranger danger” loomed large. After school, I got home, changed clothes, and went outside to play with neighborhood friends. That play, quite often, took the form of imaginative role-playing and story development or, unintentionally creating and then necessarily and collaboratively solving any number of problems. My upbringing in a neighborhood in Northwest Philadelphia was firmly middle class and notably urban. I had a backyard in which to observe seasonal changes, but acres upon acres of discoverable open space was not my everyday reality at home. I grew up with a mother who preferred to be outdoors and so, by default, spending time outdoors was expected and routine.

From grades 1-8, I attended school on a campus. Whereas most elementary schools may have an adjacent field or playground, mine was the 10 acre grounds of a former estate whose buildings had been repurposed to house classrooms, a cafeteria, and an auditorium/gymnasium. We spent time outside by necessity (changing buildings for various purposes) and intentionally. For recess, we were always outside, romping, screaming, rough-housing, and most memorably, digging for worms. I vividly remember spending an inordinate amount of time on an eighth grade class assignment with classmates, working (and playing) on a video production of *The Lion, the Witch and the Wardrobe*, under very large azalea bushes and in open fields at the school. It seemed, being outside was a conduit to creativity and imagination, as well as a great way to burn-off adolescent energy, helping to refocus and refresh hardworking young brains.

I earned a Bachelor's degree in Business Administration, but in the process, discovered the field of Ecology. Learning about the systems and principles within which the natural world functions seemed both fascinating and completely reasonable to me. Of course the brown moth that blended in well with the brown bark of the tree got to live another day, reproduce (other brown moths) and pass on its genes where the white moth got picked off by an opportunistic sparrow and did not live to pass on its genetic make-up. I went on to work as an environmental educator, with the strong belief that exposing children to outdoor settings provided benefits to the environment (by developing an appreciation which would then encourage conservation) and to children (providing opportunities for creativity, imagination, and problem-solving skills development). In my experiences educating students in the outdoors, I saw learners who were engaged and excited to both learn about the outdoors and discover a new and interesting place. What I interpreted as an affinity for the outdoors in these students did not surprise me. Historically, humans have lived and developed in intimate, close proximity to nature, relying on natural resources for sustenance and survival. Humans have a hard-wired familiarity with the natural world. Given the slow, gradual, over-many-generations type process that is adaptation, that familiarity with nature is not likely to reverse in a generation or two.

Were my students really experiencing something special during their time in the outdoors, or was that experience of excitement in a new learning environment something that children can, and do, create as a function of developing curiosities and minds at-the-ready for input? I am left wondering about the development of creativity, imagination, and problem-solving skills in adolescents. Are current pursuits of texting, video-gaming, You-Tubing, and Facebooking providing a comparable medium to the outdoors in terms of students' development of such skills as creativity, imagination, and problem-solving? Perhaps, slightly different, but more utilitarian "forms" of

creativity are being cultivated, forms that will prove useful to a technologically savvy generation's economic needs?

Education professionals recommend that today's students be versed in the "21st century skills" to enable them to succeed in the complex society they will inherit as adults. According to the website of the Poudre School District in Fort Collins, Colorado, 21st century skills include but are not limited to creativity and innovation, critical thinking and problem solving, collaboration, and communication. An understanding of how and where creativity is developed, from the perspective of children and adolescents, could provide valuable information to educators who seek to prepare these students for the work-force of tomorrow. This study seeks to answer the following questions by interviewing a girl and a boy at the eighth grade level:

1. What is creativity?
2. How does creativity happen?
3. Where does creativity happen?

Literature Review

Defining Creativity

Creativity, as a concept, is ambiguous and, at the same time, familiar. Most people have a working definition of what creativity is, or in other words can converse about the concept in an intelligent manner. But, when pressed to describe creativity in terms of an all-inclusive, widely-agreed upon definition, the concept becomes much less clear and definable. Creativity scholars and researchers have put forth definitions of creativity that seem to serve specific purposes at specific times. For example, Dr. Mihaly Csikszentmihalyi, Professor of Psychology and Management at Claremont Graduate University, creativity researcher and author of *Creativity: Flow and the Psychology of Discovery and Invention*, defines creativity in two ways, as “A process by which symbolic domain in the culture is changed,” and “Any act, idea, or product that changes an existing domain, or that transforms an existing domain into a new one” (Csikszentmihalyi 8, 28). R. Keith Sawyer, in his creativity text *Explaining Creativity: The Science of Human Innovation*, admits that creativity cannot be defined by one definition but will differ based on one’s analytic focus. For Sawyer, the Individualist approach to creativity defines creativity as “A new mental combination that is expressed in the world,” and the Sociocultural approach to creativity defines creativity as “The generation of a product that is judged to be novel and also to be appropriate, useful, or valuable by a suitably knowledgeable social group” (Sawyer 7, 8). These definitions originate from an academic perspective and seem to leave out what might be referred to as “everyday” creativity. For Dr. Ruth Richards, leading researcher on creativity in daily life, everyday creativity is the originality of everyday life; it “represents the ‘phenotypic plasticity’ that allows humans to adapt to changing environments and a humanistic force in ongoing growth, personal development, and even transcendence (Runco and Pritzker 684). If asked his/her concept of creativity- how and where does creativity develop in adolescents- what might be the response of an eighth grader?

Creativity's Usefulness and Acquisition in Children

When thinking about creativity, Dr. Mark Runco, E. Paul Torrance Professor of Creativity at the University of Georgia, Creativity Researcher, and Cognitive Psychologist; claims that the concept of creativity has traditionally been accompanied by two biases: an art-bias and a productivity- bias (Runco 2008, 2). The art-biased view of creativity would claim that creativity is largely the domain of artists, for example painters, sculptors, photographers, dancers, musicians. These artists generally express creativity through their artistic outputs, for instance a painting, a sculpture, photographs, or performances. Similarly, the productivity-biased consideration of creativity pertains to contributions, creations, inventions or something that was produced and has social significance. Theorists and famous inventors, along with their domain-changing ideas and inventions, would belong in this category. Looking at creativity through these biases is convenient in that it generally provides a tangible which can be counted, examined, compared to, and evaluated. Runco cautions that both of these types of creativity, based on performance or output, fail to recognize creative potential and, often, that would overlook a young person who has not yet had the opportunity to produce. When creativity in youth is considered, Runco encourages educators to consciously resist both the art- and productivity-biases and instead, be open to creative potential in its many forms (2).

In order to move past productivity-biases, Runco suggests defining creativity or creative thinking as the “original interpretation of experience” (2). “Original” is diction commonly used in association with creative. Adding the “interpretation of experience” moves away from a dependence on a tangible product and opens the possibility for creativity that has not yet found an expression or outlet. Runco refers to this as a *process view* of creativity and adds the qualifiers that the original interpretation should also somehow be effective, appropriate, fitting, or useful to distinguish from unrealistic or even psychotic original, but not creative, ideas (3).

Alfonso Montuori, Professor and Researcher whose emphasis is on creativity's role in a changing world, considers creativity itself as a concept in transition. Creativity was traditionally summed up by the three Ps- person, process, and product; a more contemporary view of creativity would consider the three Cs- collaboration, context, and complexity (Montuori 222). Montuori draws on the traditional view of the individual genius who experiences the light-bulb, ah-ha moment that inspires the invention of a societal-changing product or concept and contrasts that to creativity as the culmination of collaborative efforts of organizations or communities. This shift in the character of creativity can be attributed to the complexity and global nature of economies and societies in the present and in the future. Organizations and systems are valued and innovation is highly relational, requiring flexibility to address complex challenges and employing expertise in specific content areas (223). Montuori refers to the participatory culture where community involvement is favored over individual expression. With less emphasis on the individual or the contribution of just one person, the potential for creativity as an everyday occurrence becomes greater and less dependent on rare moments of inspiration or an unusual phenomenon (223).

This participatory culture requires participatory skills for engaging with the world critically and creatively, according to Erin Reilly, Creative Director for the Annenberg Innovation Lab at the University of Southern California. Reilly, like Montuori, sees collaboration and collective meaning-making replacing the individual achievement model of creativity (Reilly 7). Likewise, education is becoming more of a shared responsibility where teachers and students pool their collective knowledge to tackle real-world, authentic-learning situations that are relevant to students' realities and interests. William Shaffer and James Paul Gee, Professors and Researchers in Educational Psychology and Curriculum and Instruction respectively, would agree that authentic-learning situations are the answer to teaching students to be innovative and equipping them to be capable of rigorous learning and thinking (Shaffer & Gee 9). These authors espouse teaching students through

project-based computer games, helping students to learn in the context of real-life situations and in a way that matters because the students are actively involved and can see the applicability of their evolving knowledge.

Active involvement in the form of pretend play aids children in developing creativity, according to Psychology Professor Sandra W. Russ and Research Assistant Claire E. Wallace (Russ & Wallace 136). Similar to animals whose play prepares them for future adult activities, Russ says that childhood play in humans provides practice in 1. problem-solving and 2. processing emotions, both skills that foster creativity in adulthood (139). Other cognitive abilities identified as being important to creativity development, such as divergent thinking, broad associative skills, insight, cognitive flexibility and perspective shifting, are also characteristic of pretend play (137). Lawrence Baines and Ruslan Slutsky, both Professors and Researchers at the Judith Herb College of Education at the University of Toledo, agree that play is important for children and they promote play and competitive games in the classroom as a means of garnering student engagement and participation. These authors quote researchers who have found that play enhances creativity and helps develop divergent thinking (Baines & Slutsky 100). They contend that, by bringing fun into the classroom, students are intrinsically motivated to participate and motivation is necessary for academic achievement (99).

Cognitive Development in Children- Where Creativity Fits

How children acquire and develop creativity can be considered in terms of children's cognitive development. Jean Piaget's Theory of Cognitive Development in children suggests that children gain knowledge through their individual understandings of experiences in the world (Hassett and White 341). As a child grows, his or her capacity to understand and gain knowledge from experiences changes and develops. According to Piaget, an individual will advance through four developmental stages based on the interaction between his/her experiences and his/her rate of

maturity (341). Piaget outlined the four distinct stages and believed that a child will experience the stages sequentially but not necessarily at the same age. These stages relate to the kind of information an individual is capable of accommodating. For example, a child in Piaget's first stage of cognitive development (roughly from birth to age 2), the sensorimotor stage, will grasp information through sensory stimulation or motor experiences. A child in stage 2 (ages 2 to 7 approximately), the preoperational stage, has the ability to deal with symbolic information. In the concrete operational stage (roughly ages 7 through 11), the third stage a child will progress through, an individual has developed logic but only dealing with concrete information. The fourth stage (which can begin as early as age 11) which Piaget outlined is the formal operational stage where a child, or young adult can deal logically with hypothetical and abstract information. The difference between stages is determined by what information an individual can use in his thinking and what information that individual is capable of developing into knowledge. "Children in different stages require different kinds of experiences" based on the kind of information those experiences communicate (Runco and Pritzker 538). A child will benefit only from the information that she is capable of assimilating. This information will be original and useful to that individual as she will create knowledge and understanding from it. Runco's process view of creativity claims that creativity is an original and useful interpretation of an experience. In a process view of creativity, children are experiencing creativity through each of the stages of cognitive development as they gain knowledge from new information and new experiences.

Creativity as "A Property of the Actor"

If young persons are experiencing creativity, or original interpretations of information, all through their childhoods and early adolescent years, is it possible to more accurately describe and identify what causes creativity to happen through examination and interpretation of what young people say about their experiences with creativity? In analyzing the responses of young people to

questions about their perception of creativity, Attribution Theory provides a framework to understand what might influence those perceptions. In his interpretation of Attribution Theory, Bernard Weiner examined the causes of motivation and found that three main dimensions influenced people's motivation: locus, stability, and controllability. Weiner talks about motivation as a function of success or failure at achievement-related activities (winning a game, passing a test) and where the individual places the cause of the success or failure. Does the individual attribute something like ability or effort, internal attributes, for the success or failure? Or, does the individual attribute something in the environment, or external attributes like instruction or coaching, for the outcome? With internal attributes, the individual presumably has some level of control and with external attributes, the individual has very little control. A perceived cause which is controllable (for example, effort) could increase motivation for an individual but the opposite would be true for causes perceived as outside of the individual's control.

Weiner uses the term "property of the actor" to describe effort, ability, even physical beauty- things that are internal characteristics or traits and are within an individual's control, presumably. Things that are not properties of an actor would include the ease or difficulty of a task or the effectiveness of an instructor or coach, those external influences which the individual cannot control.

If motivation can be attributed to causes, can the same be said for creativity? Although there is generally no success/failure component associated with creativity, Weiner's dimensional structure might serve as a useful organizational tool with which to talk about causes of creativity. Returning to Weiner's three characteristics of attribution- locus, stability, and controllability, locus refers to whether the cause is internal or external to the individual. "The stability dimension refers to whether the cause is stable or unstable across time and situation" (Anderman 2). In the above example, effort is an example of a cause that is unstable. Effort is changeable over time and circumstances, given a

person's desire to expend effort or possibly his/her physical ability to expend effort. An example of a stable cause might be an individual's height as a cause of his/her ability to score a basket.

Controllability dimension refers to whether or not the individual believes he/she has control over causes. This would seem to mirror the locus dimension but controllability deals with factors which are only internal to an individual. To illustrate, Anderman uses the example of a runner who lost a race and can attribute that failure to a controllable cause (not training enough) or an uncontrollable cause (the innate ability as a runner), both of which are internal to the individual (2).

In attempting to understand what causes creativity, asking the study interviewees questions related to *how* creativity occurs, for example, *Are there things that help you to be more creative?*, or *Describe a teacher who encourages you to be creative. What does he/she do that helps you to be more creative?* will reveal the individual's belief about causes of creativity. Asking questions pertaining to *where* creativity occurs, such as, *Think of a place where you can be creative. Please describe that place.* and *Are there places that make you feel less creative?* will address the idea of creativity being attributable to environmental influences or an internal-external distinction that Fritz Heider, the originator of Attribution Theory posed (Weiner 82). Based on the responses to the interview questions, the casual dimensions which Weiner uses to describe influences on motivation might also be utilitarian in describing influences on creativity, namely, perceived locus (is the influence internal or external to the individual?), stability (is the influence consistent and unchanging or variable?), and controllability (can the individual enact change on the cause?).

Methodology

Children who are currently in kindergarten-12 (K-12) grade schools will face challenges as working adults that quite possibly do not exist today. Additionally, those working adults might be working in jobs and even career fields that are not prevalent in the work-force today. To best prepare current K-12 students for what will likely be a new, changing, and unfamiliar future, teachers and educational professionals today consider “21st century skills” among the tools these students will need. According to the website of the Poudre School District in Fort Collins, Colorado, 21st century skills include, but are not limited to, creativity and innovation, critical thinking and problem solving, collaboration, and communication. An understanding of how and where creativity is developed, from the perspective of adolescents, could provide valuable information to educators who seek to prepare these students for the work-force of tomorrow.

Context

The primary study participants for this study were one eighth grade male, one eighth grade female, and those students’ English language arts teacher. These students and teacher were from a mid-sized school district of approximately 26,000 students located in a mountain-west state of the United States. Although the primary purpose of the interviews was to gain the perspective of the students about creativity, I also interviewed the students’ teacher to gain her perspective on how a teacher might teach to develop students’ creativity. I asked the English teacher how she encourages creativity in the classroom, how students demonstrate creativity in the classroom, and what characteristics are typical of a student she considers to be creative.

I worked with students and a teacher from a small, western state school district and sought approval from district administration to work with both the students and their teacher. This school district is located in a town just east of the fourth largest city in the state of Colorado. In 2013, the town population was 4647 with an estimated population growth of 73% since 2000. The town’s

median age in 2013 was 37.3 years and 29.2% of the population had a Bachelor's degree or higher. The median household income in the town in 2012 was \$53,615, which is below the average for the state (\$58,244) but slightly above the average for the country (\$53,046) (US Census Bureau, 2010.) The town's residents are predominantly White (85.2%), followed by 12.1% Hispanic, 1.3% identifying as 2 or more races, .5% American Indian, .5% Asian, and .2% Black. In the November, 2012 election, 6 of 7 ballot initiatives supporting educational finances were passed by the voters in the town's county.

Study Participants

Once I received approval from the school district to work with teachers and students, I asked building administrators to volunteer a current eighth grade English language arts teacher with whom I might work. That teacher introduced the opportunity to participate in this study to her students and the interested students were given an explanatory/consent letter for their parents to read and sign (see appendix for sample letter). Students whose parents consented to their child's participation in the study were considered potential study participants and a single boy and girl were chosen randomly from that group. I chose a boy and a girl to compare possible differences in perception of creativity between genders. Perception of creativity, being an abstract concept, could be influenced by the individual's stage of cognitive development and this could vary across genders for the same grade level. Because eighth grade is a significant time for adolescents' developmentally with their departure from childhood and their embarking on their teenage high school experience, I felt that interviewing eighth graders to understand their perceptions of creativity would provide rich, honest responses to consider as my primary data source. Ideally, regardless of gender, age, race, ethnicity, socio-economic status or other differentiating traits, each of the student study participants' responses are forth-coming, enthusiastic, and truthful.

The female participant whom I interviewed, Maddie (her self-selected pseudonym), was 13 years old at the time of the interview and self-identified as being creative. Maddie identified herself as an artist and art, particularly drawing, was the outward expression or output of her creativity. The male student, Marty (his self-selected pseudonym), was also 13 at the time of the interview and also self-identified as being creative. He said that his creative pursuits included making movies, writing stories and writing how-to books. The teacher, who I will refer to as Mrs. Conrad, is a veteran teacher, teaches both language arts and social studies at the middle school level, and has taught at this particular school for fifteen years.

Documentations

I employed one-on-one interviewing with study participants, students and their English/ language arts teachers, as the primary data collection method. One-on-one interviewing produces a “richly descriptive product” and written transcripts will allow for coding and grouping of responses as part of the data analysis (Merriam 14). I functioned as the researcher and the primary data collector and, as such, I had the ability to pose pertinent questions, in addition to the pre-planned questions (see Appendix A for interview questions), as follow-up or to provide deeper probing of responses, as situations dictate. I was also able to build knowledge and experience as I progressed through the interviews, allowing one interview to inform each subsequent interview. With permission from each interviewee, I audio taped the interviews and then turn each into written transcripts to facilitate data analysis.

In addition to the one-on-one interviews, I asked the student participants to demonstrate their perception of creativity by providing images of examples that they consider to be creative (see Appendix B for written instructions that were given to the student study participants). These images were restricted to photographs that the students themselves took or that were obtained from another source, for example a photograph taken from a magazine or from an internet source. This

qualifier of restricting the images to photographs was to ensure that the focus remained on perceptions about creativity and does not become a demonstration of the participants' own creative expressions. The participants were asked to accompany these examples with short narratives, answering three specific questions, the first of which asked them to justify each examples' creative qualities and why he/she chose that example as an illustration of creativity. The second and third questions asked the students to propose, hypothetically or imaginatively, how the creator of the image/object may have perceived its concept and where the creator was when the image's object was created. Since these are the fundamental questions that this study seeks to understand, these images and narratives provide additional, rich forms of data to inform the question of "how" and "where" creativity develops in adolescents.

Procedure

I conducted one-on-one, semi-structured interviews with the study participants (students and their English teacher), where the questions were predetermined (see Appendix A for interview questions) and open-ended in an attempt to capture the participants' perspectives. With their prior consent, I recorded the interviews to provide for complete and accurate data collection. I generated transcripts from each of the recorded interviews and used those transcripts for the primary data for analysis. I asked foundational interview questions of all three interviewees, such as "What is creativity?" and "Describe someone you know who you think is creative. What are the qualities about that person that make you believe he/she is creative?" Additionally, I asked the students questions intended to specifically address the concept of how and where creativity developments, for example, "Does creativity happen more easily in some places than in others? If so, where are those places? Do you think you are creative? If so, when did you start being creative?" I asked the teacher perception-probing questions specific to being a teacher like, "Students who you consider to be creative look like (or behave like) _____. Students who are not creative look like

_____. Do you intentionally employ techniques in your classroom to encourage the development or expression of creativity?” (See Appendix A for the complete list of interview questions.)

At the conclusion of the students’ interview time, I described to each student the creative image collection part of the study and asked each student if he/she would please supply me with five images of examples of things that he/she considers to be creative, along with a short narrative about each image. I explained to the students that these images should either be photos that they themselves take or pictures they locate. The intention of gathering these images was to obtain additional data, in the form of images and written narratives about those images, about the students’ perceptions of creativity. Students were asked to write a simple description of each image, explaining why it is an example of creativity and, hypothetically or imaginatively, describing how the image may have been conceived and where that process of conception took place. I supplied each student with a written description of this request for creative images (see Appendix B for the written instruction.) I asked that the students send this to me within 1 week of the interview via U.S.P.S. in a postage-paid envelope. The consent form described both components of the study so student study participants should be expecting the creative image collection as part of the study. Both students did submit the creative image collection accompanied by short narratives for each image. Figure 1 gives a graphic representation of the study design with the type of information collected from each study participant.

Study Participant		Data Source 1: Interview*	Data Source 2: Creative Image Collection with Narrative**	Data Source 3: Possible Follow- up Interview***
8 th Grade	Female	√	√	√
8 th Grade	Male	√	√	√
8 th Grade	ELA Teacher	√		
*- approximately 30 minutes in length, during structured school time **- approximately 60 minutes to complete, outside of structured school time ***- no more than 20 minutes in length, outside of structured school time				

Figure 1. Study Design

Analysis

Primarily, I collected 2 types of data, as illustrated in Figure 1 above. One-on-one interviews with a total of 3 study participants resulted in transcripts of responses to interview questions. Additionally, the 2 student study participants submitted narratives for each of 5 images that they submitted. Data analysis took place as an on-going process, particularly as I conducted interviews. On-going data analysis facilitates more focused data collection and an intimate familiarity with the data will inform findings even as the data collection process is continuing (Merriam 171). I grouped interview questions together and looked for categories or themes that appeared within and among the interviewees' responses. From there, I developed a coding system consisting of phrases to capture these themes or categories present in the content of the responses. I also underlined phrases in the transcript which seemed to be the main idea of the response. I employed an open coding process when grouping responses since I did not have pre-determined ideas as to what responses the study participants will supply for each question. The following are some of the phrases that I used to represent the common themes pertaining to creativity that I identified from the interviews: individual expression, something in an individual's mind expressed publically in a medium/in a public way, cognitive process, internal process, art/writing/drawing as output, singular, personal,

production of something, building, innovative, developed over time, inspiration from looking at similar media, opposite of boring, homework is boring, positive affirmation from external/internal source, quite, time alone. In a similar way, I looked for themes across the content of the written narratives and compared any common themes and categories. Once I coded all data, I consolidated, reduced, and compared commonalities and significant areas of divergence to interpret and make meaning of the data in terms of the three primary study questions- what is creativity and how and where is creativity developed.

I pulled from the data some significant themes and ideas that the student study participants presented and present those in the next chapter, Data Analysis. In some cases, there was agreement and convergence in the students' responses but, differing perspectives also surfaced. In some cases, the responses of the teacher were in agreement or supportive of what the students said and, where appropriate, I have included her responses along with the student responses. Those questions and responses that were specific to my interview with the teacher, and primarily ask her perspective on creativity in the classroom, are groups together. The last section of the Data Analysis chapter reports on the creative images collection part of the study where I propose themes in both the images and the narratives that the student study participants submitted.

Data Analysis

Personal Pursuits as Influence on Perception

Both students whom I interviewed self-identified as being creative, although the expression or output of their creativity was different. Maddie identified as an artist, specifically engaging in drawing and Marty identified as a writer and movie producer. Each student attributed an individualist, personal, and cognitive aspect to creativity which then was expressed in a public or concrete way. Maddie said that creativity is “your own art or your own way of thinking of things...your own way of doing things,” and Marty said creativity is “what you can think of in your mind and then, just put it, like, on a piece of paper or a Google doc or something.” The responses of the two students could be interpreted as representative of Dr. Ruth Richards’ idea of everyday creativity or the originality (original for these two individuals) of everyday life. For Richards, everyday creativity enables ongoing growth and personal development and allows humans (on an individual level) to adapt and change. Similarly, the students’ responses can be compared to Dr. Mark Runco’s process view of creativity by which creativity is the original interpretation of experience. Mrs. Conrad also said that creativity was expressing oneself or one’s ideas in an individual or personal way. She added an aspect of creativity as involving innovation or divergence from the norm or the accepted. She used phrases such as “think outside the box,” “to make connections,” “make something where there wasn’t anything,” “see things in a different way.” This idea was not present in the responses of the students and is representative of R. Keith Sawyer’s Individualist approach to creativity which defines creativity as “a new mental combination that is expressed in the world” (Sawyer 7).

Given that Maddie’s creative expression is through art, her answers reflected an influence that her creative output has on how she perceives creativity. When I asked her to describe another person who is creative, she named another friend who draws. She also said that she goes to an art

museum to look at other artists' work to inspire her own creativity, and when I asked if any of her teachers help her to be more creative, she named her art teacher as the one who helps her be more creative, "...because, like, she lets you think up your own ideas for things and help you visualize some things and then you get to do it on your ownand she lets you be you." Marty's responses suggested a broader view of creativity and creative expressions. He writes stories and makes movies as his creative expressions. When I asked Marty to describe another person who he thought was creative, he described a friend who "builds certain inventions, ...something that'll help him in everyday life," from things he finds in the junkyard. Marty said that his shop teacher helps him be more creative, by challenging the students in the class "to think differently when...building a project" (personal communication). When I asked if there are things that help him be more creative, Marty responded that drawing, as well as movies, books, and things he sees on the internet help him to be more creative.

Motivation as Internally or Externally Inspired

I asked both students to describe how they felt when they were being creative. Both students associated positive feelings with being creative but gave differing sources for those feelings. Maddie said, "I think it feels good cuz, like, things just come to you..." and she went on to describe the affirmation she gets from her friends' compliments when she draws something. Maddie attributed this external affirmation as a source of motivation for her creative output, "I felt really good about it so it made me want to do it even more." Additionally, when I asked if there are things that kill creativity, Maddie mentioned, "If some people, like, are mean to me or say something bad, that kind of puts me down so then I'm less creative at that time," which is another external influence, this time as a demotivator. Marty said, "I feel like I can do anything, like motivated and inspired," where his motivation and source of positive affirmation is seemingly internal. This internal/external differentiation echoes Weiner's interpretation of Attribution Theory of Motivation. Looking at

Weiner's three main dimensions influencing motivation- locus, stability, and controllability- and extrapolating to what the students said about what motivates them to be creative, Maddie attributed an external locus by saying that things external to her person, her friends' compliments or other people 'being mean,' serve as motivators or demotivators of her creativity. Marty seems to be saying that his motivation is generated from within. When considering the stability dimension, creativity would seem to be similar to effort, as used in the example in chapter 2. "The stability dimension refers to whether the cause is stable or unstable across time and situation" (Anderman 2). Creativity, like effort, is changeable over time, or unstable, and influenced by an individual's desire to be creative and possibly one's ability to be creative in a given domain and within given circumstances. In looking at the controllability dimension of creativity, Maddie's external locus equates to a lack of control, where the comments of others influence her receptivity (an internally experienced emotion) to being creative. Alternately, Marty's internal locus squarely gives him control of his acting out creativity; nobody outside of himself is influencing him to feel or not feel creative. To reiterate, the controllability dimension refers to whether or not the individual believes he/she has control over causes that are internal to him/her. Where creativity is concerned, teasing out the difference between the locus dimension and the controllability dimension becomes challenging due to the fact that the output (an expression of creativity like a drawing or a poem) is closely tied to, perhaps even caused by, an internal state (an emotion) where, something like playing basketball, for example, might be less tied to an emotional state.

Homework and Rules Kill Creativity

Marty's response to the question about things that might kill creativity was, "Homework." When I asked him to expand on that answer, he said that, "I have to do certain things and I can't, like, do the things that help me finish my homework." Maddie cited homework when I asked, "Are there things that make you less creative?" saying, "Some [homework] is not fun, it's boring." When I

asked their teacher if there was ever a time when she discouraged a student's creativity, she described a situation where she had to explain to a student who wanted to submit an assignment in a way other than what was prescribed in the assignment instructions, that not following the given procedures of that assignment would result in loss of points. The teacher explained to the student that the assignment might not be graded by her so she could not guarantee the outcome for this student who had a strong belief about and reasons to back her need to divert from the rules. In this example, the teacher is admitting that strict observance to procedures equates to stifling creativity and eliminates the opportunity for personal expression. Likewise, homework typically involves the practice of skills acquired during the school day, which might have the students repeating designated procedures, where rules are involved but room for personal expression is not. It would seem that repeating procedures and following rules deflates creativity, according to these interviewees, because of an inherent loss of individual expression, and this is deemed not fun and boring. Barbot et al. in "Creative Potential in Educational Settings: Its Nature, Measure, and Nurture," would agree. In the article, they name classroom climates not conducive to the development of creativity, specifically, 1) a focus on assessment, 2) rote learning as the norm, 3) limited choices, 4) competition, and 5) pressure to conform (377). Interestingly, when I asked both students if they have ever had a teacher who discouraged them from being creative, both students answered no, they have never had a teacher discourage them from being creative.

Creativity: How and Where

When I asked both students at what age they started to become creative, Maddie said she has always been creative and has been drawing since she was very young and she has, "grown in art." Marty said he started to become creative at ages 7, 8, or 9. Marty described a process where he started drawing "some stuff" and then that turned into a movie and now he's working on a couple of movies and books. Maddie echoed this process idea when she described creativity as something

that, for her, can happen anywhere, when she's "Just thinking through things, it will just come to me." When I specifically asked where creativity happens or if there are certain places where she can be more creative, Maddie answered "anywhere" but also, "Outside" and particularly "...in the mountains." Marty named his house where he is typically alone, the public library, and school as places that help him be creative and noisy places kill his creativity. Their teacher felt that, for her, creativity can happen anywhere and she added that having a computer available, especially when she plans activities and units for teaching, provides, "...a great resource for just roaming and looking and kind of allowing things to come to you so that all of a sudden you can take little bits and pieces and have a bigger idea." She makes use of the internet and the clearinghouse of information available there as her inspiration.

Creativity in the Classroom

When I asked Mrs. Conrad if she felt that creativity could be developed in students, her answer was, "I absolutely do think it can be developed." She continued on to say that she felt that the current atmosphere in schools of strictly teaching mandated educational standards, which are very skills-based and information-based and not creativity-encouraging themselves, has left her feeling limited in her ability to incorporate activities where she might foster and encourage creativity. Returning to Barbot et al. and the things that they say limit creativity, Mrs. Conrad herself is experiencing a limitation of choices, pressure to conform, and a focus on assessment (implicit in the strict adherence to teaching the mandated standards) as limiting her own instructional creativity and most likely limiting her ability to inspire creativity in her students. When I asked about the things she does to encourage her students' creativity, she said that she encourages her students to think outside the box, to become problem-solvers and detectives seeking out their own answers to challenges. She said that she resists the urge, which is a strong one, to give them answers and forces them to, "...look for things on their own," and "...look for the answers themselves." She admitted that,

“...if you are forcing them (the students) to be creative, there’s a certain amount of frustration especially with those students who do not consider themselves to be creative.” She helps students through that frustration with encouragement and humor but is insistent that they take the first step and get the process going themselves before she will lend any help. The teacher also said that she tries always to work with students’ creative tendencies for example, if students are working on an assignment and a student asks, “ “Could I do ‘fill-in-the-blank’”, and I’m gonna say 9.8 times, I’m gonna figure out some way that they can because they’re thinking about it outside of what my actual assignment was.”

In an attempt to discover if there are any commonalities shared by creative students, I asked Mrs. Conrad to please describe students who she considers to be creative. She responded that creative students can look very different. To illustrate her point, she said she would describe the two extremes of what, in reality, is a spectrum. She said on one end would be the very verbal student who has an idea about everything, has a conversation about everything, makes connections about everything, is excited and excitable, and goes above and beyond with projects because, “...it’s fun for them, it’s not work, it’s just, almost a hobby...” The other end of the spectrum, according to the teacher, would be the student who is very quiet, easy to miss or overlook, with not a lot of discussion going on, and may even cause an observer to wonder if he/she is focused or not or engaged or not. This student’s creative process is an internal process and the result will be almost shocking because there was no indication of what was going on internally. The teacher went on to say that with some creative students her experience has been, “...it’s like they’re having their own little parade or party and you’re just not sure where it’s all going to end” where there is a potential for scattered thinking, for not finishing assignments, for getting really excited about one part of an assignment and forgetting about the other ten parts of the assignment.

When I asked Mrs. Conrad what a non-creative student looks like, she said that she thinks that all students are creative and have the capacity to be creative and that with some students their creativity might come out in other areas (other than in language arts class). The non-creative student in language arts can either look disinterested or, “....they might be the overachiever, non-creative type where it’s, “Tell me step one, tell me step two, where is the rubric, how do you want this to look?, but how do you want this to look?, no, no, no, but how do you want this to look?,” very much, like, “Give me my check list.” These students are less likely to display outside-the-box thinking for fear of not getting “the correct” answer.

Representing a Concept Versus Demonstrating an Output

At the completion of the interview with each student, I verbally asked each student to submit to me a creative image collection. I described this creative image collection as being five images that represented what he/she thought was an example of creativity. I stressed that these were to be images, photographs that the students themselves took of an object or images collected from another sources such as the internet or magazines, and not something that the student him/herself created for this purpose. I also gave these instructions to each student in writing to take with him/her. The written instructions were as follows:

Collect or photograph images of 5 examples of things that you think are creative. **Please do not create anything yourself** but simply collect images (pictures from magazines or taken from the internet, photographs that you take or borrow from a friend, etc.)

I asked each student (both verbally and in the written instructions) to please answer the following three questions for each image:

1. Why this is an example of creativity?
2. How did the creator become inspired to create this?
3. Where was the creator when that inspiration happened?

In response to this request, I was expecting to receive images of examples of creative products or outputs, for example a painting, a sculpture, or a photograph. I was expecting to receive images that addressed the question, “What is creative?” or could accompany the statement, “I think this is creative.” What I received was physical representations of the concept of creativity (see Appendix C for images and narratives submitted by both student study participants). I received images that would seem to answer the question of what creativity is as opposed to what is creative. The images could have been produced by a researcher or theorist wanting to give a physical representation to the theoretical concept of creativity. This representation of the concept of creativity is more apparent in the images that I received from Maddie versus those I received from Marty. This difference in interpreting the instructions for the creative image collection could be a result of having first participated in the one-on-one interview and having answered the interview questions that I asked. The interview questions were focused on the students’ perceptions about creativity and did not ask the students to exemplify creativity, but rather to explain creativity. Having had that experience first, it is understandable that the students would think that I was continuing to ask about perceptions of a concept rather than seeking examples of a product.

This difference in the interpretation of the goal of the creative image collection made answering the three narrative questions problematic. The three narrative questions, and particularly questions two and three, ask the student to hypothetically or imaginatively suggest what influenced the creator (i.e. an artist). If the person who produced the images was not an artist but rather a theorist attempting to represent the concept of creativity, the question of how that individual was inspired to be creative (narrative explanation question #2) and where that creative inspiration occurred (narrative explanation question #3) becomes moot. It can be argued that creativity is necessary to develop a theory but the inspiration for developing a theory and the inspiration for developing a creative output are very different in origin. A theorist or researcher who is wanting to represent an

abstract concept in a concrete form is motivated by the need to visually see his/her idea in order to share and discuss that idea with other theorists. This is a cognitive process and is presumably motivated by different influences than those that would influence creative outputs. The difference in interpretation of the original question shifted the result to being the representation of an abstract concept rather than the expression of a creative notion.

Given the discrepancy in interpreting the purpose of the images, I feel that the images do hold interesting meanings. All ten images that the students submitted were taken from internet sites. Although not instructed to do so, Maddie included the uniform resource locator (URL) for each of the images that she sent; Marty did not. Students of Maddie and Marty's generation are very accustomed to using the internet as a source of information and a place to find answers and it is not surprising that they used the internet to complete this task. Both students addressed the three questions about each image in a concise manner, with Maddie providing slightly more description and detail in her narrative. Maddie's answers give clues into her ideas about each image in an abstract way where Marty's narrative responses give more concrete descriptions of each image. As Piaget suggests in his Theory of Cognitive Development, these students are possibly at different points of the fourth stage of cognitive development, the formal operational stage. The formal operational stage is characterized by the individual's ability to deal logically with hypothetical and abstract information. If Maddie is farther along in the formal operational stage, she would be able to process and develop more abstract ideas and make knowledge from them.

In analyzing the images, I expected to see similarities in what the interviewees said during their interviews and what was represented in their images. Two of the images that Maddie submitted (M1a and M1b in Appendix C) reflect the idea of creativity as manifested in a person's mind and then expressed or reflected in a public forum, an idea she expressed in her interview. Two of Maddie's pictures depict a person (M1a, M1d) and none of her photos include groups of people,

echoing her notion that creativity happens as an individual or personal process. Her narratives introduce a new idea that she did not express in her interview, the belief that possibility and potential come from creativity and she indicates a sense of limitlessness in that potential (M1b, M1c, M1e). In the narrative for image M1b, Maddie says that the image shows the mind being able to “think of anything” and that our minds suggest that “anything is possible.” In image M1c, Maddie’s interpretation of the image is that, “Anything can come true if we have a bright imagination.” In image M1e, Maddie interprets creativity as being the thing that enables people to achieve, “touch the sky,” or “make it to the top.” Another concept introduced with the images and their narrative that did not appear in the interview is the idea of creativity as emergent, as an outgrowth or revelation as opposed to a static quality or entity. This concept is represented in two of her images (M1b, M1c). In image M1b, the light bulb image is often associated with a revelation and Maddie says that the light bulb represents “creative and inspirational ideas and thoughts com[ing] to us.” In image M1c, the objects are emerging from the pages of the book and Maddie attributes creativity and imagination as allowing “books and stories [to] come alive right before our eyes.” Interestingly, only one of Maddie’s five images of an example of creativity depicts drawing, her own creative output.

Marty’s selected images reflect his personal pursuit of movie making as he includes images with interesting angles (M2d, M2e), very visual images (M2c) and depiction of concrete objects (M2c, M2d). There is also the obvious inclusion of a movie poster as one of his images of creativity (M2a). One of Marty’s visual examples includes people (M2a), as a group and not an individual. The people in this image are engaged in physical activity with no indication that any cognitive process is at work, which is contrary to what he expressed in his interview as he talked about creativity happening in one’s mind and then expressed in a concrete media. In the case of two of Marty’s narratives (M2b, M2c), he explains that the creative product is as a result of an internal drive, i.e. liking wolves and being thirsty. When describing where the creative inspiration may have occurred, Marty’s narratives

give specific, concrete location whereas Maddie suggested circumstances which resulted in the inspiration and not actual places. Marty's narratives, being more concrete and succinct in information, provide less opportunity for interpreting his ideas about creativity.

Understanding the concept of creativity from the perspective of an adolescent has implications for those who work with adolescents. If the goal is to nurture and encourage creative habits of mind within adolescents, knowing what young people themselves believe about, for instance, the conditions that are necessary to develop creativity, gives educators and others who work with youth a justifiable blueprint of where to begin their efforts to develop creativity. The adolescents whom I spoke with view creativity as an individualistic pursuit, inspired by different motivational drivers, and requiring autonomy for personal expression.

Conclusion

There is much agreement among educators, politicians, and economic leaders about the importance of creativity as an asset to enable the future success of our youth. Alternately, among that group who believe that creativity is important, there is little agreement on how creativity might be developed in today's youth and even on what creativity is. In my attempt to understand more about creativity and its development, I spoke to two eighth graders and their English language arts teacher and found more agreement between those three individuals than what I could find in the current literature. Understanding the concept of creativity from the perspective of an adolescent has implications for those who work with adolescents when considering how creativity might be nurtured and encouraged. The three research questions which addressed the development of creativity for the purposes of this study were 1. What is creativity?, 2. How does creativity happen?, and 3. Where does creativity happen?

What Is Creativity?

From the perspective of the student study participants whom I interviewed, creativity is an individualistic expression of one's thoughts generated in that individual's mind and then expressed in a visual or concrete media. Mrs. Conrad, the students' teacher, perhaps summarized the idea in her response that creativity is "an individual, personal insight on things." From these concurring definitions, creativity has three main components- 1. It comes from the individual, 2. It is generated in the thoughts or in the mind, and 3. It is expressed in a public way or via a concrete representation (Mrs. Conrad's summary lacks this public expression idea). Although none of the study participants used the words "original" or "originality," those words are fundamental to the concept of creativity as interpreted by these interviewees. Mrs. Conrad's definition did include references to the idea that creativity also involves innovation or divergence from the norm where this concept was not present in the students' answers. The students are not viewing creativity as something that is relative to what

might already exist or what might already have been suggested. For them, creativity pertains only to the individual creator. These students are not considering the idea that something creative is new and innovative in a particular field of study or domain. They are simply viewing creativity, similar to what Dr. Mark Runco's process view of creativity suggests, as the original interpretation of experience. Researcher and author Sawyer's proposes a similar definition of creativity, saying that creativity is a new mental combination that is expressed in the world (7). Many creativity researchers, Sawyer included, qualify creativity by differentiating between what they call "Big C" and "little c" creativity. The previous examples, and also what Maddie and Marty offer as definitions of creativity, would qualify as "little c" creativity. Professor Csikszentmihalyi refers to "little c" creativity as something that happens in everyday life and equates it to experimenting with new ways to prepare a recipe, great ideas, or ways of decorating living spaces (8). "Big C" creativity is something presented or expressed as new or innovative in a particular domain, accepted by that domain's members, and even resulting in domain-change (Sawyer 8, Csikszentmihalyi 8). Creativity "Big C" for Sawyer is the generation of a product that is judged to be novel and also appropriate, useful, or valuable by a suitably knowledgeable social group (8). For Csikszentmihalyi, "Big C" creativity is a process by which a symbolic domain in a culture is changed (8). Within that perspective, Maddie's and Marty's thoughts on what creativity is seem to fall short of creativity having a larger-scale impact, but they are both talking about creativity, nonetheless. Even Mrs. Conrad's addition of creativity involving a degree of innovation and "newness" does not include the qualification of domain-acceptance or domain-change. These differing ideas of what creativity fundamentally involves could be seen as a continuum, where the student study participants' interpretation of creativity, as an individual and personal insight on things generated in the individual's mind and then expressed publically, would be one end and "Big C" creativity, where an innovation is accepted by and causes change to a particular domain, would be the other end. The mid-point on this continuum is the place where new and

innovative meet the idea of a personal individualistic insight expressed publically, the idea of creativity that Mrs. Conrad expressed. If we accept this idea of a continuum to represent the concept of creativity, and if our ultimate goal is to develop and nurture creativity in our students as an asset that will aid their future success, at what point on the continuum do we aim to equip our students and how exactly do we equip them?

How Does Creativity Happen?

To begin to tackle the question of how to equip students to be creative, an examination of the responses of the study participants in terms of when they first started to be creative, what influences and motivates them to be creative, and how they feel when they are creative might inform proactive measures to take. The students' responses to interview questions suggested that their creative outputs (for Maddie, drawing and for Marty, movie making and writing) were the result of a developmental process. Maddie said she had, "grown in art" and had "been creative for a while" and Marty described his movie making as an outgrowth of "drawing some stuff" and he started to be creative at age 7 (personal communication). They both mentioned being influenced by looking at other examples in their given art form, either at art museums (for Maddie) or on the internet (for Marty). Maddie attributed sources external to her own self as motivation for her creativity and Marty named internal experiences as motivators. They both said that being creative was the opposite of being bored and that being creative felt "good," "[like I] want to do it even more," "like I can do anything," and "inspired" (personal communication). Both students named homework as something that stifles creativity and neither student named school or teachers as stifling to their creativity. Typically, homework involves practice in previously acquired skills, the skills which were introduced or learned during the school day. If homework is not the actual production of knowledge or the creation of learning but more the reciting of learning, these students find the learning process fun and the reciting process boring. Recitation allows little room for personal expression. Personal

expression is also missing when strict rules or constraints are imposed. Mrs. Conrad gave an example where she felt strict rules prevented personal interpretation of an assignment and therefore prevented her student from exercising creativity. In that example, the rules were imposed by the teacher and the student was constrained by a lack of flexibility in her ability to interpret the assignment rules. In another example of constraints limiting creative expression, Mrs. Conrad described a student who imposed the constraints on himself by assuming that what the teacher had in mind was the one way of completing the assignment. For that student, that one way is the right way, how the teacher wants the assignment to look, so knowing the one way equates to receiving a good grade on the assignment. In this example, creative expression on the part of the student was never involved.

According to the students and their teacher, creativity happens as the result of involvement in an activity over a number of years. Creativity happens with the aid of examples of creative outputs and internal *or* external motivators. Creativity feels good when it happens and is the opposite of being bored. Creativity does not happen if personal expression is impeded or if strict constraints or rules are imposed, regardless of who imposes those rules.

Where Does Creativity Happen?

Understanding, from the perspective of the student study participants, what types of settings or environments are conducive to the development of creativity can be helpful to teachers who want to aid their students' development of creativity. Maddie suggests that processing time or "time to think things through" is important to her creative process. She specifically mentions being outside "in the mountains" as a setting where she can be creative. Marty specifically says that noisy places kill his creativity and he prefers time alone to help him be creative. Neither student associates group work, brain-storming, or collaboration as being conducive to creativity. It is possible that these students might benefit from group collaboration only after they have had the chance to generate

ideas and “think through things” on their own. For Mrs. Conrad, creativity can happen anywhere and a computer aids her creative process by providing a clearinghouse of ideas and examples from which she can draw and build her final output. For these interviewees, creativity can happen almost anywhere, and is aided by quiet, alone time when the creator has time to process his/her thoughts. Allowing students the time, space, and resources they each require to encourage their creativity process will not only enable creativity to happen but will make the process more accessible and familiar, developing creative response as a habit, not an exception.

Images Speak of Possibility and Preference

From the images and the narrative accompanying the images, two main ideas emerged. Maddie suggests in her narratives that creativity is enabling. She says, “Our minds...don’t stop creating new ideas,” “Our minds ...tell us anything is possible,” “Anything can come true is we have a bright imagination,” and “Its’s okay to be different and always be yourself....it’s always ok to try new things.” These are very empowering and optimistic words to accompany the images she submitted, and give a glimpse into what this particular thirteen year old thinks can result from creativity. Encouraging creativity, with its outside-the-box, divergent thinking might be the hook helps another student to think optimistically, feel empowered and fuel inspiration.

Marty’s images, representations of things that are his personal interests, suggest that creativity is tied to personal likes and preferences. While sounding like an elementary concept, this idea presents important considerations for educators. Educators might have greater success encouraging creative habits of mind in their students if assignments can be designed to allow students to both work within and express their personal interests. Working within areas of personal interest might be an introductory way to encourage creative habits of mind in students; once students become familiar with accessing their creative abilities, they are ready for challenges that might be outside of their areas of familiarity and knowledge.

Recommendations

An examination of the responses of the study participants to the questions regarding how creativity is developed yields some suggestions for teachers who want to aid their students' creative development. Know that the development of creativity is a growth process and perhaps even a building process where, over time, a student might become more skilled in one area or one creative expression might lead to a different creative output. Students benefit from viewing examples of creative outputs; providing examples can aid students in their own creative process. Some students might benefit from and be motivated by encouraging comments from teachers or other classmates. Recitation can be stifling to creativity so it should be used in content areas and with skills where it will produce the most benefit. Explaining to students why and where recitation builds skills might help them understand why it is necessary in the acquisition of certain skills. Model creativity by making learning creative. Allow room for students' personal interpretation and expression, where possible, by providing flexibility within assignment guidelines. Reward those instances where students show divergent thinking or creative expression, where appropriate.

Implications for Future Study

While my interviews with two eighth graders and their English language arts teacher yielded interesting information about their perspective on creativity, I think future research with additional participants would make for a more complete picture of perceptions about creativity. My original study design included interviews with fourth and twelfth graders and their English language arts teachers in addition to interviewing fourth graders and their teacher. Interviewing students in different age groups- fourth, eighth, and twelfth grade- would provide a representation of perspectives with consideration to different cognitive stages and different maturity levels. Additionally, and in response to the emphasis placed by educators, economic leaders, and politicians on the importance of creativity as an asset for youth to possess in the complex society of the future,

it would seem that more published research and literature as a whole focusing on creativity in youth and representing ideas from educators and others working with youth would help to further the goals of nurturing creativity in our adolescents. Lastly, the idea of collaboration is often associated with creativity, as in the power of minds working together to solve problems or generate ideas. It is interesting and deserving of future study that none of my study participants introduced the idea of collaboration as associated with creativity. Is this a reflection of a stage of maturity and perhaps the result of a self-focused viewpoint? Might it be attributable to a focus on an initial, idea-developing stage of creativity where collaboration might be an appropriate piece of a later, idea-building phase of creativity? The answer to the omission of collaboration is an interesting one to pursue with further research as it has direct implication on how educators ask students to develop and exercise creative thinking.

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Appendix A

Interview Questions

Questions for the student study participants:

1. What is creativity?
2. Do you consider yourself to be creative? How do you know this?
3. If you do consider yourself to be creative, at what age did you begin to be creative?
4. Describe someone you know and who you think is creative.
5. For you, does creativity happen more easily in some locations and not in others? If so, where are those locations?
6. Are there things that help you to be more creative?
7. Are there things that make you less creative?
8. How do you feel when you are being creative?
9. Describe a teacher who encourages you to be creative. What does he/she do that helps you to be more creative?
10. Think of a place where you can be creative. Please describe that place.
11. Are there things that kill your creativity?
12. Are there places that make you feel less creative?
13. Have you ever had a teacher who discouraged you from being creative? What did he or she do that discouraged your creativity?

Questions for the students' English/ language arts teacher:

1. What is creativity?
2. Students who you consider to be creative look like.....
3. Students who you DO NOT consider to be creative look like.....
4. Describe a time when you encourage a student to be creative. What did you do?
5. Do you think creativity can be taught/developed? If so, do you intentionally do things in your classroom to encourage or develop creativity? If so, what are those things?
6. When you are needing to be creative (i.e. when you are lesson planning or perhaps developing teaching strategies to address a struggling student's needs), is there a place where you prefer to go?
7. Describe a time when you discouraged a student's creativity. What did you do?
8. Are there companion attributes to creativity? In other words, someone who is creative is also.....

Appendix B

Written Instructions for Creative Images Collection

Creative Image Collection

Thank you very much for participating in this study on creativity.

As the second part of the study, please compile a creative image collection.

Collect or photograph images of 5 examples of things that you think are creative. **Please do not create anything yourself** but simply collect images (pictures from magazines or taken from the internet, photographs that you take or borrow from a friend, etc.)

Write a short narrative about each image which answers three questions:

1. Why this is an example of creativity?
2. How did the creator become inspired to create this?
3. Where was the creator when that inspiration happened?

Please mail the 5 images along with each image's narrative back to Shelly in the envelop provided before **FRIDAY, SEPTEMBER 11, 2015**.

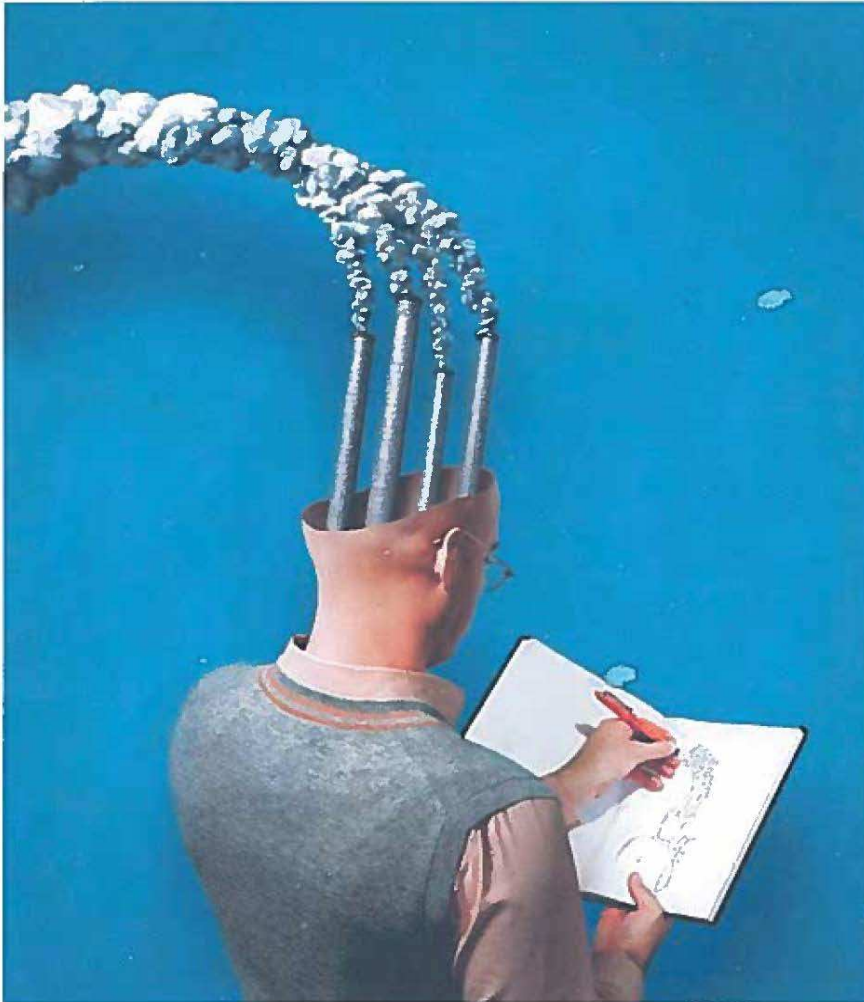
Thank you, again!

Appendix C

Creative Images Collection Submitted by Maddie

M1a

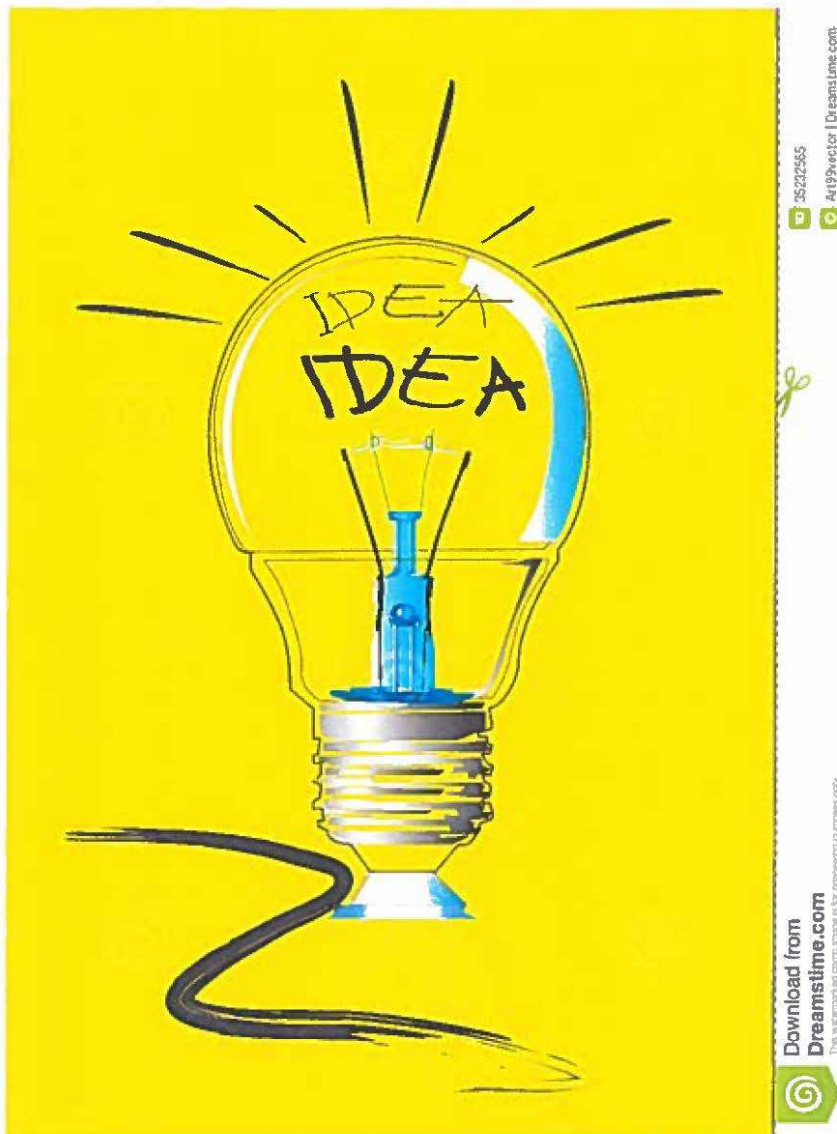
5 Pictures of CREATIVITY



<http://magazine.ucla.edu/features/creative-sparks.jpg>

I think this is a sample of creativity, because I think this the photographer perspective of what creativity might look like. I think he became inspired that our minds are like a factory they never stop running, our minds keep running and they don't stop creating new ideas. Maybe the creator was driving by a factory and started thinking and comparing our minds to the factory.

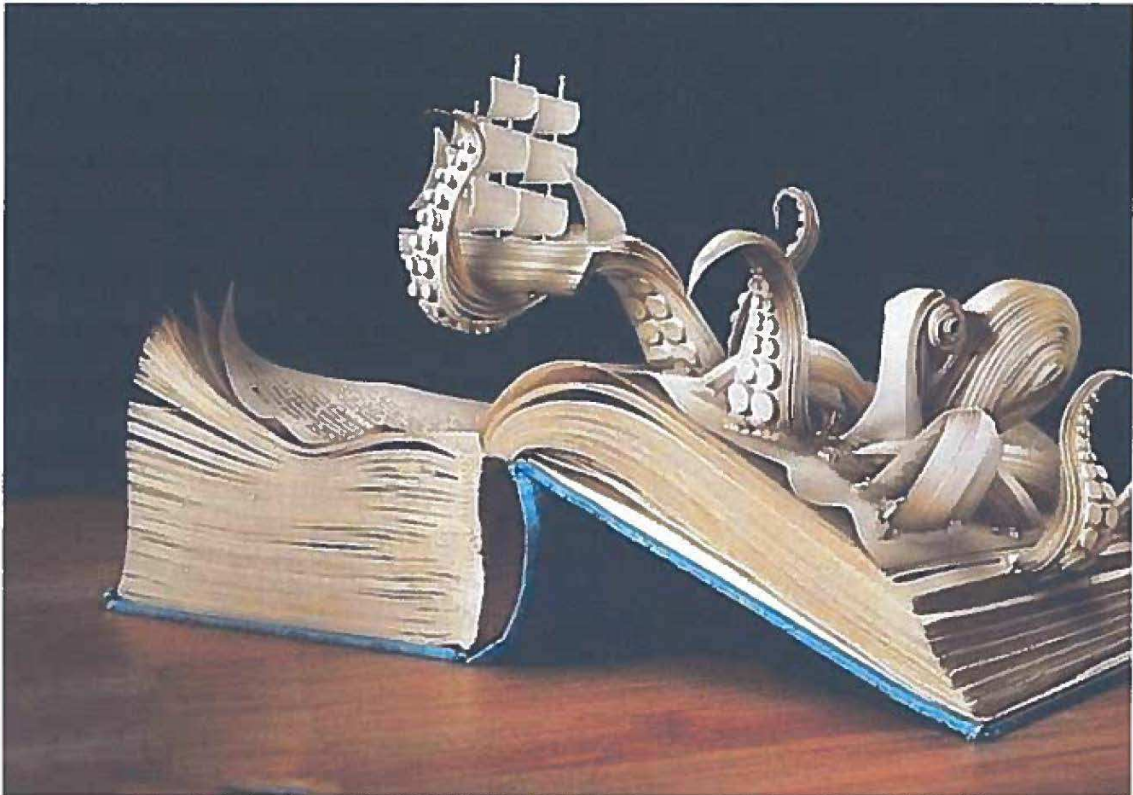
M1b



<http://thumbs.dreamstime.com/z/lamp-art-sketch-graphic-beauty-brightness-light-bulb-creative-tone-gray-mind-success-business-35232565.jpg>

I think this is an example of creativity because I think the artist is trying to say our minds can think of anything and they tell us that anything is possible. I think the creator who made this thought that when our minds think of a creative idea our creativity light bulb turns on and all these creative and inspirational ideas and thoughts come to us. I think the creator had an idea and he thought of a lightbulb turning on inside of their brain.

M1c



<http://1.bp.blogspot.com/-i7ptFH7eQ14/UTJ3Ztry2II/AAAAAAAAAJYk/kcg-pCCsKR4/s1600/Creative+Paper+Art+-+002.jpg>

This is an example of creativity because the author is telling us that anything can come true if we have a bright imagination. I think the author was inspired by this because someone maybe told them that books and stories can come alive right before our eyes if we only have the creativity and imagination to create them.

M1d



http://36.media.tumblr.com/f13f5ef92aa2c946931513629a5b9228/tumblr_nozumonLsz1r80xdao1_500.jpg

I think this is an example of creativity because we watch the time go by throughout the day from **sunrise** to **sunset**. I think the creator who came up with this idea always watched a clock throughout every day and became inspired. This creator was probably always watched clock all the time and became inspired.

M1e



http://www.oakwoodhouse.co.uk/uploads/images/top_page_images/image60.jpg

I think this is an example of creativity, because many people are scared and don't want to try and reach the sky so they stay on the ground, but some of us are brave enough to touch the sky and those people always try to make it and they do reach the top. I also think the creator did this because he is trying to say it's okay to be different and always be yourself because everyone else is already taken, and it's always ok to try new things. I think the creator might have been seeing how different people react to things, because everyone is different and everyone is not the same.

Creative Images Collection Submitted by Marty

M2a



1. This is an example of creativity because it shows the characters fighting and the allies and the enemies attacking
2. I think the creator got inspired to create this because when he was asked to create a poster for the movie he asked for some pics from it and used those to put in the poster.
3. The creator was probably in a movie studio in a office when the inspiration happened.

M2b



1. This is an example of creativity because it shows the earth, space a wolf on a rock howling inside a bigger wolf, and a forest wrapped in one.
2. I think the creator got inspired to create this because he/she must like wolves and wanted to paint/draw a picture.
3. The creator was probably in the forest when he/she got the inspiration for this.

M2c



1. This is an example of creativity because it shows ice falling into a coke(mm, ice cold).
2. I think the creator got inspired to create this was that they were thirsty so they wanted a coke and drew one.
3. The creator was probably at a mcdonalds, or at his/her house.

M2d



1. This is an example of creativity because a car with a cool paint job is creative in my perspective.
2. The creator probably got inspired to take this picture, draw this picture, or did whatever he/she did by asking a car factory for an okay.
3. The creator was possibly at a car factory when he/she got inspired.

M2e



1. This is an example of creativity because the creator got a angle so they could get the interior of that part of the cruise ship (I also chose this one because i went on this cruise ship this summer).
2. The creator got inspired because he/she wanted a nice picture of the inside of the cruise ship.
3. The creator was most likely on this cruise ship.(If you are wondering, the cruise ship was carnival imagination.)