Examining Critical and Creative Thinking of High School Students Making Art in a Learner-Directed Art Class

Adriane Pereira
EXAMINING CRITICAL AND CREATIVE THINKING OF HIGH SCHOOL STUDENTS
MAKING ART IN A LEARNER-DIRECTED ART CLASS

By

ADRIANE PEREIRA

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Adriane Pereira defended this dissertation on April 14, 2014
The members of the supervisory committee were:

Tom Anderson
Professor Directing Dissertation

Mark Messersmith
University Representative

David Gussak
Committee Member

Jeffrey Broome
Committee Member

The Graduate School has verified and approved the above-named committee members, and certifies that the dissertation has been approved in accordance with university requirements.
For my grandmother, Minerva Fernandez Borroto, a teacher, who fueled my curiosity of the world, supported my study of what I love, and reminds me that “el tiempo pasa.” For my mother, Minerva Borroto, for her sacrifices to support my endeavors and endless encouragement. For Almi Rodriguez, who inspires me to do my best and of whom I am proud to call sister.

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ABSTRACT

The purpose of this study was to provide a close up examination of high school students’ critical and creative thinking during the process of making art in a learner directed class where students were encouraged and supported to make decisions about content, technique, and media.

The study is grounded in phenomenology and draws from ethnography and arts-based research methods. Data were gathered ethnographically about the class and situational context of the art making process. A photo-elicitation interview technique drew information from participants about the decisions they made during the course of their art-making experience. Data were analyzed for phenomenological themes in relation to participants’ critical and creative thinking while making art.

Results of the study are provided as detailed portraits of the artistic process of ten high school art students. The narrative portraits drawn in this study results rely on both verbal and visual data.

Students engaged in critical and creative thinking within the context of making choices about content, media, and processes; judging their progress based on criteria; setting goals for their work; generating ideas for possible solutions; solving artistic problems to meet goals; and through talking with peers and their teacher. Themes of critical and creative thinking in participants’ experiences further extant research in relation to the works of Ennis (2004), Hetland, Winner, Veenema, and Sheridan (2013), Jaquith and Hathaway (2012), Marshall (2010), Paul and Elder (2007), and Walker (2004) filling a gap that was revealed in a paucity of research done in this area from students perspectives. Themes emerging from engagement with the data included transitioning between multiple ongoing artistic processes and reasons for doing so. Future research should examine secondary students’ long-term development of a thematic
body of artwork with special attention to the emergent theme of multiprocessing. The findings were used to develop suggestions for fostering reflection and critical and creative thinking in learner-directed curricula.
CHAPTER ONE
INTRODUCTION

At 7:30 am, I stood in the hallway brightly lit by a long row of fluorescent tubes and I greeted students as they entered my classroom. I was told not to smile until Thanksgiving to gain their respect but I could not hold down the corners of my mouth as they walked in. It was my first day of school as a high school art teacher. Having limited experience in the classroom, planning curriculum, organizing an art room, or classroom management, I asked, “So, What do you want to learn about?” I noted their requests and planned the semester from there. In subsequent years, I experimented with different curricula framed by discipline-based art education, Sunshine State Standards, and curriculum based-competencies. I presented themes such as visual culture (Barrett, 2003; Cosidine & Haley, 1999; Duncum, 2002; Efland, 2005; Freedman & Wood, 1999; Tavin, 2002), gender studies (Aapola, Gonick, & Harris, 2005; Griffen, 2004; Keifer-Boyd, Amburgy, & Knight, 2007; Ivashevich, 2011; Smith-Shank & Keifer-Boyd, 2011), multiculturalism (Bastos, 2006; Blocker, 2005; Kuster, 2006), and earth art education (Anderson & Guyas, 2011; Graham, 2007). Later, students made their own thematic choices and my curriculum design gave way to structural designs that facilitated students’ inquiries. I found that concentrating on key concepts that were important to them, students constructed meaning from various sources outside of art class. While addressing one topic of inquiry over time, they made connections to various fields, the works of contemporary and historical figures, and were genuinely supportive of each other’s learning through discourse and collaboration.
Statement of the Problem

The current emphasis of accountability in the education reform movement is laudable in its aim to improve education. But at times, due to high-stakes standardized testing, some teachers engage in “repetitious instruction that boils down content to isolated bits of information, leaving little time to engage in creative interdisciplinary activities or project-based inquiry” (Nichols & Berliner, 2008, p.15). Traditional education stifles creativity in students (Runco, 2007). Students are expected to memorize information and learn test-taking skills with the purpose of choosing the right answer on the test. Within the field of art education, creativity is often suppressed when learning is guided by rubrics that reward the conforming to art teacher’s preconceived expectations (Gude, 2010; Zimmerman, 2010).

The criticism of didactic instruction and uniformity in schools as suppressing student independent thinking (Dewey, 1933; Freire, 1970; hooks, 2010), creativity (Cropely, 1992; Hetland, 2013; Runco, 2007), and motivation to transfer thinking skills (Gardner, 1991; Langer, 1989; Ritchhart & Perkins, 2000) is not new. Eighty years ago, Dewey (1933) denounced monotonous school conditions, where “pupils [are] regimented with military precision. The same textbook is thumbed to the exclusion of other reading. All topics are barred except those in the text…recitation is so emphasized that spontaneity is excluded and likewise novelty and variety” (p. 53). Later, Dewey (1938) argued that that teaching thinking should be a primary goal of education in a democracy. Whitehead (1929) also condemned the dedication to routines and the passing on of “inert ideas... that are merely received into the mind without being utilized, or tested, or thrown into fresh combinations” (p. 1).

Since then, Gardner (1991) delineated significant limitations of educational practices that are considered “good.” In Unschooled Mind, Gardner (1991) cited studies that found that
students with high scores on standardized tests did not exhibit understanding of materials and concepts when assessed in ways that were different from the expected form. He challenged the view that everyone learns the same way and that a single measure is sufficient to gauge student learning.

The call for critical and creative thinkers is evident in goals set forth by national education organizations. *The National Educational Goals Report: Building a Nation of Learners* (1991) was the result of an educational summit responding to growing concerns about education preparation of the United States. The summit concluded with the formation of six general goals for education that were to be reached by the year 2000. Goal three stated that creative thinking and reasoning skills are essential for student achievement and success. In 2007, the Association for Supervision and Curriculum Development continued the call for critical and creative thinking when they stated, "Today's student must be prepared unlike any generation before to think critically and analytically, while acting with innovation and creativity" (p. 7).

Pink (2008), Florida (2002), Friedman (2005), and Robinson and Aronica (2009) tied education to a creative economy by arguing that rapidly changing technologies make the future difficult to predict, limiting the ability of didactic instruction to prepare students for their lives. Pink (2008) observed, “You’ve got schools moving ever more toward routines, right answers, and standardization at precisely the moment that the wider world is moving toward novelty, nuance, and customization” (p. 4). Starko (2013) explained the “pace of change and the global economy demand young people who can learn on their own, solve problems, and respond to situations” (p. 55) that parents and teachers cannot presently envision. He argued for educating independent and creative learners. Hetland (2013) added that schools have the potential to “serve as incubators for creative and ethical people” rather than simply producing workers.
One way to prepare students to think critically and creatively is to use inquiry based teaching methods in art class (Lampert, 2006b). Examples include teaching students how to pose a question or problem to solve through art, develop possible solutions, and select and defend a course to a solution (Lampert, 2006b). Students’ higher order thinking skills are engaged when thinking through a problem and practicing sound methods of artistic inquiry (Lampert, 2006b). In the field of art education, Perkins (1994; 2007) argued that intelligent thinking may be developed through looking and creating artwork. For example, Perkins (1994) elaborated how the process of sound thinking is analogous to looking at art critically. The benefit of developing thinking through art is that there is a tangible object to connect with as one describes the thinking process. Looking at art involves many types of cognition including: “visual processing, analytical thinking, posing questions, testing hypothesis, and verbal reasoning” (Perkins, 1994, p. 5).

Lampert (2006a) conducted a quantitative study that compared the critical thinking dispositions of arts and non-arts students at a large, urban university. She found that arts students had significantly higher mean scores on specific subscales (truth-seeking, critical thinking maturity, and open-mindedness) of the California Critical Thinking Dispositions Inventory survey instrument. She suggested that visual arts curriculum and instruction might significantly enhance critical thinking dispositions. When art students select their own topic to address and choose media to use that is expressive of their idea, art making is an inquiry method and a process of problem-finding and problem-solving (Marshall, 2010). Making choices and defending them provides opportunities for students to engage in critical and creative thinking within their foundation of knowledge and motivates them to make connections to new information (Jaquith & Hathaway, 2012).
A problem for the field of art education in public schools is that art class is oftentimes viewed as supplemental to the core curriculum and non-essential to children’s education (Noddings, 1992). In the larger educational community, art making is viewed as “easy not tough, soft not hard, simple and not complex” (Eisner, 2002). Yet, when students are asked to conceptualize their own aims in art, cognitive development is promoted (Eisner, 2002). The purpose of this study is to understand how a particular group of students enrolled in art class that allows them to make choices about their artwork engage in critical and creative thinking. It is in this context that I posed the following research question:

*How do selected high school students experience critical and creative thinking while making art in the context of a learner-directed high school art class?*

**Rational/Justification of the Study**

Recognition of the value of creativity in the classroom became apparent after the 1957 Soviet launch of the first artificial satellite, Sputnik (Cropley, 1992). The American educational system underwent a period of self-reflection. Scientists and engineers would not suffice to take full advantage of technological possibilities that lay ahead (Cropley, 1992). Innovation became valued and a continued interest in developing creativity ensued. Guilford (1962) concluded that in order for society to survive, the United States would need creative thinkers. A similar argument was echoed more recently in the work of Pink, (2006), Friedman (2005), and Florida (2002). They argued that inventiveness and play (Pink, 2006), passion and curiosity (Friedman, 2005; Robinson & Aronica, 2009) fuel a new creative class (Florida, 2004) of entrepreneurs highly desired by business leaders.

A feature of life today is communication through technology and exponential development of knowledge (Starko, 2013; Torrance & Safter, 1999). Today’s students will hold
future jobs that do not yet exist. In order to prepare students, schools can no longer expect to provide a one-size-fits-all educational model because skills needed in the future are not clear at present (Cropley, 1992). Langer (1989) argued that knowledge should be viewed as innovative and adaptive not fixed and absolute. In this context, schools should to prepare students to change and adapt, thoughtfully.

In the field of art education, Hamblen (1984) and Garoian (1988) used Bloom’s Taxonomy as a way to frame the thinking skills involved in the process of art criticism. Since then, Anderson and Krathwohl (2001) updated the Taxonomy recognizing that learners are active constructors of knowledge and asserted that the highest desirable learning behavior is creating rather than evaluation, as it was in the original formulation. The new taxonomy considers the act of creating an artwork (or a piece of writing, or other creation) demonstrates synthesis of information and the evaluation of the merits of the selected elements in the construction.

In the field of creativity, studies have found that people who were given choices (Amabile, 1996) and engaged in play (Amabile, 1996; Runco, 2007) showed increased creative behavior. Most of the studies involved play in a laboratory followed by creativity testing (Amabile, 1996). When children made choices about the “materials to use in their work, [they] showed higher creativity than children who had the choice made for them” (Amabile, 1996, p. 249). In a special issue of Educational Leadership on creativity, Starko (2013) suggested allowing “students to choose the ways they want to learn or the ways they want to demonstrate learning” (p. 56) to encourage creativity.

One purpose of this study is to answer the call for empirically grounded, close-up studies, of student engagement with artwork and artistic thinking and creativity. Eisner (2002) described useful types of thinking promoted by art making and urged researchers to conduct empirically
grounded qualitative studies of artistic thinking “related to the tasks that students engage in [and] the materials with which they work” (p. 217). Anderson and Milbrandt (2005) suggested that while creativity is discussed in art education “literature, it is not fostered or well understood in school art programs” (p. 65). The Qualities of Quality report by Seidel, Tishman, Winner, Hetland, and Palmer (2009) found that the process of learning is one lens through which one can study quality in art education. Elements that serve as indicators of quality learning include student engagement and inquiry with artwork. Seidel et al. (2009) recommended more “close-up studies of art education practice to understand the nuances and details of achieving quality in particular situation” (p. 87).

In order to support intelligent and creative thinking and doing, we need to understand what situations motivate students and which ones lead to stagnancy (Pitri, 2006). This study of students’ process of art making in a particular art class provides a practical example and contributes to conversations about learner-directed art curricula such as Choice-Based Art Education (Douglas & Jaquith, 2009), Big Ideas (Walker, 2004), and Art Practice as Research in the Classroom (Marshall & D’Adamo, 2011). The findings may also serve as inspiration for educators trying to balance direct instruction with opportunities for students to seek and find answers to their own questions. Walker (2004) acknowledged the need for substantive knowledge about the artmaking process to guide instruction in art and recognized that “the study of individual artists can be extremely profitable in revealing a range of strategies and methods with these different elements” (p. 7). Knowledge of the art making process is necessary for practitioners to design and implement meaningful art education curricula (Walker, 2004) and can serve as a guideline for employing learner-directed art education methods in similar situations.
The qualitative understanding of how a group of high school students engage in the artmaking process in a learner-directed class informs what we know about how students experience critical and creative thinking. Findings from this study are situated in relation to the work of scholars who write about critical and creative thinking (Anderson & Milbrandt, 2005; Ennis, 2004; Elder & Paul, 2009a), studio thinking (Hetland et al., 2013), art process (Anderson & Milbrandt, 2005; Chapman, 1978; Dewey, 1933; Marshall & D’Adamo, 2011; Walker, 2004), and learner directed art curricula (Andrews, 2001, 2005, 2010; Douglas & Jaquith, 2009; Jaquith, 2012; Milbrandt, Felts, Richards & Abghari, 2004).

Scope of the Study

The procedures of the study designed to answer the research question were:

1. Review the literature on creative and critical thinking and learner-directed curricula to understand what is known.
2. Review the literature on research methods to prepare a research strategy for the study.
3. Implement the research using observations and informal, photo-elicitation interview, member checks, and focus group methods.
4. Analyze and interpret data to answer the research question.
5. Offer conclusions and implications.

Research Design

This research emerges from a previous study in a learner-directed class conducted during my doctoral coursework. I built rapport with the students in the class through intensive participant observation in their art room. I found that students in this class make choices about the themes and media that they use to make art. The teacher provided a structure to support their inquiries by helping them select topics to address over time, suggested assignments that students
could adapt to their interests or let them decide their own topic, and organized a variety of art materials for easy access. I found that students addressed a variety of topics related to their interests, in and out of school, and dealt with emotions through their art. Students overwhelmingly expressed the value they held for the autonomy to make choices in this class. Yet, once I began reading about student directed learning, I noticed gaps in the literature about critical and creative thinking through artmaking as told from high school student participants’ perspective.

This study is grounded in phenomenology (Giorgi, 2012; Husserl, 1970; Van Manen, 1994) and the research design is influenced by ethnography (Bogdan & Biklen, 2007; Creswell, 2013; Dewalt & Dewalt, 2002; Patton, 2002) and visual research methods (Clark, 1999; Clark-Ibáñez, 2007; Collier & Collier, 1986; Harper, 2002; Rose, 2001, Stanczak, 2007). In order to understand how selected high school students’ experience critical and creative thinking in a learner-directed class, I collected data through observation and informal interviews (Bogdan & Biklen, 2007; Dewalt & Dewalt, 2002), photo-elicitation interviews (Clark, 1999; Clark-Ibáñez, 2007; Harper, 2002), and a focus group activity (Savin-Baden & Major, 2012). The photo-elicitation used student-generated photographs of the process to make their artwork. As the researcher, I also used photographs as observational tools of the context in which student artmaking took place. I asked students to photograph their artmaking process and later talk with me about what they were thinking and doing while they made art. Asking students to photograph their own work built rapport by enlisting their participation in way that they got to tell about their art process in their own way. These methods support a phenomenological inquiry by providing that students describe their experience using their own words as a significant data
collection method, which is also structurally corroborated (Eisner, 1998) through multiple data sources.

As an observer, I began by providing a rich description of the context of this classroom in order for it to be useful to other researchers and practitioners (Eisner, 1998). I immersed myself in the field for 70 school days, made daily field notes, reflected on themes (Bogdan & Biklen, 2007), methods, and theory through analytic memos (Rossman & Rallis, 2012). I observed and informally talked with students, building on the previously established rapport, to understand what students are thinking and doing during their artmaking process. I was truly interested in their process and students became comfortable talking with me about my research interest: their thinking and doing while making art. I asked for volunteers to photograph their artmaking process then share that process with me in a photo-guided interview. Ten students elected to photograph their artistic process and share their thinking and making in an interview. Students used each image as a guide to recall what they were thinking and doing in each image. I would save my questions until they were finished and ask, for example: What was it about in the art in Photo X that led you to take the photo? Why at this point? What happened in the time between Photo 1 and Photo 2? What were you thinking and doing in between each photo? Giving students the prompt “What are you thinking and doing while you make art” gave them a guide for documenting talking about their process.

I printed four-by-six inch prints of the photos generated by students. Participants sequenced each series with a letter or number so that the images would align with the transcript of the interview. The interviews took place in class, in the adjacent art class gallery, or the in-class library. The individual interview yielded students descriptions of their experience of thinking and doing during the art making process. A focus group was conducted well near the
end of data collection process to further inquire about developing themes and categories that I saw emerging in the data.

The observations with informal interviews and photo-elicitation interviews provided data for me to analyze and interpret to answer the research question. A phenomenological thematic analysis (Van Manen, 1990) was conducted with the data, with initial coding using students own words (in vivo coding), themes found in the literature on critical and creative thinking, and emergent themes. Conclusions are discussed in relation to inquiry-based art curricula (Marshall, 2010; Marshall & D’Adamo, 2011; Siegesmund, 2009; Walker, 2004), practitioners considering a learner-directed approach (Douglas & Jaquith, 2009; Jaquith & Hathaway, 2012), and visual research methods. Implications for further research and K-12 practice are also offered.

Limitations and Assumptions

This study provides a close up examination of the choices made during the art making process of a group of high school students in a learner-directed class. I used a purposive sampling (Patton, 2002) method that allows the researcher to select cases that clearly exhibit the phenomenon under investigation. The sampling method is not randomized so it does not allow for generalization of findings to other contexts as is possible in quantitative studies. However, this qualitative study provides a rich description that creates a vivid image of the artistic process and the context in which students work, so readers can make use of they have learned in this study and “apply them to other aspects of the world to which [they] believe them to be relevant” (Eisner, 1998, p. 199). Attending to the qualities of fewer cases allows this research to focus on subtleties left unaddressed by broader quantitative studies such as Lampert’s (2006a) study of critical thinking dispositions of art students. I assume that the findings of this research study
offers useful implications for learner-directed art education, art education, and teachers working in similar environments.

I personally collected data and interpreted the findings. Therefore, a limitation is that I am the instrument through which the study is interpreted but my informed awareness of teaching and learning in a high school art class makes this also a strength, what Eisner (1998) calls connoisseurship. Eisner (1998) also describes that this limitation can be mitigated through the use of multiple data sources that build structural corroboration. When drawing conclusions in a qualitative study, structural corroboration is increased when data is cited from multiple data sources such as observations and interviews (Eisner, 1998). In order to build the credibility of my findings, I used multiple data sources, member checks, and kept an audit trail of my analysis through researcher memos. I asked participants to check the transcripts of their interviews to ensure that I captured the data in a way that is “true” for him or her. Drafts of the findings as portraits were also member checked with participants. To further increase the credibility of my study, I kept daily, detailed methodological, thematic, and theoretical memos to document analytical thinking, developing themes, and how my findings fit in with relevant literature (Rossman & Rallis, 2012). Keeping memos throughout the data collection process was essential to reflect on my developing analysis throughout the study and provide an additional data source (Rossman & Rallis, 2012).

A methodological limitation of the photo-elicitation interviews is that participants relied on a memory to provide reflective account of an experience. Participants who reflected on experience negotiated what was expressed and how they talked about their artmaking process, what Kuhn (2010) called a performance of memory. She argued that performances of memory in and with visual media might embody and express “interconnections between private, public, and
the personal” (Kuhn, 2010, p. 299). While the reflection on a past experience was expressed in a reflection, the photos served as an “aid to remembering” the past (Kuhn, 2010, p. 304). While reflection on experience is a limitation, the alternative would have been for students to talk through their experience, which would have disturbed their process. Talking through their experience would have been socially awkward in a high school art class. In order to offer some structural corroboration to the reflective photo-elicitation interview data, I observed students as they worked and asked brief questions about their thinking and doing. Asking for volunteers engaged willing participants who wanted to share their art process, so I assume that participants answered truthfully and to the best of their abilities. The benefits to the photo-elicitation process are elaborated in Chapter Three.

**Definitions of Terms**

*Experience.* In the context of this study, experience is defined as involvement with thinking while making art over a period of time.

*Critical Thinking.* Ennis (2004) provided a concise definition, “reasonable reflective thinking on deciding what to believe or do” (p. 1).

*Creative Thinking.* Thinking that leads to the creation of “a product or response will be judged to be creative to the extent that it is both a novel and appropriate useful, correct or valuable response to the task at hand” (Amabile, 1996, p. 35).

*Critical and Creative Thinking.* High quality thought where creativity masters a process of making and criticality judges the creation (Paul & Elder, 2008).

*Making Art.* “The act of creating aesthetic objects or engaging in aesthetic performances” (Anderson & Milbrandt, 2005).
*Learner-Directed Curricula.* In the context of this study, learner-directed curriculum is defined as a curriculum that requires students to self-select a theme to address over time and the media with which to work.
CHAPTER TWO
LITERATURE REVIEW

Hart (1998) recommends that a literature review demonstrate an understanding of the “main theories of a given subject area, how they have been applied and developed, as well as main criticisms of work on the topic” (p. 1). Utilizing that framework, this review of the literature includes an examination of articles in periodicals, books, and dissertations. I began my review of learner-directed art curricula by searching Florida State University’s online databases and hard copies of the following journals articles: *Art Education, Studies in Art Education, Visual Arts Research*, and the *International Journal of Art and Design*. I found that manually going through journal issues uncovered additional articles not found using database search engines. Then, I used the following keywords to search subject headings, abstracts, and entire documents: art education, creative thinking, critical thinking, phenomenology, and learner-directed. I searched for works by particular authors known to be experts in these fields such as Kerry Freedman and Enid Zimmerman. I began with publications since the year 2000, then let the current literature led me to older sources that seemed valuable and appropriate. These searches also brought my attention to books on the topic. The literature review is presented in the following sections: Critical Thinking, Creative Thinking, Critical and Creative Thinking, and Learner-Directed Art Curricula.

**Critical Thinking**

Ennis (2004) summarized critical thinking as “reasonable and reflective thinking focused on deciding what to believe or do” (p. 1). Generally, the process of critical thinking involves making judgments about a present state of affairs to make a decision about subsequent actions or
beliefs. Creativity is a complex process that is “reflected in production of useful, new ideas or products that result from defining a problem and solving it in a particular cultural context” (Zimmerman, 2009). Paul and Elder (2008), founders of the Foundation of Critical Thinking, argue that the achievements of thought are both critical and creative. They describe criticality as the process of assessment and creativity as having in a critical component. Creativity is critical when it selects from many possibilities in the construction of a new idea or product. Criticality and creativity are interdependent in high quality thought, “as the mind must simultaneously produce and assess, both generate and judge the products it fabricates” (Paul & Elder, 2008, p. 4).

Creativity and critical thinking are sometimes viewed as being opposed (Azzam, 2009; Paul & Elder, 2008). Yet, the creative process as defined by Wallas (1929) and Siegesmund (2000) involved a reflective critical thinking process (Moseley, 2005), where the thinker/maker made decisions from a number of created, or generated, possibilities. In the following, I review critical thinking, creative thinking, and both critical and creative thinking.

Scriven and Paul (1996) were specific about the types of behaviors that guide thought and action when they defined critical thinking as the “intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action” (p. 4), qualities mirrored in Bloom’s Taxonomy of Educational Objectives (Anderson & Krathwohl, 2001) discussed below. Paul and Elder (2004, 2008, 2009), co-authored several publications on thinking skills based on the idea that quality thinking is necessary for a democratic society to think independently and critically (Elder & Paul, 2009, 2009b; Paul & Elder, 2008, 2009). They put forth a definition of critical thinking as follows: “the art of analyzing and evaluating thinking with a view of improving it” (Paul & Elder, 2008, p. 2). An essential feature of the Paul and Elder (2008) conception of thinking is a set of intellectual standards that can be used to assess the quality of thinking: clarity, accuracy, precision, relevance, depth, breadth, logic, significance, and fairness.

Matthew Lipman (1988) defined critical thinking, as “skillful, responsible, thinking that is conducive to judgment because it relies on criteria, is self-correcting and is sensitive to context” (p. 31). For Lipman (2003), it is necessary to have criteria in a particular field of knowledge to distinguish between critical and uncritical thinking in that field. Criteria provide a foundation for analysis and comparison to make a judgment or evaluation. Like Paul and Elder (2008), Lipman (2003) considered critical thinking to be a reflective process that guides thinking through reflections of its quality. Lipman (2003) described critical thinking as contextual. Lipman (2003) asserted that in order to think critically, one must be sensitive to exceptional or irregular conditions, special limitations, and overall structures within a discipline. In the Creativity section below, I will address how sensitivity to exceptional or irregular conditions is also necessary for creativity (Barron, 1955; Csikszentmihalyi, 1996; Guildford, 1950; Sawyer, 2006).
Dewey (1933) was a proponent of teaching reflective thinking as part of children’s education. Dewey made a distinction between everyday thinking and reflective thinking, which is aware of its own processes. Reflective thinking is “active, persistent, and careful consideration of any belief of supposed form of knowledge in the light of grounds that support it and the further conclusions to which it tends” (Dewey, 1933, p. 9). Considering the causes and consequences of one’s thinking provided individuals with intellectual freedom, Dewey (1933) argued. Dewey (1933) also delineated an algorithm to aid thinking through a problem: (a) define the problem, (b) generate possible solutions, (c) use imagination to consider the consequences of possible solutions, (d) experiment with possibilities until a solution is found. The algorithm is similar to creative process models discussed in the next section, Creativity.

The preceding definitions embrace the understanding that critical thinking is reflective thinking about what to believe or do (Ennis, 2004). Critical thinking evaluates various possible outcomes of action (Moseley, 2005) and selects an outcome using criteria specific to a context or field of knowledge (Lipman, 2003). Creative thinking and critical thinking are interwoven (Lipman, 2003; Paul & Elder, 2008). Creative processes use critical thinking to evaluate and decide how to create an idea or a product (Paul & Elder, 2008) and are the subject of the next section.

**Creativity**

The standard, or widely accepted, definition of creativity requires originality and effectiveness (Runco & Jaeger, 2012) of a product, persons, process, or environment (Torrance, 1993). In this study, I assume that the art making process in a learner-directed class is a creative process because students create original works that are effective in addressing topics of their choice. Choice is “conducive to creativity” (Brookhart, 2010, p. 32). Next, I will review the
literature regarding definitions of creativity, creative processes, and how they have been used in art education.

Creativity theories can be divided into individual and contextual conceptions (Fasco, 2006; Feldhusen, 2006; Runco & Jaeger, 2012; Sawyer, 2006). Creativity theories focused on individual creativity, often termed little-c, consider that ordinary problem-solving is creative. Examples include seemingly insignificant, daily outsmarting of traffic patterns, or daydreaming. On the other hand, Big-C creativity is a socially valuable product (Sawyer, 2006); one that is appropriate within a field and is recognized as original by others in the group. Solutions to difficult societal problems and genius work are considered Creative. Sawyer (2006) termed Big-C theorists socioculturalist because they require the achievement of a level of social acknowledgment and appropriateness.

**Standard Definition of Creativity**

Runco and Jaeger (2012) provide a standard, or widely accepted, definition of Big-C Creativity: “It requires both originality and effectiveness” (p. 4). Originality is key. If the product is not original it is not creative. But, originality alone is not sufficient; creativity must be effective. Runco (1988) argued that, “originality is vital but it must be balanced with fit and appropriateness” (p. 4). Csikszentmihalyi (1996) also found that creative individuals worked within a particular domain. It is helpful to set the standard definition apart at this point in the text as it serves for comparison with others’ definitions that I explore next.

*Creativity requires both originality and effectiveness.*

Runco and Jaeger (2012) discovered that many articles in recent issues of *Creativity Research Journal* use definitions of creativity from the 1980’s and 1990’s yet there is a rich history of relevant definitions that are often ignored and deserve recognition. They insist that
Barron (1955) and Stein (1953) should be cited whenever the standard definition of creativity is used because they set forth the most important elements of the study of creativity still used today.

Evidence of the standard definition of creativity is seen in the literature as early 1955 in the work of Barron, except that he used the term originality rather than creativity. Barron (1955) declared, “the first criterion of an original response is that it should have a certain stated uncommonness in the particular group being studied” (p. 479). Novel responses are only so in a particular domain. He added a second criterion; “it must be to some extent adaptive to reality” (p. 479). Original ideas not only had to be novel but useful as opposed to simply random or ignorant. Barron’s (1955) definition laid the groundwork for the term, effective, in the standard definition. Effectiveness implies that it has a purpose or use to a group.

Runco and Jaeger (2012) credit Stein (1953) for providing the earliest and clearest use of the current standard definition. Stein (1953) said, “the creative work is a novel work that is accepted as tenable or useful or satisfying by a group, at some point in time…[novelty depends on] the fund of knowledge or experience that exists in the field at the time” (pp. 311-312). Stein (1953) further reported that creativity required flexibility within a domain, “for persons in one area it may mean greater flexibility in the intellectual sphere, while for other…the artist, it appears as a greater flexibility in the emotional or affective sphere” (p. 313). In these excerpts, Stein (1953) described conceptions of creativity subsequently cited, demonstrating the significance of his work in defining creativity, and aiding in making it a researchable phenomenon. The three aspects of Stein’s definition still used today in the definitions by Sawyer (2006) are: (a) creativity is useful to a particular group therefore based on social judgment; (b) creativity combines elements already in existence in new ways; (c) creativity is flexible.
Earlier, Guilford (1950) identified originality and effectiveness this way: “The creative person has novel ideas…the surviving ideas requires evaluation” (pp. 452-453). Evaluation requires that someone must adjudicate the work as meeting some standard. Guilford (1950), like Stein (1953) and Barron (1955), valued the usefulness of novel ideas. Their work is still evident in the standard definition of creativity (Runco & Jaeger, 2012).

Creativity Models in Contemporary (Art) Education

Catell and Butcher (1968) and Heinelt (1974) make a distinction between products that meet and do not meet criteria of both original and effective. They used the terms pseudocreativity and quasicreativity to describe creativity that is not worthwhile or not effective. Is student art Big-C or little-c or somewhere in between?

Jaquith (2011), cofounder of Teaching for Artistic Behavior, cites the definition of creativity by Teresa Amabile (1996) as a framework for creativity that may be helpful to understand the artwork of young art students. Amabile (1996) regards that “a product or response will be judged to be creative to the extent that (a) it is both a novel and appropriate useful, correct or valuable response to the task at hand” (p. 35). Amabile (1996) defines creativity as effective if it is valued as a response to a given task. Her definition directly contradicts Kay’s (1994) definition “not predetermined by the situation or task” (p. 117). Amabile’s (1996) definition is consistent with the standard definition of creativity commonly accepted by creativity scholars and added, “the task is heuristic, rather than algorithmic” (p. 35). Algorithmic tasks have clearly identified goals while heuristic tasks require the individual to create their own path to an original answer. Amabile (1996) is explicit about what may seem obvious, that an original idea does not result from a previously described process. Her model of creativity considers the social and environmental factors as part of the creative process while
Runco (2006) personal theory of creativity, discussed below, regards social factors as having an influence on the process.

Kerry Freedman (2010) reconsidered the idea of creativity to support contemporary art education practice. She drew her description of creativity in art education from theory (Dewey, 1934) and research (Csikszentmihalyi, 1996; Nečka, Grohman, & Slabosz, 2006). She provided the following seven characteristics of creativity: (a) creativity depends on critical reflection; (b) creativity is based on interests; (c) creativity is a learning process; (d) creativity is functional; (e) creativity is a social activity; (f) creativity involves reproduction as well as production; and (g) creativity is a form of leadership. Three aspects of her recommendations for art educators relevant to my study included that creativity (a) is critical reflection (b) is based on interest, and (c) is a learning process. She cites John Dewey’s (1934) assertion that art making begins with a critique, a definition of a problem through critical analysis. In learner-directed classrooms, students may choose a problem to solve. Also based on the findings of Csikszentmihalyi’s (1996) study of creative individuals, she recommended giving students choices to support creative work. Freedman (2010) considered creativity as a learning process because motivated students create art as a process of learning about their interest. Inquiry-based learning and inquiry-based art education also support student motivation through personal interest (Lampert, 2006). Furthermore, students can increase their level of creativity (Nečka, Grohman, & Slabosz, 2006) through repeated reflective interactions with its process (Freedman, 2010). Freedman’s amalgam of creative theories for art education provides a framework through which to study students’ creative process in art class. The research cited by Freedman (2010) comes from a variety of fields and her definitions are supported by specific studies of creativity in art classrooms where students make choices based on their interests.
Stage models of creative process. An enduring model of the thinking process applied to the creative process is Graham Wallas’ (1926) model. Sawyer (2006) and Siegesmund (2009) delineate remarkably similar creative processes to the 1926 model. And more recently, Marshall (2010) used Wallas’ as a curricular foundation for a study of high school students using Art Practice as Inquiry. Wallas’ (1926) model serves a source for comparison to highlight similarities and differences in subsequent models reviewed in this section. See Appendix A for a table comparing creative thinking and processes models.

Wallas (1926) described thinking as occurring in four stages: preparation, incubation, illumination, and verification. In the first stage, preparation, ideas generate divergently and a problem is defined. During the incubation stage, the production of ideas ceases and critical analysis organizes the variety of ideas. In the illumination stage, a new idea emerges and might find manifestation in a design, scientific theory, product, artwork, novel, or music. In the last stage, verification, the idea is evaluated and further considered for possible modification.

Creativity scholar, Theresa Amabile’s (1996) model of the creative process follows a similar configuration to Wallas’ (1926) concept with explicit attention to environmental factors. Her first consideration is whether or not the task is initiated intrinsically or extrinsically. Then, as Wallas (1926) suggests, the preparation stage ensues where stores of knowledge activation are accessed. In the next step, response generation, possibilities are generated from memory and from environmental factors. Then, the responses are analyzed to test responses against possible outcomes. A final step, distinct from Wallas’, and similar to self-regulation as described in Bandura’s (1986) Social Learning Theory, Amabile (1996) considers the personal response the final product. If it is satisfactory, it is deemed successful. If not, it is considered a failure and the creative process begins again.
Art educator, Julia Marshall (2010) developed a framework for teaching creative thinking through inquiry in art class based on Wallas’ (1926) creative process model. She found her framework useful because it provided a guide for identifying specific aspects of theory in the artistic process. Marshall’s (2010) contributed to Wallas’ (1926) stages by adding specific applications to art making. In Wallas’ (1926) Preparation stage, Marshall (2010) adapted the theory by suggesting that the student name the problem, identify the essence of the problem, gather and collect information about the problem, and analyze information gathered. In the Incubation stage, Marshall (2010) suggested making connections, synthesizing, combining and framing ideas in new ways. For the Illumination stage, Marshall (2010) described as the creation stage where the ideas come together into a concrete form. Finally, in the Verification stage Marshall (2010) suggested extending and reflecting on the created product to elaborate the ideas further. She provided examples of two high school art students engaged in the creative problem solving process.

Art educator, Karen Heid (2008) employed Siegesmund’s (2000) Visual Cycle of (Artistic) Inquiry and Torrance and Safter’s (1999) creative thinking skills to frame her study of elementary art students’ creative process. Siegesmund’s (2009) conceptual framework is a cycle that repeats through perception, conception expression, and reflection. The model shares many of the same qualities as Wallas’ (1926) conception with some distinctions. Wallas’ (1926) and Siegesmund’s (2009) stages of the creative process are placed in a table in Appendix A for easy comparison. Firstly, Siegesmund (2009) elaborates that all senses are present in gathering ideas for art making during perception. Ideas are then conceptualized and elaborated through dialogue in the classroom. Then, students begin to work out concrete examples through expression in art
in ways that others will understand. Finally, Siegesmund (2009) considered that reflection occurred throughout the process rather than at the end.

Torrance and Safter (1999) described creative thinking skills in four levels: fluency, flexibility, originality, and elaboration. Heid (2008) used Siegesmund’s Visual Cycle of Creative Inquiry and Torrance and Safter’s description of creative thinking skills to describe how kindergarten and third-grade students developed creative thinking while making surrealist inspired art. Students exhibited fluency and flexibility in the perception stage as they generated many ideas and made connections between seemingly different concepts. They also demonstrated originality and elaboration in the conception stage when they illustrated their own ideas in their sketchbooks. Heid (2008) found that encouragement of fluency, or idea generation, in the initial stages of art making, helped students make meaningful connections to their own experiences, imagination, and fostered their creative thinking. Using creative skills that generated new perspectives stimulated the visual cycle of inquiry to begin again and loop.

**Criticism of Wallas’ (1926) Model.** Criticisms of Wallas’ (1926) model include that it implies that the artistic process occurs in a linear fashion and in discrete stages (Richardson & Walker 2011). The creative thinking processes are not considered linear as Wallas first proposed (Marshall, 2010; Steers, 2009); creative thinking progresses in a cyclical manner and doesn’t have particular entrance stage (Heid, 2008; Marshall 2010; Marshall & D’Adamo, 2011; Moseley et al., 2005; Richardson & Walker 2011). Sculptor Henry Moore described beginning the artistic process though the manipulation of media rather than a preparation stage; “I sometimes begin a drawing with no preconceived problem to solve…but as my mind takes in what is so produced, a point arrives where some idea becomes conscious and crystalizes, and then a control and ordering begin to take place” (Moore, 1985, p.72). The notion of discrete
stages is replaced with the notion of phases overlapping in their occurrence (Marshall, 2010). For example, ideas can arise at any time and applied to the process.

Kerry Freedman (2010), art educator, makes the point that conceptions of creativity are grounded in particular contexts requiring continuous modifications as changes in time and place occur. Bandrowski’s (1985) creativity model provides an example of entering the creative thinking process at a different phase other than Wallas’ (1926) initial preparation stage. Conceived for use in strategic planning, Bandrowski plans for a different sequence. In Bandrowski’s model, planning occurs after analysis and concludes with action. While the phases in the models are similar, the differences in their structure demonstrate that conceptions of the creative process are flexible depending on the context of their use.

**Non-stage models of creativity.** The limitation of Wallas’ model is the assumption that creativity occurs in a linear fashion and in stages, beginning with preparation for making something new. It does not consider that a person could move in and out of stages out of order. Brandowski’s model, which begins with analysis rather than preparation, identifies discrete phases to describe the process in an ordered formulation. Runco (2006) and Richardson and Walker (2011) offer two models of creativity that do not rely on specific stages.

**Runco’s (2006) theory of personal creativity.** Runco (2006) argues that creative things are made useful and aesthetically pleasing through reasoning. He asserted, “All creative performances depend on reasoning” (Runco, 2006, p. 99). He considered the possibility of looking at creativity as a kind of reasoning process rather than in stages. Similar to Bandura’s (1986) theory of self-regulation, Runco (2006) suggested that personal values could be added to a model of creative thinking to understand how values motivate creative behavior. Runco (2006) concluded that creativity involves some sort of reasoning but reasoning is not enough to explain
creativity and offered that the consideration of values in the creative process helps to understand creative behavior.

There is a distinction in the literature about the impact of the social environment on the art process. Runco (2006) made clear that his theory of personal creativity views culture as influential on the process rather than as part of the process as is Amabile’s (1996) conception of the role of the environment on process. The theory of personal creativity began as a reaction to ideas of creativity that over-emphasized social influences. Similar to the process-event discussed below, Runco (2006) argued that the emphasis on objects resulting from creative processes ignores significant processes of creativity.

**Process-event model.** In contrast to stage or phase models, Richardson and Walker (2011) conceive of the art process, as a process-event, a dynamic event influenced by relationships between people and things. Their conception is grounded in the philosophy of “becoming” by Gilles Deleuze. The process-event is active, in the present-time rather than evident through a reflection of the past. Richardson and Walker (2011) describe the process-event as a synthesis of forces that create the artwork and result from the artist’s and the artwork’s existence. In other words, the art process is the relationship of everything that influenced the creation of the artwork and influenced by the artwork. Thus, raising the question: When does the art process begin or end? Richardson and Walker (2011) studied the artistic process of two college-level art education student to examine the usefulness of their conception of the process-event. Richardson and Walker (2011) recognized that an artwork could be regarded as a conclusion of or interval within a learning/thinking process. Yet, they argue that this view may overlook the “the variable, subtle, intended, and unintended occurrences that took place” (p. 8).
They offer the process-event concept as a way to make examinable such subtleties (Richardson & Walker, 2011).

To clarify Richardson and Walker’s (2011) conception, it is useful to explicate the terms *process* and *event*. An event is the “multiplicity of relationships in constant flux at the intersection of thought and action” (Richardson & Walker, 2011, p. 9). When a person is engaged in the art process, there are a multitude of connections guiding thinking and doing. Process is the movement through relationships between thoughts, things, and people as they come into contact. The choices students make and others’ influence on thinking and doing are considered in the *process-event*. They argue that considering the creation of art as a process-event, the researcher can attend to subtle qualities in the process-event rather than simply occurrences at regular intervals. They encourage researchers to attend to these subtleties by framing artmaking experiences as shifts in attention from things that affect making such as materials and skills to focusing on the things that making affects such as the place, the artists, and new knowledge created. I address their recommendation in the Photo-Elicitation section in Chapter Three of this manuscript.

**Summary of Creative Thinking and Processes.** The definition of creativity is not universal; it varies by time and place. Creativity can be generally defined as a novel and appropriate idea or product within a particular context (Sawyer, 2006). It is a cultural and historical idea that changes from culture to culture and from century to century because its value as something novel is rooted in society (Sawyer, 2006). A definition of creativity that encompasses individual and contextual approaches is the “emergence of something novel and appropriate, from a person, group, or society” (Sawyer, 2006, p. 33). Amabile (2010) concurs;
creativity involves the development of an idea or product that is valuable to an individual or society.

Wallas’ (1926) thinking model set a foundation for stage models of creativity and is still a viable and useful framework in modified form (Marshall, 2011; Sawyer 2006). Slight adaptations to a distinct starting point and discrete stages were made artmaking contexts. Recently, a holistic conception was developed by Richardson and Walker (2011), which viewed artistic production as a presently active process, where the interaction of thought and action are influenced by people and things rather than through reflections on past events.

Appendix B provides an overview of definitions of creativity in chronological order from researchers in the field of creativity. It is clear that definitions of creativity share elements of Runco and Jaeger’s (2012) standard definition: *Creativity must be original and effective*. For some (Hutchinson, 1931; Stein, 1953) the definition requires a transformation in society as opposed to affecting solely the individual. And for others (Catell & Butcher, 1968; Heinhelt, 1974) the definition does not require applicability in the larger society. But all agree that creativity requires originality.

**Critical and Creative Thinking**

Thus far, I have reviewed the literature on critical thinking and creative thinking as separate concepts. Yet, in the following section I review conceptions from the field of psychology (Lipman, 2003; Paul & Elder, 2008; Runco, 2006), education (Anderson & Krathwohl, 2001), and art education (Hetland, Winner, Veenema, and Sheridan, 2007; Anderson & Milbrandt, 2005), which consider critical and creative thinking as functioning together.
Critical and Creative Thinking as Inseparable Elements of Thought

Paul and Elder (2008) described the construct of thinking as inseparable critical and creative achievements of thought. They considered that the thinking process is a creative process by arguing that new meanings are created through questioning, forming new concepts, and making new inferences. Lipman (2003) made the connection this way: “There is no critical thinking without a modicum of creative judgment. There is no creative thinking without a modicum of critical judgment” (p. 21). Critical and creative thinking depend on each other to make new things and reach reasoned conclusions. Runco (2006) argued that critical reasoning is what makes original works effective and considered the creative thinking as a type of reasoning process.

Bloom’s Taxonomy of Educational Objectives

In the field of general education, Anderson and Krathwohl (2001) supported critical and creative thinking as desirable educational behaviors in their recent update to Bloom’s (1956) Taxonomy of Educational Objectives. The taxonomy assumed that knowledge developed in a hierarchical fashion from simple to complex, concrete to abstract, and dependent to independent thinking. Evaluation was the highest level and required students to make critical judgments and develop criteria to justify judgments. Hamblen (1984) and Garoian (1988) used the taxonomy as a way to frame the types of thinking that students engage in while critiquing and looking at art.

In the 2001 revision of the taxonomy, creating is named as evidence of the most complex form of thinking because it requires learners to critically analyze and evaluate information, providing evidence of their synthesis through the production of something. Desirable learning behaviors include critical evaluation and creative thinking (Anderson & Krathwohl, 2001). Creating is defined as making a “new product by mentally reorganizing some elements or parts
into a pattern or structure that was not clearly present before” (Anderson & Krathwohl, 2001, p. 85). The definition is similar to individualistic definitions of creativity because it does not mention the criteria of effectiveness. However, Anderson and Krathwohl insist that the work pertain to the domain in which the student learns. Creating replaced evaluation as the optimal learning objective because evaluation is now made visible (Ritchhart & Perkins, 2008) through, for example, a piece of writing or an artwork. Scriven and Paul (1996) also used the words applying, analyzing, synthesizing, and/or evaluating to describe thinking but solely as part of a critical thinking framework. Paul’s later work with Elder (Paul & Elder, 2008) made the connection between both critical and creative thinking as inseparable elements of thought.

Table 1

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<th>Taxonomy of Educational Objectives</th>
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<td>1956 Bloom, 1956</td>
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<td>Evaluation</td>
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<td>2001 Anderson and Krathwohl, 2001</td>
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<td>Creating</td>
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The new Taxonomy of Educational Objectives also loosened the original rigidity of the hierarchical structure of desirable educational goals (Krathwohl, 2002). For example, the cognitive process, explaining in the category Understanding (Krathwohl, 2002), is more
cognitively complex that executing found in the “higher” category Applying see (Table 1, above). The blurring of the boundaries between classifications is similar to the loosening of rigid stages in creativity models. The original (1956) publication, behavioral objectives were expressed as nouns. In the updated version (2001), the authors used active verbs to describe desirable behaviors, which emphasize their assumption of learning as an active, construction of knowledge. Significant to the field of art education, Creating (Krathwohl, 2002) is considered the most cognitively complex learning behavior.

**Criticism of the Unified Concept of Thought at Critical and Creative**

Martindale (1995) argued that critical and creative thinking couldn’t happen concurrently because creative ideas are borne out of two independent ideas coming together. When deductive logic is occurring, creative processes are not possible because the structure of logic does not allow for two independent ideas to collide. When considering specific moments of thought, the argument holds. However, the artistic process occurs over time, allowing the thought processes to work together. Both types of thinking are evident within the process as provided in the *Studio Thinking Framework* discussed below.

Hamblen (1983) criticized the separation of the affective from the cognitive domain and the use of cognition to mean intellectual and logical thought rather than all knowledge modalities (Hamblen, 1984). Yet, she found the framework to be sufficiently useful for art education when she used Bloom’s Taxonomy as a way to frame the thinking skills developed as students engaged in art criticism (Hamblen, 1984). She also provided a set of questions for each domain of the taxonomy as a sample for art teachers to use with their students.
Studio Thinking Framework

In an effort to be explicit about the types of thinking and behaviors that students employ in art class, Hetland, Winner, Veenema, and Sheridan (2013) developed the Studio Thinking Framework, which provided a structure to describe the contexts and learning goals for students in high school studio classes. In their study, the research group set out to understand what and how excellent teachers teach and what students learn. They studied studio art classes where the arts were taken seriously, meaning that they “explicitly defined themselves as dedicated to the arts” (Hetland et al., 2007, p. 9). The two participating schools auditioned students, provided intensive art classes, and hired practicing artists as teachers. Researchers observed and analyzed five studio art classes to describe the how they functioned and goals for student learning. They used an iterative method to identify patterns in the interactions between teacher and students and the use of class time and space, which were termed studio structures, which were categorized as demonstration-lectures, students-at-work, and critiques. Then, they identified patterns in teachers’ personal concepts for intended student learning which were called studio habits of mind: (a) Develop craft, (b) engage and persist, (c) envision, (d) observe, (e) reflect, (f) stretch and explore, and (g) understand art world. The studio structures and the studio habits of mind make up the Studio Thinking Framework.

Hetland et al.’s (2007) study resulted in a framework to describe what they saw being taught in studio classroom; they believe that the dispositions are central to artistic thinking and behavior. While the studio thinking framework does not use the terms critical and creative thinking, it does describe the types of thinking that are critical and creative. For example, Ennis’ (2004) concept of critical thinking is “reflective thinking on deciding what to believe or do” is evident in the studio habit of mind termed Engage and Persist, which describes student
engagement in personal or social problems of relevance that develop “mental states that are conducive to working and persevering in art tasks” (p. 6). Working on personal art tasks require that the student reflect and decide what to do. The studio habit of mind Express described “creating works that convey an idea, feeling, or personal meaning” (p. 6). Hennessy and Amabile’s (2010) definition of creativity as the “development of a novel product, idea, or problem solution that is of value to the individual or larger social group” (p. 572) is resonated in the studio habit of mind Express because of its emphasis on value to the individual. Lastly, the studio thinking habit of mind Reflect described students’ reflective thinking about their art process. Students also judged their “work and their process in relation to standards of the field” (Hetland et al. 2007, p. 6), which resonates with Runco and Jaeger’s (2012) standard definition of creativity.

The Hetland et al.’s (2007) study focus on teachers’ objectives for his or her students. I take this into consideration in my methodology in Chapter Three, as I focus on description of students’ learning experiences, from his or her perspective. As Seidel et al. (2009) recommended in the Qualities of Quality report, learning experiences serve as one lens through which the quality of an art education can be examined.

**Learner-Directed Art Curricula**

Learner-directed curricula refer to approaches to teaching where students make choices in directing their own learning. Student choice in learning activities (Amabile, 1996; Runco, 2006; Brookhart, 2012) and play (Runco, 2007) foster creativity. When students get to choose, they are enthusiastic and more likely to engage in creative behavior (Runco, 2006). Amabile (1996) found that creativity increases when students are given choices about how to engage in an activity because the likelihood of intrinsic motivation and self-determination increase.
Furthermore, Piaget (1951) said that play was “as source of creative imagination” (p. 155).

Playing with ideas fosters creativity because original interpretations are constructed (Runco, 2006) through “experimentation, risk-taking, and invention” (Fahey, 2012, p viii).

**Roots of Learner-Directed Art Curricula**

Roots of students as agents in their education are evident in progressive schools. John and Evelyn Dewey (1915) described innovative schools of the early 20th century in *Schools of Tomorrow*. The schools share essential qualities seen in recent studies (Andrews, 2005, 2010; Burton, 2000; Jaquith, 2011; May, 2011; Milbrandt, Felts, Richards, & Abghari, 2004) that focus on student choices: play is educational, students have some freedom and exhibit their individuality in class, context matters, and students are active learners.

J. Dewey and E. Dewey (1915) discussed studies conducted in the kindergarten class of Columbia Teachers College. Researchers found that relating learning to children’s play curiosities was more likely to produce interest in problem solving and creating. The “schools of tomorrow” allowed students more freedom in class than their more authoritative contemporaries. Students could move about and talk with their peers, which assisted them in becoming members of society. Similar to socio-historical learning theory, the schools grounded learning in the community. The context determined each school’s approach to curriculum development. J. Dewey and E. Dewey (1915) emphasized *learning by doing* rather than the “passive education of imparting the learning of others” (p. 163).

Education focused on the interests of the child continued to find adherents in what Efland (1990) named the “expressionist” (p. 87) stream. Child-centered schools of the 1920’s and 30’s, rooted in progressive principles, held the child’s creative self-expression as their goal for school reform (Rugg & Schumaker, 1928). Students were considered to be artists, poets, and athletes
and were encouraged to use art materials, dance, and language to express their ideas. Like progressive schools, child-centered schools encouraged student initiative over teacher initiative and active, dialoguing students. They differed from progressives in their view of the community. For progressives, learning was situated in the community. Child-centered educators considered that community and adult influence restricted creativity.

The work of Florence Cane (1926) is considered an intense case of allowing students choice in art with little intervention from a teacher. She said, “Painting is play for [a student] and he is better off with almost no teaching” (p. 156). Franz Cziek in Vienna encouraged students to paint freely, didn’t insist on a particular technique, and offered no method of study (Smith, 1996). However, Efland (1990) notes that the work by Cziek’s pupils had a distinct style influenced by adult works.

Natalie Cole, Marion Richardson, and Victor D’Amico followed the creative self-expression advocates and encouraged students to use personal stories in their work (Efland, 1990). Cole and Richardson helped students create strong mental images, through stories and discussions, before making art. Cole engaged children in conversations so that they had something in mind so the artwork would flow (Efland, 1990). She did not use drawing examples to avoid influencing their personal creativity. Richardson told stories about her own life and encouraged students to do the same (Smith, 1996). Victor D’Amico (1942) emphasized art education experiences over the final product and the development of the child’s creative growth. His ideas were published in seven printings of Creative Teaching in Art.

Lowenfeld and Brittain (1987) promoted creative and mental growth of the child through art. Unlike Lowenfeld’s teacher Franz Cziek, he did not revere the child’s product, or the art
experience; he advocated the free expression of the child as necessary to healthy development. He also maintained that adult and society’s influence stifled children’s creativity (Eisner, 1972).

**Criticisms of Creative Development**

Critics of the child-centered movement viewed proponents as romanticizing the child leading to a lax environment, where anything goes (Burton, 2000). Catering to the needs of children led to anti-intellectualism, and permissivism led to irresponsible education (Eisner, 1972). Greer (1984) and Eisner (1972) deemphasized the child as a self-taught artist. Eisner (1972) contended that the free expression movement failed to prepare students with the skills they needed to be expressive with art materials. He proposed changing the view of creative self-expression as artistic behavior to the development of student skills over time. He argued that behavioral objectives rather than vague, unclear goals allowed for clear assessments to determine artistic growth (Eisner, 1972).

Greer (1984) introduced discipline-based art education (DBAE), which structured art curricula with four art disciplines: aesthetics, studio art, art history, and art criticism. He was influenced by the previous work of his contemporaries (Erickson, 1977; Feldman, 1967) who made connections between art education and the disciplines (Greer, 1984). His approach defined art education to encompass a broader field than solely art making that would produce “educated adults knowledgeable about art and its production and responsive to the aesthetic properties of works of art and other objects” (Greer, 1984, p. 212). Features of DBAE included: a written curriculum, focus on the four disciplines, systematic instruction, and attention to the outcomes of instruction. Greer’s (1984) position was that providing evidence of increased complexity through systematic instruction, school boards and administrators would view art as part of a general education rather than as a form of enjoyment. Opposed to the perceived laissez-faire
attitude of the creative self-expression proponents, DBAE held art education accountable for information, content, techniques, and products that served as evidence of increased student competency.

DBAE curricula considered student developmental levels and abilities, but not student interests or choices in learning material. It was criticized as a backlash to instruction that primarily focused on studio production for personal expression (Hamblen, 1988). Hamblen (1988) questioned the attitudes, values, and modes of thinking that DBAE implied. DBAE specified a curriculum independent of people and places that it served. Blandy and Congdon (1987) expressed concern about DBAE’s emphasis the European art and academic tradition and largely ignored multicultural viewpoints and women artists. Hamblen (1988) viewed the curriculum as limiting student independence and creativity therefore emphasizing conformity for the sake of easy accountability.

As the theory of DBAE met practice in the classrooms, modifications to the scope of its content, assessments, and outcomes satisfied some of the criticisms (Hamblen, 1997). Multicultural artists and teacher created curricula expanded the scope of DBAE content (Hamblen, 1997). Stronger links between art and other subject matters enhanced learning throughout general education. Early recommendations for objective pencil and paper tests gave way to qualitative forms of assessment as critics emphasized the limitations of such measures (Hamblen, 1988, 1997). Students’ choices and voices were once again evident in the portfolios of student work, sketchbooks, and journals used as authentic assessments of student open-ended responses and higher order thinking (Hamblen, 1997).
Explicit Versus Emergent Art Curriculum

Douglas and Jaquith (2009) provide a useful continuum to describe types of art curricula. On one side of the continuum (teacher-directed/explicit curriculum), the teacher assigns the themes of projects, provides students with specific materials to make art, and students have few opportunities to make choices about their work. On the other end of the continuum (a student-directed/emergent curriculum), students are expected to find and solve their own art problems, select content and media for their artwork, and have ownership of process, directions, and products. In between the two extremes, Douglas and Jaquith describe a modified curriculum that allows some choices to students: (a) teacher chooses content, student chooses media, (b) student chooses content, teacher chooses media, or (c) teacher is flexible with curriculum in response to student interests and needs.

Recent studies in art classes that encourage student choices use a variety of terms to describe the curricula and types of learning experiences: child-centered (Pitri, 2006), student-centered (Andrews, 2001, 2005, 2010; Burton, 2000), choice-based (Douglas & Jaquith, 2009), constructivist (Milbrandt, Felts, Richards, Abghari, 2004), socio-constructivist (Pitri, 2006), and decentralized (May, 2001). Situated, negotiated (Pitri, 2006), discovery (Perkins, 1999), and experiential (Marshall, 2010) learning are terms used to describe activities that encourage students to learn from their own experiences and each other.

I selected to use the term “learner-directed,” to describe the context I wish to study where students engage in self-selected artistic processes. I choose to use the term learner in favor of student because it actively describes a young artist who exercises autonomy and makes choices in learning rather than describing him or her as a pupil of a teacher. A student in high school is a “schoolboy, schoolgirl, an undergraduate” (“student,” 2011). Learner is a more active term than
student. A learner is one who “acquires skill, masters, assimilates, grasps, and becomes proficient” (“learner,” 2011). Throughout this text, I may use the word student and learner interchangeably to avoid redundancy. I prefer the term directed to centered because it implies active, movement rather a stationary finite point, as in a bull’s-eye. In Figure 1, I provide a comparison of my conceptions of the two terms. Student-centered is depicted as a bull’s-eye and the learner-directed icon is represented by a circle with grey arrows to indicate possible choices. The black arrow the direction the student chose to pursue.

![Figure 1: Comparison of learner-directed and student-centered.](image)

The current literature about learner-directed classrooms is reviewed and organized using Douglas and Jaquith’s (2009) categories: Students as Artists, The Role of the Teacher, Pedagogy, and Classroom Context.

**Students as artists.** Studies in learner-directed classrooms report that agency allowed students act as artists. Teachers assumed that students had something meaningful to express. Classes functioned in a decentralized (May, 2011) system that dispersed authority in decision
making from the teacher to students. Andrews (2010) gave students the freedom to choose themes that excited them rather than ones she assigned. By making choices, students became active participants in their learning rather than having the teacher tell them what to do. Jaquith (2011) and Pitri (2006) observed that students were empowered by controlling the direction of art learning. Douglas and Jaquith (2009) supported active learners by giving student choices about subject matter, materials, and approach to increase students’ intrinsic motivation to be creative.

Walker (2001) used the term big ideas to describe “themes, issues, or perhaps, questions that captivate the artist for a extended time periods, even years” (p. 7). Students watched videos of artists and their process to learn how artists work (Walker, 2004). Other educators (Gude, 2007; Milbrandt et al, 2004) gave specific prompts for students to exercise choice in response. Gude (2007) used deconstructivist art making activities in her Saturday Spiral Workshops to remind students that they were the creators of meaning of what they see in visual culture communications. For example, students collected commercial postcards and used them as inspiration to make Chicago tourist postcards based on their experiences with the city. In Milbrandt et al.’s (2004) study, high school students in Georgia were challenged to create their own lesson objectives and learning activities to become experts in a medium (collage, video, or printmaking) that they in turn taught to their peers. The students became class experts in a given medium and were able to help others as the school year progressed.

**Role of the teacher.** The teachers in the following studies functioned as facilitators of students’ choices in making art. Walker (2004) provided a conceptual framework for students to work within. Students selected a big idea elaborated through personal connections, knowledge, art problems, and boundaries. Walker (2004) provided the framework for students to work
within as artists. Walker (2004) May (2011) used the term “decentralized” (p.33) to describe the breakdown of the hierarchical relationship between teachers and students. The teacher was just one voice in the dialogue among all participants in class. Andrews (2001), a high school teacher and researcher, explained her role changed “from commander to facilitator” (p. 45). As practiced by participants in Milbrandt et al.’s (2004) study, Andrews (2001) taught a technique to a small group of interested students who became the experts and taught others so that she was not the center of authority. Jaquith (2011) described the teacher/facilitator as the one who creates a “structure that promotes independence” (p. 16) and opportunities for students to find success with their choices. Pitri (2006) likened the role of the teacher to a participant observer who carefully watches students to detect their needs and interests and considers how to modify his/her teaching practices to meet those needs. Teachers listen, wait, and anticipate students to access their support.

Teacher planning to support students’ choices and autonomy in art class demanded more time and attention than planning for assignments where the teacher decided what students made (Milbrandt et al., 2004). Activities were tailored to meet learner interests and needs. Burton (2000) recommended that teachers have familiarity with a variety of materials, techniques, and ideas to offer students as they moved forward with choices in their work. Eisner (2002) recognized that to make “educational gold” (p. 152) out of emerging activities in the classroom requires someone skilled in the art of teaching. The teacher plays a key role in bringing attention to qualities in student work (Eisner, 2002). May (2011) further cautioned that teachers must be willing to be slightly uncomfortable with the unpredictability of the evolving character decentralized curriculum. An emergent curriculum, as opposed to a prescriptive one, promotes genuine individuality and therefore requires constant revisiting (Eisner, 2002).
Pedagogy. Andrews (2001) and Burton (2000) used the terms student-centered and learner-centered to describe curricula that allowed students’ choices to distinguish their emphasis from historical child-centered views. Milbrandt et al. (2004) and Pitri (2006) cited constructivism as the theory underlying the pedagogical practices they studied. Despite the difference in emphasis, the pedagogy in these studies incorporated learner-directed approaches to art education.

Andrews’ (2001, 2005, 2010) students set their own goals and recorded their developing ideas throughout the process of making choices in their artworks. Teachers made tools easily accessible, made class activities flexible, negotiated with students, and acted as participants to support individualized learning (Milbrandt et al., 2004). Teachers used whole class demonstrations and small group instructions to assist in acquiring the skills necessary to express their choices in art (Jaquith, 2011). In a constructivist attitude, Jaquith (2011) encouraged students to make connections between previous experiences to new ones as they made decisions at the studio classroom art media centers. May (2011), working with a college online art-making course, encouraged students to continue to make thematic connections to the same subject matter, of their choice, throughout the course so that concepts were revisited, recreated, and reanalyzed.

Teachers used talk as a pedagogical tool in learner-directed courses. They encouraged learners’ dialogue with peers as mentors and collaborators to support student decision-making in class (Andrews, 2005; Gude, 2007, Milbrandt et al., 2004). Burton (2000) declared that dialogue serves students by promoting “self-reflection, tolerance for diversity, ability to listen, and learning from others” (p. 334). Andrews (2001) encouraged peer teaching so that students who wanted to work with ceramics, printmaking, and watercolors had access to experts. May (2011)
used dialogue as her primary teaching strategy due to the absence of face-to-face interaction in her online course. Students posted images of their self-selected artworks to the class discussion board for peer critiques.

Gude (2007) proposed that art learners “investigate, analyze, reflect, and represent” (p. 14) ideas through the choices they make within the curricular framework she called The Principles of Possibility. She suggested themes for students to think about and personally respond to. Playing with materials is a pedagogical strategy that Gude (2007) used to encourage students’ voice and choice in the art process. Activities such as making inkblots, smoke marks, and wax drippings aided students in becoming comfortable with unexpected, original outcomes, as they interacted with the process of making art.

Marshall and D’Adamo (2011) and Walker (2004) used writing as a pedagogical strategy for students to think about their process. Marshall and D’Adamo’s high school students documented their developing ideas in a series of works. Walker (2004) was interested in students understanding the art making process so they reflected on process decisions. A significant pedagogical strategy in Walker’s (2004) work was thinking about artists’ processes. Students watched videos of contemporary artists discuss their art making process. In Walker’s (2001, 2004) work and my own investigations, I’ve learned that she studied professional artists, Schön (1985) studied the art processes architects and graphic designers, Barkan (1962) studied processes of art professionals, and Getzel and Csikszentmihalyí’s (1976) seminal study examined studied college students in art school.

**Context and use of materials.** The contexts of learner-directed curricula vary broadly from elementary school (Douglas & Jaquith, 2009; Heid, 2008), to high school (Andrews, 2001, 2005, 2010), to an online university art class (May, 2011). In several contexts, students could
choose what materials to use (Andrews 2001, 2005, 2010; Gude, 2007; May, 2001). In the classroom, Douglas and Jaquith (2007) conveniently arranged art materials for students to exercise autonomy in gathering supplies for art making (Jaquith, 2011). In this way, students chose what they wanted to do in art class without the need to ask for permission. Douglas and Jaquith, (2009) constructed student work centers equipped with easy to follow how-to menus to make art. For example, a monoprint station provided necessary materials and easy to read directions (Douglas & Jaquith, 2009). Students chose their subject matter and what center they wanted to work on each day. Gude (2007) considered that materials and fabrication methods might be different based on how each student chooses to express his/her idea. In a bricolage assignment, Gude’s (2007) students made choices to create new meanings for found materials (e.g., African drums made from recycled pots and pans).

In Figure 2, I have created a model for use in understanding where a particular curriculum is positioned drawing from Douglas and Jaquith’s (2009) continuum of explicit versus emergent curricula (p. 12). Across the center is a horizontal line representing the continuum between explicit curricula and emergent curricula. A vertical line represents a continuum between student-choosing-contents/teacher-choosing-media and teacher-chooses-content/student-chooses-media. To illustrate how to use the model, I use Milbrandt et al.’s (2004) and Gude’s (2007) studies. The curriculum studied by Milbrandt et al. (2004) allowed students to set their own goals within the context of teacher-selected medium. Therefore, it is placed near the top center of the model because students had choices in subject matter but not media. On the bottom of the vertical line is Gude’s (2007) curriculum, because she provides a thematic prompt and students choose the media with which to respond. Douglas and Jaquith’s
(2009) curriculum is placed on the right of the circle is because students select both content and media.

The participants in this study were enrolled in a high school second year art class of grade levels 10-12. The curriculum is placed slightly higher on the circular model because the teacher required one assignment focused on experimenting with Ink Batik. All other assignments were students’ choice based on a self-selected theme or suggested assignments (described in Chapter Four, Teaching and Learning Structure). The selection of her class as the site for this study is discussed fully in Chapter Three.

\[\text{Figure 2: Explicit versus emergent curriculum (modified from Douglas & Jaquith, 2009).}\]
Summary and Conclusion

Critical thinking is informed decision making about what to believe or do (Ennis, 2004). Creativity is generally accepted as the creation of something new that is useful for some purpose (Runco, 2006). Anderson and Milbrandt (2005), Freedman and Stuhr (2004), Lipman (2003), and Paul and Elder (2008) consider that critical and creative thinking act in concert.

When students make choices they are more likely to be creative (Amabile, 1996; Brookhart, 2012; Runco 2006). Lampert (2006a) found that college students who took art scored higher on some critical thinking measures. Recent studies of classes that allow students to make choices in their art education vary in their contexts throughout K-16 education. Students in learner-directed art classes consistently make their own decisions about their work (Douglas & Jaquith, 2009; Walker 2004). They share the shift of authority from the teacher to student, engage students in dialogue, and provide a curricular and contextual framework to support students in exercising autonomy in their art education. Learner-directed art classrooms provide a rich opportunity to understand how students engage in critical and creative thinking (Jaquith & Hathaway, 2012).

The literature indicated that Walker (2001, 2004) studied professional artists and college students, Schön (1985) studied architects and graphic designers, Barkan (1962) studied art professionals, and Getzel and Csikszentmihalyi (1976) studied college art students. Marshall and D’Adamo (2011), Andrews (2001, 2005, 2010), and Milbrandt et al. (2004) presented their examinations high school students in student-centered learning environments. Hetland et al. (2013) studied what was taught by high school art school teachers to understand the dispositions that are central to artistic thinking. One purpose of this study is to fill a gap in the literature about high school student’s critical and creative thinking, as told from his or her own
perspective, in a context that is regarded as conducive to creative thinking.

Furthermore, following the recommendation of recent research (Efland, 2002; Marshall, 2010; Pitri, 2006; Seidel et al, 2009), I studied *particular* student experiences in art making. In Chapter Three, I describe the research methodology I used to examine critical and creative thinking of students making art in a learner-directed art class.
CHAPTER THREE
METHODOLOGY

The Research Question

The purpose of this study is to examine the experience of selected high school students’ critical and creative thinking while making art in a learner-directed art class. To provide a context and theoretical foundation for the study, the review of the literature examined Walker (2001, 2004) who studied professional artists and college students, Schön (1985) who studied architects and graphic designers, Barkan (1962) who studied art professionals, and Getzel and Csikszentmihalyi (1976) who studied college art students. In addition, Marshall and D’Adamo (2011), Andrews (2001, 2005, 2010), and Milbrandt et al. (2004) examined high school students in student-centered learning environments. Jaquith (2012) suggested that learner-directed classrooms provide rich opportunities to understand how students engage in critical and creative thinking. But review of the literature also indicated that there is a gap in understanding of how high school students engage in critical and creative thinking while making art in a learner-directed art classes from the student artist’s own perspective. Therefore, the following research question that guided this study focuses on filling that gap in the literature:

*How do selected high school students experience critical and creative thinking while making art in the context of a learner-directed art class?*

Research Foundation

Phenomenology

This study is methodologically grounded in phenomenology drawing particularly on the phenomenological methods of Van Manen (1990) and Giorgi (2012). As an art educator I found the work of Van Manen (1990) to be an appropriate foundation because of his approach’s
sensitivity to the experiences of learners. He viewed phenomenology as particularly useful for educators to become sensitive to the lived experience of children's “realities and life worlds” (p. 2). The statement resonated with me because it makes sense that understanding students learning experiences informs pedagogy. Van Manen (1990) maintained that, “The theoretical practice of phenomenological research is in the service of pedagogy” (Van Manen, 1990, p. 12). The primary purpose of my study is to understand the themes of critical and creative thinking as it is lived by high school students in a learner-directed art class. The extended intention is to inform the practice of teaching art.

In order guide my data collection methods and analysis, I also used drew from Giorgi’s (2012) similar phenomenological method, which combines Husserl’s (1970) original phenomenological method with a specific area of psychological interest, such as critical and creative thinking, to analyze the gathered descriptions of experience. Giorgi (2012) emphasized that the “phenomenological method is generic enough to be applied to any human or social science…. The only difference is that one assumes that attitude of the discipline within which one is working” (p. 11). Giorgi’s method allowed me to use what I learned in the review of the literature about critical and creative thinking to situate my findings within pre-figured themes and identify emergent themes.

**Foundation of Phenomenology**

When Husserl (1970) developed phenomenology in the early 20th century, he argued that it was necessary to understand the role of consciousness in scientific inquiry. He said that despite the goal of objectivism, the subjective was present as explained below. He argued that it was more scientifically rigorous to understand how we perceive phenomena than to ignore
subjective experience (Husserl, 1970). He described phenomenology through three key concepts: consciousness, phenomena, and intuition.

Husserl (1970) considered that consciousness presented objects to us in the normal everyday manner of awareness he called *intuition*. Real objects such as pencils, computers, and chairs are intuited through experience. Intuition is a broader term for everyday awareness and experiences are more narrow aspects of that intuition. For example, you are presently experiencing reading these words within the broader intuitions of your common daily life.

Giorgi (1997) defined a phenomenon as “the presence of any given” such as a table, a soda, or anger (p. 237). Husserl (1931) separated the *intentional* experience of a phenomenon into noema and noesis. That is, the intended object of perception (*what* one perceives) is also accompanied by *how* it is experienced (see *Figure 3*). Husserl (1931) was interested in separating the experience from the meanings that people attributed to things.

*Figure 3*: Phenomenal meaning and objective meaning.
Intentionality means that consciousness is always directed to an object. In phenomenology, the subject-object relationship is relational. Van Manen (1990) described it as “the inseparable connectedness of the human being to the world” (p. 181). The object of the intention can be specific (scissors), general (social justice), fictive (unicorn), or defined (circle) (Giorgi, 1997). When someone experiences something, there is an object of the experience. For example, when someone experiences anger they are intent on someone or something that is the object of their anger. Phenomenology is interested in the relationship between subject and object (represented by the arrows in Figure 3); how the phenomenon presents itself in the experience of the object.

**Criticisms of Husserl’s Method.** As the founder of phenomenology, Husserl (1970) set an agenda for the systematic examination of lived experience. His broadly described ideal method of bracketing, which calls for the suspension of bias, has been criticized and modified for practice by philosophers (Heidegger, 1996; Merleau-Ponty, 1962) and qualitative researchers (Giorgi, 2012; Moustakas, 1994; Van Manen, 1990). Husserl’s student, Heidegger, questioned whether suspending our assumptions was at all possible and whether or not knowledge could be constructed outside an interpretation (Heidegger & Stambaugh, 1996). Merleau-Ponty (1962) rejected a disconnected reading of phenomenological data and instead dedicated himself to initially ignoring theories and research presuppositions in order to reveal lived experiences. Van Manen (1990) recommended making understandings, beliefs, biases, assumptions, presuppositions explicit in order to identify what to set aside during initial stages of analysis. He suggested that a researcher might do well to write down experiences with the phenomenon under investigation and try a phenomenological description herself (Van Manen, 1990; see Appendix C). Eisner (1998) considered experience with the phenomenon under investigation an asset. He
considered the ability to make fine-grained discrimination based on understanding and presuppositions of complex and subtle qualities *connoisseurship* (Eisner, 1998). I apply Van Manen’s (1990) suggestions and provide a description of my experiences guiding students through a thematic, learner-directed art program and a personal phenomenological reflection on the process of making a drawing in Appendix C.

**Research Design**

In this phenomenologically grounded study, I examined the experience of selected students’ artistic process in a learner-directed art curriculum in a high school in North Florida in order to understand how they engage in critical and creative thinking while making art. Methodologically the study draws on ethnography (K. DeWalt & B. DeWalt, 2002) and visual methods (Clark 1999; Clark-Ibáñez, 2007; Guillemin & Drew, 2010; Harper, 2002). Ethnographic methods provide the framework for data collection including observation of participants in their regular everyday setting, informal interviews, focus groups, and included a photo-elicitation interview using students’ own words to describe and interpret the students’ experiences thinking and doing while making art.

Data collection included observations with informal interviews (Bogdan & Biklen, 2007; K. DeWalt & B. DeWalt, 2002), formal photo-elicitation interviews (Clark 1999; Clark-Ibáñez, 2007; Guillemin & Drew, 2010; Harper, 2002), a focus group (Bogdan & Biklen, 2007; Creswell, 2013; Savin-Baden & Major, 2013), and member checks (Patton, 2002; Savin-Baden & Major, 2013). The multiple sources of data provided triangulation (Miles et al., 2014; Patton, 2002) and structural corroboration (Eisner, 1998) of findings. Findings are reported in a narrative style (Savin-Baden & Major, 2013) as portraits of participants (Lawrence-Lightfoot & Hoffman Davis, 1997) that acknowledge me as the researcher but highlight the perspective of the student.
participants to detail findings of experiences. I conducted a phenomenological analysis (Giorgi, 2012) of the data and supported my interpretation with students’ own words through prefigured themes and emergent themes.

**Selection of Participants**

The study took place at a charter school in southeastern United States. The enrollment of the school intentionally mirrors the average population of schools in Florida for the purposes of generalizing pilot test findings as appropriate. During my doctoral coursework, I conducted an initial qualitative pilot study, in the art class I eventually used to conduct this study, to understand students’ general experiences in taking art. At that time, I used short phenomenologically based interviews (Seidman, 2006) to talk with students. As a result of that study, I became more specifically interested in the students learning experiences in art, and in particular their critical and creative decision making. It became apparent to me that for a number of reasons, including the fact that this was a learner-driven program, that this was an appropriate venue for the doctoral study. So the sample of students in this study is a convenience sample because, from my pilot study, I was already familiar with the school administration, teacher, and students. More importantly, in my pilot study, students expressed the appreciation for the autonomy extended by their teacher so I was eager and curious to understand how these students experienced artmaking in this learning context. The 30 participants were second-year art students aged 14 to 18.

I used what I learned in my pilot study about students’ regular engagement with art making to select a *purposive sample* of participants (Patton, 2002). Based on suggestions by Stake (2008) and Patton (2002), I assumed that the *purposive sample* of students regularly engaged in artmaking would maximize what I would learn about their experience making art.
In my pilot study, I found that students worked with self-selected themes based on what they were interested in learning about. In this case, I was interested in second year art students’ thinking (critically and creatively) through the art making process in a learner-directed art class. Patton (2002) supported using “an information rich case that manifests the phenomenon of interest intensely” (p. 234) as opposed to extreme, out of the ordinary cases. From my pilot study I learned that the second year students exhibited the phenomenon of engagement in the art process intensely because they engage, daily, in self-directed art projects within a learner-directed curriculum. They do not represent extreme cases such as gifted or talented art students in a magnet art program.

**Informed Consent**

The Institutional Review Board (IRB) of Florida State University approved my study as having demonstrated appropriate ethical considerations of human subjects. The approval letter is provided in Appendix E. The committee also approved the parent permission forms and student assent forms (also in Appendix E). I defined assent for students on their form so that agreement to participate was clear. The informed consent advised students that they did not have to participate and that would be fine. I informed them that even if their parents consented they could dissent and that they could change their minds at any time. When I introduced my study to students we discussed potential harm, student rights to discontinue participation at any time, and their right not to participate at all. I clarified their questions and then I gave each student a consent and assent form. It took about one week to receive all forms signed from students and parents.
Data Collection

Data collection included observations with informal interviews (Bogdan & Biklen, 2007; K. Dewalt & B. Dewalt, 2002), formal photo-elicitation interviews (Clark 1999; Clark-Ibáñez, 2007; Guillemin & Drew, 2010; Harper, 2002), a focus group (Bogdan & Biklen, 2007; Creswell, 2013; Savin-Baden & Major, 2013), and member checks (Patton, 2002; Savin-Baden & Major, 2013). The multiple sources of data provided that I could review the findings from different perspectives to provide triangulation (Miles et al., 2014; Patton, 2002) and structural corroboration of findings (Eisner, 1998).

Observations

I began this research as an observer using the lens of my research question to focus on students’ artistic processes and to ask what they were thinking and doing (Bogdan & Biklen, 2007; K. Dewalt & B. Dewalt, 2002). I took part in the daily routines, activities, and events in the classroom from mid-March 2013 through the end of the school year at the end of May 2013. When a student completed two detailed drawings in my absence early on in the study, I subsequently felt the need to be present nearly daily to keep up with students’ processes and did that for the rest of the observational time. On an almost daily basis, I took detailed notes about my observations regarding students’ artistic processes and context of the study including the happenings of the school (when pertinent to artistic processes), the classroom setting, and the teachers’ instruction. I used what Eisner (1998) might call educational connoisseurship as I attended to qualities in students’ engagement with materials, their environment, and interactions with other. My nearly daily attendance allowed me to observe the choices students made about their artwork, who they talked to, and what they did in class. I informally talked with students about their process and inquired about their decision-making.
Pink (2007) described that walking around a setting allows the researcher to engage all of their senses in understanding. Being present in the class on a daily basis allowed me to walk around and experience the context of the art classroom and to have my senses engaged in this place, with these students. I relied on the method of walking around the classroom, developed from my teaching practice, to observe students for clues about their progress. Using my research question as a lens, I looked for cues in body language, use of materials, and what students said to other classmates, to develop my field notes of their experience. I asked questions as they worked to better understand what they were thinking and doing.

In order for this study to be useful, a detailed description of the context is provided in Chapter Four so that readers can make sense of how it might apply to other contexts (Eisner, 1998). The field notes provided the basis for the description of the setting, teaching and learning structure, activities in which participants engaged, which structurally corroborated (Eisner, 1998) with interview data. Through participation in the setting, I attended to contextual descriptions, the time and space that students’ worked within, and the interactions they have with each other and the teacher. The daily observations helped me to write a “detailed description of the participant’s experience and action” (Giorgi, 1997, p. 245) provided in Chapter Four.

Photography. A photograph “is a record of a brief moment in time” (Goldstein, 2007, p. 70). I used photography throughout the data collection process to help document my observations, the student artwork, and the context in which these students worked. The images created a rich visual data set for me to use as a resource to remind me of particular instances as I wrote my field notes and analysis. The images served as an observational tool to remember particular instances in students’ art process for documentation of field notes, interviews, and analysis. Photos helped me to develop rich, detailed field notes to make my observations explicit.
by describing the daily occurrences in the context of where experience the phenomenon of interest occurs (Spencer, 2011).

**Image File Management System.** Photographing on a daily basis required that I develop an image file management system in order to make pictures available for analysis. I wanted to be able to search images by participant and date and had to ensure that my computer’s Random Access Memory (RAM) functioned within its capacity given the large files. I used a Canon 7D Single Lens Reflex digital camera for my observations and I provided small Canon Power Shot point-and-shoot cameras in the class for students to photograph their work. The SLR used a Compact Flash (CF) memory card and the point-and-shoots used secure-digital (SD) cards to store images. After photographing daily, I imported the files into folders, titled by date, onto my computer. The files from the SLR were approximately five megabytes each, so I used Photoshop to reduce the file sizes to about 500 kilobytes, a more manageable file size for the RAM on my computer. I created a separate folder for smaller images, which were inserted my word processing software or qualitative data analysis software. I re-named the files with the letters assigned to each student (to maintain their anonymity) and the date. This way, I could easily search my computer for images by student or by date. Furthermore, NVivo, the qualitative data software that I used to organize my data, sorted the file names by student then date, so I could easily locate and search for images.

**Artwork.** In this study, artworks served as objects that provide evidence about students’ decisions and processes and can be pointed to as a way to engage students in conversations (Perkins, 2007) about critical and creative thinking about making art. I documented my observations of students’ art making processes using photographs. Additionally, participants volunteered at intervals following my instructions to photograph their work to use to guide
photo-elicitation interviews. Sometimes, as they worked, I asked students to describe the ideas and themes of their work as well as to describe processes they were engaged in (e.g. what led them to a particular moment in the process, problems they encountered, what they expected to do next, and the choices they made). Husserl (1931) held that consciousness is intentionally directed at an object. In this study, I was interested in understanding how students engage in critical thinking and creativity as they are intent on the object, or work of art they make. The structure of critical and creative thinking as students related to his or her intentional object is what I was aiming to describe.

Interviews

**Informal Interviews.** As an observer, I talked informally with students about the choices they made. Informally interviewing students while they work provided a quick validity check of my observational data (Anfara, Brown, & Mangione, 2002). Talking with students allowed them to explain what they were thinking about as they worked. Richardson and Walker (2011) suggested that conventional notions of time limit how the art process can be understood. Time can certainly help to account for the chronological progress of an artwork; as a way to document how it develops. But, they add that experience repeats itself through “reflective (recalling the past) and anticipatory (predicting the future) thoughts” (Richardson & Walker, 2011, p. 10). Talking with students as they work helped to bring about an understanding of how they thought about their present moment in the artwork and where they expected to go next. The informal interviews were brief so as not to disturb their process with too much talk.

**Photo-Elicitation Interviews.** Phenomenological research is derived from first-person reports of life experiences (Moustakas, 1994), which have a temporal structure and are difficult to grasp in immediate manifestations and are more fully grasped in a past presence (Van Manen,
In order to assist students in reflecting on their experience making in art, I employed a photo-elicitation interview method. Volunteering participants created an image-based account of their experience, which was used to guide an interview (Guillemin & Drew, 2010). In short, they were instructed to photograph their artwork as it progressed. In addition to providing phenomenological evidence or processes it aided students in remembering their decisions and method also built rapport with participants as they showed me their developing artworks.

Harper (2002) described photo-elicitation as “the simple idea of inserting a photograph into a research interview” (p. 13). The images may be readily available, generated by the researcher or by the participant (Guillemin & Drew, 2010). Images in interviews yield rich, detailed and focused data that is difficult to attain in words-only interviews (Clark-Ibáñez, 2007; Collier & Collier, 1986; Guillemin & Drew, 2010; Harper 2002; Spencer, 2011). I encouraged an auto-driven, photo-elicitation interview (Clark, 1999; Samuels, 2007) to emphasize the participating students’ roles in generating data for the research. It was important a student took photographs at intervals that he or she considered appropriate to explain the process so that the interview would provide a description of what he or she deemed to be significant. Furthermore, the method allowed students to share what they were comfortable sharing rather than solely reacting to my inquiry (Clark, 1999). The simple prompt given to students for this process is provided in Appendix F.

Early use of photographs to elicit responses from participants in research is found in the work of anthropologist, Collier (1957). He found that using photos increased understanding in the communication between researcher and participant and noted particularly the quality of informants’ memory recall of his or her life. Interviews with images produced data that were more structured and precise than those without images, which could ramble and lack
organization. In time, J. Collier and M. Collier (1986) developed their methods in *Visual Anthropology*. They claimed that photographs serve not only as observational tools; they have the ability to elicit knowledge beyond what is contained in the photo. Photos can serve as a starting point for conversations between researcher and participants because both parties can read what is seen in the photo and the participants can elaborate beyond what is captured in the photo. Photos provided a refocusing tool to bring the conversation back to particular moments in critical and creative thinking process of making art.

The work of Kuhn (2010) and Harper (2002) offered insight as to why photos focus interviews. Kuhn (2010) described memory as a performance; a recall that negotiates personal, private, and public expression. Interviewees consider and select what they are comfortable sharing with the interviewer. Images trigger a flash of memory in a way that is different than words only interviews (Harper, 2002). Photographs aided the recall of past experiences in a focused manner because there is an instance in time captured in the photo, which is referenced in the interview. Images assisted the participants in returning to memories because it was easy to visualize moments in the experience rather than relying on memory recall alone (Harper, 2002).

An added benefit of using auto-driven, photos elicitation with students is to limit the power relationship between researcher and child participant (Clark, 1999). Cindy Clark (1999) suggested that using visual methods to collect data in interviews provide that young participants tell their stories using their own words and at their own pace (Kuhn, 2010). This was particularly useful with high school students because in word only interviews the adult researcher is more versed, experienced, and able to use words than the younger less experienced participant (Clark, 1999). Furthermore, Schwartz (1989) offered that interviewees recognize things in photos that are not immediately apparent to the researcher. So, including images in
interviews allows participants to share experiences from their perspective using their own words rather than having me, the researcher, lead the interview with questions.

Clark Ibáñez (2007) using an auto-driven, photo-elicitation method to research the everyday lives of immigrant children, found that the method gave children agency in sharing their experiences. While she found studies of children in relation to other topics, youngsters’ own lived experiences were rarely addressed. She gave one class of Los Angeles elementary school children disposable cameras and asked them to photograph whatever they found to be important. She introduced their photos in interview students and asked them to tell her about the images they took. The children were active and expressive of their own experiences during interviews. She also found that using photo-elicitation was crucial to accessing perspectives and worldviews that would not have been accessible through using traditional words-only interviews, where the researcher asked predetermined questions. Clark-Ibáñez (2007) asserted that this “type of fieldwork yields richer data” (p. 194) than words-only interviews. Spencer (2011) found that interviews using a family photo album yielded vivid narratives that traditional interviewing would not provide. Participants described specific memories associated with the time periods and places using the photos to trigger their memory.

Giving students the power to make their own images respected their autonomy and agency (Clark-Ibáñez, 2007). I wanted to place the emphasize students’ perspective of experience by using the auto-driven method. When the researcher takes the photos, it is likely that essential aspects of the participants’ perspective are not captured. The opposite is true for participant-generated photos. Finally, asking students to tell their stories through the photo-elicitation interview provided that they use language that they were comfortable using and put
them in the position of teacher by explaining to me how they progressed in art making. This way there was no right or wrong answer. Students guided the interview using the images they made.

After approximately two weeks of becoming acquainted with students’ most recent works and the teaching and learning structures of the class, I asked for volunteers to photograph their artwork throughout their art making process. I provided Canon Power Shot point-and-shoot digital cameras; students generated their own images of their process periodically and we later use the images in an interview. I placed the cameras on student work desks so that they could photograph at intervals they felt would best describe their artistic process during the interview (Clark-Ibañez, 2007).

I was sensitive to student preferences in the methods by which they were most comfortable photographing their work for the photo-elicitation interviews, which encouraged their participation in the interviews. However, most students did not use the cameras that I offered. Four (CA, WR, JD, JC) students preferred using their own cameras; two students, started using the easily accessible cameras on their phones. When I asked one student “why?” She said she was afraid to break my camera and another said her own camera was better. But negotiating the execution of the research strategy supported students preferred methods of involvement, encouraged their participation, and yielded good photo series that were used in subsequent interviews.

Four students preferred a directed photography method (Banks, 2001), whereby they told me what to photograph. For example, CL periodically walked over to me and asked, “You want to take a photo of it now?” Rather than discourage her participation by insisting she take photos my way, especially since she made active decision to stop and share her work at that particular moment, I took the photo, smiled and thanked her. Similarly, other students made their work
available way by waving me over to their workspace and offering, “You can take a photo of it now.”

After considering the change of my initial plan in practice, I negotiated another strategy. To engage students in the photographing process, I offered my digital single lens reflex (DSLR) camera to students when they were ready for a photograph. This way, they framed the images of their work in the way they wanted, in addition to taking the photo when they were ready. I assured students that they need not worry about “breaking” the camera so long they wore the strap around their neck. With the assurance, the DSLR camera became a camera of choice for students to use. The negotiation yielded 10 series of photographs that were subsequently used in photo-elicitation interviews.

**Executing the Interviews.** The photographed images of the student artwork were printed on four-by-six inch paper. I asked participants to sequence the photos with numbers or letters to guide the interview and so I could match the images to the transcript later. I asked students to choose a comfortable place to talk about their photos, which, in most cases, was the adjacent gallery. The gallery was quieter and less crowded than the classroom yet within sight of class activities so students could speak without being overheard and still remain within the comfort of their class. Two interviews took place in the classroom at student desks. First, I asked the interviewee to look over the photos to familiarize him or herself with the group of images and then add numbers or letters with a permanent marker or pen. I asked the student to stack them back up and talk with me about what they were thinking and doing throughout the process as they looked at each picture. Gathering data about their thoughts and action in their own words was critical in order to review the transcript later through the lens of my research question. As the study progressed, I found that the less I interjected, the more thoroughly
students discussed their process. If I had questions, I wrote them down and asked after they were finished in a portion of the interview where I asked for more details.

In recognition of the often-overlooked nuances of thought and action in the intervals between significant moments in the artistic process (Richardson & Walker, 2011), I attended to the intervals between photos by asking students to discuss the photos one at a time. Richardson and Walker (2011) suggested that what happens in between intervals are often left out of consideration in the artistic process although they are “viewed as significant but unaccountable or unimportant or irrelevant” (p. 10). So, while the interviews began with reviewing the images, I asked students to talk about each image. Looking at the photos one-at-a-time or two or three-at-a-time, allowed them to see the nuances of changes in the photos and discuss the choices they made as the work progressed. The technique helped to slow down the account of their art making process to gather the “variable, subtle, intended, and unintended occurrences that took place” (Richardson & Walker, 2011, p. 8) about the intervals and in between the chronology of the photos. In some cases, I sought to gather the subtleties when I asked, “What happened after Photo X that led to what is captured in Photo Y?” Furthermore, the informal interviews that I conducted as a participant observer provided me with details to remind students about what I saw as they worked and provided a validity check of my observation.

I audio recorded each interview and transcribed the text after each meeting. I used NVivo, a qualitative data analysis software, to playback the audio and type the text, then, using a word processing application, I added the photographs within the text at the moments when images were discussed. The text was divided into meaning units of the experience for phenomenological analysis (see Analysis below). A sample of a transcript is provided in Appendix G.
NVivo further served as a tool to highlight sections of students’ interviews and code themes from the literature and emergent themes. I read the interviews multiple times throughout the study, highlighting students’ words to conduct a phenomenological analysis to uncover the structure of critical and creative thinking in the art making process of selected high school students in a learner-directed class. Memos documented my developing imaginative variation of fine-tuning the patterns into themes of experience. The themes are elaborated fully in Chapter Five of this text and the coding and thematic structure is provided in Appendix H.

**Member Checks**

I conducted member checks (Lincoln & Guba, 1985; Miles et al., 2014; Patton, 2002) with participants to verify that I had transcribed the interview accurately, made appropriate interpretations, and offered proper explanations, which fostered a relationship of respect with participants (Savin-Baden & Major, 2012). It was an essential strategy to verify my data and interpretation with participants as well as to demonstrate to students that I was interested in understanding their perspective through their participation. I gave a copy of the transcript, with the photos from the interview inserted into the text, to each participant to read and make corrections, clarifications, or additions. Preliminary drafts of the portraits provided in Chapter Four were also member-checked by participants.

**Focus Group**

**Themes.** I conducted an interactive focus group interview of 10 students at the end of my time in the field to inquire about patterns that were clustering around themes that I wanted to know more about (Savin-Baden & Major, 2013). I facilitated the meeting with discussions about prefigured themes such as generating ideas, peer influence, defining “good” art, facing
challenges, and foundational skills in art. I also asked about the emergent themes *artistic multiprocessing and transitions*.

**Contact Sheets.** In preparation for the focus group, I created an index, or *contact sheet*, of 20 images per page, for each student of the images we both created throughout my time in the field (see sample in Appendix H). The contact sheets served to remind students of the works completed during the study as well as to help me better understand the emergent themes *Artistic multiprocessing* and *transitions*. I presented each student his or her contact sheet at the focus group meeting. I asked each student to divide the contact sheet into sections by artwork. That is, they made lines between different artworks. Then, I asked them to cite why they *transitioned* from one artwork to the next to define the reasons that they *multiprocessed*. The focus group meeting was recorded on an audio-recorder. I transcribed the interview for analysis.

**Phenomenological Analysis**

Phenomenological analysis is composed of three main activities: phenomenological reduction, description, and search for themes (Giorgi, 2012; Van Manen, 1990). Phenomenological reduction is described as an *attitude* that the researcher maintains to initially set aside assumptions about the phenomenon. I selected Giorgi’s (2012) method because it allows the researcher to additionally hold a perspective in a discipline (in this study I approach from a pedagogical art education perspective) and sensitivity to the phenomenon under investigation, which in this case is art making.

I personally transcribed each photo-interview and added the photographs within the text. Moustakas (1994) warned of the difficulty, and sometimes impossibility, in achieving a ‘pure’ bracketing technique. Therefore, I used his and Van Manen’s (1990) methodological suggestion to conduct a quiet, concentrated, solitary, intense reading of the description of the experience as
given in the interview. The aloneness of the reading allowed me to fully concentrate on what was before me and nothing else (Moustakas, 1994). As a scholar, art educator, and artist, I have experience teaching, learning about, and making art. Eisner (1998) considers my experience as an asset because it equips me with the ability to make “fine-grained discriminations among complex and subtle qualities” (p. 63). Therefore, I did not engage in a strict Husserlian (1970), “pure” (p. 577) phenomenological bracketing technique. However, I did follow Van Manen’s (1990) and Moustakas’ (1994) suggested method to allow participants’ voices to take lead in the preliminary analysis. Positioning students words as primary data was an explicit intent of this research investigation.

After the initial holistic reading, I divided the text into sections of experience. That is, I sectioned off passages when the text moved from one phase of the experience to another (Giorgi, 2012; Moustakas, 1994; Van Manen, 1990). When there was a change from one part of an experience to a next part of an experience, I marked the transition in the text. In other words, I segmented of the process of thinking and doing while making art. Giorgi (2012) named this process “constituting parts” (p. 5). The units were constituted by my “attitude and activity as the researcher” (Giorgi, 1997, p. 246), or as Van Manen (1990) described it, I made the segments based on my “orientation toward the phenomenon” (p. 38) as maker of art myself. This was significant because I made the decision of where to divide the experience rather than the participant. At this point in the analysis, I named the units using words of the participants, or in vivo codes (Miles et al., 2014; Saldaña, 2013). Then, I grouped the units into themes found in the literature (Giorgi, 2012). Units that did not fall within prefigured themes from the relevant literature were coded as emergent themes. A sample of a coded transcript is available in Appendix G.
The next activity is to describe experiences. At this point professional orientation toward the phenomenon under investigation may emerge, while purposely staying true to participants’ expressions of experience. After the phenomenological reduction, the “researcher transforms the data,” (Giorgi, 2012, p. 5) into expressions that are more revelatory of the pedagogical (Van Manen, 1990) importance of the experience. The purpose of the description is to articulate how the participant expressed the presence of the phenomenon. Chapter Four provides the detailed descriptions of experiences as portraits of each participant.

Next is the search the themes (1990) or the invariant structures of the experience (Giorgi, 1997). The aim here is to communicate the themes that make up the experience “without which a phenomenon could not present itself as it is” (Giorgi, 1997, p. 242). The analytic process begins with a detailed examination of each case but them moves on to similarities and differences between descriptions of participants to present accounts of patterns and themes for participants’ shared experiences (Smith, Flowers, & Larkin, 2009). The themes that make up the experience of critical and creative thinking while making art of selected high school students and the discussion of its relevance to the literature is provided in Chapter Five.

**Reporting the Data**

I wrote my description, analyses, and interpretations in a narrative style because I am the primary instrument through which data was analyzed (Richardson, 2005) and my aim was to be honest in my perceptions and clear to readers of the study (Anderson, 2000). Patton (2002) recommended reflexivity, engaging in an ongoing consideration of what I know and how I know it, as a way to be self-aware of my own perspective. I recorded my developing thoughts through memos, which catalogued my thinking. Through these notes, I made connections between events in my findings and established themes and refined emergent themes evolving from
engagement with the data (Eisner, 1998). My goal is to tell a ‘true’ story of the participants (Anderson, 2000). In recognition of Richardson (2005) and Van Manen (1990) my writing and research practice are inextricably intertwined. As Van Manen (1990) put it, “Research and writing are aspects on one process” (p. 7).

Findings of the study are provided in Chapter Four as detailed portraits of the artistic process of ten high school art students in a learner-directed class. The narrative portraits rely on verbal, textual, and visual data and aim to provide a detailed experience of each participant. In each portrait I provide my observations and informal interviews with students with whom I shared time in their class. I also provide findings from each volunteering participants’ photo-elicitation interview, detailing their experience making art.

The method to provide the findings drew on Lawrence-Lightfoot and Davis’ (1997) description of social science portraiture:

Portrartists seek to record and interpret the perspectives and experiences of the people they are studying, documenting, their voices and their visions, their authority, knowledge, and wisdom. The drawing of the portrait is placed in social and cultural context and shaped through dialogue between the portraitist and the subject each one negotiating the discourse and shaping the evolving image. (p. xv)

The method calls for a clear description of the context in which the participants experience the phenomena under investigation and a descriptive picture of the experience. Portraiture as a method is framed by the “traditions and values of the phenomenological paradigm, sharing many of the techniques, standards, and goals of ethnography” (Lawrence-Lightfoot & Hoffman Davis, 1997, p. 13). The method aims to provide authenticity to the study by portraying the participants’ experiences expressively and honestly but also explicitly recognizes the researcher as the
primary instrument for recording and interpreting the experiences of the participants. As described below, I used two member checks to negotiate the portrayal of participants in the portraits presented in Chapter Four. These data were analyzed for phenomenological themes, which are presented in Chapter Five.

Credibility and Authenticity

Strategies to build the credibility of my study included triangulation of multiple data sources (Patton, 2002) and of data gathering strategies, member checking (Lincoln & Guba, 1985; Miles et al., 2014), and keeping an audit trail of my analysis through memos (Rossman & Rallis, 2012; Savin-Baden & Major, 2013). Findings that were evident in multiple data sources and strategies (such as observations, interviews and focus group) provide triangulation (Miles et al., 2014; Patton, 2002) and structural corroboration (Eisner, 1998). Member checks supported agreement between the participant about the data collected and its interpretation (Guba & Lincoln, 1985; Miles et al., 2014). I kept analytic (thematic, methodological, and theoretical) memos (Rossman & Rallis, 2012) throughout the data collection and analysis process to reflect my developing analysis throughout the study. These almost daily memos were written in a narrative style (Richardson, 2005; Van Manen, 1990) and provided an audit trail of my developing methods, themes, and connections to theory. An example is provided in Appendix D.

Summary & Structure of Chapters 4 and 5

This study was grounded philosophically and methodologically in phenomenology (Giorgi, 2012; Van Manen, 1990). Strategies included traditional ethnographic methods of observation and informal interviews (Bogdan & Biklen, 2007; K. DeWalt & B. DeWalt, 2002; Patton, 2002) to provide a contextual description of the setting and orient me to the thinking and doing of participants making art. I employed a photo-elicitation interview method (Clark 1999;
Clark-Ibáñez, 2007; Guillemin & Drew, 2010; Harper, 2002) to gather detailed descriptions of students’ experiences. A member check (Patton, 2002; Savin-Baden & Major, 2013) after the interview confirmed agreement between researcher and participant of the content of the interviews, and participants had the opportunity to correct, clarify, or add to the interview transcript. I held a focus group interview (Bogdan & Biklen, 2007; Creswell, 2013; Savin-Baden & Major, 2013) to explore the respondents’ group views on developing themes of experience with critical and creative thinking themes in their artmaking process. Focus groups and member checks (Patton, 2002; Savin-Baden & Major, 2013) built rapport with participants and, importantly, helped to establish agreement between researcher and participants in the study’s findings and interpretation. The multiple data sources provided structural corroboration (Eisner, 1998) and triangulation (Miles et al., 2014; Patton, 2002) of the findings.

In Chapter Four, the findings are reported in a narrative style (Savin-Baden & Major, 2013) as portraits of participants (Lawrence-Lightfoot & Hoffman Davis, 1997) that acknowledge me as the researcher but highlight the perspective of the student participants to detail findings of experiences. The findings of the focus group are also provided in Chapter Four. Phenomenological analysis (Giorgi, 2012; Van Manen, 1990) guided the analytical process to develop the themes in the critical and creative thinking experiences of high school students in a learner-directed class, which is elaborated in Chapter Five, followed by conclusion, discussion, and implications.
CHAPTER FOUR
PRESENTATION OF FINDINGS

In Chapter Four I provide evidence in the form of a description of the physical and educational context of the study, portraits of participants’ experiences, and a report on focus group activity. The research question that guides the collection and organization of this evidence is:

*How do selected high school students experience critical and creative thinking while making art in the context of a learner-directed art class?*

First, I present a description of the city, school, classroom, teaching and learning structures. Then, I present findings in the form participant portraits. I use a narrative style to provide a description of my observations and informal interviews and use the participants’ own words as they describe their artmaking process in photo-elicitation interviews for each participant. Finally, I provide the evidence from a focus group activity conducted to further understand emergent patterns in the data.

**Context of the Study**

It was a balmy Friday in September when I stood before the classroom door decorated with a variety of announcements related to art: a garnet colored floor rug informed, “You are entering a creative zone,” a plaque read, “entrée des artistes,” a poster advertised a field trip to New York, and a bumper sticker suggested, “Visualize world peace.” I thought to myself, “This must be the art room.”

I entered a classroom filled with the familiar smell of art materials: drying tempera paint, sharpie marker, and reams of paper. Metal racks to the left held drying paintings, shelves housed
notebooks, portfolios stored student artworks, and books filled the shelves of the corner library. I smelled black beans. Ms. Mona, the art teacher, brought her crock-pot to class to celebrate the birthday of a student and welcomed me with “first dibs” (Figure 4).

Figure 4: Crock-pot of black beans to celebrate a birthday.

The School

Florida State University School (FSUS) is located in Tallahassee, capital city of Florida. The population of the city in 2012 was estimated at 186,971 by the United States Census Bureau. The institution was founded in 1857 in Tallahassee as the Primary School of the Department of the Florida Institute (FSUS, 2013). High school was added in 1922 and the school was accredited by the State Department of Education in 1927. Today, it is a charter school sponsored by Florida State University (FSU) enrolling about 1,700 students from Kindergarten through 12th grade (FSUS, 2013). The school serves as a laboratory school for teacher education and provides research and development opportunities for researchers from FSU, Tallahassee Community College, Florida Agriculture and Mechanical University, and Flagler College (FSUS, 2013). During my study, the student demographics of the school were 51 percent white, 30 percent African-American, 11 percent Hispanic, 2 percent Asian, and 6
percent Multicultural (FSUS, 2013). The population “represents a population typical of other sites in Florida” (FSUS, 2013, p. 2).

Ms. Mona has called this place her second home for 32 years. She started at the institution in 1980 when the school building was housed on the FSU campus. In 2000, the school was relocated to its present location in a southeast neighborhood, Southwood (FSUS, 2011). It has maintained the state-rated school grade of, “A” since the state began rating in 2002 (FSUS, 2011).

For potential students, an online application for admission is required during the fall before anticipated enrollment to the school (FSUS, 2013). Approximately 32 percent of available student seats are reserved on a first-come, first-served basis for student residents of the surrounding Southwood neighborhood. There are approximately 160 Southwood students in each elementary, middle, and high school grade level. The remaining 68 percent of students are from surrounding Leon, Gadsden, Jefferson, Wakulla, Madison, and Liberty counties (FSUS, 2013). Priority is given to applicants whose siblings are enrolled or whose parents are teachers or staff at FSUS. Students are randomly selected by computer according demographic information on race, gender, socio-economic status, and academic ability so that the overall population of the school closely resembles the average public school student profile of the State of Florida (FSUS, 2013).

Florida State University School Secondary School, or Florida High, as the community more commonly refers to it, operates using a seven-period daily schedule. Classes run 55 minutes and five lunches are served. The starting bell rang at 8:00 A.M. but a few students entered the art room at 7:45 A.M. to greet Ms. Mona and use the extra time to start their artwork. Ms. Mona’s schedule began with the course Art One and ended with Art One. In between, Ms.
Mona saw students in Portfolio, Drawing and Painting, and Advanced Placement (AP) Studio Art courses. Her classes had approximately 25 students enrolled in each period and she had planning time during period three and six. The final bell rang at 3:00 p.m.

Ms. Mona’s homemade black beans were delicious. The banquet for the celebration included sour cream, cheese, tortilla chips, napkins, bowls, and spoons. She introduced me to Terri, a substitute teacher who spent her free time in the art room. Terri’s hair was a fiery orange-red color that matched her eyebrows and complemented her powder blue eyes. At the time of my first visit, Terri was aspiring for an art teaching position in Leon County. She has since found her own art room at a local school. After our black bean snack, Terri kindly walked me around the school to show me the four other art classrooms in the K-12 school and introduce me to the teachers. There are five art teachers at FSUS: one in the elementary, one in the middle school, and three in the high school. Courses offered include Photography, Sculpture, Yearbook, Graphic Design, Drawing and Painting, Portfolio, and Advanced Placement Studio Art: 2D and 3D.

**Ms. Mona’s Art Room: Organized for Productivity**

The study took place in Ms. Mona’s art room. It is an approximately 1,500 square foot rectangle with two offices at one end for Ms. Mona and the sculpture teacher, Ms. D (Figure 5). The student tables were arranged in the center of the room. One long row of tables and chairs ran along the back of the room so that students faced the front and four tables sat perpendicular to them, making a big, “E,” shape (Figure 6). There was a podium in the center of this arrangement where the teacher kept an attendance book. Ms. Mona also used a tall table in the front of the room to house her computer and access the electronic grade book, Internet, an
interactive white board, and a document camera. There was a stool under the podium that I never saw her use.

Figure 5: Bird’s eye view of the classroom layout.

Instructional materials and supplies were stored on shelves on the walls surrounding the room. Students had access to ten computers, four scanners, two 11-inch wide printers, three sinks, a library, and art materials. In the front left corner of the room, the library fills three large bookcases and overflows into neatly stacked milk crates above (Figure 7). The books are about culturally diverse artists, art techniques, art media, art education literature, and related subjects. A small bench, two chairs, and a coffee table, all atop a woven rug furnish the library. Next to the book collection, in the rear left, were three sinks (Figure 8), a small worktable, and numerous objects for use as still life subjects, including a skeleton wearing a red hat and blue scarf (Figure
9). An art supply company poster, featuring Mr. Brush, introduces students to members of the brush family: the flat, the round, the angled, and the filbert.

Figure 6: Student at their desk (photo taken standing in the library).
Figure 7: Library.
Figure 8: Three sinks in the back left of the room.
Figure 9: Still life materials.

Ms. Mona’s art room is full of details. At first glance it is a lot to decipher (Figure 10, Figure 11) but upon close inspection everything is clearly organized into logical compartments and placements. Paints (tempera, acrylic, watercolor, gouache), pencils (drawing, color, watercolor), markers (sharpie, fabric, watercolor), brushes, and other art materials are stored in small containers and housed on shelving in the front and rear of the room. The clear bins store
permanent markers, thin markers, thick markers, color pencils, hard pencils, soft pencils, charcoal, sharpies, glue, sharpeners, scissors, mirrors, spray paint, national geographic magazines, trays, plastic baskets for pencils, and spray adhesive.

Figure 10: Front of the classroom.

Figure 11: Detail. Easily accessible art materials.

The rules posted in Ms. Mona’s art class are hand-written in red calligraphy pen. They are regarding the care and maintenance of art materials:

Rules of the room
If you open it close it
If you get it out put it away
If you mess it up clean it up
If you take it off hang it up
If you drop it pick it up
If you clip it file it
If you dirty it wash it
If you find it nice leave it nice
If you respect us we’ll respect you.

The list does not include any of the school wide rules regarding cellphones, headphones, or the tardy policy. The rules focus on personal responsibility in handling art materials. They encourage students to be considerate of their classmates and teacher. If students can follow these
rules, materials will be readily available for everyone to use. By encouraging these specific rules, set-up and cleanup is quick so that students can spend more time making art. Rules such as stay in your seat and raise your hand are not primary expectations. Her hand-written rules are positive and friendly. The last one encourages a community atmosphere: “Respect us and we will respect you.”

Ms. Mona organizes materials in ways to help students follow the rules. The rule, “If you get it out, put it away,” is intended to keep the art room neat. If a student is sewing, he or she can get the small container of thread (*Figure 12*). If a student is using markers, there are several transparent bins, labeled, “marker,” to choose from. The bin may stay at the student desk for the duration of the class period. The system allows for easy clean up since students can quickly return the materials to the bin and place it back on the storage shelf before the end of the class period, leaving materials ready for the next class to join Ms. Mona.

*Figure 12*: Small clear containers are easily accessible.

**Curricula**

The participants in this study were enrolled in periods four and five. In period four, students were enrolled in Drawing and Painting 3 or Advanced Placement (AP) Studio Art: Two Dimensional Art. In period five, students were enrolled in Portfolio One, Two, or Three, or AP
Studio Art. The “stacking” of courses in each class period allowed students with varying schedules to take a second, third, or even a fourth year of art. The schedule also allowed AP students to enroll in two class periods of art, if desired. Nine students in the study were enrolled in both class periods.

**AP Studio Art.** There were 11 students enrolled in Advanced Placement (AP) Studio Art: a course to prepare students to submit a portfolio of 2D artwork to the College Board in May. Students may request credit hours, based on their scores ranging from 1 (lowest) to 5 (highest), from higher educational institutions in which they subsequently enroll (College Board, 2013). The portfolio submission consists of three sections: Concentration, Breadth, and Quality. The *Concentration* section examines students’ demonstration of a depth of an “investigation and process of discovery” (College Board, 2013, p. 3). The *Breadth* section asks students to exhibit ability in visual language and use of material techniques. The *Quality* section evaluates works that best demonstrate a “synthesis of form, technique, and content” (College Board, 2013, p. 3). Artworks for *Concentration* and *Breadth* are submitted electronically online and artworks for *Quality* are mailed to the College Board.

**Drawing and Painting.** There were 14 students enrolled in Drawing and Painting during fourth period alongside AP Studio Art. The state standards for Drawing and Painting require that students experiment with a variety of tools for mark-making and the development of the organizational principles of design using imagery from observation, research, and/or imagination (CPALMS, 2012). Students evaluate their progress through self and group critiques.

**Portfolio.** There were 13 students enrolled in Portfolio during period five including eight students who were also enrolled in AP Studio Art and one enrolled in Drawing and Painting. The state standards course description for the Portfolio course states that students work in a
“self-directed environment to develop a portfolio of work that addresses an artistic concern and is articulated in a written artist’s statement” (CPALMS, 2012, p. 1). Students may use any media to demonstrate understanding of design and elements of art and to demonstrate growth in media and techniques. Seven 11th grade students enrolled in this course to prepare for the following school years’ AP Studio Art portfolio submission while working in conjunction with students enrolled in AP Studio Art. Students learned the process from watching their one-year-older peers.

Teaching and Learning Structure: Working as an Artist

Ms. Mona’s goal for students in period four and five is that they work as artists. What that means is that students select their own topics to consider through artmaking and select their own media to make it, while addressing the state standards. Importantly, for the purposes of this study, it means that students select their own media and subject matter to address over time.

When I asked Ms. Mona how she perceives her role as a teacher in this context, she said:

I want to be like an air traffic controller. Where I am like, “Come in on runway number nine, were sending more gas out to you, and here are some lunches to take out on your next flight. Okay, let’s look here and talk about the size of this work.” Where everybody is doing different things. Even way back at the old school, it used to drive me crazy that everyone was doing different things. I taught 2D and 3D and photo and ceramics, all happening at the same time, in the same room. I thought, “This is driving me crazy.” But, that is how I wanted it to be. I want it to be where everyone is following his or her own passion.

Ms. Mona structures her class to support student decision making about their own artworks rather than telling them what to do. To facilitate their independent work, she offers
recommended assignments. Students can substitute their own assignments for the recommended assignments. The recommended assignments, suggest either a general thematic or media suggestion. For example, students were encouraged to create a portrait in any medium for the Memory Project, a piece remembering the Holocaust in any medium, and an artwork created by observing something outdoors (see figures below). Students also drew from skills and techniques learned in a previous art class including: crayon engraving, tempera and ink batik, Zentangle, and using diluted instant coffee as medium. These processes are described below.

**Memory Project.** The purpose of the Memory Project was to create a special memory and keepsake of childhood for children and teens around the world that have been neglected or orphaned (Memory Project, 2014). Art students created portraits from photographs provided by the organization and were free to use the media of their choice. Children also provided short introductions about themselves and art students responded with a short note along with the artwork as a gift (Figure 13).

**Generations Project.** The Generations Project was a collaboration project between the five art teachers at the school (Figure 14). The teachers introduced art, poetry, and music from the Holocaust and students responded artistically with works in response the themes of tolerance, hope, and citizenship. A culminating event was an evening of music, art, and drama featuring Ela Weissberger, a Holocaust survivor of Terezin and a student of the art teacher Friedl Dicker-Brandeis (Davis & Hartsfield, 2013).

**Crayon Engraving.** The process to make a crayon engraving begins with making a crayon drawing, then a layer of India ink is painted over the drawing. (Figure 15) Once the ink dries, the artist uses a sharp tool to scratch off the India ink exposing the crayon below.
**Tempera and India Ink Batik.** The process to make a tempera and ink batik begins by painting with tempera paint. (Figure 16) Oftentimes, several layers of tempera are used because eventually some washes off. After the painting is completely dry, the artist paints a layer of India ink mixed with a small amount (five percent) of dish soap over the painting and it is left to dry. Then, the artists places the painting under running water and begins a process of removing some of the ink from the painting exposing the layers of tempera below. Some of the ink remains and the artist decides when to stop removing ink.

**Zentangle.** Zentangle is a drawing method by which the artist draws structured patterns (Zentangle, 2014). The strokes are deliberate and drawn using thin permanent marker. There are several books describing different methods (Hall, 2013; Krahula, 2012; Meissner, 2013) and Ms. Mona encourages the technique for beginning students who think they can’t draw because focusing on one stroke at a time eventually leads to a final piece (Figure 17).

**Plein Air.** Ms. Mona learned that a plein air painting group would be visiting the area and were scheduled to paint landscapes from life at several nearby locations over the course of two weeks. She had seen the group of 20 artists before and told me that the events were popular and people offered to buy artists’ works while they were still wet on the easel. Inspired by the painters visit to the area, she decided to introduce students to plein air painting. She offered them the opportunity to paint from life using French easels or drawing boards accompanied with a small suitcases prepared with various art materials including gouache, watercolor, and oil paint (Figure 18).

**Coffee.** The participants in this study took Art One with Ms. Mona in previous school years. She asks students to make a value study painting using diluted instant coffee granules. Two students, AB and JD, used coffee in their artworks during this study (Figure 13).
My study was conducted at the end of the school year so, students in AP were also
developing their final portfolios for submission, while students in Portfolio were considering and
trying out concentrations for next school year.

Figure 13: A Memory Project Portrait by JD. 
Figure 14: Austrian Skyline by CR.

Figure 15: Crayon Engraving by JD. 
Figure 16: Ink Batik by CB.

Figure 17: A Zentangle by KC. 
Figure 18: A work from observation en
pleine aire by RB.
Portraits of Participants

There were thirty participants in this study. Students were in grades 10 through 12 and their ages ranged from 14 to 18. Twenty-three students were girls and seven were boys. All students took art with Ms. Mona in previous school years and two girls took a pre-AP course in middle school where they selected concentrations for their work to address over time. Ten of the students were enrolled in periods four and five and therefore enrolled in two courses. One student dropped out of school during the study. Eleven students submitted portfolios to the College Board in May 2013.

I talked with all students in both classes as I spent time with them. Ten students volunteered for photo-elicitation interviews (as described in Chapter Three), which became my most intensive data-collection strategy to focus on their experiences. The following portraits orient the reader to those students who participated in the photo-elicitation interviews. For each student, I provide a narrative description of my observations and informal interviews and a detail their artistic process as discussed in the photo-elicitation interview. At the beginning of each photo-elicitation interview, I asked each participant to chronologically order the photographs documenting the development of the artwork. Each student selected either letters or numbers to seriate the photographs. Sequencing the photos helped guide the participants’ description of the experience to make art and allowed me to connect the photographs with the transcript for analysis. The images used in each photo-elicitation interview are provided in Appendix I. A separate section following these portraits describes the evidence gathered from my observational and informal interview data from students who did not participate in the photo-elicitation interviews.
Observations and informal interviews with CA. CA was a senior and was enrolled in AP Studio art for one period with Ms. Mona and other honors classes and AP courses. She had friendly outgoing character. I found that her demanding course load contributed to her missing art class more often than other students. When I first asked her about her concentration in AP Art, she told me that she was interested in silhouettes and used paper cut outs to make her art works. Spring break was soon approaching and she had decided to make a piece for the Generations Project exhibition that she could possibly use for her AP portfolio submission, too. I saw her print an image of an army tank and a silhouette of a boy from the Internet. She told me her goal was to complete this artwork over spring break.

After the break, I noticed she had not completed the work and noted to ask her about it during our interview. She told me that she had visited her uncle over the break and did not want to use chalk pastels at his house because they are messy. With the deadlines for the grading period soon approaching, CA got to work. I saw CA use two images printed from the Internet to make a composite image of the tank and the boy. She made her drawing as a sketch first. Then, I saw that she rubbed graphite on the back of her drawing and transfer the outline to grey charcoal paper that was approximately 12 by 18 inches. Once it was transferred lightly in graphite, she began using black and white chalk pastels. We talked in further detail during the photo-elicitation interview using photos of her artwork as it progressed over time.

After she completed her drawing for the Generations Project, I saw CA cutout images from a magazine to generate ideas for a colored pencil geometric shape background that she had started prior to the study (Figure 19). She discovered a background in her portfolio: a prepared paper with color and shapes that needed a subject. She thought she could use it for a new piece.
Ms. Mona had suggested that she cut out some shapes so that she could begin to see possibilities for the artwork. She recommended tracing shapes that she liked in vellum. She reminded CA that if you draw on one side of vellum, it would look differently from the other side due to the transparency. I saw CA in the process of flipping through a variety of magazines selecting photos that interested her. She decided on an image of a mother walking with a child.

Figure 19: CA’s geometric background and repeated shapes.

Photo-elicitation interview with CA. CA agreed to photograph her artwork made with chalk pastel and sit with me for a photo-elicitation interview. I provided CA the photos of her artwork and asked her to add letters or numbers to the prints so they could be connected the transcript. The images are provided in Appendix I, Figure 64. She preferred to sit near her regular seat at the end of a class period to discuss her process to make the artwork for the Generations Project. Pandora, the music website, played the Beatles in the background.

Adriane: Please tell me about your artwork.

CA: To start with my boyfriend helped me with the idea because I told him I had to do a Holocaust piece for remembrance. I started with the idea of having a tank and the boy looking up. [I had to] think of the Holocaust and make an [art]piece based literally out of it. It could be something that happened in the Holocaust or it could be something
that happened afterwards or it could be something that happened as a symbol or something to symbolize the Holocaust.

Adriane: But in a hopeful way? (I asked her to clarify because she had expressed that it symbolized hope during informal interviews).

CA: But you could have done a more descriptive way of what was happening at the time, if you wanted to.

Adriane: Ok, so your assignment was something on the Holocaust, how you wanted to represent it, in subject matter and media?

CA: Yeah. So for mine, what I wanted to do was when the US tanks came into the concentration camp and relieved them of being captured in there. So I wanted to show, the youngest, the most innocent thing I can show is a child...because they, too, got sent there. So I wanted to show a child seeing the tanks coming in to save them. So, um, I wanted to do it in pastel because, even though it’s messy, you can do lots of things with it. You can make little marks and you don’t have to be exact. Because I don’t like being exact all the time but I started tracing the American tank from the time period so that I could get an accurate one and trace it on [to the paper].

Adriane: You got it from the Internet?

CA: [Photo A]. Yep. I got it from the Internet and I also got a silhouette of a boy looking up so that I could have a basis of how to draw the boy looking up. I stuck to similar colors like grays, blacks, and whites (Photo D, E). And then afterwards I went in and I added yellows and some oranges to show hope coming in like a bright light coming into your life. And, um like in [Photo] G that is helpful showing that light is coming and hope coming in. And I showed how the tanks came in through the gates because you know how in Auschwitz is set up there are the Auschwitz gates then the barbed wire going this way.

Adriane: Tell me a little bit of these lines. I was interested in them earlier when I prepared to talk with you.

CA: When I finished with the coloring, I went back in because I want to focus more everything revolves around the tank and I wanted the focus to be on the tank so I made the lines go around and added more yellow so the lines go around it. Everything surrounds that tank [Photo I].
Adriane: That’s a good start. Now I have some specific questions. What did you boyfriend say about the artwork?

CA: He is very creative and he loves coming up with ideas for things so I asked him. I said I have to do a Holocaust piece and I want it to be hopeful. Maybe something happening or something coming in… but I don’t know exactly what I want to do. So, he said maybe you can have a tank coming in and someone looking up at it seeing it as hopeful.

Adriane: What was the goal with this work?

CA: I wanted to show hope through the innocence of the child.

Adriane: How long did it take from when you thought you might do it?

CA: I thought about it about one week before I decided to start and start tracing it out. Also, I started because the deadline was coming up so I knew I had to start it soon. The deadline is this Saturday for Ela’s presentation. It’s actually before. It’s this week because [Ms. Mona] needs to mat it. So, I started before spring break, I think, (pause) but it took me about a week to actually sit down and decide how do I want to do it because I wanted to do it. I don’t want to ruin it. And, then it took me about a week or a week and a half to actually finish it.

Adriane: Was there a moment that you decided you would do your work this way?

CA: Yes, the week before spring break because I was like ‘grades are due!’…on our [senior] skip day. All our grades were due [at the end of March] and that Monday I was like ‘I need to start this!’

Adriane: I remember you telling me that you had wanted to do it over spring break.

CA: I wanted to but I was at my uncle’s house and I didn’t want to get his house dirty with pastels.

Adriane: Do you think it is successful?

CA: I think it is successful because I got out my idea. I also think it is successful because I could still go back into it to make it better to make it more appealing. But, as for right now, I think it is pretty successful.

Adriane: Did you do anything to it after you thought you were done? But you just finished it so it’s hard to say.
CA: At first I thought I had finished it and then that is when I went in with the yellows and whites and I did the circling (Photo J).

Adriane: What was the purpose of going back into it?

CA: I felt like it wasn’t completely done so wanted to do a few more things before giving it to Ms. Mona to mat.

Adriane: When you added the yellow and the swirls what was it that you saw in it that you wanted to add something else?

CA: I was actually taking pictures for you and when I saw it further away that when I could see farther up and get a better look and saw that it needed more going on and I added the light.

Adriane: Did you artwork end up as planned?

CA: In a way, yes.

Adriane: In what way, no?

CA: The gates turned out differently. I did it a different way that I thought I was going to. I spent a lot of time on the shading of the gates… I thought this is driving me insane…so that didn’t turn out as I expected. And I wasn’t sure how it was going to turn out other than how I thought they were going to.

Adriane: What were you expecting?

CA: I guess I expected that it would look different. I am not sure how to explain. I thought that the shading would look different. I thought that the wires…see how I used black here…I thought the wires would be an absence of colors.

Adriane: Oh, I see you imagine that the wires would be white and that the background would be dark.

CA: But then I changed it because I saw how this was going. So, I did it a different way. I saw how the dark was going around the tanks and the child and since I kept it going dark so I saw that it would be easier to do the dark with the wires (Photo L).

Adriane: What did you learn from doing this work?

CA: I learned how to work more with pastel. Over the years I learned to work with pastels but I learned more shading this time and how to do lights and different kinds of lights to emphasize something. Holocaust was one of my favorite topics. In a weird way, not
like favorite good way, but it is an interesting topic to think about so I am glad that we did a project on it.

Adriane: Is there anything about the Holocaust that you learned through this?

CA: Well, since over the years I learned, I’ve studied it over the years for myself because I was very interested. I didn’t know about Ela. I had never learned about her and that she wrote a book but I had learned about others like I read night by Elie Wiesel in 10th grade, which was a good book.

Bell rings for next class. But she says she stays in this class because she eats lunch here today.

Adriane: Is there anything that you thought of that influenced your work?

CA: When I was at home. I was trying to formulate how I wanted the tank and the person to be. Do I want them on one side? Originally I wanted the tank on the left side and the boy on the right. And in my picture it’s opposite. A lot had to do with the silhouette I got off the Internet to help me. It was facing in the other direction so I flipped it. But at home I was figuring out how I wanted it spaced. Did I want the gates in the back or off to the side? Or how I wanted everything set up. That I thought about while at home.

Adriane: Is there anything else about your process that I haven’t thought about?

CA: I don’t think so.

Adriane: We’ll leave the next questions for another time. Thank you

CA: No problem.

Summary of CA. CA concentrated on silhouettes and paper cut outs for her concentration in AP Studio Art. She made a connection between her portfolio development and contributing to the Generations Project by creating a silhouette of a boy. In this way, she could participate in Generations as well as make progress on her AP portfolio. Her boyfriend helped her generate the idea for the artwork. Once she decided on the imagery for her work, CA readily searched for images on the Internet or magazines. She selected two images of a boy and an army tank to combine for her final art work. She made a sketch of what she wanted her work to look
like then transferred the sketch onto charcoal paper. When she got to a point where she thought she was done, she decided to add yellow pastel to bring more attention to her main focus, the tank.

After she submitted her pastel drawing for the Generations project, CA picked up a geometric shape drawing that she had made several weeks back. She had created a “background” of geometric shapes that served as the foundation for a new work. Unsure of what to place in the foreground, CA looked through magazines for interesting silhouettes. Once she found the image of the mother and child, she traced and cut shapes out of vellum and overlapped them in a final artwork.

**Portrait of WR**

**Observations and informal interviews with WR.** WR was enrolled in AP Studio Art. WR enjoyed using fabric on canvas and acrylic or tempera paint. Early in the study, she cited black paint as a preference because she liked the contrast made with the fabric. Human profile heads were seen in most of her artworks as a main point of focus whether she used paint, cut fabric, marker, or tempera and ink batik technique.

She shared that her interest in fabric started last school year when she found a clear plastic tote of fabric in the art room. She was drawn to the medium because she said, “I knew I really want to do something like this.” In the ninth grade, she designed a pair of sneakers for a contest, and her interest in fashion and fabrics persisted. She described a floral, earth-toned fabric collage on which she painted black and white silhouettes. The artwork won a top prize at a local, competitive exhibit and she became hooked to the silhouette motif. She was proud to win and her interest in fabric as a medium continued over time even though she also dabbled drawing and painting.
In this study, I first encountered WR in the process of combining two artworks into a diptych (*Figure 20*). The first artwork presented 17 profiles heads, each cut from the different fabric using the same stencil. She stacked and staggered on the lower three-fourths of a vertical canvas, which was patterned with a white dotted, orange fabric. In the upper fourth of the canvas she outlined the stencil in a yellow fabric paint pen several times, creating what appeared like a spiral across the top fourth of the canvas. She combined this work with another piece that used a dragon fly pattern. She had painted a large dragon fly in the upper right. She pooled black, green, yellow, red, green, and blue tempera paints on the bottom half and allowed the paints to blend at the edges where they met. I observed WR consider how she might combine the two canvases to make a diptych. She wondered whether or not each piece could be considered a final work individually as well as a diptych. CA said no, because she thought that each work individually was part of the process to make the diptych. WR countered that each could stand on its own. Another student offered that the two works were so different that they could not be combined; they needed to match. In response to the critique, she added two dragonflies to the stenciled piece and added the orange and white pattern to the dragonfly canvas. Ms. Mona framed them and they were ready for exhibition, as a diptych, at this year’s local, competitive county exhibition.

*Figure 20:* WR combines two works into a diptych.
WR had several artworks in process at a time. I inquired about having multiple artworks on her desk while she worked on just one. She said, “Oh, I have lots of works I am working on at one time.” For example, she painted on a purple, flowery printed fabric (Figure 21, A). She broke up her profile motif into what looked like eight puzzle pieces. Each piece was rendered in either black paint or red thread. On the same day, I also observed her trim a profile made up of collaged fabrics (Figure 21, B). On her desk, she also had an artwork with vertical lines and a curvy figure that implied a profile. I didn’t see her create, Figure 21 C but it was on her desk as she worked on the other two profiles.

She connected her AP Studio Art concentration with a new work to participate in the Generations Project, which she volunteered to photograph for this study. I noticed she worked steadily to complete this work for the Generations art show. She used an 11 x 14 inch watercolor paper to make a tempera and ink batik. Watercolor paper is used for ink batiks because it can withstand the water wash used to rinse off the ink from the tempera painting. She worked deliberately for two days and then took a break.

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Figure 21: WR uses a profile head motif throughout her artworks.

On the third day, I noticed she was starting a new drawing outside on a sunny, warm spring day. She drew on a grey sheet of paper and used a Zentangle technique to draw a
headpiece on the profile of a man. I asked what she was working on. She told me she was cold inside and outside was so nice and warm. She also explained that she was conducting a small experiment. Since she seen people experience difficulty releasing ink from the tempera paint during the washing process, so she was “testing out” two combinations of ink with the brand of tempera on small three by five inch cards (Figure 22). She predicted that one would wash off and the other might completely dissolve. She said, “One looks like it will wash off but it might wash off too much.” The ink and tempera combination are difficult to predict so she prepared the test on two small pieces of paper to determine which ink she would use. As the ink was drying on the small cards, she took the opportunity to start a new idea while drawing outside and enjoying the nice weather.

Figure 22: WR conducts an experiment.

**Photo-elicitation interview with WR.** The following is a detail from WR’s interview about her process to make the tempera and ink batik. I asked WR where she wanted to sit. She said that the gallery would be a good place. We sat on chairs, just a couple of feet from the entryway into the classroom. I asked WR to go through each one of photographs she took of her work in progress and add a letter, so that I could pair up the images we used to discuss her process with the interview transcript. The images used in the interview are available in (Appendix I, Figure 65).
Adriane: How does this piece fit into what you are doing? What is this piece about?

WR: Ok, so, fabric is the main point of my concentration but another thing you can find is profile pictures of the side of the head. We were working on holocaust pieces and the concept I came up with was “light at the end of the tunnel” and that is kind of cliché but regardless of where you are in your life I think it is a positive thing to think of so that is what the picture revolves around. I have the Jewish star on the face representing that it is a Jewish person. Then the red and black walls show that it is a dark place and then there is a brick road leading toward the doorway at the end of the tunnel where it is white to represent that light. I did it as an ink batik I have always thought they looked really, really cool and it’s another kind of art that I enjoy doing. So that’s what happened and like I said I always work with tempera paint within my concentration so it worked out. I’m very pleased with it. I will probably put it in my breadth [section of my AP portfolio submission] more than in the general concentration area.

Adriane: What makes you pleased about it?

WR: I don’t like planning out the artwork because I gain expectations about it and for once I accidentally I didn’t mean to gain expectations and I actually met my expectations.

Adriane: Oh, I got it.

WR: So I was actually happy with it. So it turned out as I planned it to turn out which never happens so, I think that is why I like it because I actually genuinely feel good about it. And, that is the biggest thing with my art is that I actually feel good about it.

Adriane: So you planned. Did you have this exact idea in mind? You told me that you wanted to do a light at the end of the tunnel.

WR: I remember when we learned last year about in my English class we learned about the gas chambers usually when we put the colors red and black together it makes me think of a darker time so that’s kind of what I gathered in my picture and the idea of them being able to walk out alive.

Adriane: How do you think that the ink batik met your expectation of what you wanted it to look like or not or what does that add to the work? I realize we just saw it today so it might be too early since you just finished it.
WR: I think it adds a darker aspect to it but it was a dark time. One thing I was glad about adding the ink batik effect is that it didn’t take away from the optimism that you find within the picture. As dark as it is there is an optimism. I think that is one worry I had with it adding the ink batik effect that it would take away for it [optimism] and make it even darker.

Adriane: Why did you select this image for this work? Why did you incorporate the profile?

WR: It’s my favorite thing to do. I like working with fabric. Tempera paint and my profile pictures. You can find it often in my pieces.

Adriane: How did you prepare for making this work?

WR: I kind of jumped into it. Did a general sketch of where the floor and the walls and the face so I could get an idea of where the main pieces were and then I just painted it from there.

Adriane: Did you know it would be blue? Or did you decide when you got to this point?

WR: Probably when I got there. I planned on the red and the black—I knew that and I knew this was going to be brown. I knew the stars of course were going to be yellow. The back of the face, it came as it went. Like I said I don’t like planning that much.

Adriane: Looking at photograph Letter I, please tell me a little bit about this effect you do here.

WR: I like swirling and blending the tempera paint together. I don’t want to mix them together within the artwork. I like to have the colors coordinating into each other. I think it is like a marble effect you might call it.

Adriane: Yeah, like a marble.

WR: One, I love the way it looks and two, and the emotion that the marble effect gives off in a painting is the effect that I wanted to portray in the picture.

Adriane: Now that we are looking at it, the ink goes in with the marble.

WR: I think it was pretty risky for me using black and red in an ink batik considering ink is black so I was worried about that exactly, if it would get lost, or if it would show up the right way but it worked so I am very pleased with that.

Adriane: Yeah, today at the sink you said, “This is nerve wracking!” How long was it before you made this work and when you actually sat down and complete it?
WR: I am a procrastinator. I am. And before, two weeks ago, I thought, “I need to sit down and do one [for the Generations project]” and I hadn’t planned it or thought of it. I hadn’t planned it out until honestly, the day I sat down and started it.

Adriane: So the idea of the light at the end of the tunnel was that that day?

WR: Yes.

Adriane: This might be too early but after it was done did you go back and change anything?

WR: I doubt it. I don’t usually change anything once I am done.

Adriane: Did you change anything in the process or did you execute it as planned?

WR: I was worried about how the shadow effect would turn out around the door and it turned out good I was worried that the black would was going to wash off and it wasn’t going to do that darkening and fading into this foreground way. It turned out the way I wanted to so I’m glad with that.

Adriane: Is there anything in the piece that is different from what you have done before?

WR: There is no fabric! And I am not usually a painter so doing a piece that was a painting was very different to me.

Adriane: Did you work from life or imagination?

WR: It is all imagination.

Adriane: Is there anything that you thought of while outside of this class that encountered in another class or at home that influenced this work?

WR: Not with this particular one. But that does happen very often, where I will see something and I’ll be inspired and I’ll be like I have to write this down and put it in this piece. But for this particular piece, no.

Adriane: Is there anything about this process that I haven’t asked you about?

WR: I think that it’s not one my strongest pieces. I am very happy with it because it’s only the second ink batik I’ve done. But if I had put more time and thought to it then it could have turned out better but considering the time I took to do it I’m personally happy

Adriane: Which piece is a strong piece from this year?

WR: The diptych. It’s helpful for me to have this type of interview and have to go over my artwork. And have to talk about it out loud rather than just going through it day to day and thinking I have to get this many pieces done when it comes to AP when I actually
stop to appreciate my work I feel a little better about it. Cause I am a really critical person. I can be more appreciative too and actually feel good about myself.

Adriane: Thank you.

Figure 23: Holocaust by WR.

Summary of WR. A box of fabric in the art classroom intrigued WR, and she wondered what she could do with the multiple printed patterns. She created collage of floral, earth-toned fabric pieces with black and white painted profile images for which she won an award of merit in a local art competition. Since then, WR has focused on using fabric as a medium and continued to develop the theme of the human profile shapes. She has combined different fabric patterns and repeated the profiles throughout her series of artworks and combined two works into a diptych. For our interview, she photographed her process of making an ink batik using the profile shape (Appendix I, Figure 65).

In addition to making art from fabric, WR enjoys making ink batiks because of the texture they produce. For this piece, her goal was to portray the end of a dark experience for Holocaust survivors. She told me that she doesn’t plan too much in advance because when her actions do not meet her expectations, she feels disappointed and dissatisfied. She prefers to
begin with a general idea and allow her ideas to develop while she makes art. She sketched out a road using one-point perspective ending in a white archway to symbolize the ability to walk out of the darkness. The black and red walls symbolized a terrible experience, and she produced a red geometric pattern on the road. She painted a large blue human profile shape patterned with yellow stars. WR told me that sometimes the India ink is stubborn to remove so she was prepared for a very dark final image. After she finished painting with tempera and before applying the India ink, WR conducted a simple experiment. She painted two cards with the brand of tempera paint she used in her painting. Then, she used a different brand of India ink on each card to determine which would provide her desired effect. She chose the India ink that dissolved as she’d hoped and WR felt that the brightness symbolizing optimism was not dulled down by the dark textural effect. Although WR did not think it was one of her stronger art works, she felt satisfied that she successfully executed her expression and that she had found success with ink batik.

**Portrait of CR**

**Observations and informal interviews with CR.** CR was a confident 10th grader, passionate about art making. Prior to taking art with Ms. Mona, she completed a pre-AP middle school course that prepared her for advanced art classes in high school. By the time she entered Ms. Mona’s class, she was familiar with choosing a concentration for art making. CR was enrolled in one period of art during this study.

In the art class, she was a leader. As Ms. Mona put it, “she practically teaches the class [sometimes].” When students had questions about technique, CR cheerfully mentored with step-by-step instructions and made suggestions to help students. I observed CR’s confidence emerge as she engaged in dialogues about her own work and her classmates’ work. I saw her talk with
JC about the development of her portrait of a priestess and discuss the development of her painting with Ms. Mona and classmates (figures below). A source of CR’s confidence was her skill in drawing technique. She reproduced photographic images with a striking likeness that was admired by her peers and garnered success at local and state art exhibitions. CR was also a stage performer, acting and singing in a school play while I studied the class. She was a featured student in a local magazine and was quoted as saying, “Always give your 100 percent effort even if you don’t feel like doing it right now.”

CR likes to draw relatively large (16 by 20 inches) compared to her peers. During this study I saw her complete a drawing for the Generations Project, a portrait in graphite of Ela, and a watercolor portrait of a friend. CR used the Internet to help her imagine images of an Austrian skyline to inspire the buildings in Figure 15. She drew the image of the girl and tops of the buildings from imagination using what she learned about Austrian architecture. I asked CR if she would volunteer to photograph her next artwork during the process of making it and she agreed.

After the photo-elicitation interview, which shortly follows, I observed CR make the following images. She took about two weeks to complete the watercolor painting. These images were significant to me because during her interview she mentioned a need to finish her work in one sitting. When I saw her work on the painting over a series of days, I mentioned this need to finish artwork in one sitting. She explained that with the painting she could not finish all at once because she could only work on it during the one hour of art class per day since she was using paints from class. To make the painting in the images below, she took a photo of her friend and used the photo as a guide for the painting. While she clearly envisioned the figure of the girl and used the photo as a guide, she decided on the background after the figure was complete.
**Photo-elicitation interview with CR.** CR was the first to volunteer to photograph her work. She used a time-lapse camera to document the process. The resulting images can be played as a time-lapse video or viewed individually. In Appendix I, I provide a sample of the images reviewed in the photo-elicitation interview with CR. For the interview, CR was eager to share the video so we viewed it together. We sat on the floor and then discussed CR’s process to make the artwork.

**Adriane:** Tell me the idea, how this artwork came to be and what your process was.

**CR:** Well, since we knew that Ms. Ela was coming to speak to us and we had the art show and I finished my piece of the Austrian skyline I got to learn more about Ela as a
person, I mean I am sure that there is a lot I can learn but as I did that, I realized we were really honoring her by putting all of our artwork based on, maybe not her life but, on everything that happened during her lifetime. And, I don’t know it’s something, Ms. M and I were talking about it. We said that we should draw her and then I was like oh, I can record it, and we can present it to her we could give it to her we could show the video at the ceremony! And we just thought it would be like building blocks, one after the other, so that is how the idea of doing a drawing of her for her came about.

As for the way I draw, I feel like it reflects my personality. I am a real go-getter. I am definitely (pause) everything I do I will sit down and have it finished and it will be the best I could have done. A lot of times it’s hard for me because when you consider homework and group projects, you are not able to sit down and complete an art work all the way through.

I think that that is why art is something that I always turn to because whenever I feel like I need to do something if I draw I know that I can create anything I want which is the coolest thing in the world if you think about it. With a piece of paper and a pencil I can make anything happen and that blows my mind. Anything you want in the world you can draw. You can sculpt it too. I think that is why I like to draw. Being able to duplicate another human being almost exactly as they appear makes me feel good about myself. I don’t draw just to get praise I draw because it’s wonderful. It’s something everyone should do.

Adriane: Something you said is that you can draw them exactly. And you like to draw very realistically. And I remember the other day that we were talking to ZO and she said I can’t get the teeth, and I said try to pretend they are not teeth. And you said “I have to think they are teeth.” Tell me a little about that about your process. Did it turn out the way you thought it was going to turn out?

CR: It always does and I don’t know why and I don’t know how but I can picture it in my head and it comes exactly how I want it to. And I think that I cool. My first holocaust piece not the one of Ela but the one of the Austrian skyline and the girl I just remember that I just thought of it. It just popped into my head and I wasn’t thinking
about what I should do. I was just living everyday life. It just popped into my head and knew that that's what I am going to do.

And I didn’t know what the girl would look like and that it would be the Austrian Skyline but I just saw in my head the things so when I got thinking about it. First, I looked up pictures of the Austrian skyline and none of the buildings are exact. I didn’t look at the Austrian skyline while I drew it. I just looked at the style of buildings that they had. I think one of the buildings is supposed to be a church and I changed the cross to a swastika because I thought that would really tie it together. And I was amazed cause I had never tried architecture but I think I did a good job of making it look real.

It was a weird process because whenever I draw I draw a picture of a person because I like to have that reference but this picture. I think the actual name is silent town or something like that I’d have to check again but…

**Adriane:** When you titled it?

**CR:** Yeah. It was like silence over the town I don’t remember. That was the first time for a long time ever since that I came up with my own idea that wasn’t based off any person I knew or any picture that I saw or a picture that I took and it was kind of refreshing since I didn’t have to base it off of anything. Usually when I draw I look at this then I look at this and I look at this. But, I think that was really cool.

Back to Ela’s drawing: that’s a big difference between my two styles. I mostly sketch and do watercolor and I haven’t done watercolor in a long time, which I want to get back to that. Whenever I do sketch drawings, they are really big, they are really detailed, and they are really fast.

**Adriane:** Why big?

**CR:** I don’t know. A lot of people say big artwork is more forgiving because you have to step back to see the whole picture but when you are up close that is not even a real thing it’s just a blob of paint but it looks like a nose that is not what it is for me. If I have a whole pencil by the time I am done, then it’s not done. I probably used an ebony pencil per drawing and that is kind of cool too. But I don’t know why but it’s big and quick. Get it done! That’s funny to me. I have artists come up to me, like RB especially, say "That’s not fair. I don’t understand." Why are you allowed to able to
sit down draw something and be done with it? Because a lot of times people take a long process in painting and drawing like I said.

Adriane: Could you stop and walk away?

CR: It would bother me so much. I can’t just stop. It’s just how I am. I’m very anal very organized, very detailed, and you see that in my schoolwork, too. You know, my room is perfect and all of that stuff and its funny [because] RB is the opposite of that and it shows in his artwork too. My lines are extremely, every line is meant to be there. That is something that fascinates me too. Ever since I was little that one line in a painting changes everything on a face, too. If the corner of your mouth is turned down it completely changes the whole idea of what that person is trying to show you, what emotion that person is feeling. What the artists wants you to feel when you see the painting or the picture. That blows my mind.

Adriane: So we talked a little bit about how you prepared for it. How did you pick that image? You guys knew you were going to do an image of her. How did that image come to be? How did you settle on that one? How did you settle that it would be a portrait of her?

CR: At first I was going to draw a picture of her now sitting at a desk and having a frame facing the audience. Inside the frame would be a picture of her when she was younger BUT as I started looking through her book, through the pictures of her that one picture that I chose really stood out to me.

It’s because whenever I sketch I want black and white. I don’t want all grey schemes and the shadows caught my attention and her eyes looked so dark and her hair looked reflective and you can see it. It just stood out to me and while I was looking for a picture of her now and a picture of when she was younger, I just couldn’t keep going I just wanted to draw that picture. Whenever, it’s like that for all of my inspiration of portraits and drawing.

I don’t go into it thinking, “Oh I have to find a picture.” I see a picture and say, "I want to draw that. I want to paint that.” There is just something about the contrast in colors or the darkness and light, I just want to. I just have to.

Adriane: So you see that one, is there anything that after you finished it and go back in?
CR: Never. No the last thing is I do on my drawings sign my name. If my name is on there then nothing is changed. No. It’s just not ….

Adriane: So when do you know when to sign your name?

CR: I take a step back and I look at it. I look up close and I look at it. I find things, abnormalities or smudges, or whatever, and I clean it all up. Then, with an eraser or pencil or whatever needs to be fixed or if something is uneven but a lot of times I just feel complete.

I just thought of this now. Drawing for me is like downloading something off of the computer. You see it going then at 99% it stops for 2 minutes and ok, then, it’s finalized.

Adriane: I saw that you started with the eye then the brow and mouth then the hair. Tell me about that. Do you always start there or just anywhere?

CR: Come to think of it, yeah. I always start there. Well, eyes fascinate me. I think they are so beautiful even if they are just one color and not a bunch; eyes are so pretty to me. The other reason why I start with the eye is because if you start with the right eye or the left eye you can spiral out. If I started out with the right eye then I'd go to the left eye, the nose, mouth, the shading around the face, whatever I feel like you have to do next. I wouldn't start with the left eye then go to the necklace. It’s a building block for me. Paining is completely different. You have to start with the shade of the face.

For me, I like pencil because you don’t have to go back with different colors. The different colors are the different shades [determined by] how dark or how light the value of the pencil that you use. But, I always use one pencil. Just depending on how light I press or shade. By starting with the eyes and then spiraling out or expanding that just makes it easier for me. Hair is usually the last thing.

Adriane: When you compare the picture that you had to work with and the way that they you did the hair, you didn’t follow the picture.

CR: I improvised. A lot of times, I’ll do that too. It is the way I feel like it should look and that is why it’s hard, too, trying to draw someone identically because you can’t really change the way they look. You can’t just be like, "I know you have blue eyes but I want to you to have brown eyes." You can’t say that. But, I think that hair is more
forgiving. It is the same style, it’s the same flow, the same color, if you just add a little here and there and make it look more complete.

Adriane: When you first saw the video what was your first impression of the video?
CR: Honestly, I was upset when I imported the pictures. With the [time lapse] camera you can’t see. I don’t have the screen and I was angry at myself that I didn’t check because there was a glare you could only really see it when I lifted my arm you could see the shadow. So, I was upset with myself for just a brief moment. Afterwards, I just thought, you can get the gist of it. I made it look further away [than my first video] the video that I drew of myself it was really up close because I wanted people to see the steps that you go through. But this one I wanted it to be everything around; the cars the trees.

Adriane: Who were the people with you in the video?
CR: Oh, it was my brother, my dog, [my friend], and my friend from [another country] she visited for spring break so I think it’s cool that she got to be in the video, too. I like that at the end everyone is just standing around looking at it.

Adriane: Did they say anything to you while you were drawing or did they just look?
CR: Yeah, actually there would be like every [so often], one of them said one thing but it wasn’t continuous.

Adriane: Was it about that?
CR: We were talking the whole time. I asked them to sit out there with me because I am a good multi-tasker. They would say, "Wow, that’s cool" or something like that. But my friend, I didn’t know, until afterwards. She Instagamed me and I didn’t know. I thought that was kind of funny.

Adriane: How long did it take from when you thought you might make this work until you decided to do it?
CR: Once I found what picture I wanted to draw, I did it like immediately.

Adriane: Is there anything that you learned from making it?
CR: Every time I draw something, I think I get better. I don’t think I’ve ever gone back and declined in my ability.

Adriane: Do you mean technically?
CR: Yes. I was just talking about this with some of the people in photo [class]. We looked through all of my paintings on [the class website] ever and the difference between 7th grade CR and sophomore CR is just so crazy. I’ll show you.

Adriane: Anything specifically that you were impressed with?

CR: This is kind of weird but my favorite thing about this drawing is the shading of the neck. I know it’s so random but I just think that the way I used the eraser you could kind of see. No one is perfect and they have lines and you can see that when you are looking up close at someone. So you can kind of see the shading and I would have very faint tiny lines with the eraser.

Figure 25: Portrait of Ela by CR.

**CR Summary.** CR draws quickly and relatively largely (16 by 20 inches) favoring pencil and watercolor. She told me that her challenging class schedule leaves little time for drawing, so she often completes her art in one sitting. She exhausted an ebony pencil in the two-hour process of realistically reproducing a photographic image of Ela, a Holocaust survivor who
visited the school (*Figure 25*). CR attributed her determination to her overall neat character: organized and detail oriented as verified by her timely, thorough schoolwork and perfectly tidy bedroom. She said that she envisions her final piece before she starts working and every line in her artwork is “meant to be there.”

CR’s process to draw Ela included finding a photo to guide her. CR considered several images until she saw a portrait of Ela as a young woman, about CR’s age. She knew she found the image she wanted to reproduce when Ela’s eyes and shiny hair caught her attention. The various value grades of the photograph provided a technical challenge, which she eagerly embraced. CR started with the eyes (she told me that she usually starts here) and spiraled out to other elements of the face, building the composition from that central origin. Her preference for realism sometimes allowed for improvisation like she did with individual strands hair. The photograph provided a flat and non-descriptive hair-do but in CR’s reproduction each strand is deliberately placed creating a textural, full, and neat coif. Nearing completion, she stepped back, looked at it, stood close, looked at it, and found abnormalities and smudges, which she cleaned up with pencil or eraser. When she felt there was nothing else to fix, she was finished. She signed it two hours after she put pencil to paper.

Although I observed CR work on the watercolor portrait of her friend over time, CR told me that preferred to work on drawings quickly and intently using realism as her goal for artwork. For this and other artworks, CR used an image to guide her art making but improvised when necessary to increase the realism in the art. She appreciated a technical challenge and felt good about duplicating another human being almost exactly as they appeared in a photograph.
**Portrait of JD**

**Observations and informal interviews with JD.** JD was in the twelfth grade and enrolled in two periods of art to develop a portfolio of work for the AP Studio Art portfolio submission. JD was friendly and seemed to enjoy sharing elements of her process with me. JD was persistent. When she made a decision to make an artwork, she found a way to reach her goal. She overcame setbacks, started over, and modified her work until she achieved her goals. After I had introduced my study and was in the process of observing and becoming acquainted with students she said, “I think I understand what you mean when you are interested in when you say ‘my process.’” She continued:

> Yesterday, I knew I wanted to do this Zentangle around the edge of the [crayon engraving]. I was using the wooden tool and it wasn’t sharp enough and I discovered that the nail was sharper. And, today I decided that I would use paint to cover up the areas that got too scratched by the nail. So, when I talk to you, that is what I will tell you about. I can tell you how I thought through the process. I get it!

JD told me early in my data collection process that she considered her concentration to be “anatomy of an emotion,” through portraits. She started her AP portfolio as self-portraits but decided to include other people in her collection of paintings and drawings. JD focused on portraits with exaggerated proportions in art class to develop her AP Studio Art portfolio.

When I first began familiarizing myself with students for this study JD was making a crayon engraving of what looked like a girl’s face hanging upside down over a desk or table (Figure 26). She told me that she started her Memory Project piece but had recently been steadily working on the crayon engraving. Later in the focus group activity, she shared that she had been frustrated by her Memory Project piece and set it aside. Four days after starting, she
mentioned that she had spent a lot of time on the crayon engraving because she had not used enough soap in the ink so the ink had adhered to the crayon and was difficult to etch off with the wooden skewer she used as an etching tool. She said it wasn’t a good day to look at it. She seemed frustrated with the slow removal of the ink, but she persisted. Soon she discovered that using a nail and hammer worked to remove the stubborn, hardened ink and exposed the colored crayon beneath. Finally, the bright colors began to appear quickly. She added paint to some areas to increase the intensity of color as well as cover up some strokes with the sharp nail that scratched the art rather than reveal crayon. All in all, she spent about three weeks on the crayon engraving. She said, “I spent way too much time on this.” The AP deadline was nearing and she wanted to give herself time to make enough pieces to choose from for submission.

Figure 26: JD's Crayon Engraving.

She immediately returned to the Memory Project, which she had committed to completing by the deadline for mailing. She would also use this image in the Breadth section of the AP Portfolio to demonstrate her technical skills beyond her concentration. A picture of a six-
year-old girl was “so cute” that it motivated JD to participate in the *Memory Project*, an initiative in which art students create portraits for neglected or orphaned children and teens around the world (*Figure 27*). The purpose of the *Memory Project* was to create a special memory and keepsake of childhood. Children write short introductions about themselves and art students make a portrait in any medium using a photograph as a guide. Then, the children receive the artwork as a gift along with a note.

JD started this project, using her exaggerated proportions style, prior to the crayon engraving. As she readdressed the painting, she questioned whether or not its purpose matched the style in which she was painting. She set up a new sheet of paper. She used a clear sheet of acetate to create a grid over the photograph and gridded her new sheet of paper. She told me it took her about three hours to carefully replicate the face as proportionally as she could. She erased the lines and began to consider which medium to use for paint. Ms. Mona offered some ideas: color pencil, watercolor, diluted instant coffee, or Zentangles for the hair. JD thought about it for a little while as Ms. Mona continued scanning artworks to upload to the state art teachers’ association student art show. After about five minutes, JD walked over to Ms. Mona and asked if she used coffee, was there a way to “do something with it so bugs won’t eat it when we send it?” Ms. Mona said, “Yes, we can varnish it.” It was settled. JD gathered her supplies, a small brush, instant coffee granules, and empty yogurt cups to mix a variety of dilutions. She began with a light wash of color and was done for the day.

As soon as I returned the next day, JD showed me that the water had pooled and dried, leaving unwanted lines on the art work. I overheard her tell Ms. Mona of her predicament. She immediately got to work to find a solution. She added a slightly darker coffee dilution, which
diminished the hardness of the line and built up the intensity of color. She learned not to leave too much water on the painting to dry.

The next day, JD walked to me with her work to see and said proudly, “I am happy with it.” She had added some wavy pencil line that seemed to radiate from the shape of the girls head into the background. Ms. Mona mentioned that one iris was smaller than the other. JD didn’t see it, so Ms. Mona suggested that she stand in front of the mirror with it. Ms. Mona explained, “When you look at an artwork in the mirror you get a different view of it. You can see what needs to be done to improve it.” Sure enough, JD said, “Oh yeah, I see.” She added just a little more dark coffee to even out the irises then painted a light blue to add dimension to the white shirt. I saw JD cutting the shape of the girl from the background of radiating lines. She told me that she was considering a larger background or possibly a “Greetings from Florida” background similar to old postcards, since she was mailing this to another country. She followed up with Ms. Mona about a spray adhesive and went outside to seal the coffee painting.

She placed the cutout atop of a new sheet of paper, the same size as the original, and considered what she would do for the background. The next day, she had created a Zentangle background in the negative space left by the shape of the face. She had traced the shape and only added Zentangle pattern to the viewable paper. I noted that I wanted to interview her about how she came to this decision.

Her next artwork was a small and quickly completed. She said, “I didn’t know what to do and Ms. Mona always says pick out an idea from the ‘wishing well of ideas.’” A three by five inch artists’ trading card resulted on the topic “if you were a superhero, what would your super power be? I always said I would fly.” It was completed in about 45 minutes. Then she dug into
her portfolio and found an older incomplete watercolor “background” and said, “Oh! I didn’t finish this one!” She added a Zentangle and male figure drawing to the work.

**Photo-elicitation interview with JD.** I asked JD to put her photos in chronological order and add letters so that I could later match the images with the transcript of the interview. We sat in the class at her regular seat and I asked her to tell me about her process to make the portrait for the Memory Project. The images used in JD’s photo-elicitation interview are provided in Appendix I, *Figure 67.*

**Adriane:** So let’s go through these [pictures showing the stages of your process] one at a time. You looked at them a little bit yesterday. Tell me about the work. What was your goal? Where did the idea originate? How did you begin? I know you had one thing and you decided to change. So please talk about that.

**JD:** Ok well the memory project was something Ms. Mona talked about last year and the year before and I wanted to do it because you get to do a piece of art of an orphan and it is the only thing they own. And it is a powerful thing for them to have. And I wanted to do it. Ms. Mona got all the pictures [from the Memory Project] and I picked this girl’s face because she is the cutest little girl ever. And, I thought I could really do something with that face. It had a lot of meaning to it, to me. I was going to start painting in the style that I was painting my scream piece but because the purpose of those things were to make the flaws of the people bigger, I don’t think I want to do that for this little girl because it is supposed to be meaningful to her. So I had started that piece.

**Adriane:** To what point did you get that piece?

**JD:** I got it to where I got to her hair. Most of her hair was really dark so if I wanted to I could just make the background black, and it was taking too long, and it wasn’t blending right, and this doesn’t look good enough to send forever away. It didn’t feel good enough for that purpose.

**Adriane:** What is the purpose?

**JD:** The purpose is to have a meaningful piece that little girl is going to have with her as her only memory of herself and it just didn’t feel like it fit. So I thought, "I’m just
going to start over and I am going to get realistically, this little girl’s face." I gridded it off. I gridded the paper and I gridded the face. Because I’ve done grid drawing before and they’ve been really successful because focusing on the little pieces really helps me to get what it looks like.

I know that they weren’t proportionally correct but it’s okay because it’s art. It’s not a photograph. So with the complicated part that I was messing up in my painting, because I knew it was cause had already tried to paint it and I knew which parts were hard to figure out how far apart and how big her eyes were. I took it and made even more little boxes inside those areas so that I can get it as exact as I needed to.

And then I started drawing the piece and I was doing a good job got really, huh, really, really happy and excited about it. I kept taking pictures of and sending it [to my boyfriend].

Adriane: How did you know it was a good job?

JD: Because it looked like a person and it looked like it was supposed to look, like the image that was taken and that’s why it was successful to me. It looked like it represented her in a good way. I looked at my little drawing and thought "Oh, she is so cute." Just like when I look at the picture I think “Oh, she is so cute. Actually, I think my vision was better, more cute. Then, I was comparing it to the other one. I am really glad that I started that because this doesn’t look [Photo E], it wasn’t what I had envisioned it to be. Then, I finished the drawing and I started the coffee.

The coffee was a suggestion because I wanted to paint it but I didn’t know how. I didn’t know what medium like acrylic or tempera or watercolor. Ms. M said, "What about coffee" and I thought “wow, that really works.” She is dark skinned and coffee is dark and it worked out. And then I was going to do this wavy background as you can see on letter G kinda.

I didn’t like the wavy background because it just didn’t…the lines that I was waving didn’t follow her lines right and had I painted in them or had I color penciled them in they would have taken away, it would make it look abstract and not this beautiful piece that this girl is going to have forever.

And then the first day I was painting in coffee. Like the difference between [Photo] H and I that was the day I painted it and that was the next day. On the next
day, I noticed that where I had a lot of coffee, I noticed that there were a lot of stain lines and it made her face look blotchy and I had to fix it. [I thought,] "You can’t do it that way."

Adriane: How did you fix it?

JD: Well, I know that in watercolor, if you mess up you can add water to it and that loosens up the pieces and you can loosen up the pieces of the actual color and that makes it spread. So I thought, "coffee must do the same thing," so I tried it out and it worked and I was like "Okay, awesome!"

Adriane: Did you change the way you used the media later? As a result of what happened between one day and the next when it dried that way?

JD: Yeah, because I discovered that if I let it dry with lots of pooled coffee I was going to get these lines. I used that to my advantage actually in her hair. When I let it dry I let a big pool of coffee dry in certain areas because I knew it was going to leave that line and I wanted that line in her hair. So I discovered a technique and I used it in the end. Also, I tried to avoid it because I realized that it is easy to get the whole thing really wet because I realized that if you want it really dark you need a lot of coffee you can make it really wet and dry like that.

Adriane: So how did you get the hair so dark?

JD: Well, you put more coffee and less water, [look on] on this picture K. There are all these little cups I have one with just clear water in it for if I want to make something really light and three cups was too much.

Adriane: One of these cups has more coffee than the other cups? Yeah, Oh, okay I see. So you have a light a medium and a dark?

JD: Right but I realized that I didn’t really need a light, a medium, and a dark. I could just do a light and dark and mix them together to mix a medium if I wanted to or add more water so really all I needed was a water and a dark, or like a water a dark and a light. I ended up taking a picture where you can see that. I took the [instant coffee] to my desk because if I needed to make a dark I had it with me so I didn’t have to get up all the time.

[Photos] J and K must have been when I was painting her hair and L too because I didn’t- the hair wasn’t dark enough so in [Photo] M that was after I started getting all
the super darks in her. The difference between [Photo] L and M is that in [Photo] L there is no real darkness but in [Photo] M there is all this dark and all this super dark coffee I was able to use it to my advantage and also the red in her bow.

Adriane: What did you decide to use for Red? Acrylic?

JD: Yes. Acrylic. The bow, I wanted it to be really exact it because in the picture it doesn’t have that flowy feel of ones face. It’s a really a blocky kind of thing. And since acrylic is really specific I can make the whole thing red. That must have been the first day a day after that. I am not sure if those are the same day but on [Photo] N, I used acrylic on her shirt and I didn’t use coffee for her straps because I would need so much coffee to make that really dark. And it would take a long time. And I wanted to start working on other things. Then, I outlined her. I realized that I didn’t like the background she was on. So I outlined her with acrylic, a really thin brown acrylic. I had a line to cut off on. Otherwise, she would not have an outline. She wouldn’t have a border to cut on.

Adriane: Let me see this [Photo L]. Had you already done the background? Ok, so you had already thought about the background and but you knew you were going to cut her out so you did the line so you could cut her out. I see.

JD: Yeah. I showed Ms. Mona because I was really proud of it and I like everyone to look at it when I’m proud and she said that if I look in the mirror I can see any flaws it might have. She had noticed that one of the eyes was too small to match the other eye and I didn’t see it so when I looked in the mirror I was like, “Oh yeah they are really different.” You can see it better. You can’t really see it in these pictures O and P. But you can see in N that one of her eye. Her eye on the right is a little smaller that the eye on the left. Like it doesn’t fill up as much space. It makes her look less realistic.

So, I added more super dark coffee. It’s like the tasters choice coffee, if you get them wet they spread, these little granule forms, so you can have these little chunks of coffee and just get them wetter and wetter and they spread. There are two or three little granules you can see in her eyes.

So then that’s cutting her out and I made really sure to follow that line and to keep the line there just in case I had light spaces in the back ground. I wasn’t sure if I was
going to do a “Greetings from Florida” background because that would be really cute since we are sending them out or a Zentangle background.

I was thinking in the shower about it. I thought Zentangle would be really cool because you know it is a contrast between the color and the dark background. It would make her pop. I cut her out and I sprayed her with sealant so the coffee doesn’t attract animals or rot or cause problems.

I got another piece of watercolor paper from the same packet so they are the same size and I started Zentagle-ing the background in her outline. I mean what is the point of filling in the middle if she is just going to cover it up? I did make an outline of her. And I went a little bit in. Just a quarter inch in just in case it didn’t fit in and it would still be ok. Right now I am really happy about it like I am almost done. I have to finish this little piece (Figure 27).

Adriane: So what are you going to work on today?

JD: I am going to finish this little piece. During our black bean celebration and I am going to eat my black beans and fill out my AP thing but tomorrow I was thinking about starting on a plein air piece and going outside.

Adriane: I don’t have any more questions, thank you.

JD: You are welcome.

Figure 27: Portrait for the Memory Project by JD.

Summary of JD. JD focused on portraits with exaggerated proportions in art class to develop her AP Studio Art Portfolio. A picture of a six-year-old girl was “so cute” that it
motivated JD to participate in the Memory Project, an initiative in which art students create portraits for neglected or orphaned children and teens around the world (Figure 27). The purpose of the Memory Project was to create a special memory and keepsake of childhood. Children write short introductions about themselves and art students make a portrait in any medium using a photograph as a guide. Then, the children receive the artwork as a gift along with a note.

JD applied her painting style, which emphasized flaws in people’s faces by exaggerating proportions, to the Memory project. When she compared her painting to the photograph, she was dissatisfied. She wanted the artwork to capture the enchantment she felt when she first saw the photograph. She thought, “I am just going to start over and get this realistically” because providing a meaningful piece as a gift to a young girl needed a different approach.

JD’s interview photo series started when she began the second artwork. A grid enlargement technique learned in an earlier art course helped concentrate on small bits of the reproduction at a time. She was enthusiastic about the progression of the work and emailed her photos of her process to her boyfriend. Instant coffee at different dilutions functioned as a medium for the girl’s brown skin-tone and presented a challenge when pools of color dried and left unwanted lines. She corrected what she viewed as a flaw by applying her watercolor painting skills to soften the undesirable lines. She learned to manipulate the nature of the medium to serve her needs by leaving pools of instant coffee to dry and leaving lines where she wanted to delineate the girl’s hairstyle. JD increased the dilution of coffee granules when she wanted darker values. Not pleased with a distracting background of wavy lines, JD changed course again and cut out the background and replaced it with a new one. She drew a brown line with a fine-tipped marker around the face and shoulders and used a pair of scissors to cut along
the line. After considering possibilities for a new background, she decided on a visually engaging monochromatic Zentangle that permitted the colors of the portrait to “pop.”

The beauty JD encountered in the photograph of the happy, cute little girl guided her process. JD made changes to her art process, when her progress did not meet her goal. The exaggerated features of her first portrait did not inspire the viewer to be enamored with the girl so she started over to realistically represent the girl’s image. She encountered challenges with materials and composition, which only made her more intent on reaching her goal through generating ideas and manipulating the media to serve her needs. She changed course when necessary to meet her goal and was thrilled with her final gift for the sweet girl.

**Portrait of RB**

**Observations and informal interviews with RB.** I observed RB create a portrait in acrylic paint, abstract and geometric watercolor paintings, a human figure drawing of a discus thrower, and a plein air charcoal drawing of a tree. During his interview, we talked particularly about a cityscape painting and his reasons for having many artworks in process at once. The cityscape was inspired by bird’s eye view of our city from a parking lot and reinforced by images he saw on blogs.

RB allowed several works to remain unfinished at one time, leaving them in a tentative state, in order to gather ideas to complete them and at times abandoning them altogether. Once every few weeks he took inventory of his unfinished works and planned which ones to pursue based on ideas gathered since last working on them and ideas generated during his periodic self-reviews. As long as he progressed at least one piece per day he felt satisfied with his work. He said, “If I work on the same piece every day then I just work on one thing. There is only so long you can stare at one thing.” He readily transitioned to other ideas.
RB was a senior and enrolled in two consecutive periods of art, Portfolio and AP Studio Art Two Dimensional. When I first started observations for this study, I asked students to tell me a little about their concentration for the artwork in this class. RB reported that he was interested in abstract and geometric shapes and enjoyed the media of watercolor, papier-mâché, acrylic and oil paint, and, interestingly, diluted instant coffee (although he did not use coffee during my observations).

When I visited a week later, I found him developing a PowerPoint submission of his work for a popular local, community art exhibit. The submission required 10 examples of his artwork. He carefully reviewed the images he kept on the class computer and after about 30 minutes had selected about four. I saw him close the PowerPoint application, then walk over to his portfolio and retrieve a portrait of man, on approximately 16 by 20 inch paper, looking on through a slide viewer (Figure 28). He paper clipped a four-by-six inch image from a magazine to the artwork that he used as a guide for his painting. He used a small, round, plastic container cover to make a palette of varied orange and peach colored skin tones. He added highlights and shadows to the man’s neck for about 40 minutes using a small #2 round brush. Then, I saw him stand up, place the portrait on the drying rack, and retrieve a second painting from his portfolio, a watercolor of an imaginary building structure suspended in the center of a white background. I asked him about this new piece. He told me it was titled Fantasy Architecture (Figure 29). He reminded me, “I like geometric and abstract shapes. That is my concentration [for the AP portfolio submission].” I watched as he used another small brush to add a light wash, an almost undetectable light blue, to the already blue colored building entrance.
The next time I saw RB, I noted that he had started a new acrylic painting of a bowl approximately nine inches by 12 inches (Figure 30). The portrait of the man and fantasy architecture were both placed at his work station alongside what looked like a still life of a classical statue of a discus thrower, I had not seen before. He steadily painted the bowl for two hours. I asked him what he was planning for the work. He told me that he wanted to add fruit but today he was intent on shading to add form to the bowl. He worked in black and blue colored paint. As the day progressed, he added a line across the top third of the painting implying a background and darkened the shadow of the bowl on the ground with a city in the distance. When I took a photograph of his work, he told me he thought he was done. He looked at the artwork for a while, about 10 minutes as he slowly cleaned his brush and paints, then paced around the class looking at other students work and returned to review his own. I saw him place his work in the drying rack, clean his desk then the bell rang, and he went to his next class.
When I visited two days later he told me he had decided not to add the fruit because he did not have fruit to observe. Instead, he added white “rice” to the inside of the bowl to evoke a feeling of hope in a gloomy setting. His work had progressed with more contrast and the entire canvas was painted in short blue and black loose, wiggly strokes. He decided to include this work in the art show honoring a visiting holocaust survivor.

At this point in the study, I noticed RB start three new paintings in two days while he still had his portrait of the man and the viewfinder and the discus thrower to complete. I knew I would want to ask him during our interview to elaborate why he worked on multiple pieces. After completing the bowl, he searched in a bookcase for a sheet of watercolor paper and began a still life of a goblet lying on a table (Figure 31). He sketched for about 10 minutes then began adding acrylic paint in yellows and brown. The next day he did not return to the goblet acrylic painting and started a new 9 by 12 inch watercolor painting. The bottom third of the painting was blue and was painted in a way that implied a wave shape. The top third was yellow. The same day he began a second watercolor painting on a square sheet of watercolor paper using a wet on wet technique, blending colors while the paper was moist. He used pink on one side and a light turquoise on the other, which blended in a violet in the center. When I saw RB a week
later, he had returned to the wave painting and was adding darker blue to the wave and a couple of large circles in the bottom third.

Figure 31: Goblet, wave, and abstract watercolor by RB.

RB agreed to participate in the photo-elicitation interview with his next painting. The following day, he started using a 16 by 20 inch paper and a small number two brush and black and blue paint (Figure 32). I noted that he had been painting shades of blue in straight vertical lines for 30 minutes and had covered about one fourth of the paper. RB painted closely in proximity to his art and periodically stood up to view his work from about five feet away, holding his brush in his hand, and then returned to his seat. He told me he was planning to make a cityscape like the city in the background of the bowl painting but this time from a bird’s eye view. At times he sat way back in his chair and worked on patiently making vertical lines with his arm extended. Other times he worked close to the work with his face about a foot away from the art. At the end of two-hour block in art, the vertical lines were almost complete, and the process continued into the first part of the next day’s class. When he had filled the paper with shaded blue lines, he took a break. He walked around class. Then, I saw him turn the paper around. He told me he was looking for the right angle to make a cityscape. He decided on the orientation and began using short two to three-inch squiggly lines. In this phase of the process, his hand moved loosely and not as deliberately as his vertical lines. I saw him mostly standing to
make the wavy lines. He continued until he had covered the vertical lines with wavy, squiggly ones. Then, with white paint he began a process of making long curved and straight white lines that ran across the length and height of the paper. I noticed that at times he stood close to the paper, his face about one foot from the canvas, looking intensely at the lines he made. He completed filling the composition with squiggles and then asked his teacher for a flat brush. She plucked a couple from her office and offered him a choice. He selected about a size four acrylic bristle brush and used black paint to apply thicker vertical lines. The lines were somewhat evenly spaced across the vertical center of the painting. I took photos throughout the process of making the cityscape when he told me he was ready for the piece to be photographed and is the subject of our interview, reported in the next section.

Figure 32: Cityscape by RB.

After the cityscape was complete, RB let it sit on his desk for a couple of days. He would walk by and look at his work. So did his peers and the other art teacher, Ms. D. At this time, Ms. Mona learned that a plein-air painting group would be visiting the area and were scheduled at several locations over two weeks. She had seen the group of 20 artists before and told me that
the events were popular and people offered to buy the artists works while the canvases were still wet on the easels. Inspired by the painters visit to the area, she decided to introduce students to plein-air painting and offered them the opportunity to paint from life using French easels or drawing boards accompanied with a few small suitcases she prepared with various art materials including gouache, watercolor, and oil paint.

RB had completed his cityscape and seemed eager to try plein-air painting (Figure 33). He said, “I want to use charcoal.” He went to the computer and looked up how to use it. I overheard him ask Ms. Mona, “What is vine charcoal?” She explained that it is charcoal made up from burning vines at high temperatures. Next thing I knew, RB was equipped with a drawing board and paper. Ms. Mona offered him a soft and a medium charcoal pencil. He chose medium but she said, “Here take both.” Upon his return about an hour later, I asked him if he had used charcoal before and he replied, “No.” He said that he liked that it was so dark, “you only need one line to get a shadow.” He explained that he used a tissue to drag the charcoal to suggest the Spanish moss that hung on the branches of the oak tree.

Figure 33: RB used charcoal en plein air.

**Photo elicitation interview with RB.** RB agreed to use photos of his work to engage in the photo-elicitation interview. We sat in the gallery adjacent to the class. The images used in the photo-elicitation interview are provided in Appendix I, Figure 68.
Adriane: How did this piece develop? Try to talk about each photo one by one.

RB: At first I had this image of like a city in my head. I was going to use the same technique that I used in the bowl one like how I just did random strokes with the tiny brush. If you use a big brush then you have the strokes that are bigger but if you do a tiny brush you can see the lines more. I like seeing that. And then I chose blue because I thought any of the other colors would not match a city. Blue came in my head.

Adriane: Because it did match or it didn’t?

RB: It did. You can’t really do like a green city unless it’s a light green but I didn’t feel like working with light colors I think blue sets more of a mood to the picture. When I was in the middle of this I saw a forest. [Photo C] I thought maybe I should change it. I was debating, I thought, "I'll see what happens when I get done painting the whole thing." Then one thing I had done is, I started to flip around the paper determining, I had chosen the city. So I started to flip around the paper to see what side the city should start on, which perspective it should go through [Photo D]. I was undecided whether to do a really high bird’s eye view or staring out through a window. I did the technique that I did for the bowl doing random things. I put my signature in there a couple of times. I had WR put her signature in there. I did random strokes with different colors [in Photo F]. I did random lines…. just let my hand go randomly and then I started painting lines. Just like streets. I had an image of streets intersecting. At first I didn’t think that in my final piece… that there is a river that goes on top. It is supposed to be like a combination of New York and London, some imaginary city that came up in my head. I crisscrossed lines with white. I decided to use white for a street because it pops out. I did horizontal lines, vertical lines, ones that curved, one that goes like a circle. The, I started seeing each block. And determined how big a building will be. Then [Photo G], I found it easier to make buildings using one of those square brushes and do with black paint, a straight line. I just did a bunch of straight lines going along these blocks within this big giant block there’s a bunch of different streets that you can’t see.
[In Photo I] I like how I did the little squiggles. I was thinking about using a fine brush and just taking the time to do a bunch of little squiggles on the ground like a representation of houses or suburbs or something. So this squiggle is from before form when I was making these lines. In this little area, I was starting to do that with a tiny brush so I decided I would just do this. Then on the top of each building I used the same brush and dipped it, I didn’t clean off the brush at all, I got the same brush then dipped it in a white greyish and put a bunch of tops onto the buildings.

Adriane: Did the tops come after the black lines?

RB: I did all the black lines first and then the tops and like a stripe down the side.

Adriane: Did you do a series of lines and tops?

RB: No. I did the black lines then the tops then the sides. I added a bridge right there [in Photo I] like a suspension bridge and an island over here. I liked how this part and this street and this side; how it looks like a city, where there are roads and these are the main roads and these are the in-between and this is a circle plaza. I’m not done with it yet but just a little bit more and it could be done or a lot more and still be done.

Adriane: What do you think you will do to it?

RB: I’m going to finish off the white tops on this one [on top left of the work]. I might add more buildings over here to cover it or I might take out some buildings and cover it with some blue and that will take out the buildings. I’ll make the water look less like the ground so it looks more wavy.

Adriane: Where did the idea come from? You said that you wanted to do a bird’s eye view at an angle. Where did the cityscape idea come to you?

RB: On Tumblr [a blog website], I follow art blogs a lot and I have seen washed out photos of cities. I saw this one that’s kind of like this where it’s just a lot of buildings. A bunch of tiny colors sand little shapes to it. I like how the architecture. I like definite lines but I also like when physics is defied. When building looks like this but it stands up.
Adriane: The other thing, will you put these in order? Let’s talk a little about this one. What you were thinking. Is this the first time that you used lines?

RB: I think I started using the lines on the orphan project where I started experimenting with cubism. I looked up how to do that. Then the orphan. The background. I just did a regular yellow. Then I had the idea maybe I should do the monotone person. Then, I thought of the statue and I used the same process but instead of white and black and blue, I used yellow and white and like a darker yellow. I used a tiny brush each time I did this so you can see the strokes messy, looks like a texture behind it. After this one I had the idea, the hope project or a contest. And I thought, “What is hope?” And, I thought blue is sadness and an empty bowl. I had thought a bowl of fruit but I didn’t have a bowl of fruit to draw. But I found a bowl and drew the bowl. And, thought I should enter this into the contest but is just a bowl. This used to be AB’s canvas. It was a picture of HB so I put a bunch of layers of gesso because you could see the outlines of what AB did so I did a bunch of layers. Then, I did the little scribbles of paint and then I drew a rough outline of a bowl while looking at one. I focused on the darks and the lights around the rim. You couldn't really see it on the bowl. I was looking at so I just kind of exaggerated it or emphasized it. Made the darks darker and the lights lighter so you could see the bowl. See how empty it is?

Adriane: What I wanted to ask you about: there were a couple of days that you were working on the bowl [Photo AA]. You had the bowl and then you pulled this work. These were the same day so it was interesting that you took the photos apart and put them in different stacks. And you had these three out and you worked on them all. And then you still have this one somewhere. I am curious about having multiple works in process at the same time. And you still have this one going. Tell me about working on different ones. Why you were working on all of these?

RB: Mostly because of deadlines. Ms. Mona said there is less than a month away for the AP portfolio. I thought, “Wow, I have a lot of unfinished work,” and I thought, "I have less than a month away." I feel that if I work on the same piece everyday then I just work on the same thing. There’s only so long you can stare at a blue thing you need to like transition to other things like yellow green. I just find it easier to work on
different projects at once because I am the type of person if it is unfinished as long as I
did something to it that day. As long as I got some progress then fine.

Adriane: So this day you were taking inventory of what you had?

RB: Once every few weeks I pull out all the my artwork and just lay it down and see which
one looks like needs more work or which one is more incomplete or which one I feel
like working on. Then, I start off with that. Whenever I put off the work, whenever I
get back to work on it--when I get inspired by what I might do next. I think, "That
would be a cool idea that would be a cool thing to try out." I think a lot.

Adriane: When you have all of these, do you ever think like when you say you look on Tumblr,
do you ever think, "Oh, that would look cool on that piece I have in the works."

RB: Yeah. Those building pieces were inspired, not by Tumblr, I saw cityscapes on
Tumblr, but from when I went to downtown. We went to a parking garage and we
went to the top it and I looked at the capitol and I saw that the capitol was the highest
and there’s two buildings and another building. And you just see the uniformity of the
windows. So I was thinking of doing a city. I was thinking, “I want to paint a city.”

RB: I was thinking of doing that as a plein air piece. I was thinking I would just practice
with the charcoal first with that tree over there. But once I get good at it or once I feel
comfortable with it, I will sit and draw one of these houses and focus on the darks and
the lights and do harsh darks and exaggerated lights. I think that will look cool.

Adriane: So, in this case you started with a sketch of the tree?

RB: I really want to go home and do an en plein air with the charcoal because my house
has a forest behind my house. So, I know places that I can go that I have thought
about drawing before. Like my street, down the street, there is a slight curve and then
there is a pole and then there are wires going around the car right there. And I thought
about drawing that before too.

Adriane: Thank you

RB: Um hmm.
Summary of RB. RB’s series of photos showed several artworks over time: a portrait in acrylic paint, watercolor paintings with geometric forms emphasized, and a human figure drawing of a discus thrower. We talked particularly about a cityscape painting and his reasons for having many artworks in process at once (Figure 32). The cityscape was inspired by bird’s eye view of our city from a parking lot and reinforced by images he saw on blogs.

He began the painting using a small number two watercolor brush on an 18 by 24 inch paper. He chose to use vertical lines in shades of blue because he felt it was the best match for the mood he wanted to express in his cityscape. At one point he considered changing his theme to a forest landscape because he could envision the work going in that direction but allowed himself to make the final determination about the works direction after he completed the blue background. He turned the canvas around and around considering which angle would be best for his cityscape, which he decided to pursue. He let his hand move randomly with the brush on the surface of the paper and added his signature in a few places in a way that would not be evident in the final piece. He asked a peer to add her signature, too. Then, white lines started to define areas of the work that eventually represented city blocks and a circular plaza. He used squiggly lines to tentatively represent potential shrubs or a suburban landscape but abandoned the idea in favor of vertical lines made with black paint and a flat brush giving the impression of buildings. After placing over a hundred black strokes, he decided to add a third dimension by adding tops to the buildings and a line on each side. As essential to his process, he used random strokes using an intentional color scheme to create a visual effect of randomness.

RB allowed several works to remain unfinished at one time, leaving them in a tentative state, in order to possibly gather ideas to complete them. Once every few weeks he took inventory of his unfinished works and planned which ones to pursue based on ideas gathered.
since last working on them and ideas generated during the review. As long as he progressed at least one piece per day he felt satisfied with his work. He said, “I feel that if I work on the same piece everyday then I just work on the same thing. There’s only so long you can stare at a blue thing you need to like transition to other things.”

**Portrait of JC**

**Observations and informal interviews with JC.** JC was in 10th grade and enrolled in Portfolio. She was articulate, open about her process, and seemed to enjoy sharing ideas and feelings about artmaking. Like CR, she took pre-AP in middle school so she was familiar with developing a theme in her artworks prior to enrolling in the art course under study. During an informal conversation, she told me that she always loved art because it helped her relieve stress, because she could do things based on “just me;” art was, “a safe haven.”

I asked her why it was meaningful that she could do what she wanted in art class. She shared that she could use her imagination and not be “told what things are.” I asked what was most challenging in an art class where she could do what she wanted. She said that coming up with ideas to form her concentration. She said that her ideas develop from things she sees throughout the day while riding in a car, sitting in class, or when ideas “pop” into her head. I never saw JC look for imagery on the Internet but I observed her make numerous sketches in class. She drew and painted in class but she also developed her artwork at home, bringing her artwork to school episodically as they progressed. She told me that she likes to work on art for periods longer than the one hour in class and that her schedule was busy with her coursework and gymnastics training. I observed JC use graphite, color pencil, watercolor, ink, and acrylic paint. JC calmly entered art class set her oversized book bag down on the table and settle into a sketch or drawing. I also saw her sit quietly for periods of time. When I asked what she was
thinking, she said she was considering what to do next. In class, she made a crayon engraving of a surreal creature. She created a drawing of a “parent” creature in crayon. Then, she used the ink prepared by Ms. Mona to paint over the crayon. Then, she engraved a different creature into the ink, revealing parts of the drawing underneath. The eye of the parent creature underneath was the same eye in the child drawing revealed through the engraving.

She generally created fantastic images, which unusually combined figurative elements to create art works described by her friends as “scary and creepy” (Figure 34).

Figure 34: JC's artworks.

She expressed that her art class was like a family. She said, “We are really close,” and provided an example. In other classes, she may not be terribly over-concerned if a classmate hurt their ankle. She said, “But here, it is like, ‘Oh! What happened?! How can I help you?’ It is more like a family, and I really like that.”

Photo-elicitation interview with JC. JC agreed to take photos of an artwork. I did not see her work on the artwork since she completed most of it at home. JC provided over 35 photos of her process to make a portrait of a priestess. She warned, “Some are doubles because I was
trying to get a good angle and not get a glare, so pick whichever ones you think are best.” She was right, not only were there doubles but triples. I selected one image from each moment JC stopped to photograph and winnowed the images down to 15, which documented the process to draw and paint the priestess. I asked JC where she would like to talk. She elected to sit in her regular seat. She carefully placed a letter on each of the images and stacked them back up in order.

Adriane: How did this work come about?
JC: So, starting with Picture A, that was my place where I started drawing a face. That is just where I started drawing. I start with eyes then the nose. For some reason I always start with the right eye, when I am drawing it. Then, I did that right before gym.

Adriane: What size is the work?
JC: Sixteen by 16? I drew the hair because the face was giving me a wavy hair kind of person. It was originally going to be more flowy out but I decided to have it more downward. It has an anti-gravity kind thing going on. Not as much as I had originally planned. Then the ornament crown thing: At first it was just me kind of playing around. I wasn’t going to keep it but I liked how it looked so I kept it.

Then on [Photo] C, I started darkening the lines and adding the darker shading around in the lips and in the nose, that whole area. Then, in [Photo] D I started drawing the lines in the hair showing which way I wanted it to flow because I have discovered that the helps me when I am drawing hair to have the way it flows especially when its curly because when I get started I’ll just go with the same pattern. I don’t want that with curly hair because it not the same curves all the time. So I drew that out.

I shaded a bit in here where I started drawing thinner lines. Then, I got the whole behind the head area (Photo E). I think of that as the darker hair area. So, I start there then I start moving toward the parts that I think are going to be darker and the rest of the hair and then I spread out even more doing the rest of the hair and doing more darker colors to the hair than I’ve already done.
So, I’ve got the base color that I want for the hair and I darkened up the crown within that. Then, I started more shading to the face trying to make it look more realistic and popping out. I also took an eraser to the hair to give it the shine. When I started drawing her, I felt like, down here, it made her look really old, but I kept it cause it ended up looking good.

Then, normally, I went in a different route than I normally would because normally I would start on the right eye so here I started on the left for some reason. The left decided to call to me at that time (Photo H).

So, I got the shapes around the nose. I was testing out around the nose a bit adding some bumps in it. So, compared to the smooth noses that I draw it has a couple of bumps in it.

Then, I hadn’t done the right side of the face or the lips because lips are really hard. Then in [Photo] I, I got more of the face covered. I stared working on the right eye. Still avoiding the lips. They always frustrate me.

Then in [Photo I and J], I got the shading in the eye done completely. Then around the eye, I originally had it a bit darker around the edge of the face looking at the right side so, I took an eraser and I took that off a bit because that’s where I wanted the light to hit along there; to give it lightness.

Then in [Photo] K, I finally got to the lips! And, actually they turned out pretty good. I was really happy with them this time. I really made sure I went on the fact that the top lip is going to have shadows because people don’t realize that that the top lip is going to be more shadowed. When everyone normally draws them light and has light on them the light that you are going to see. If the light source is above you, the light that you are going to see is really going to be a bit of a reflection of the bottom lip on the top.

**Adriane:** Did you look at any lips?

**JC:** No. I have a hard time. I look at stuff sometimes but sometimes if I look at stuff it will frustrate me and I will put the work away. I was on a roll I was happy with how it was going.

**Adriane:** What were you happy with at this point here?
JC: I was just happy because it looked like a person but it had a surreal look to it. Something made you look at it besides the eyes obviously but something about it, a fantasy kind of feeling to me. And, I like when work does that to me. That there is pretty much normal but there’s just something there that is out there.

At that point, I was looking at it and all the shading was about the same tone so that is when I went to [Photo] L and decided that I wanted all of the background to be black. So, I colored all that in and I got shading around the crown area and shaded the crown a bit because earlier it had just been just drawn and I hadn’t shaded it in. I still wasn’t sure if I really liked it. It still stuck with me. I actually left the work alone for a while. Just like that because a lot of times for me I am always nervous about adding color. Sometimes I will be really happy with it in black and white and then I'll color it and think, "Uhhhh. I ruined it."

Finally, after lots of contemplation, like about a week, of just looking at it and doing other stuff and looking at it more, I finally decided on painting it. I always start with a light wash of the color. I always do that when I start. I did that for the skin. It is amazing how many colors you can use to make a skin tone. I had green in there and you look at skin and wonder, “Why would you add skin?”

Adriane: Was it green in the mix or you put green on the canvas?

JC: I mixed the greens and yellows and browns and reds and whites all together and I mixed the colors until I get what I want. If I look at it and, "Oh, that is too red for my liking," I’ll add a different color. Then, the lips were a bit of my skin tone without white. I had left a little portion that I didn’t add white to. And some more red and that was the wash on that. I also used that on her crown with the strings in between the parts that hang down.

For the crown I didn’t use a light wash of yellow. I was just like YELLOW all over it. I used a really thin brush on most of it with lots of paint. That was interesting; I kind of got the color that I wanted in it.

Adriane: Were you okay with this or did you feel like you "ruined it?"

JC: I was pretty good at it. The crown was throwing me off because it was a bright out there colors rather than the washed out tones like her skin. So, that was throwing me off and I wasn’t sure if I was still going to like it at the end. I was like, "Um?"
Then, I took it home at every stage to take a picture of it. And, I ended up taking it to gym because I like showing off my work at gym. One of the girls held it up to her shoulders and the shoulders matched up but the head looked humungous. So, I thought "Oh, I made the head really big." But, I just kept on going. I still liked it.

Then, on [Photo] N, I decided that I would add color to her hair. I probably sat for half the class period trying to figure out what color I wanted her hair to be. A lot of times I go with red colored hair for some reason. I just do a lot of red. I ended up adding a pinkish-red, but here I decided that I wanted it to be blue because I was thinking of her at this point as a priestess, which is what the title ended up being. So, because she had that unearthly kind of feel to her, I went with the blue because I wanted her to be pure and when I think of blues and whites I think of purity.

Then, kept on looking at her hair I decided that I didn’t want her hair to just be blue, so I added a bit of the normal red that we have, which when you wash it down has more of a pinkish color.

Adriane: What kind of paint?

JC: Acrylic. It’s all acrylic but watered down and used like you would use watercolor but I used it with acrylic. So, I went over it first with a wash of the pinkish red and covered it all and some of the blue showed through which I liked. So, I left it that way. I added some of the darker pink colors going through it to give it like the hairs you can still see the lines from the pencil so I wanted that there but they aren’t nearly as bright as what they were. Then, finally I decided to add my shine again with the eraser when I just had the pencil. I added the shine with the white paint. I am pretty happy with it. And added my signature in white.

Adriane: So, does she look like what you thought she would originally look like?

JC: No.

Adriane: What did you think she would look like?

JC: When I first started imagining her, almost like Amazon-ish. That’s right she would have bigger hair, almost flying floating hair. Amazonian feel. But, she progressed differently than what had originally come to mind and became the pure priestess lady that she is now.
Adriane: How did you come up with the idea of an Amazon woman?

JC: This may be strange, but because of her nose.

Adriane: You started off knowing you would draw a woman?

JC: Yes. I don’t draw men very often. I am trying to slowly draw more men. I think it’s easier to draw your own gender. Even when I draw men they have feminine features. Something funny. As I was drawing her in pencil, I normally draw a bunch of creepy stuff. When I got to where I wanted it in pencil everyone was like, everyone was like, “Hey its not creepy! You could add a scar here or stitching here. That would look really good and scary.” And, I thought, “Guys, all my work has to be creepy.” It was just funny. People’s reactions when it wasn’t something that would be deemed as scary, which is what they are used to me drawing. Interesting to give me ideas to make it scarier.

Adriane: Thank you.

JC: Yeah. It was fun.

Ms. Mona approached us and asked: Can I ask a question?

Adriane: Sure.

Ms. Mona: So, you get an idea and you start making it. Is there ever a point where you aren’t in control but the artwork is?

JC: Definitely. It always goes for itself. For me to have an idea and know exactly what is going to go on the paper, I have to tell my self that it’s not going to end up the way you want it to look. So, don't plan it all out perfectly because its always going to end up differently than what I want. For example, I’ll start drawing an eye and then it becomes itself. I draw something and then people ask, "What kind of creature is that?" and I say, "I don't know, it just happened. It takes characteristics of all of the art that I've seen at the time or places that I’ve been near that time or images that have been through my brain. They just compile together.

Ms. Mona: Do you ever feel that the work is telling you what to do? Sort of? I want a little more of this over here?

JC: If I look at it and I have the hair I visualized it and it is like she needs something more. And, there is a girl who has short hair and she has bangs that are all in her face
then it might be like it needs pigtails. Its not going to be what I wanted it to be but it needs pigtails. I look at it tell me where to shade.

**Ms. Mona:** That’s interesting how it guides you. You gave life to it but then it tell you what it is going to be.

**JC:** It almost makes you kind of crazy when you say that the artwork talks to you.

**Adriane:** Anything else? When you sit down to work, you said you start with an eye?

**JC:** All of my art starts off as a sketch. I start drawing it just for fun then as I am drawing it whether or not it turns out to be something more, you could say that that is dependent on me but it really on how its evolved.

**Adriane:** So you not always starting off, “This is going to be finished work.” Sometimes you are just playing?

**JC:** Right. Yeah. I would say I play around with it a lot. I am always trying something new. I will walk around the art room and thinking, "What can I play with?"

**Adriane:** Do some pieces stay in play?

**JC:** Yes.

**Adriane:** Between here and here you had some days where you weren’t sure if you would color it or leave it alone. You said you worked on something else. What did you work on? And, do you have many works that are in progress and then you pick what you draw and then you finish one?

**JC:** Well, I have a lot that are unfinished and I will work on them when I feel like working on them. Because things that I do normally, I might have stopped at [Picture] B and it might have gone in to my portfolio for a week or so just sat here and, then I’d be in my portfolio and think "Oh, yeah." Or, I will be working on something else and think "I don’t want to work on this today. I’ve gotten kind a bored with working on it now," so I'll set it down because my creative energies toward that once piece is done for the moment and I need to move on to a different one. Yeah, I guess I do have a bunch all scattered about.

**JC:** Between [pictures] L and M, I played around with a bunch of stuff. I think I actually did paint within that time and I was happy with it so, that may have led me to the decision to go ahead and paint it.

**Adriane:** Thank you.
JC: Just let me know if you need more.
Adriane: After I listen to it then I will know.
JC: Sure.

Figure 35: Priestess by JC.

Summary of JC. The art process for JC was experimental, tentative, and playful. She said her works started out as sketches and whether or not they conclude in a finished art piece depended on how it developed. Sometimes, the works simply remained as a playful sketch in her portfolio. She typically addresses fantastic images, which usually combined figurative elements to create art works described by her friends as “scary and creepy.” She enjoyed art that “looks real” but has an element of impossibility, so she makes her work in a similar way. She observed life to understand how nature works (e.g. how light hits natural objects) and used what she learns to increase the realism in her surreal, imaginative artworks.

During our interview she talked about her 16 by 16 inch painting of a priestess (Figure 35). She first intended to draw an Amazonian woman with big, almost floating hair but the work progressed into a priestess. She said that her portraits almost always start with the eyes
and spiral out to the nose mouth and shape of the face. In this case, she omitted irises. She added lines to imply the flow of the hair later to be filled in with shadows and details. Once her large shapes were blocked in she began to push the dark areas, darker and pulling out highlights with an eraser to increase the three-dimensional qualities of the face. She avoided the lips, leaving them for last, because she wasn’t sure how to draw them. She explained, in detail, how she thought about how light falls on lips; the upper lip is darker because its in shadow yet has a bit of reflected light. Once she was satisfied with her drawing in pencil, she contemplated adding paint because in the past she felt like she’d ruined her work after painting it. After about a week of periodically looking at it, thinking about how to paint it, and working on other paintings, she decided to paint the priestess portrait.

Blues, yellows, greens, and reds were mixed to create just the right balance for a skin tone for the priestess. The initial yellow she used for the headpiece was too bright but she eventually toned it down to harmonize the crown with the other tones in the work. Despite her preference for red hair, at one point, she decided that blue because would better represent purity and unearthliness for the priestess. She did, however, add a subtle wash of red throughout the hair making a soft violet. To complete her work, she added white to add highlights throughout.

JC did not envision her final piece ahead of time. She reminded herself during her process that her final work will not turn out as she expects and allows works to develop as she makes it. She told me her artwork take on characteristics of the art she’s seen, or places she’s been, or the images she remembers, ”they compile together.” She leaves numerous works unfinished and works on them when she “feels” like working on them. Sometimes she will forget about a piece and see it in her portfolio and think, “Oh, I forgot about this,” and continue.
Or puts a piece away for a time because her “creative energies toward the piece are done for the moment.” Some of these works remain in their tentative state, tucked away in the portfolio.

**Portrait of AX**

**Observations and informal interviews with AX.** AX worked in bursts. There were days when she complained of an aching back due to a traumatic car accident that left her in a back brace for months. She would make herself comfortable on the floor of the adjacent gallery and rest until the pain subsided. Other times, she appeared unmotivated to make art, preferring to socialize with friends. Ms. Mona would gently suggest artworks to pursue and AX sometimes conceded. AX found determination to complete several artworks when she realized that the AP deadline was approaching and she needed four works for her thematic concentration of brightly, exaggerated colored animals. JA and AX, who sat next to each other, decided to make artworks of a furry animal on the same day. Images found on the Internet helped the young artists plan their art. JA selected a wolf and AX selected an image of two red pandas lounging on tree trunks. I talked with JA about her wolf portrait in an upcoming section but first, I discuss AX’s art making process.

I saw AX begin her sketch one day and by the next day she had a significant amount of the panda colored in bright reds and oranges. She asked Ms. Mona if he looked furry and Ms. Mona recommended adding a dark color to shade to make the hair look three-dimensional. She said she would try it out on another piece of paper before trying it on her artwork. By the end of the class period, AX added the shadows in dark blue and violet. She told me that in this step she wanted to make a branch look like it receded into the background. She also shared that she aimed to make him look sleepy or sad.
When I arrived in class the following day, AX cheerfully reported to me that she decided on a night scene for the background and that she was in the process of considering what dark colors to use. She said, “I’m going to make the moon light blue,” and reflected that she had already used dark purples for the shadows of the fur. AX also told me that she decided to settle on drawing just one panda and the tree branches rather than using the image of the two pandas (Figure 36). AX complained of her hand hurting from the process of coloring with pencil. She held her right wrist in her left hand and flexed her right hand and said, “Ah, that feels good.” She declared that she would finish, “Today.” She tested out color possibilities on the back of the work, placing different combinations of blue, indigo, and violets next to each other (Figure 37). AX decided to use an indigo color for the background because it allowed the purple used in the panda’s body to stand out against the sky color. Then, she tested out colors for the moon in light blues.
Photo elicitation interview with AX. AX agreed to photograph the process of drawing her panda and participate in a photo-elicitation interview. She worked quickly to complete the color pencil drawing of the panda so that she could make the AP Studio Art portfolio submission deadline. Once she was finished, I asked her to review each image and place a letter or a number on the print so that I could match the photographs with the transcript afterwards. Adding the letters also gave her the opportunity to review the images we used to talk about her process. The photos used in the interview are provided in Appendix I, Figure 70. The letters for each photo are provided in the text so that the reader may follow the transcript alongside the photos. We sat at her regular desk in the class during lunchtime to talk about her process to make the Red Panda. I reminded her that I was interested in what she was thinking and doing throughout the process to make the panda drawing.

Adriane: So I remember seeing you with the image [Photo A].

AX: Starting off, I had the picture of the two red pandas. I was going to have both of them in there, but once I started drawing it, the first one was too big, so I just decided to cut that one out. As well, it would help change the picture more, so the less [the image is like the original] the better. [Photo B]. Then, moving along, I just kept coloring and coloring. The fur was hard sometimes because some colors came out more than others. Like, the red was a lot more prominent that the orange. [Photo C] The color choices, I thought I would be using just reds, oranges and yellows but then I decided to throw in a little bit of purple which I think makes it look cool. I decided to do the eyes cool colored to make it pop out. I had decided those colors. Then, for the background I decided that I was going to do cool colors, which did in fact come out.

Adriane: So, you thought cool colors from the beginning?

AX: Yeah, I thought I would do the warm and the cool contrast. [Photo D] Then, I started coloring the trees. The trees didn’t really come out the way I was thinking they would. But I still think they look interesting.

Adriane: What was different?
AX: I thought it would look more like bark rather than splotchy on the branches. [Photo E] I did decide to do the front tree brighter than the farther tree so that it was like a background tree to make it more interesting. Now for the background, I didn’t know what to do so I kind of asked around for this or that, I didn’t know. Ms. Mona actually gave me the idea to do a night scene.

Adriane: So you had not picked a background at this point?

AX: No, I had not picked a background between Photo E and F. I was trying to figure out what to do. Finally, Ms. Mona gave me the idea to do a night background. [Photo F]. I was originally going to make it more purplish, but once I tried the blue I liked it, so I kept the blue. I did a few test strips on G and H to see which color scheme I would do.

Adriane: Were you comparing to make sure that this purple would not blend too much?

AX: Yeah, so that it would pop out. [Photo G] So, I played around with the colors and finally got my [color] scheme. It seemed to be working it was looking pretty good. It was just like a lot of work.

Adriane: I know your hand was hurting.

AX: Ah, my gosh, so much coloring. Then, I decided to make a moon.

Adriane: Before we go on, what about these little circles?

AX: Oh, the little circles to make it a starry sky but not have them are the stereotypical five-point start and made it a little dot instead. Which I think worked out. I made a moon so that way it would make a centerpiece for the background. Well, not a center but something to attract the eye to the corner of the piece. And I just kept coloring. [Photo H] As it got toward the side of the moon the color got lighter and lighter.

Adriane: I was going to mention; that letter H, you tried out those colors.

AX: I was trying to figure out what colors went with what other colors. Whether one was too vibrant or too purple.

Adriane: Did you pick one of those finally? [Photo I]

AX: Yeah. I think it was the one on the very end left. I can’t remember. I varied it too; I didn't go exactly with that color scheme. I added a little more purple.

Adriane: I noticed something. Here you started with lighter colors then covered it.
AX: Oh. There I continued the dark color but I just made it lighter so that it would blend with the next color [Photo K].

Adriane: Oh, so you just made it thinner. Oohh.

AX: Yeah, to blend it.

Adriane: Got it.

AX: That way it would blend better with the next color [Photo L]. Then, I was done.

Adriane: You finished it that day?

AX: Yep.

Adriane: Ah, because you had said you would and you were. Did you work on anything in between?

AX: No. I started and finished it [Photo N]. Then, I started working on the next one in color pencil. (Note: In my observation notes, I documented that she began the octopus drawing before finishing the panda).

Adriane: This one (Photo M)?

AX: Yes, it took me a while because I was going to do an octopus, an underwater scene but I couldn’t get the image. I couldn’t get the layout [of] the foreground and the background so I am still trying to figure out what pictures to use. But, I have decided what octopus I want to use, which is the blue ringed or spotted octopus.

Adriane: So, kind of like this one [where] you decided the animal but not the details of where you place the animal?

AX: Yeah, exactly.

Adriane: Do you have many works going on at the same time or do you typically start one and finish it.

AX: I usually have a lot going on. Well, not a lot but, at least a couple because someday I will feel like not getting everything out to make a painting. I may just want to use pens or color pencils, which are easy to clean up. It really depends on how much time I have. I am pretty lazy so (pause). But, also if I start during sixth period, I will pick something less messy because then I will have time to clean up.

Adriane: And you are here all day from third to seventh period?

AX: First and second are Government and English.

Adriane: How did the idea come about?
AB: Me and SP were talking about foxes
AX: Yeah, and these pandas look like foxes.
Ms. M: And she was practicing her fur.

Summary of AX. AX’s art-making process came in bursts. There were some days where she did not make art at all, but with the AP deadline looming, AX completed the red panda in three days. When I interviewed AX, she wanted to meet the submission date for College Board Advanced Placement examination and worked steadily. AX’s work concentrated on portraits of animals using expressive, exaggerated color. For our interview, she presented her color pencil drawing of a red panda, balled up on a branch of a tree, against a night background with a large moon in the left corner. AX searched the Internet for images that emphasized the creature’s furiness. She selected an image of two pandas curled up on tree branches facing the viewer, but she decided that one sufficed to fill the composition.

Challenged by varying color intensity of the orange and red pencils, she figured out how to change the amount of pressure she applied for different colors. With the help of her teacher, she discovered that purple functioned as a shadow for individual strands of fur. She applied cool colors for the eyes to contrast with the warm color fur and “pop” from the canvas. She designed the composition with winding tree bark, coolly painted in lime green and Indigo, which receded into space in darker shades. She sought the help from her teacher to brainstorm ideas for the setting and together they decided that a night scene would emphasize the bright and warm panda. She tested out several color combinations on the back of the artwork to decide which one would be best to differentiate the tree bark from the sky. She worked on the piece for approximately 10 hours on two consecutive days. During this time, she sketched the outline for her next art work of a blue-ringined or spotted octopus.
AX’s defined concentration for art class helped guide her art making. While an image found online helped compose the panda in the work, she allowed her imagination to invent the night scene suggested by her teacher. She tested out her media in order to meet her goal of using contrasting colors and engaged with her peers and teacher when she needed some advice on how to proceed. The deadline to submit her portfolio motivated her to complete this work in two days. As she concluded the portfolio submission, she expressed the wish to have had more time to apply what she learned technically in the final productive weeks before AP submission.

**Portrait of JA**

**Observations and informal interviews with JA.** JA was enrolled in one period of art: Portfolio. She expected to take AP Studio Art in the following school year and contemplated what would be her thematic concentration. During my study, JA made a series of artworks testing out the possibility of concentrating on “animals with a night background.” I first observed JA make a crayon engraving of an owl with a swirling night sky inspired by van Gogh’s *Starry Night* (*Figure 38*). After she painted over the crayon drawing with India ink, she worked on the engraving quickly, finishing in just one day. She told me that she would photograph for the interview but did not photograph the quick process of engraving.

*Figure 38: JA's crayon engraving of an owl.*
She made an effort to share more of her process to make the next piece with me. She planned to make a leopard using a tempera and ink batik process suggested by Ms. Mona. She found an image on the Internet to guide her portrait of the leopard (*Figure 39*). She sketched in the shapes lightly and started painting shapes of color. A couple of days later she told me that she had decided not to use an ink batik process because she thought her painting looked so good with textures that she did not want to risk it not looking as good as it did that day. She asked her classmates for some feedback on the work thus far and AX, who was drawing a cartoon figure at the time, responded that she liked it.

*Figure 39: JA's leopard.*

The next day, JA applied a similar wavy lined sky that she used in the owl engraving, to the sky in the leopard tempera painting. She asked Ms. Mona and the class in general, “What do you think my concentrations should be? I like night skies and I like to paint them swirly.” AX responded, “Your concentration can be anything you want it to be.” She decided to test out her idea the next day when she painted a swirling sky as a background for the leopard (*Figure 40*). She used a thin brush in shades of blue and violet and some black to paint swirly lines around the leopard’s head. After the background was complete she added white lines so the whiskers would stand out against the sky. She added dotted concentric circles to imply shining stars, inspired by
Starry Night. When I returned the following day, she proudly reported that she was done and was eager to photograph the final image.

![Image of a leopard with a night sky](image)

Figure 40: JA's leopard with a night sky.

Next, JA shared that she wanted to address “furriness.” That is she wanted to paint furry animals. AX and JA both decided that they were interested in addressing a furry animal portrait. Both young artists browsed the Internet for ideas. AX settled on a portrait of two Red Pandas and JA found an image of a furry wolf she was eager to paint. In the next section, details of the process to paint the wolf are provided.

Photo-elicitation interview with JA. The photographs used in the interview are available in Appendix I, Figure 71. The letters assigned to each photograph (photo) are provided in the text so that the reader may follow the transcript alongside the photos. JA and I conducted our photo-elicitation interview on a comfortable, quieter side of the classroom near the art gallery. I asked JA to add letters to the images, which gave her a preview of the images we would discuss. I said, “Let’s go through each photo,” because I had learned that participants remembered more details if they looked at photos one by one because they could see how one image changed to the next.

Adriane: Let’s go through each photo.
JA: And explain my process?
Adriane: Yeah, what you were thinking and what you were doing. Where did the idea start
form how did it progress? How did you make certain choices?
JA: Well, I wanted to do another animal [after the leopard and the owl].
Adriane: Let’s go like this (I stacked the photos in chronological order). This way each photo
reminds you of each step.
JA: That’s fine.
Adriane: So you wanted to do another animal because it has a lot of texture and you had started
with the leopard?
JA: I wanted to do something fuzzier because the detail with the fur is a lot of fun (Photo A). So, I was just looking at different animals that I wanted to do and I thought a wolf would be kind of cool so I found a good picture of a wolf.
I started by doing the graphite on the back of the page and then tracing it to get the basic shapes and the shapes of the colors of the fur. Then, I went in and did the basic features in the black, like the eyes and the nose (Photo B), then I did the mane (Photo C). I used water to make the black grey in some areas.
Adriane: Oh, what kind of paint is this?
JA: Most of it is tempera paint but there is also acrylic because I ran out of tempera. After about Photo C I ran out tempera so I used the acrylic. I used black acrylic to get more detail later. After I got the basic shapes in black I went in with browns and lighter got get more fur in but I just wanted to get the basic color on him then I was going to go in and add detail. So then after Photo C I was getting the basic color on him then on Photo D I started to do the fur on him some more.
Adriane: So you blocking the color first then added detail?
JA: Yeah, from [Photos] D, E, and F even G, I was doing detail with the fur. And this is with acrylic and a tiny brush. A little bit of white acrylic. Mostly for the detail it was black acrylic and water downed a little to get lighter grays. Then, I whitened him up then I darkened him some more. Then I went and add the eyes and the background to shape him up and not be so fat.
Adriane: So you had the goal of trying another furry animal and you did the furry with the little brush.
JA: Yeah fur took a long time but I really like how he looked in the end. It looked really nice (Photo G).

Adriane: Then between here and here you decided in the background how did that come about?

JA: I wanted to do a night sky because I am thinking that I might want to do night skies for my concentration but I didn’t want to do the same style that I tried with the leopard, which was the van Gogh style (Photo H). But I didn’t want a plain black night sky because he was black as well. I really liked the idea of doing an aurora borealis so I found some pictures online to just get an idea of what I could do. I went in and painted with blues and purples and greens. Just to get the colors in. I used acrylic with water to make watercolor. I got the colors behind him and went in and did some stars to make it look like a night sky. Then, I did some detail work in his eye to make it look shiny. Little dots are the stars.

Adriane: So what were some challenges?

JA: Um. Definitely trying to get the shading of the fur right. In different parts of his face there are lighter parts in some areas and getting the colors to work right and to get the contrast was challenging.

Adriane: How did you know you were done?

JA: Ah, I still don’t know if I am done. That is one thing I am discovering. I still want to go back in and put some more fur in there (Figure 41). But I am also liking the way he looks right now and I don’t want to end up making it not as good. There is a fine line between adding a little extra to make it good and, “Oh no! It’s turning out bad.”

Figure 41: Wolf by JA.
Summary of evidence from JA. JA’s acrylic portraits of animals emphasized rich textures and patterns. She worked from images found on the Internet and once from a photograph of her family dogs in honor of one who had recently died. Prior to our interview, JA painted a leopard in bright warm yellow with a rich texture and dark blue patterned sky. We briefly discussed her process of painting a wolf, which she selected because of her enjoyment of representing fur (Figure 41).

The image of the wolf, found on the Internet, looked directly at the viewer. She shaded the back of a letter-sized print and traced the outlines of the animal on to a watercolor paper. Using black paint, she painted the dark shadows throughout the composition. Then, used a dollop of white to mix middle grays into her work and sometimes simply used water to thin the black. Using a small brush, she made shades of brown to paint individual strands of fur and add highlights as she worked on the piece over three school days. She thought the wolf’s overall shape looked too wide and figured she would wait for the paint to dry and then shape him up when she added the background, a night scene inspired by the aurora borealis. She selected the night scene because she was considering “animals at night” as her concentration for the upcoming school year’s AP Portfolio Class. When I asked how she knew she was finished, she told me she wasn’t sure if she was. She liked the way it looked now and could add more lights and dark. She explained that there is fine line between making an artwork look better and thinking “oh no, it is turning out bad.” When I interviewed her, she was still thinking about whether or not it was complete.

JA was interested in realistically depicting the wolf’s fur. She blocked out the overall shape using an image from the Internet then started with dark areas and added lighter grey, brown and white until she achieved the level of contrast and value grades that met her criteria of
realistic “furriness.” With this piece, she tried an idea for a possible concentration in next year’s AP Portfolio Class. She made a decision about her present piece considering what she might concentrate in the future leaving the tentative idea for further consideration.

**Portrait of CB**

CB was in 12th grade and enrolled in AP Studio Art and Portfolio Three. She told me she wanted to major in International Studies in college and continue to make art for herself. When I first began my study, she shared that her concentration was influenced by “Asian visual culture or Asian pop culture.” I observed her play with the effects of dripping watercolors when painting portraits and create a tempera and ink batik of a geisha. CB liked to work at home and as well as in class so she had at least two artworks in process at a time.

![Figure 42: CB experiments with dripping paint.](image_url)

To develop her series inspired by Asian visual culture she selected an image from an advertisement as a guide to make a portrait. As she used her watercolors, she decided to experiment with dripping watercolor paint from the woman’s eyes (*Figure 42*, above). As I walked around the room observing, she offered eagerly, “I am really into these drips.” I asked
her what she liked. She said, “I can’t stop playing with it!” She created a second portrait using dripping paint eight days later.

Soon after, CB began a portrait of a geisha. I observed her sketch her image in pencil before painting with tempera. One day she surprised me with a few images she took at home of her work in progress and offered to participate in the photo-elicitation interview about the process to make the geisha. CB painted the umbrella and dress of the geisha at home. In class, I observed her add skin color and details in the hair. She painted a flower in the woman’s hair. I observed her change the detail in the collar of the woman’s dress from small flowers to geometric shapes. When she was ready to apply the ink to the tempera she expressed anxiety because she had spent time carefully preparing her painting and she wanted it to “come out good.” She expressed concern when the ink looked thin over the tempera. Ms. Mona examined the ink and soap mixture adjusted the solution and suggested that CB paint over it one more time.

The next part of the process involved finding a place to wash off the ink. The paper was 16 by 20 inches and too wide to fit in the classroom sink. I observed Ms. Mona and CB consider several possibilities for washing the artwork. At first, CB told me that she was going to use a water bottle outside but Ms. Mona wanted a place where they could use running water. Ms. Mona walked over to the clinic and suggested that as a possibility. Then, CB thought that the handicapped accessible bathroom upstairs would be good because of the drain on the floor and the detachable showerhead. They decided that the upstairs bathroom would be best because there was more flexibility in cleaning up. The school clinic would have to be sanitized immediately and the upstairs bathroom could be rinsed and thoroughly cleaned after the weekend. Additionally, the bathroom was located in another art teachers’ classroom so she would understand the possible “mess” left over the weekend.
Since CB was anxious about the unpredictable nature of the process she asked that I photograph the process of rinsing off the ink and she would talk with me through the process and we could discuss further in the interview. SD, another student and friend of CB, went with us. Ms. H. greeted us and showed CB how to use the shower head and suggested that the floor would be best for washing the artwork because the drain was nearby.

CB started the water and rinsing off the ink (Figure 72, picture 7, 8, 9). She was happy with how the ink was dissolving but then encountered a challenge when the artwork became soaked and the layers of tempera began to quickly liquefy. CB turned off the running water. The water was pooling on the artwork because the drain was underneath the artwork. SD offered assistance with a bucket of sponges. CB mopped up water with the sponges but decided that somehow she needed to let the water drain but the paper was so soaked that it began to rip as she lifted it. She lifted a small section and let the colored water drain down. Then, SD offered brown paper towels, which helped CB removed the last of the pooled water on top of the work. CB decided to leave the work to dry until the end of the school day. CB tells me in the photo-elicitation interview (below) how she continued the process at the end of the school day.

**Photo-elicitation interview with CB.** After CB finished resolving the effects of the soaked artwork we sat for an interview. A few days after she finished the portrait of the geisha, CB and I talked about her process. I provided the photographs for her to review and number so that I could later connect the images with the transcript. CB chose to use numbers to identify each photo instead of letters. The images are provided in Appendix I, Figure 72. The pictures used in the interview are identified throughout the transcript below at the moments they were discussed.
Adriane: Lets go over them one at a time so you can remember the particular moments of where you were at in the artwork. Let's start from the beginning. Where did you get the idea and how did it develop?

CB: (Appendix I, Figure 72, Photo 1) I was in my room because my sister does art and she has an ink batik of a geisha she did and I liked it.

Adriane: [Your sister made it] here with Ms. M?

CB: Yeah when she was here at school. It’s a small one. And I thought I want to do one because I like geishas.

Adriane: What is your concentration?

CB: Its Asian culture in general. So I thought, “I want to do a geisha,” so I found a picture that I liked but I didn’t want to do it small because it was a big picture. So I said I would go big because I don’t draw big. So I decided to draw big because I thought it would look pretty that way. It would show more off. Then, I started drawing it out. The umbrella was easy. It was pretty easy because it was the umbrella and the profile and I am good at profiles.

Adriane: So you made her up?

CB: No. It’s a picture here on Google that I found. I changed a lot of it but the overall look is the picture so I drew it all.

Adriane: Did you know it would be an ink batik.

CB: Yeah. But I was going to do the colors that were in the pictures. But my sister said it would be more exciting to change the colors around and actually have more colors than what was in the picture. So I was like "ok" (Note: CB is still looking at Photo number one). I was determined to finish it so I just kept working on it and working on it.

Adriane: So, let’s see what happens in the next picture.

CB: Ok. I had this umbrella with different colors (Photo 2).

Adriane: Is this tempera?

CB: Yes ma'am. I was at home (Photo 3). The umbrella was originally going to be green and then her outfit was going to be black and white because that is how it was in he picture but then I decided to change the colors around so I painted on this about five times. My sister was like “If you did a gradient so it shows the light hitting on one
side, you start from dark to light.” And, so I started doing these darks and as it progressed I made it lighter and lighter. Then, her flower, I kept it like that because I liked it that way. I didn’t really like the green anymore or the little flowers so I changed it to make it a light blue with lime green squares. I kept the orange because I liked the orange and I added these little stripes in them because a lot of umbrellas have that little design on the inside part so I kept it simple in white and put purple there just a little bit.

**Adriane:** What was wrong with the flowers on the collar?

**CB:** I thought they were really tiny and that they would rub off in the washing (Photo 3). So that is why I changed it. And my sister suggested that I add a red tip to her eye than just black so I put a red tip there. Oh yeah I was going to leave these [the spaces between umbrella] black but I felt that they would blend in too much with the purple so I left them while so that they would stand out (Photo 4). Oh, then the ink process. I was so scared. It was too watery so Ms. B added more ink to it to make it thicker because it wasn’t covering the paper (Photo 5). Finally, I had it covered but I went over it about three times because the outsides were still gray (Photo 6).

**Adriane:** That’s interesting because sometimes ink batiks are real dark.

**CB:** Yeah. I think it’s because that I had a lot of tempera.

**Adriane:** You told me that you used a lot of layers. Maybe we can talk about that because the colors did come off in the wash.

**CB:** Yeah, I had like five layers because I kept changing the colors. Maybe it wasn’t good or not. So then we let it dry about 20 minutes

**Adriane:** Tell me about finding the place to do it.

**CB:** Ms. Mona was running around. She went to find the key from Ms. H. to turn on the water hose over there. But they couldn’t find the key to unlock it. So, I was going to say, “Let’s use a water bottle outside.” Or, I was going to take it home but that would be too much work. And then there was the clinic. Yeah, but that was too sanitary to mess up and we would have to move it out and clean it the same day which proved to be impossible cause I ended up leaving it to dry in Ms. H’s room. So, with the washing off, I was scared to use a lot of water because the way the floor of the shower is tilted the water kept pooling back onto the work I started to use less water but the
ink wasn’t coming off and it was drying real fast so I had to keep putting bunch of water until it looked like this and then it would pool on top (Photo 7). So, all my paint was coming off with the ink. So, I got a sponge to try to dry it up faster and that was hard and I started ripping the paper because I had to lift it to get the water off and it ripped [because] the watercolor paper was so thin (Photo 8 and 9).

Adriane: How did you know when to stop?

CB: Because I knew that I wanted her face to show I wanted the gradients to show and at least the majority of the color to come back and then I would be done. So, I wanted to make sure she was washed off to where it ended up like this (Photo 10).

Adriane: So, I missed what happened in seventh period [between Photos 9 and10]. You left this here [in the shower]?

CB: Then, I went back and dried it up some more. I went back after school and got more paper towels to dry the floor so it would stop running on the painting. Then, when I came back, water was all over it. It ripped my paper! I kept lifting it and I tore it a lot like over there. And then I covered the floor in paper towel and kept dabbing it dry to where it just the water stopped.

Adriane: What worked best the paper towel or the sponge?

CB: The paper towel because there was more of it and it could soak up more. The sponges were smaller. Then, I found out that the showerhead was still running and leaking water all over! So I turned it off and I freaked out and Ms. H helped me dry it up and put up a barricade. I dried up the whole floor. I left it there the whole weekend to dry because I couldn’t move it [because it was going to rip].

Adriane: Did it dry by Monday?

CB: Yes, it was dry. And I lifted it up from the floor with the little rips in it. But that was fine. [The final work] showed my original colors, I wanted to paint over it. I was going to paint over it too but it was the original color so I left it. Because it looked fine because it looked old and it would look too new if I painted over it (Photo 11). And that was too much, so I just painted back in the darks because I wanted the gradient. That is how I wanted it. Then, I added the design back in the collar. I was pretty satisfied with it.

Adriane: That’s great thank you
CB: Ok
Adriane: I will type this up and have you look it over if I have any questions can I ask you as a follow up? Is that ok?
CB: Yep.

Figure 43: Geisha by CB.

Summary of CB. CB took on a challenge of making an ink batik of a geisha too large to wash in the classroom sink (Figure 43). The ink batik process entailed painting with tempera, applying India ink over the dry painting, allowing the ink to dry, then rinsing off portions of the ink with running water. The technique adds texture to a painting and yields unexpected outcomes because it is difficult to predict how the ink will rub off. CB challenged herself by creating artwork larger than she normally creates and in a medium with which she has little experience. She wanted to make the Geisha’s image bright enough to sufficiently emerge from the black ink. She was inspired her older sister’s work; made in the same class with the same teacher, eight years ago.
An image from the Internet guided the geisha’s shape. Determined to ensure that the colors would be bright enough to emerge from the ink, she repainted the colors of the geisha painting about five times. She seen enough ink batiks made by classmates to know that they turn out dark if the ink fails to wash off, so she kept making the colors brighter with each revision. She copied the small flowers embroidered on the geisha’s collar in the original image but replaced it with a geometric blue and orange pattern because she realized that the small flowers would likely disappear when washed. At least some of the large pattern would probably remain. The sections of the umbrella in the background were divided with white lines to contrast with the purple gradient used to define the shape of the umbrella. Black would have blended too much, she thought. While the ink dried, CB and her teacher had to find a place to wash the ink off. The classroom sink was too small. They considered the school clinic, outdoors using a water bottle, and finally settled on the photography lab upstairs, which had a handicapped accessible bathroom with a drain on the tile floor and a hand-held shower hose.

I saw CB wash off layers of ink and paint and experiment with sponges and paper towel to sop up the color stained water. She told me that she knew it was time to stop when the Geisha’s face was visible again and color showed through the dark textured lines of India ink. She left the work to dry on the floor because the watercolor paper became very soft and tore when she tried to pick it up. When she returned an hour later, she discovered that she had inadvertently left the water running slightly, and water had pooled over the artwork. She sopped up the water, ensured the hose did not leak, and left the work to dry over the weekend.

Inspired by her sister’s artwork and guided by her suggestions, CB embraced the uncertainty of the medium and adapted her original idea to anticipate possible outcomes throughout her process. The process of washing the India ink off the work was stressful because
it was difficult to wash the water off of the work when the drain was underneath the artwork on the lab floor. The leaking faucet furthered the anxiety. In the end, CB added more paint where she felt too much had rubbed off and was pleased with her portrait of a geisha.

**Portrait of AB**

**Observations and informal interviews with AB.** AB was enrolled in two periods of art including AP Studio Art. She painted what she termed “non-traditional portraits” with “hidden meanings.” She told me that her aim for her artwork was for the viewer to interpret a message or emotion. She worked steadily throughout my study, producing more works than those required for the AP portfolio.

When I began the study, AB was finalizing the details of a figure painting she referred to as the “space one of WR” (*Figure 44*). WR explained that she, herself, interpreted the meaning of the painting as, “There are many possibilities.” The outer space represented unlimited possibilities and the strands represented different aspects of life that pulled her in different directions.

*Figure 44: AB's Space Painting.*

AB became interested in detailing human figure drawings and drew from books from the class library (*Figure 45*, below). I observed her work relatively quickly compared to her classmates. In one two-hour observation, I watched her flip through the pages of the book and
settle on an image, sketch the image on plain copy paper, then ask a classmate if she could use her profile as a guide to draw the head on the figure. When she was generally satisfied with the drawing, she cut it out and pasted it on a violet tinted watercolor paper. Then, she used pen to draw a couch around the figure and touch up the drawing as she examined it. The next day, she executed a similar process. She selected an image from the book, sketched with pencil on white paper, cut it out and pasted it on the same type of tinted watercolor paper. I wondered how these studies would affect her next “non-traditional” portrait as she referred to her works.

After Ms. Mona introduced the plein air painters that were to visit the area, AB decided to try plein air painting to possibly use the artwork for the breadth section of her AP portfolio. She took a canvas board and covered it in a violet-magenta color background and sat outside the classroom doors with classmate to paint a tree. They shared a set of headphones for about an hour and painted. Upon her return to the class, she told me that she did not enjoy painting en plein air because the acrylic paint dried too fast, but she liked the way the tree looked. She ultimately did not elect to use the work for her final AP portfolio because she selected other works that she felt better reflected her technical ability in art making.

Soon after her attempt at plein air, AB had two artworks in front of her: the tree she painted en plein air and a portrait of a woman with red hair. Since I was already interested in why students transitioned from one in-process work to another, I asked why she had these two
out at the same time. She said, “I get angry with one then I go back to another and go back to it.”

A few days later, I saw her take out another artwork that she started months before during my pilot study. It was long: approximately 12 inches by 36 inches. Profiles of four friends staggered across the right hand side of the paper and AB’s profile faced them from the left. I said, “Wow, I recognize that.” She said yeah, it was a long time ago. She was adding some slight shading to the work.

**Photo-elicitation interview with AB.** AB took about 24 photographs of the development of her artwork of Kali, a goddess, for the interview. She used her own camera to document her process while I was absent during her process and she enjoyed using my DSLR camera when I was in class observing. She completed the artwork in three days, while working in class and at home. I provided the photos of her artwork and asked her to review them one-by-one. AB chose to letters to document the progress of her images. The images used in the interview are found in Appendix I, *Figure 73* and *Figure 74.* AB began:

**AB:** I wanted to do something else for my breadth [section of my AP portfolio]. Maybe something more detailed. But, um, CR gave me the idea because she had the main frame of the girl looking down and the color scheme because they all kind of blended together (*Figure 24*).

**Adriane:** Was it the same color scheme that you used?

**AB:** Yeah, it was pastel watercolors. I used watercolors and I made sure the colors complimented each other rather than contrast.

**Adriane:** Please talk about what happened in each step. Where did the idea originate? Because you are done with AP right?

**AB:** Yep. Pause. But the idea just came to me. I don’t know how. It was just like "I am going to draw an Indian woman." Then, I researched some of the stuff and learned "ooh. Kali, the goddess," I am going to do that. (Photo 1) At first I was just going to draw her [by herself] which is what I was doing. I just sketched her out and was drawing her on the board. I was doing her make up afterwards. I did her hair first
Then I did one eye then the other because I was hesitating to do the other eye. Then, I did the other features that she had because she had all the jewelry. I just boxed in where the jewelry was going to be. Then, I did the details of what the jewelry looked like. Her hands I did after that. The first set of hands, I did one hand first and then the other hand. At first I did one. Then, I hated it and I erased it and did another one.

Adriane: So you did one and then the other so that it would be symmetrical (Photo 3)?

AB: Yeah and her jewelry kind of went back and forth. Like I would draw then color (Photo 7).

Adriane: I looks like you are focused on the center part of your final work, right now.

AB: Yeah. Then I was like I want to do a background but I don’t know what I wanted to do for the background. (Photo 8) So I just started making the background white because the board is actually her skin tone. So, I was just like I am not going to color it. I am just going to shade it and make the background white. Kind of cheating I guess.

Adriane: Oh, I didn’t know that the background was her skin color.

AB: Yeah, the board was this color? I finished drawing the details of her body. Then, I did more on [Photos] nine and 10. Then, I did more white around her. Then, I erased some of the white. With these colors you can wipe it away. I decided to make her the four arms. So, I sketched those out and added the jewelry to it.

Adriane: Why did you decide to go with 4 arms?

AB: I felt like there wasn't enough to compliment her (Photo 11). Because with the way I do portraits, I want to do more than what is actually there. This was an actual girl. She was doing an event with her family, so I sketched her out, but she had clothes. But since my focus is on female figures, I drew her naked. But in my mind, there was more to her than only doing an event with her family. Then, I started adding more to the white and the back and then I finished doing that and her hands. Her extra set of hands last (Photo 12).

Adriane: You had the background and, then, you added her body [torso]?
AB: Yeah I added her body on Number 12. I added the rest of her body. I added the arms but not the hands. I kept hesitating on the hands on the second set. I was avoiding them. Then, I finished the back all of the white.

Adriane: What are these little things (Photo 13, 14)?

AB: The background I was trying to get. I was trying to get it lighter but I wanted it to still be shimmery, so I had opaque white.

Adriane: Did it work?

AB: Yeah.

Adriane: So you added regular white to the shimmery to make it more opaque? Oh, ok.

AB: Yeah. So that it would contrast more with her skin (Photo 15, 16). I wanted her to have a background because normally at the beginning of the year with my portraits I would focus on the person and not the surroundings (Photo 17). My boyfriend was like "do something and then do one of those sightseeing buildings." So, I did a tomb area. I forgot the name of the place but it is in India. I started to draw the columns out on a piece of paper. Then, I decided just to cut it out of the piece of vellum and glue it on there (Photo 18). Then, we had the blue glue stick that made it blue (Photo 19). So I had to make sure the glue was clear dry when it went on there.

Adriane: And, was it?

AB: Yeah.

Adriane: It did clear up?

AB: Afterwards

Adriane: Oh after.

AB: It was still kind of there. You could kind of see it was still there. When I shaded it, you couldn’t see it that much (Photo 20, 21). Then, I did the details of one set of columns and then the next set of columns. Then, I finished that with all the details (Photos 22 and 23).

Adriane: Now this is already when you are done. And did you have a goal of finishing it that day?

AB: Yeah, I did. (Returning to Photo 20) I shaded it. Then I asked [Ms. Mona] for some coffee [to paint with]. Then, I coffeed [sic] the columns because they were pure white like that and then the coffee made them old looking. Then, I wanted to do something
with the background I didn’t want to do clouds or anything (Photo 22). So I continued with the building and I didn’t know whether I wanted to do just the outline or make it right there behind or distant. So, I decided to make it look distant (Photo 23). So, I kept on with the watercolor. I didn’t make it as details as the columns immediately behind her because those are closer. So, I made these with many different colors and hues to make it look more distant. Then, on the outside of the building I made it whiter.

Adriane: How did you know you were done (Photo 24)?

AB: I just looked at it and I shaded in a few more areas with shadows and darker tones. Because there wasn’t any more I wanted to do to it. I accomplished the way I wanted it to look. I could have done more to it but I didn’t want to I like it the way it looked.

Adriane: So you started with an idea. Then you elaborated. The background wasn’t part of your original plan.

AB: Yeah.

Adriane: That kind of came in the middle when you wondered what to do next.

AB: Yeah.

Adriane: Ok (pause). So you said that you thought that you liked the way that it looked. The way you wanted it to look didn’t come at the beginning, but it developed in the middle. You decided on the background and arms [as you made the piece]. So, you were happy with those additions? You felt that it met your idea of showing more than just the physical person?

AB: The way I do portraits, I want it to have an emotion. Not showing an emotion but [to express] a feeling of how everything is put together. I want it to have an emotion and I wanted this emotion to be beautiful but delicate and to show how complicated everything is. So everything is detailed and she has four arms and a lot is going on.

Adriane: Is there anything that was particularly challenging about this one?

AB: Well, the hands. Not the first set. I was hesitating on them too and the eyes too like making them even [symmetrical]. But I have done it for so long that it was simple. But doing the hands in that position was kind of difficult but other than that nothing else was that challenging.

Adriane: So what did you do to address the hands?
AB: I took a picture of my friend’s hands doing that with all of the jewelry everywhere I was focusing on shading her body first then afterwards I boxed in. Oh! That is what I did at the very beginning! I drew a square before I even drew her of where I wanted her to be placed then I boxed in the jewelry.

Adriane: Once you have the general shapes where everything goes then you start adding in the details?

AB: Yeah. Then, at first I thought I would keep it like this (Photo 11) with he hands with the extra arms and no bottom and just have her floating with the four arms but then I was like there is no ground to it. There is not a continuation to it. Then, I decided to add it to show that there is some depth so that you can go into the picture and you can go to the left and create space (Photo 17). Then, with the columns I didn’t look at the picture of the actual tomb I just did it the way I thought it would look good, then, I added her in the [niches] there are four-armed people in there (Figure 46).

Adriane: Thank you.

Figure 46: Kali, the goddess by AB.

Summary of AB. AB steadily created feminine figure studies in pencil and acrylic paint. I saw her draw from books, images found on the Internet, and from imagination. AB conferred with friends about the progress of her work and offered help when peers needed assistance with ideas or technique. She photographed her process of creating a portrait of a goddess, Kali in watercolor, pencil, and coffee.
Iridescent pastel watercolors inspired the work discussed in our interview. She liked the shimmer and subtle color tones of the medium when she saw a CR use them in her work (*Figure 24*). Her goal was to create a portrait of the goddess that expressed more than what was presented to the viewer. She found an image on the Internet of a praying woman and blocked off shapes of the head, arms, and jewelry on a cream colored board. She replaced the first attempt at detailing the hands with a second attempt based on a photo she took of a friends’ hands. She drew one hand at a time and then mirrored her drawing to ensure symmetry. Then, she added details to the blocked off sections of the head and detailed the jewelry. Since her focus was feminine human figures, she used her imagination to draw Kali’s torso nude. Before finalizing the body, she considered what to do for the background. She started applying the shimmer of the white iridescent watercolor as a flat background but decided that the goddess should have four arms to add more interest and variety to the final work. The paint was easily wiped off when she decided to make the change. At the suggestion of her boyfriend to try something new in the background, AB used vellum to experiment with drawing building structures. This way, if she did not like the architectural background she was not committed to it. She used images found online of a temple in India to guide her work. Pleased with the result, she cut the buildings out of the vellum and applied them to the board with an “invisible” dry glue stick that dried blue. The next day, the blue hue remained but she incorporated the color as shadows. The white vellum contrasted sharply with the creamy tone so she used coffee as a medium to lightly stain it and soften the contrast. She decided to make a few more columns using a one-point perspective to add depth to the background rather than leaving the background flat and used atmospheric perspective in the upper third to suggest a large dome.
For AB, the artistic process to make Kali synthesized ideas found on the Internet, offered by her boyfriend, and from her own imagination to create a portrait. Before starting the artwork she knew she would paint Kali, but she did not have a finalized vision. She allowed the work to develop as she progressed. She sketched out ideas by blocking in the shapes for the composition and drawing possible building structures on vellum, and only applying them when certain of their fit in the composition.

**Class Participants**

In the following I provide findings from my observational and informal discussions with two students who did not interview with me. KM did not volunteer to interview however, he did consent to participate in the study and responded to my interest in his critical and creative thinking while he worked in art class. I observed KM work on art every day. I saw him frequently looking for imagery on the computer. On three separate occasions, I saw KM sitting at the computer cutting and pasting images on to a word processing application to print and use as a guide for his art. The first was composite of a cartoon image and baseball cap image. He used photo software to resize the baseball cap and place it on the cartoon’s head. On another occasion, he created an image for a crayon engraving assignment. He used the computer to find an image of Malcolm X and he viewed several images of picture frames to add to the artwork.

I spoke with students early into study to familiarize myself with the intent of their artwork series for this class. CL told me that she made portraits in a style using heavy outlines and bright flat color fills, which were inspired by music, lyrics, tattoos, time periods, historical references to the 1960’s and the Victorian era. I observed CL make one of her portraits by increasing the contrast of photographic portraits using Photoshop and print a black and white
image. Then she sketched the darkest shapes onto canvases and used primary colors in the white areas (*Figure 47*).

*Figure 47:* CL increased the contrast in photographic portraits as the basis for her paintings.

I also observed her create an ink batik (*Figure 48*) inspired by visit to an Ernest Hemingway house in the Florida Keys. She used the Internet to find an image and printed a photo of the façade on a sheet of printer paper and rubbed graphite on the back to then transfer the outlines to a sheet of watercolor paper. She told me that at first she considered making the artwork look “creepy” since the ink batik process would darken the final product but decided that Key West was bright and she wanted to represent her experience. I was present to observe her rinse off the ink, which proved difficult to rub off. Her classmate, AB offered to help with a sponge and a kitchen scrub brush, which removed the ink. In the end the ink was difficult to remove and CL was left unsatisfied with how much ink remained. Her goal had been to express the lightness of the day and her experience.
I conducted a focus group activity (Hennessey & Heary, 2005) to address and further understand the patterns that emerged from the observation and informal interviews and the photo-elicitation interviews. I wanted to know about participants views about thinking patterns and activity patterns that came up during my time observing and talking with them. Specifically, I inquired into leaving works in process for periods of time, peer influence, judging artworks, facing and/or overcoming challenges, foundations in art, and exhibiting their work. CR and JC were absent from the focus group activity.

**Multiprocessing and Transitions**

I was interested in knowing more about an emergent pattern by which students left their work in progress and moved to a different work. I term the behavior, *multiprocessing*. At the
time, I had witnessed students transition from one art work to another, leave artworks unfinished for stretches of time, and later return to unfinished works. I wanted to understand what prompted the behavior and why they were moving in between artworks. In preparation for the focus group, I printed the photos I had of each students work in chronological order, which I termed a contact sheet. A sample of a contact sheet is available in Appendix H.

AP: So, the first thing I want to ask you. I took everyone's interview and I looked at them. Remember, I had you check to make sure that they [accurately captured what you said]? Then, I looked to find things that were similar in your interviews, like where ideas came from and how you finished. Then, there were things that I was more interested in knowing about that I want to ask you about as a group. So, the first thing that I am interested in is: I see you working on several assignments at the same time or leaving a work unfinished putting it into your portfolio, maybe forgetting about it, and then bringing it out later.

AP: So, the first thing I would like you to do is, look at your [contact sheet] and draw a line or something to indicate where you switch works. Where you change completely, for example, you have a drawing and you switch to another work. So I am interested in why you switched to work on a different piece.

CA: So, can I just say because I finished it or because I was tired of it?

AP: Yes. Just be honest whatever the reason was.

AF: (Talking to AB) She said be honest. Look: I lost interest; I started a second draft, lost patience, got bored with it.

JD: (Adding to her contact sheet), This isn’t happening the way I want it to. Then, I put [the Memory Project] away. Then, I started my crayon engraving. I took [the Memory Project] back up again. Then, I finished it all the way here. That took a couple of weeks.

AP: Were you working on that continuously?

JD: And, then, here I thought, “Let me do an artist’s trading card using my brand new brushes.”

AB: I was afraid to make it ugly.
JD: Then, I pulled that [watercolor background that she later used a Zentangle technique and added a figure drawing] out and finished it.
AP: So, you had a good background but it wasn’t enough for your submission?
JD: So, I had to bring that out cause I was going through my portfolio looking at stuff that I could use.
AP: So you reexamined it and decided that it was worthy of readdressing?
JD: Yes.
AP: Wait, hold on, I want to ask you about them. For your pieces...did you find any recurring themes for yourself?
AB: Like is there something that came up?
CA: I was annoyed with the piece so I moved on.
AP: Does anyone else have one of those? Annoyed with the piece?
AB: Yeah.
JD: No.
RB: I had one of those earlier in the year. But it’s not in these photos. It was the picture of the face.
CA: Did you ever finish that?
RB: Yeah, I went back and finished.
AP: So, for the ones that you had "annoyed with the piece," would it be like frustrated?
CA: Yes!
AB: With me it was more like I lost interested or I was afraid to make it look bad.
RB: I had, “I got an idea and I had to put it down on paper or else I would forget it.”
AP: I had a new idea and I wanted to get something down so I wouldn’t forget. So RB and CL said that they had that experience.
CA: I did that, too.
Ms. Mona: JD just totally trashed it and started over.
JD: Yeah.
AP: Is it still in her portfolio to see if she will still look at it another day?
JD: Yeah, I didn’t throw it away. It’s still in my folder. I think.
AB: A lot of mine, I started it and didn’t stop until they were done.
JD: Yeah, like that one that I did.
AB: Like these and that one and this and that one. I finished [the figure drawings] in two
days. I did that one in two days, too.
AP: Yeah, you did some really quickly.
AP: One that I was interested in was this one, [AB]. You were working on both. I remember
you telling me that you were annoyed with this piece.
AB: Yeah.
AP: With the tree. The plein air one. So you had it out, you weren’t sure, but it was still
there.
AB: Yea. Yeah. These two were at the beginning of last year (referring to the profile portrait
of five girls and a portrait of a classmate).
AP: So, why were they out that day?
AB: Because I saw them, and I was like “oh, these pictures,” and I was going to give these to
him at the end of the year when I finished it. But, I am afraid to make it look bad so, I
have been hesitating. And the same for this one, I finished everyone else in the picture
except for Mary and I am afraid to make her look bad.
CA: So what will happen to it? The fear is stopping you from completing it.
AP: So any other reasons that we haven’t talked about?
RB: I was afraid to draw CR. I just lost effort. So didn’t feel like doing something I didn’t
feel like doing so I had a high standard.
CB: I didn’t want to mess up my geisha piece so I stopped working on it. I wasn’t really into
it anymore.
AP: I remember JC telling me that she finished her pencil drawing but she was afraid to paint
it so it hung around [for a week] until she decided to do it. So, that one stayed around for
a little while. So, that sounds similar to what you have told me.
WR: Well, when I do artwork usually think of my older pieces because I usually never finish
anything and often when I get a better idea or add something. I will drop what I am
doing and go pick up the other artwork and put it down. Because I don’t like to write it
down, I go ahead and put it down while I still can, while I am thinking of it.
AP: Ok. So when something clicks you think let me put that down while I remember?
WR: Yeah, pretty much.
AP: So you can see, so RB has this blue [artwork] going on then he goes to the portrait, then he starts a drawing, then a background. So what was happening there? Because then you went on to this one that you finished in one long spurt.

RB: I just had a bunch of ideas. I think it was after a weekend. I had a bunch of ideas that I really wanted to do. So I just kind of put them down.

AP: So, you had the weekend and you had all these ideas and you wanted to get them started, maybe just sketched out?

RB: Yeah, just like background or something to get my idea down.

AP: Did you go back to any of these?

RB: No. I abandoned that idea

AP: I abandoned that idea. It’s still up there in the drying rack.

CB: I would start something at school then I would start something at home and I will finish that at home and then come to school and be bored so I would do homework but didn’t do school work.

AP: Right, I asked you once and you told me “Oh, I left my paints so I am just going to start something else.”

CB: Some days I can’t do it at school I have to do it at my time. And be weird.

AP: AX gave me a good example too. She said well it also depends on the time of day.

JD: I know that I would pull out art and look at it be like, “I don’t have enough time to pull out all the paints and the water and the paper towels and be able to finish it a clean it up in the class time before the bell rings.”

AP: So sometimes it’s just a logistics thing?

AB: Most of the time, I do works and continue them until I am done with them.

CB: Oooh not me! I ain’t got time for that.

AP: How about this girl? She was kind of half done.

AB: That’s because I didn’t really care about that girl.

AP: AB, you also brought this one out and added the reflection.

AB: I um was finished with that and then when Ms. Mona was talking about the Dali contest and I thought that the reflection would make it look a little more like one of his pieces because he has a lot of the reflection like that.
AP: So you altered one to make it adhere to a contest requirement? CR told me that she has to finish a piece in one sitting. But then I saw her working on the painting over time.

RB: Yeah, I told her to slow down. I think she finished yesterday. I told her to remember to take photos. She paid attention to details and slowed down.

Peer Influence

Next, I was interested in knowing more about how these young artists influenced each other. I had seen them interact in informal conversations about each others’ work, overheard JA ask the class what they thought would be a good thematic concentration for next year’s AP portfolio, noticed JA and AX’s interest in furry animals simultaneously emerge, and I saw AB and another student paint en plein air together. I wanted to know more about how they influenced each other’s works. I asked:

AP: I also wanted to know [more about working with your classmates]. When you look at your pieces are you ever influenced by one of your classmates because of what you saw them doing?

CA: Yes. Richie.

AB: Yeah. [I was influenced] with CR’s piece of this one [the portrait of Kali, the goddess] I wanted to do the same colors not the pinks but the lighter colors. I wanted to use the color tones. And I was inspired by WR to draw her.

CA: My background for the repetition one, I got because of RB. Because of all the lines and colors and marks. I started to do that because of RB's work.

AP: Which one?

CA: The geometric with the cutouts.

AP: And which [of RB’s] works or in general?

CA: In general his work. The lines and the colors. Like the really big ones he does.

AP: This one I had originally called WR even though it was another student.

RB: I was inspired by AB when she was doing her nude streak. I thought of the [classical] statues, the classical discus statue.
JD: I was inspired by AB’s figures phase as well. And I did the piece of the guy with the crazy hair.

AB: Yeah, and you were asking me how to do a butt.

JD: Yeah, and with the coffee painting and the Zentangle, I thought of another student’s (KC) work because I thought, “That is really cool. I can see that put that in my work and do a lot with it.”

RB: I was inspired by WR, too, because she used oil paintings and I had never used it. And since we sat next to each other I thought well I may as well learn now.

WR: He did a really good job at that oil painting and so I put mine down and was like ok never mind.

AB: Yeah, I think that is why I haven’t finished some paintings because I want it to be perfect.

Judging Artwork

I wanted to know more about how students judged their work. I ran a word frequency query on the interview data using qualitative data analysis software (Nvivo) and found that students used the term “I decided,” 24 times in all of the interviews to describe their process. I wanted to know how they made their choices. I wanted to know how participants determined whether or not their artwork was progressing successfully.

AP: I had a question. You said that you went from this to this to this but how do you know whether your artwork is good or not?

CB: If I like it.

RB: If it turns out the way you think it should then it’s good.

CB: If it looks like I thought it would look then it’s ok. If not, I will throw it in the trash.

RB: Or, if it didn’t turn out the way you thought but it still looks good to your standards then it’s good.

JD: Like if it closely resembles your preconceived notions of what it was going to be.
AP: Yeah, that is something you did say to me. Another thing was that some of you said were happy and fine with an emerging artwork where it changed from what you originally thought it would look like but it was ok and you liked it and you thought ok I can continue with this.

AB: Yeahhh.

RB: As long it had the general idea.

**Solving Problems, Facing Challenges**

Another pattern I noticed was that students adapted their goals as they saw the results of their work. The word frequency query from the qualitative data analysis software on the students’ interview texts revealed that participants used the expression “I was going to … but,” 77 times indicating that they originally planned to do one thing but then that idea changed. JD started over when she saw that her goal was not met by the execution of her work and CB had struggled throughout the process of washing the ink off of her tempera and ink batik of a geisha. So, I wondered if there were other challenges that students faced that I had not observed myself.

AP: I have one other question. When you did hit a block, or there was a mistake, or you couldn’t get the materials to do what you wanted them to do, or any little roadblock that came up, how did you deal with those?

AB: Well, sometimes I just give up all together like with the tree one here. That is still not done. That one, she is at home. I don’t know about that one, but with this one I did have issues of it not working well that the colors weren’t the ones that I wanted (in the artwork Ethereal) it was like for half the time she did not have legs because I couldn't get it out there. But I made myself do it because I wanted the extra credit.

AP: Oh, so incentive. Other challenges?

CB: I was trying to paint a person entirely. This was with jazz gloss I thought it was ugly so I threw paint all over it but then it turned it out good but then I threw it in the trash because I messed up the other paint. I was done but I tried for a few weeks.
CA: I put it in my portfolio when I face a challenge.
WR: Well, if you work on a piece that you don’t like, it’s not going to come out as good as if you start a new piece that you thinking you will do well.
AP: Or even return to a piece that you feel you can move forward with? (I said since I saw WR work on multiple artworks).
RB: Yeah, that is what I did.
AB: I did that with this one because she did not look like this.
CA: I did that a lot. I still have a half-finished one at my house.
RB: I finished the one I had at home.
AB: Then, I just finished completely finished her.
AB: I saw an image like this on a fan website of Adventure Time, of Marceline. But anyways inspired by Marceline. She looked different that the image I saw.
AP: You all talk to each other and you will have these little mini critiques between people. Any thoughts on how you help each other out [with challenges]?
CA: It’s good to get different opinions.
AB: I like it cause their always positive about it.
WR: Were all different in our styles so I think it is healthy that we can go to each other, who see art in different lights, and a whole different view on what they would do, because they are always going to have something to say that you probably would have never thought of in the first place.
RB: I like to go to other people who specialize in that type of area like somebody who have something I lack. I go to them and ask “how do you draw like a nose?”
CA: Laughing. We have a nose specialist in the group?
RB: I remember AB taught me how to do water droplets or something or water reflections.
AB: I was asking you about water reflections and you were helping me out with that. And I remember commenting about the statue.
CB: I hate asking questions
CA: Me too.
CB: So, it killed me that one time I asked AB how to draw breasts. (Giggling) It killed me but I had to.
AB: I like how everyone comes to me for body parts!
CB: It killed me I hate asking for help
WR: I think we are a lot less scared now.
RB: We are more comfortable.
WR: I was terrified to do things that I wasn’t comfortable with. I think, now, I can approach it recently. I am scared to draw or even…
AB: Well, if you only do what you are good at then you will be stuck.
WR: Exactly, well, it’s just so scary to try something new because you don’t want to be bad at it but the only way you are going to be good at it is if you keep trying it.
RB: Yeah I tried doing oil and I stopped.
CA: I do that at home work on stuff that I wouldn’t do in class.
AB: I think our opinions of our work has changed too cause a lot of my works I hate. But, I think they are ok. They are good to be done. When I sent some of my work to the Emporium the one that I hated (or the one I liked the least) was the first one to be sold. So somebody else valued it.
CA: Which one was it?
AB: The one of the girls that I did for extra credit to Mr. Strozier.

**Foundations in Art**

During my observations, I noticed that students developed skills that they had previously learning in art class to make the works in this study. For example, JD used a grid enlargement technique, AB and CA drew tentative ideas on vellum prior to committing the drawing to the final work, and CA transferred her drawing by rubbing the back with graphite then tracing. I asked:

**AP:** *What were some of the things that you learned in your art one that you used in this class?*
CA: Grid drawings.
JD: Grid drawings.
RB: I remember one of the first things we did was to draw a picture of my face.
CA: Oh, yeah we had the mirror and then we had to do the contour drawing. We had to use the clear glass. She had it marked off and you had to hold your hand a certain way.
RB: Yeah, that is the first thing that I remember doing.
AB: Or draw it upside down.
CA: Those upside down ones were terrible.
RB: Or the one with the bag over your hand.
CA: Oh, yeah. *Laughing*.
AB: That was difficult. It just looked like scribble.
CA: I remember we did the model. We had people stand here with a broom.
RB: Standing up.
CA: And, then, we would draw them.
CA: I still have them. We did gesture drawings.
AB: I remember Ms. Mona would give us a random object and you would ask us to abstractly give it an emotion. And, she would give us a slip of paper with the emotion on it. And mine was anger.

**Exhibition**

I also wanted to know more about the role of exhibiting their work locally and nationally.

I noticed that Ms. Mona submitted their work to several local, state, and national art shows, matted artworks, and framed them. Throughout the study, there was always a contest to enter, show to exhibit, or project to participate in. I wanted to know how students felt about exhibiting their work.

AP: Here is another [question]. The role of exhibiting your work because when I look back I always see Ms. Mona uploading [your work to the website], sending to [a contest], or the Memory Project, or inviting Ela, or Million Bones Project, or [local art show], so how does that influence how you work? Do you like exhibiting?
CA: The holocaust one made me finish my tank one, which I really like.
AB: Uh-huh (in agreement). It gives me inspiration to do better because we have professional outlet. Cause when we mat and frame them,
CA: They look really good. The last one we did for my portfolio Ms. D matted it in two mats and it looks really good.

AB: What happens sometimes is that at the state conference art show we get awards. What happens [is that] when there is a first place, I look to see and it gives me inspiration to go beyond what they did.

CA: When I see first place I see how people have different opinions.

AB: Me too.

CA: I went through the ones that I looked the best a [the local art show] and it was none of the ones that they picked.

AB: When I saw the first place winner of [the local art show] they were pretty much in my style but the reason hers won first were because hers were done in oil.

RB: I saw that too. I think that is one reason I tried oil too cause it takes practice but I can do that.

AP: Anything else you want to add? (long pause). Thank you everybody.

**Triangulation of Multiple Data Sources and Strategies**

The triangulation between multiple data sources and the themes described in the next chapter are found in Appendix J. The names of participants indicate findings from their photo-elicitation interview. Absence of an “x” does not mean that the participant did not exhibit the theme in their experience simply that it was not expressed in their interview. I may have observed or informally spoken with the student. I included coding of other class participants in the observations and informal interviews column. In the next chapter I use participants words to elaborate the themes of the experience of critical and creative thinking in a learner-directed classroom analyzed from the data provided in this chapter. For each theme at least half of the students talked about similar experiences in their interviews. Only four students talked about transitions in their interview but 10 students commented on transitions in the focus group through their notations on their contact sheets.
Summary

In this chapter I provided a description of the findings as the physical and educational context of the study and a presentation of evidence. I described the city, school, classroom, and teaching and learning structures. Then, I presented portraits of each participant using a narrative style to provide evidence of my observations and informal interviews. I used the participants’ own words as they described their artmaking process in photo-elicitation interviews. Finally, I offered the evidence from a focus group activity conducted to further understand emergent patterns in the data. The evidence provides the data for the analysis and interpretation that follows next, in Chapter Five. Chapter Five consists of two parts. First I offer a thematic assessment of the findings of selected high school students experiences thinking critically and creatively making art. Then, I conclude the study, situate the findings in the literature, and offer implications for future research and practical K-12 applications.
Chapter Five offers a thematic assessment and discussion of the evidence provided in Chapter Four and offers implications for further research and K-12 practice. While the specific methods of data collection and analysis are presented in detail in Chapter Three, I will briefly describe them as orientation to how the following themes emerged. I conducted preliminary data analysis while I gathered observational and informal interview data. Preliminary data analysis was also conducted after each photo-elicitation interview. I transcribed each interview, divided the transcript into “meaning units,” (Giorgi, 2012, p. 5) or distinct moments in the experience of thinking and doing while making art, then summarized each unit with in vivo codes (using participants own words). Then, patterns of critical and creative thinking began to cluster around prefigured themes or emergent themes from my repeated interactions with the data. The focus group activity was guided by patterns and themes that I wanted to learn more about. The findings from the focus group activity helped to further refine patterns into themes of the experiences of selected high school students’ critical and creative thinking in the artmaking process and are presented next. Descriptions of students’ suggested assignments are provided in Chapter Four under the heading Teaching and Learning Structure. Images of students artworks described in this chapter are found in Appendix I.

Thematic Assessment

As a result of my observations and informal interviews, photo-elicitation interviews, and focus group activity, the following pre-figured and emergent themes resulted. I will explore these themes then I will present my conclusion in answer to my guiding question:
How do selected high school students experience critical and creative thinking while making art in the context of a learner-directed high school art class?

In the following, I provide a thematic assessment of the evidence to lead to an answer to my research question. The structures, or themes, of critical and creative thinking during the artistic process of selected high school students are organized by prefigured and emergent themes (Eisner, 1998). But first, I provide a table to orient the reader the themes discussed in this chapter in Table 2.

Table 2

Thematic Structure of Experience

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-themes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Thinking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Assessing or judging”</td>
<td>Judgment</td>
<td>Making decisions based on criteria.</td>
</tr>
<tr>
<td></td>
<td>Criteria</td>
<td>Setting standards, measuring them, and moving toward meeting the criteria they have set.</td>
</tr>
<tr>
<td></td>
<td>Problem solving</td>
<td>Encountering challenges and overcoming them.</td>
</tr>
<tr>
<td></td>
<td>Deciding how to express</td>
<td>Making a connection between the media/technique/content used and the desired expression/meaning in the artwork.</td>
</tr>
<tr>
<td>Creative Thinking</td>
<td>Envisioning: Short-term and long-term</td>
<td>Long-term envisioning: Picturing clearly what the final artwork would look like. Short-term envisioning: Not picturing clearly what the final artwork would look like. Students described this experience to varying degrees on a continuum.</td>
</tr>
<tr>
<td>Novel and appropriate, useful, or valuable response to the task at hand (Amabile, 1996, p. 35).</td>
<td>Generating ideas</td>
<td>Creating ideas for possibilities in art making.</td>
</tr>
<tr>
<td></td>
<td>Materializing ideas</td>
<td>Using the Internet to generate ideas that cannot be envisioned clearly.</td>
</tr>
<tr>
<td></td>
<td>Other people</td>
<td>Engaging peers and teacher for help in generating ideas.</td>
</tr>
<tr>
<td></td>
<td>Experimenting and play</td>
<td>Testing out ideas/materials, holding them tentative during the art making process.</td>
</tr>
<tr>
<td>Emergent</td>
<td>Multiprocess</td>
<td>Having multiple incomplete artworks at one time. Working on an artwork and not finishing it before beginning a new work or continuing work on another unfinished work.</td>
</tr>
<tr>
<td></td>
<td>Transitions</td>
<td>The reasons that students gave for moving from one unfinished piece to a new/other unfinished piece or when a student moves from a finished piece to an unfinished piece. In other words, reasons for multiprocessing.</td>
</tr>
<tr>
<td></td>
<td>Finishing</td>
<td>When a student decides a work is complete and ceases working on it.</td>
</tr>
</tbody>
</table>
Critical thinking (Ennis, 2004; Paul & Elder, 2008) and problem solving (Dominowski & Bourne, 1994; Fasko, 2003; Lipman, 2003) are themes that emerged from the literature to describe the choice making and judgments I observed with the participants in this study. Particularly, as a foundational point of observation, I noted that students set goals and criteria for their work, which guided their decision-making and judgments. Participants’ creative thinking is elaborated through two pre-figured themes established in the literature: envisioning (Hetland, Winner, Veenema, & Sheridan, 2013) and generating ideas (Wallas, 1926). The three emergent themes, rising from my engagement with the data, are finishing and multiprocessing and transitions. Narratives from the findings are used to expound each theme (Rossman & Rallis, 2012).

**Critical Thinking**

Students made critical decisions based on their goals for art making. Criticality is “assessing or judging” (Elder & Paul, 2009b, p. 13) based on “criteria” (Dewey, 1933, p. 309), and is sensitive to a context (Lipman, 1988). Dewey distinguished between standards, which are a quantitative measurement of an object, and criteria to judge the quality of an art object. Students made critical judgments of quality based on criteria about their works in progress and final works. Students also solved problems, which is a facet of critical thinking literature (Dominowski & Bourne, 1994; Fasko, 2003; Lipman, 2003). In the following section, I describe participants’ critical thinking through setting criteria and making judgments and problem solving, as themes in the experience of participants’ art making process.

In summary, participants in general did judge their in-progress and finished artworks based on internal criteria, to which they held their work in juxtaposition. Works-in-progress were subject to judgments based on criteria, which directed their art making process. Works-in-
progress were also subject to the consideration of future possibilities as students thought ahead about their process. Final works were deemed successful (or not) based on criteria or goals, which included the technical ability to produce the likeness of a person, exaggerated proportions and expressive colors, surrealism, and personal expression. The standards that some students shared were personal expectations and shared values (Bandura, 1986). Students expressed a feeling of satisfaction from achieving their standard.

**Setting the criteria and making judgments.** Students set criteria for their work, which were used to make judgments about their progress. Three participants shared that the criterion for their artwork was a realistic representation. When they met their goal they felt a feeling of satisfaction. CR said it succinctly about her portrait of Ela, “Being able to duplicate another human being almost exactly as they appear makes me feel good about myself.”

JD also expressed satisfaction in the ability to represent life realistically as described in her piece related to the Memory Project. Prior to volunteering to photograph her work for this research project, JD worked on a series of portraits that exaggerated natural proportions. When she applied her style to a portrait of a six-year old girl for the Memory Project (See Teaching and Learning Structure in Chapter Four) she stopped and started anew. She said her work didn’t look “good enough to send forever away.” Her style wasn’t appropriate for the purpose of the work, which was to give a “meaningful piece…as a memory” to a little girl of her childhood. When she was faced with an artwork that “just didn’t feel like it fit,” she said “I’m just going to start over and I am going to get this realistically, this little girl’s face.” JD made the active decision to change her goal to meet the purpose of the artwork.

JD’s goal and criteria for judging this artwork was that the girl looked “realistic.” It didn’t have to be “proportionally correct, but it is okay because it is art.” She used a photograph
provided by the Memory Project as a guide and decided to use a grid enlargement technique to
meet her criterion of realism. As the work progressed she said, “I was doing a good job. I got
really, really, happy and excited about it.” I asked her “How did you know it was a good job?”
She said,

Because it looked like a person and it looked like it was supposed to look…. It looked
like I represented her in a good way. I looked at my drawing and thought “Oh! She is so
cute!” Just like when I look at the picture [sent from the Memory Project]. I think “Oh,
she is so cute!” Actually, I think my vision was better, more cute.

JD’s criteria included not only to reproduce a likeness of the cute girl but also to express the
cuteness of the girl in her portrait. During the process of making the portrait, JD made decisions
based on her criterion of realism for this artwork. The grid enlargement technique ensured a
proportionally realistic representation. She carefully drew proportional grids on a clear sheet of
acetate over the girls photograph and on a blank sheet of watercolor paper because “focusing on
the little pieces really helps me to get what it looks like.” After she finished drawing and painting
the face, she began to draw wavy lines for the background. However, she decided that it
distracted from her goal of realism. She said, “[the lines] made it look abstract and not this
beautiful piece that this little girl is going to have forever.” She created a thin border in brown
acrylic paint around the girl’s hair and shoulders and used it as a guide cut out the background
and considered a better one.

After deciding to cut out the background, JD engaged in a creative idea generating
process to consider possibilities for the background that would enhance the “cuteness” of the girl
that she wanted to express. She thought about it overnight. She considered making a “Greetings
from Florida background” to make the artwork look like a postcard but decided that a “Zentangle
would be really cool because you know it is a contrast between the color and the dark background. It would make her pop,” or stand out, and didn’t distract attention from the cute girl. She decided based on her goal of realism and wanting to inspire “cuteness” that a monochromatic background would allow the girl’s image to stand out.

JD’s criteria for realism guided her decision-making as she made the portrait of the girl. Although, realism was not her goal or criteria for her personal artwork series, the purpose of the work guided her goal of realistic representation and decision making throughout the art making process. Two distinct moments in her process are evidence of critical thinking through making decisions and justifying her choices: First, she decided to start over when the exaggerated proportions were not capturing the girls cuteness and the second was when she cut the portrait out from the distracting wavy background and she replaced it with a monochromatic Zentangle pattern.

JC also set criteria for her art, which guided her decision making while she made art. JC expressed feeling happy meeting her criteria for art while “on a roll” with her drawing of a priestess. When I asked what pleased her, she shared,

I was just happy because it looked like a person but it had a surreal look to it… a fantasy feeling to it. And, I like when a work does that to me. That [the art] is pretty much normal but there is just something there that is out-there.

JC’s criterion for her work was realism with a hint of impossibility. In this case, her portrait is realistic with some exaggerated proportions. The portrait of the woman does not include irises so there is a blank stare. In order to make it look more “realistic and popping out [three-dimensional],” JC carefully ensured that there were several values to increase the three-dimensional illusion. Referring to the change between picture K and L (Figure 49), she said:
At that point I was looking at it and all the shading was about the same tone so that is
when I went to [picture] L and decided that I wanted all of the background to be black.
So I colored all that in and I got shading around the crown area and shaded the crown a
bit because earlier it had just been just drawn and I hadn’t shaded it in.

JC decided to shade the background to increase the realism in the piece creating a foreground
and a background. The dark background also broadened the range of value shades in the work,
which increased the perception of three-dimensional space.

![Figure 49: Photos J, K, L from JC's series of photographs documenting her art process.](image)

She observed that her work in Photo J was flat with low contrast. To increase the realism
and meet her goal or criterion of surrealism she added darker shadows. To further achieve her
goal, she added a dark background around the priestess’ head to create an area behind the
woman, and gave the illusion of the woman’s face in a foreground closer to the viewer. Adding
shade around the crown furthered her goal of a realistic representation by giving the illusion of
light hitting a three-dimensional object.

JC described her decision making process to meet her realistic criteria when she
discussed her process of drawing the lips, which she had been apprehensive about attempting.
I really made sure I went on the fact that the top lip is going to have shadows because people don’t realize that that the top lip is going to be more shadowed. Everyone normally likes to draw them light and has light on them. The light that you are going to see, if the light source is above you, is really going to be a bit of a reflection of the bottom lip on the top.

She wanted to represent the lips realistically so she considered how light falls on natural objects and reasoned that the upper lip is darker than the lower lip because it curves under the light. She expressed her understanding that the upper lip also has a reflected light in her surreal representation of a woman. She darkened the dark areas and lightened the highlights to create the illusion of three-dimensional space.

JC also used her eraser to add highlights, increasing the three-dimensionality: “I took an eraser to the hair to give it shine….I took off a bit because that is where I wanted the light to hit along there to give it lightness.” The criteria of realistic representation of a fictional character guided her work.

JC’s peers held her work to a different criterion. In the past JC’s works had been “creepy” and “scary” characters. She shared, “When I got to [the point] where I wanted it in pencil, everyone was like ‘Hey, it’s not creepy!’” Her friends gave her suggestions to make it creepy. “You could add a scar here or stitching here. That would look really good and scary.” She responded, “My work doesn’t always have to be creepy.” In her interview she shared, “It was just funny…people’s reactions when it wasn’t something that would be deemed as scary. It was interesting that they gave me ideas to make it scarier.” Although JC was satisfied that the priestess met her goal for making art that is realistic but shows “something that is out-there,” her peers wanted to see scary and creepy art.
Although JD’s goals for her AP portfolio were distorted faces, she changed her goal for the Memory Project because the purpose was to make a portrait that the “cute” girl would cherish as a memory. JD’s criterion for this piece, to represent the girl realistically in all her “cuteness,” guided the decisions she made through her artmaking process. JC expressed satisfaction (“happy”) in meeting her criterion of making an artwork look “like a person but it had a surreal look to it… a fantasy feeling to it.” She made choices throughout making the artwork that increased the realism by darkening the background and paying particular attention to reproducing realistic looking lips. Participants JD and JC engaged in critical thinking by setting criteria for their artwork and making decisions and judgments based on those criteria (Ennis, 2003).

**Problem solving.** Lipman (2003) and Fasko (2003) summarized a facet of critical thinking as problem solving in practice. Hunt (1994) explained that problem solving could be viewed simply as the development of a path through a problem space. Dewey (1933) provided a problem-solving algorithm: (a) define the problem, (b) generate possible solutions, (c) use imagination to consider the consequences of possible solutions, (d) experiment with possibilities until a solution is found. More recently, with specific reference to artmaking, Hetland et al. (2013) defined *Engage and Persist* as “learning to embrace problems of relevance within the art world and/or personal importance, to develop focus and other mental states conducive to working and persevering at art tasks” (p. 6). In this study I found that students problem-solved as a way to Engage and Persist. Students encountered problems and created paths to a solution. With these prefigured themes as a guiding orientation, I describe another theme in selected high school students’ critical and creative thinking as *Problem Solving*.

In reference to thinking through a problem, Dewey (1933) explained, “For the mind tends to dislike what is unpleasant … that which is especially annoying,” (p. 102). Students expressed
that they were, “Annoyed with the piece,” and “didn’t like it” when they encountered a challenge in the art process.

From the example in the preceding section, I described how JC was challenged by the uncertainty of depicting lips because she was not sure how to make them look realistic. JC had “a clear and distinct a recognition … of the nature of the situation with which [s]he had to deal” (Dewey, 1933, p. 102). She was avoiding painting lips because she did not know how they looked. She solved the problem by thinking about how light falls on lips. She reasoned that the upper lip must be in shadow if the light comes from above. She even added a little reflected light from the lower lip.

In another example, AB solved her problem of drawing hands. She said that she “avoided” drawing both set of hands in her painting of Kali, the goddess, because she did not know how to draw them. She first drew them using what she could remember from her imagination but decided to erase them and start anew because they did not look “real.” I asked her how she solved her problem. She told me she took a photo of a pair of her friend’s hands in prayer and used the image to guide her drawing. So, she “observed in order to take stock” (Dewey, 1933, p.102) of how hands appear. Rather than simply drawing hands from life, she took a photo so that she could take her time to observe and draw.

Another example of a practical problem, which needed a solution, was finding a place to wash CB’s Ink Batik of a geisha because it was too large to wash in the class sink. In this case the teacher Ms. Mona helped CB solve her problem. CB said, “Ms. Mona was running around.” At first they thought that they could wash the ink off the artwork using a hose outside the classroom. Ms. Mona walked upstairs to find the key to access the water spigot. However, the art teacher upstairs did not have the key. Then, CB thought she could simply use a water bottle.
She also considered taking it home and use the hose there but she would risk damaging her art in transportation. CB also considered using the shower in the school clinic but they thought it would make too much of a mess in a place that needed to remain sanitary. They would also have to clean up the same day. CB settled on using the shower in one of the bathrooms within an art classroom because she could leave the work to dry over the weekend if necessary and they did not have to clean up immediately.

Additional problem solving was necessary in CB’s process when she had to wash her artwork on the floor of the bathroom shower. Water unexpectedly pooled on top of the artwork since the drain was necessarily under the artwork. Further complicating matters, the watercolor paper started ripping because it was soaked in water so she could not lift the artwork of the floor. CB had to find a way to rinse off the ink and tempera infused water and somehow get it down the drain. SD, an art classmate helped her by providing alternative ways to sop up the water. SD handed her brown paper towels and sponges. CB lifted a small corner of the artwork and let the water slowly drain under the paper and used the sponges to stop the water from diluting the tempera paint after the ink rinsed away. In the end, CB was glad she had not used the clinic because she had to leave her artwork to dry on the floor over the weekend because she could not lift the delicate paper. She was happy with the work and her resolve to make it a success.

Another example of problem solving involved a little experiment. WR paused her process of making her tempera and ink batik to prevent the ink from becoming a problem. She was concerned that the India ink would not release from the tempera paint of her tempera painting of the silhouette because she had seen a couple of classmates encounter such a problem. In order to attempt to solve this problem, she conducted a short experiment. During my observations, I noticed that she took a break from painting her ink batik and started a new
drawing as she enjoyed a beautiful sunny day outside. I asked what she was working on. She
told me that she “tested out” the ink batik on two different three by five inch cards (Figure 50).
On each card she used a different brand of ink and the same brand of tempera she used on her
own work. She wanted to see how each would wash off of the tempera paint. She said, “One
looks like it will wash off, but it might wash off too much.” As she waited for the ink to dry, she
started a new drawing, which is why I found her sitting outside. She decided which ink to use
based on the results of her experiment. The small card on the right resulted in too much ink
dissolving in the running water so she decided she would use the India ink she tested on the card
on the left.

**Figure 50:** WR tested out which brand of India ink would produce her desired effect.

**Deciding how to express.** Deciding how to express describes when a student decided to
use a specific medium, technique, or imagery to express his or her idea. WR decided to
participate in the Generations Project art show. She selected her theme “light at the end of the
tunnel,” which she admitted was cliché but felt that it is an appropriate message to express for
many stages in life. She wanted to demonstrate hope for Holocaust victims and incorporated the
motif of human head profile to the artwork. She selected the tempera and ink batik process
because she could use the dark ink and allow light (or bright colored tempera paint) to emerge
from the darkness. In her interview she shared that she had learned about the Holocaust gas
chambers in her English class and thought that using the colors red and black would express
darkness and that lightness could represent people being able to walk out alive. Although she was concerned that the ink would make the expression too dark she was satisfied that optimism was expressed through her work. She had worried how the shadow effect would look around the bright door, whether or not it would dissolve in the washing process. But since she devised her experiment, which tested out different inks, she chose the ink that she determined would provide her desired effect. In the end she said, “I was glad that the ink batik effect didn’t take away from the optimism.”

AB chose to represent many possibilities in a portrait of a friend facing a view of outer space. She painted a girl with her back to the viewer, facing the infinite possibilities, represented by the infinity of stars. AB painted strings attached to the figure that represented a young woman pulled in different directions. AB’s goal was to express emotion through her portraits “more than what is actually there.” Using symbolism in her work, to express more than was actually there.

When I spoke with AB in the photo-elicitation interview, she revealed how she created the image to express her intention. In reference to the Kali, goddess artwork, I asked AB why she added four arms to her portrait of the goddess. She said, “In my mind, there was more to her than only doing an event with her family.” I asked her if she had met her “idea of showing more that just the physical person.” She explained,

The way I do portraits, I want it to have an emotion. Not showing an emotion but [to express] a feeling of how everything is put together. I want it to have an emotion and I wanted this emotion to be beautiful but delicate and to show how complicated everything is. So everything is detailed and she has four arms and a lot is going on.
AB wanted to show “how complicated everything is” so she provided detail. She detailed the jewelry, hair, and even added a set of arms to show that there is more than one would expect in an ordinary portrait to show “that there is a lot going on.”

In another example of decision making for expression, JD started over when her painting style of exaggerated portraits conflicted with her goal to provide a meaningful piece to a little girl to keep as a memory of childhood. Her intention was to make a beautiful piece and her exaggeration proportions were not working so she deferred to a grid enlargement technique that would allow her to express the joy she felt when she originally saw the photo of the cute girl. JC also used symbolism to express in her art. She selected blue hair to express purity in her priestess. She said, “Because she had that unearthly kind of feel to her, I went with the blue, because I wanted her to be pure and when I think of blues and whites I think of purity.

In her artwork for the Generations project, CA used colors to symbolize hope. She said that she added yellows and some oranges to show “hope coming in, like a bright light coming into your life.”

**Summary.** Students engaged in critical thinking through the art making process by setting goals and criteria for their works and making decisions about their process based on their goals and criteria for expression. Students also engaged in critical thinking through problem solving and persisting through challenges by finding paths to their own solutions. Critical thinking and problem solving related to creative thinking when participants generated possibilities to choose from to find solution. I discuss the theme of generating ideas in the next section. But first, I present the overarching theme of creative thinking.
Creative Thinking

The review of the literature provided the definition of creativity as requiring both “originality and effectiveness” (Runco & Jaeger, 2012, p. 4). Some scholars maintained that originality could be determined in reference to individuals and others argued that creativity is relative to others within in a context (Fasco, 2006; Feldhusen, 2006; Runco & Jaeger, 2012; Sawyer, 2006). Amabile (1996) offered a definition that Jaquith (2010) used as a framework to understand the work of children. Amabile (1996) proposed that creativity “is both a novel and appropriate useful, correct or valuable response to the task at hand” (p. 35). In the context of this study, the students’ task was to respond to suggested assignments or make their own choices about artmaking. Students created imagery and generated possibilities to make a determination about what would be most effective for their response. The reader will note in the following section that creative process clearly has elements of critical thinking, which I will address more fully following this segment, but in this section I focus mostly on creative decision making, acknowledging an underlying assumption that critical thinking plays a role in creative processes and decisions. Two creative thinking themes about how students created original and effective ideas in response to the task at hand were envisioning (Hetland et al., 2013) and generating ideas (Wallas, 1928).

Structures for envisioning. Envisioning describes the theme of creative thinking when participants expressed mentally creating an image of what their artwork would look like. The theme, as it emerged from the data and as I analyzed it, closely aligned with Hetland et al.’s (2013) definition of envisioning as, “Learning to picture mentally what cannot be directly observed and imagine possible next steps in making a piece” (p. 6). In this study I offer an elaboration of envisioning. The experiences of envisioning in this study fell on a continuum. On
one end of the continuum, the artist engaged in *long-term envisioning* when he or she created a clear picture of what the final artwork would look like. On the other end, I will describe *short-term envisioning* as having a general idea of what the work would look like and allowing changes to occur during the art making process. I provide the following examples of envisioning by CR, RB, JC, AB, AX, and JA as an essence of creative thinking in the artmaking process.

**CR.** CR clearly envisioned her final artwork. During the photo-elicitation interview, I asked her, “Did it turn out the way you thought it was going to?” She responded, “It always does. And, I don’t know why, and I know how, but I can picture it in my head, and it turns out exactly how I want it to.” In the case of drawing the portrait of Ela, she had the help of a photograph to guide the image she produced. Before beginning her portrait, CR searched for a photograph. She flipped through a book and thought she would draw Ela at a desk. However, the photograph of Ela, at an age close to CR’s, captivated CR and she knew she wanted to draw “that picture” because “it really stood out to me.” She described her pencil strokes to draw Ela as, “Every line is meant to be there.” Her deliberate lines executed the final image as she had envisioned it. She felt that her artistic process to make large drawings reflected her overall preference for neatness,

Whenever I do sketch drawings, they are really big, they are really detailed, and they are really fast…. I can’t just stop. It’s just how I am. I am very organized, very neat, very detailed, and you can see that in my schoolwork, too. You know, my room is perfect and all that.

CR likened her artistic style and process to her preference for organization and attention to detail. CR reached a point in the drawing where she had to improvise the hair do because the photograph reproduced the hair with no detail. I noticed the difference in the photo and the
drawing; the hair had distinct strokes in the drawing and the photo showed a black shape around Ela’s face. CR decided to invent what she thought Ela’s coif would have looked like. This way the details of her portrait would increase. In her series of photos (Appendix I, *Figure 66*) you can see that she closes the book when she is drawing the hair. She no longer uses the image as a guide when drawing Ela’s hair. I asked her about the difference in the hair. She said, “I improvised….It is the same style, the same flow, the same color, [I] add just a little here and there and make it look more complete.” Adding the details for CR made the artwork look more “complete,” or realistic rather than a flat, black shape around Ela’s face. She used her imagination and envisioned what a neat hairdo would look like to complete the work.

CR did not always use a photograph to reproduce a person’s image. She had recently made a painting from imagination and said,

I just saw in my head the things. It was a weird process because whenever I draw a picture of a person I like to have that reference….It was kind of refreshing because I didn’t have to base it off of anything.

She enjoyed working from photographs and is respected among her peers as having the ability to reproduce images from photographs with striking similarity and is proud of her skills and techniques in portrait drawing.

*JC.* JC’s artmaking process is another example of envisioning on the other end of the continuum: The final image of the artwork is not clearly defined at the onset, as in CR’s example. JC does not create a clear vision of what her final piece will look like. She prefers to envision possibilities through the process of making it. JC reminds herself throughout her process:
I have to tell myself that “it’s not going to turn out the way you want it to look so don’t plan it out perfectly” because it’s always going to end up differently than what I want. For example, I’ll start drawing an eye and then it becomes itself. People ask, “What kind of creature is that?” And, I say, “I don’t know. I just happened.” It takes characteristics of all the art that I’ve seen at the time, or places that I’ve been near that time, or images that have been through my brain. They just compile together.

She explained that normally she prefers to start with the right eye when drawing a face but in the case of the priestess left side of the drawing “called” to be completed first, or attracted her attention first. She explained that all of her work, including the priestess, begins as a simple sketch and whether or not it turns out to be something more depends on how it develops. She provided an example of how she envisions in her artmaking process.

If I look at the artwork and I have the hair [completed], I visualized it and it is all in her face, then it might be like, “It needs pigtails.” It’s not going to be what I wanted it to be but it needs pigtails.” I look at the drawing and it tells me where to shade…. It almost sounds crazy to say that….

In the case of her portrait of a priestess, the work began as a portrait of a woman with “floating” hair but ended up as a peaceful priestess when she drew large wavy strands of hair that flowed “downward.” Placing individual strands of hair helped her materialize the shape of the hair she envisioned. She became interested in detailing skin around the neck and thought it made her look older than she originally expected but since she was pleased with the representation she kept it.

Like JD, who took the evening to generate ideas for the background of the cute girl, JC took a break from the artwork to engage in a creative idea generating process to consider
possibilities for continuing this artwork. Once she was finished drawing, she wasn’t sure about adding paint and color to her pencil drawing. In the past, she had added paint to her drawings and felt “Ugh! I ruined it.” Every day she took out the priestess painting from her portfolio and looked at it while considering what to do. Unfortunately, JC did not discuss the generating possibilities process during her interview, I only observed her repeatedly look at the work, assuming she was finished. During this time, she also painted and was pleased with the result. So, after about a week of consideration and painting a different artwork, JC decided to paint the priestess.

JC does not envision clearly how her image will look before she starts. JC set aside the priestess for a week to work on another artwork to give her time to envision possibilities. She made choices about her work as she created it. I further discuss leaving artworks in tentative states and working on multiple art projects at once, in the section Multiprocessing section below.

RB. RB had a general vision of what his work would look like and allowed himself to use a technique of “doing random lines” to make his citiescape painting (Figure 68). RB was inspired to make his citiescape by a view of our city from a tall parking lot. He saw artworks of citiescapes on blogs online and decided to use his technique of “random lines,” developed in a prior still life painting of bowl (Figure 30), to make a citiescape. He began by making blue-hued vertical lines using a small brush on a 16 x 20 inch art board. At one point, he envisioned or, “saw a forest,” and thought he would change course but decided to make that choice when he was done with his initial vertical strokes. Once the sheet was covered in thin vertical lines he said, “I flipped around the paper determining what side the city should start on, which perspective it should go through. I was undecided whether or not to do a really high bird’s eye view or [a view] staring out through a window.” At each turn, RB envisioned how his city might
look from each perspective. Once he selected the board’s orientation, he described his process, “Then, I did the technique that I did for the bowl [painting] of doing random things [with a tiny brush]. I made random strokes and just let my hand go randomly.” He added his signature in illegible strokes and asked a classmate to do the same.

Similar JC’s process, RB allowed what he did in artmaking to bring him to a new point of considering possibilities rather than creating a predetermined image for his final work at the onset. Before starting, RB envisioned his work as a cityscape using his technique of random things. But he waited to determine the orientation of the board, perspective of the viewer, and size of city blocks as he made his work. He clearly had a goal, but his vision was not crystallized at the onset. He preferred to let the work develop and even titled his painting process as his “technique of random things.”

**AX, AB, and JA.** AX, AB and JA shared a similar theme of envisioning in the artmaking process. Each created a mental image of his or her main subject clearly with the help of an image found on the Internet, made minor adjustments based on composition, and waited to generate ideas for a background after significant gains on the foreground figure had been completed.

AX knew that her subject would be a Red Panda but allowed herself to decide on the background during her process of making the work (*Figure 70*). She decided to “ask around for this or that idea.” Her peers offered recommendations but her teacher’s suggestion ultimately provided the idea to create a night scene. She decided that in order to meet her goal of expressive colorful animal portraits, she would make a cool colored night scene to contrast the warm toned panda.
Similarly, AB used an image she found on the Internet of a girl with praying hands and a photograph detailing her friends praying hands to guide her work of Kali, the goddess (*Figure 73*). She sketched out large areas of shapes to define the figure and then added details. She had not yet selected a background or stage for Kali. Once the figure was near completion, she asked for suggestions. She took her boyfriend’s suggestion and created a temple for a background.

JA worked similarly to AB by establishing large areas of shapes to define the form of the wolf and then began adding details with shadows and highlights to depict fur (*Figure 71: Images used in JA’s interview.*)(Figure 71). She neared completion of the wolf’s figure before envisioning a background. As a portfolio student, she decided to paint an aurora borealis in background, as a way to test out a theme for the following years AP Studio Art concentration. She looked up an image of the aurora borealis online and used it as a setting for her wolf.

The theme of envisioning fell on a continuum in the experience of participants in this study. CR completed her mental picture of the final product at the onset of the art making process while others allowed the image to develop in response their activity upon the artwork. And, yet, others engaged in a process where they clearly pictured the main subject of the final product while letting the background develop midway into the process of making.  

**Structures for generating ideas.** All participants who interviewed with me shared some form of *generating ideas* as a way to process the possibilities for making art. One theme in the artmaking process, as described above, was picturing possibilities of what the artwork would look like. Whether it was *long-term envisioning*, clearly from the beginning of the process to make the art piece (e.g. CR, JD, WR) or *short-term envisioning*, periodic considerations during the process as the work progressed (e.g. JC, RB), students pictured mentally what they wanted
their artwork to look like. In this section, I describe how students sought and found assistance with generating ideas.

Nine of 10 students I interviewed reported using the Internet as a source for imagery in their artwork. I observed eight students use the Internet to mine for images to materialize what they imagined or to help them generate image ideas. Generating ideas was also evident when I observed students giving each other advice on how to move forward in their artmaking process. In their interviews and focus group, participants also told me how other people, including peers and their teacher, helped them generate ideas.

**Materializing envisioning through composite images.** The Internet was a source for aiding envisioning. Six of the 10 artworks photographed for the interviews referred to images found on the Internet. Of the four others, CR used an image from a book and a photograph she took of her friend and WR, RB, and JC used their imaginations, from what they had seen, to guide their work. KM, CA, JA, and AB made composite images from photos found on the Internet to use as a source of reference for their art making. These students knew the images they wanted to use in their art but they couldn’t fully envision or imagine in detail their idea so they used the Internet to find pictures to make composite images to meet their goal. They synthesized images to create a new one for their artwork.

KM did not volunteer to interview however, he did consent to participate in the study and responded to my interest in his critical and creative thinking while he worked in art class. I observed KM work on art every day. I saw him frequently looking for imagery on the computer. On three separate occasions, I saw KM sitting at the computer cutting and pasting images on to a word processing application to print and use as a guide for his art. The first was composite of a cartoon image and baseball cap image. He used photo software to resize the baseball cap and
place it on the cartoon’s head. On another occasion, he created an image for a crayon engraving assignment (see Teaching and Learning Structure in Chapter Four for description of a crayon engraving). He used the computer to find an image of Malcolm X and he viewed several images of picture frames to add to the artwork. He decided not to add a frame in favor of (Figure 51).

Figure 51: KM consistently used images found on the Internet as sources for his artwork.

CA also made a composite image when she was unsure what an army tank looked like. She used two images found on the Internet to make her drawing of the child and the tank in a concentration camp. In her interview, CA described materializing her idea with pictures.

What I wanted to do was when the U.S. tanks came into the concentration camp and relieved them of being captured in there. So, I wanted to show the youngest, the most innocent thing I can show is a child because they, too, got sent there. So, I wanted to show a child seeing the tanks coming in to save them.

When I was at home. I was trying to formulate how I wanted the tank and the person to be. Do I want them on one side? Originally I wanted the tank on the left side and the boy on the right. And in my picture it is opposite. A lot had to do with the silhouette I got off the Internet to help me. It was facing in the other direction so I
flipped it. I got [the images] from the Internet and I also got a silhouette of a boy looking up so that I could have a basis of how to draw the boy looking up.

*Figure 52* shows the sketch CA made using the images of a tank and silhouette, found on the Internet. Then, she began her drawing.

*Figure 52: CA used Internet images to create a composite image.*

JA used an image found on the Internet to guide her portrait of the wolf and later looked up an image of the aurora borealis to guide the night sky behind the wolf. She used a similar process to make her leopard portrait. She found and printed an image from the Internet, which guided the overall shape and color of her final work (*Figure 53*).
AB also used images to help her envision her final art piece. She made a composite image from images she found on the Internet and altered them to fit her artmaking goals. Her concentration was female figure drawing so she only used the general pose of the girl and used an Indian tomb image to guide her background but elaborated niches and a dome. She explained,

It was just like, “I am going to draw an Indian woman.” Then, I researched some of the stuff and learned, “Ooh. Kali, the goddess. I am going to do that…” This [girl in my artwork] was an actual girl she was doing an event with her family. So, I sketched her out but she had clothes [in the image]. And, since my focus is on female figures, I drew her naked. But, in my mind, there was more to her than only doing an event with her family…

I wanted her to have a background because normally at the beginning of the year with my portraits I would focus on the person and not the surroundings. My boyfriend was like “do something. And then [he recommended] do one of those sightseeing buildings” so, I did a tomb area. I forgot the name of the place, but it is in India. I started
to draw the columns out on a [separate] piece of [vellum] paper, then I decided just to cut it out of the piece of vellum and glue it on there.

KM, CA, and AB generated ideas through Internet searches for images that fit their vision for their artwork. Each student used the images to help them envision their final work. KM used the outline of Malcolm X in his crayon engraving, CA flipped the silhouette of the boy and mostly stayed true to the form of the tank in her pastel drawing, and AB modified both the portrait of the girl and the tomb significantly in her watercolor painting.

**Other people.** Generating ideas as a theme of creative thinking was also experienced through participants interactions with other people as they made art. All interviewees but WR referenced how they interacted with at least one other person regarding their artwork. In the referenced examples, the artist reached out for suggestions, others offered suggestions, and/or peers’ artworks influenced new ideas.

**Ms. Mona.** Ms. Mona described that she helped students generate ideas for their concentrations in AP Studio Art and Portfolio at the beginning of the course. She shared with me how she orients students to developing a theme to address in the Portfolio and AP Studio Art class with a theme called, “I can’t concentrate on my concentration!” She talks with students early in the term and provides a teacher-compiled packet defining a thematic concentration for artmaking and offers over 200 ideas that students can think about as they consider different possibilities for their concentration. At mid-term, she asks student to briefly sketch out the artworks they have ready for their final portfolio and asks them to consider which artworks could move their body of work toward a concentration. Once students begin their concentrations, she said they ask for her assistance less frequently. She said, “Mostly first and second year students ask for help with ideas.” Ms. Mona provided suggested assignments (such as the tempera and ink
batik, crayon engraving, plein air, and Generations project) that helped student generate ideas for their artwork foci and/or could be used for the breadth section of the AP portfolio.

Four students cited Ms. Mona as assisting them in generating ideas. The following examples were collected in the interviews of CR, AX and JD. CR attributed the origin of the idea to create a portrait of Ela from a conversation with Ms. Mona, the art teacher. Ela was visiting their school to share her experiences in a Nazi concentration camp and a small class discussion ensued about how art students could help to honor her. I had asked CR if she would participate in the photo-elicitation interview by documenting her progress to make an artwork. CR explained the origin of the idea to make the portrait:

Well, since we knew that Ms. Ela was coming to speak to us and we had the art show [about our reflections on the Holocaust] and I finished my piece of the Austrian skyline, I got to learn more about Ela as a person…. I realized we were really honoring her by putting all of our artwork based on, maybe not her life, but on everything that happened during her lifetime.

And I don’t know it’s something Ms. Mona and I were talking about it and we said that we should draw her and then I was like “Oh, I can record it, and we can present it to her, and we could give it to her and we could show the video at the ceremony!”

And we just thought, like building blocks, one idea after the other. So, that is how the idea of doing a drawing of her for her came about.

CR’s idea for a drawing of Ela originated from a conversation with her teacher (and probably from my inquiry into the documentation of her process). The dialogue set off a series of ideas “like building blocks,” that ended up in a portrait of Ela and short video made of a series of photos to show the process of drawing.
In another example, Ms. Mona offered suggestions about a night scene for AX’s Red Panda. The panda was bright red, orange, yellow, and purple, curled up on a lime green tree that wound through the composition. She described her process: “Now, for the background I didn’t know what to do so I kind of asked around for this or that, I didn’t know. Ms. Mona actually gave me the idea to do a night scene.” I asked for clarification, “So you had not picked a background at this point.” She replied, “No, I had not picked a background between letter E and F (Appendix I, Figure 70). I was trying to figure out what to do. Finally, [Ms. Mona] gave me the idea to do a night background.” Then, AX had the task of choosing which cool colors to use so she tested out possible color schemes of cool blues and purples. Ms. Mona further suggested that AX use dark colors as shadows to make the panda appear furrier. I overheard Ms. Mona make the suggestion and documented it in my field notes. But, AX did not recall Ms. Mona’s suggestion in her interview, instead stating, “I decided to throw in a little bit of purple.” Ms. Mona’s suggestions help AX generate ideas her art.

Figure 54: AX asked Ms. Mona for help generating ideas.

JD also reached out to her teacher during the artmaking process to assist with generating ideas to move forward with her portrait of the cute girl for the Memory Project. Nearing completion of the face, JD said:
I showed Ms. Mona because I was really proud of it and I like everyone to look at it when I’m proud and she said that if I look in the mirror I can see any flaws it might have. ‘Cause she had noticed that one of the eyes was too small to match the other eye and I didn’t see it so when I looked in the mirror I was like “Oh, yeah they are really different!” So, I added more super dark coffee.

Using the mirror to view artwork was one technique that Ms. Mona employed, which served to show students a different perspective of their work. A different view often times stimulated their thinking about what to do next.

Another strategy Ms. Mona used to help students generate ideas for artwork was a “wishing well of ideas.” One day while I was walking around the room and informally talking with students JD told me where the idea originated for her artist trading card. Ms. Mona provided a “wishing well of ideas” where JD had plucked out a small piece of paper the size of a fortune cookie fortune that read, “If you were a superhero, what would your superpower be?” JD told me that when she was a kid she would always say she wanted to fly (Figure 55).

Figure 55: Idea for the small artwork was generated from the “wishing well of ideas.”

Ms. Mona also helped JD decide on the medium to use for painting the cute girl for the Memory Project. After JD made her portrait in pencil, she considered what medium to use to
add color. I observed Ms. Mona offer color pencil, watercolor, diluted instant coffee, or Zentangles for the hair. JD thought about it for a few minutes. She verified with Ms. M that the coffee could be sealed so as not to attract bugs and Ms. M said yes. JD chose coffee as a medium. JD detailed in her interview,

The coffee was a suggestion because I wanted to paint it but I didn’t know how. I didn’t know what medium like acrylic or tempera or watercolor. Ms. M said, “What about coffee” and I thought “wow, that really works.” She is dark skinned and coffee is dark and it worked out.

In Art One, students use coffee to make a value study painting so coffee is a medium with which they have familiarity. AB also used coffee in her portrait of Kali. Ms. Mona’s suggestion helped JD consider possibilities and in the end JD drew on her strength of familiarity with the medium to meet her goal for the portrait of the cute girl.

Peers. Peers influenced the essence of generating ideas in students’ critical and creative thinking in the artmaking process of nine participants. Five of the students interviewed revealed the influence of peers on generating ideas. The focus group triangulated observational and interview data.

I asked the focus group participants to comment on the “mini-critiques” I saw them engage in during my visits, I asked “Any thoughts on how you help each other out?” CA shared, “It’s good to get different opinions” and AB added, “I like it because they are always positive about it.” WR pointed out,

We are all different in our styles. I think it is healthy that we can go to each other, who might see art in different lights and whole different views, [to ask] about what they would
do because, they are always going to have something to say that you probably would have never thought of in the first place.

RB added that he liked to ask the advice of “other people who specialize in that type of area, who have something that I lack. I go to them and ask, ‘How do you draw a nose?’” RB continued, “I remember AB taught me how to draw water droplets.” AB responded, “That’s right! And, you taught me about water reflections.” On the other hand, CB shared that she “hated asking questions” revealing that she hated having to ask AB for help. RB countered, “We are more comfortable now asking for help.”

RB shared that WR’s use of oil encouraged him to experiment with the medium and AB’s drawings of female figure drawing gave him the idea to try figure painting a Greek discus thrower. JD agreed and shared that her painting of “the guy with the crazy hair” was inspired by AB’s interest in female figure drawing and that the Zentangle pattern in the painting was inspired by KC’s concentration on patterns in their class. AB cited CR’s work in pastel watercolor (Figure 24) as the inspiration to make her painting of the goddess, Kali. She said in her interview, “CR gave me the idea because she had the main frame of the girl looking down and the color scheme because they all kind of blended together.” CA named RB’s geometric work as the inspiration for her geometric artwork that included the mother and child. She said, “My background for the repetition one, I got because of RB. Because of all the lines and colors and marks. I started to do that because of RB’s work.” Student’s interests guided and helped others generate ideas for their own work.

On the other hand, WR stated that she stopped using oil paint when she saw that RB had become successful. In the focus group RB said, “I was inspired by WR to because she used oil painting and I had never used it. And since we sat next to each other, I thought, ‘I may as well
learn now.’” WR revealed that since he “did a really good job… I put mine down and was like ‘Ok, never mind.’”

CB’s interview revealed, for the first time, that her sister had influenced not only the subject of geisha for the tempera and ink batik but also the guidance of several of the elements in the artwork. CB started the interview by sharing, “my sister does art and she has an ink batik of a geisha she did and I liked it.” In my observations and informal interviews, she had never shared her sister’s influence. She had only shared that she liked to work at home. The outline of the geisha came from an image found on the Internet:

But my sister said it would be more exciting to change the colors and actually have more colors than what was in the picture. So I was like, “Ok.” The umbrella was originally going to be green and her outfit was going to be black and white because that is how it was in the picture but then I decided to change the colors around so I painted on this about five times.

CB’s sister also suggested a purple gradient for the umbrella. CR said, “so I started doing these darks and as it progressed I made it lighter and lighter.” Her sister also recommended the red tip on the geisha’s eye instead of “just black.”

AB and CA’s boyfriends helped each young artist generate ideas for their artwork. When AB considered ideas for a background for her Kali goddess, her boyfriend suggested that she “do some thing.” She explained his suggestion,

“Do one of those sightseeing buildings.” So, I did a tomb area. I forgot the name of the place but it is in India. I started to draw the columns out on a piece of paper. Then, I decided just to cut it out of the piece of vellum and glue it on there.
AB used vellum to tentatively test the idea of a tomb area in the background buy using a separate piece of paper. She decided to keep the idea when she glued it onto her final artwork. (See Playing, below).

AX’s Red Panda drawing was influenced by the conversations in class by JA and AB. JA had finished her leopard tempera painting and decided to paint a wolf so that she could focus on fur. On the same day, AB and another student suggested that AX draw a furry fox. AX looked for a furry fox on the Internet and stumbled across the Red Panda that looked like a fox. I could not pinpoint who influenced whom, or if conversations in the class influenced both, but the influence on each other is evident in the subsequent, concurrent addressing of furriness in each artwork.

CA talked with her boyfriend about her assignment to create an artwork reflecting on the Holocaust. She said,

He is very creative and he loves coming up with ideas for things so I asked him. I said, “I have to do a holocaust piece and I want it to be hopeful. Maybe something happening or something coming in… but I don’t know exactly what I want to do.” So, he said, “Maybe you can have a tank coming in and someone looking up at it, seeing it as hopeful.”

She made the subsequent decisions regarding the artwork, including the decision to show a child and choosing the image of the tank, but her boyfriend helped her develop and generate the idea for her artwork.

In another example of peers assisting young artists’ generating ideas is when peers offered ideas to JC for making her work “scarier.” JC described how her friends in gym class reacted with ideas when they saw her drawing of a priestess.
I normally draw a bunch of creepy stuff. When I got to where I wanted it in pencil everyone was like, “Hey it’s not creepy! You could add a scar here or stitching here. That would look really good and scary.” And I thought, “Guys, all my work doesn’t have to be creepy.” It was just funny, people’s reactions when it wasn’t something that would be deemed as scary, which is what they are used to me drawing. It was interesting that they wanted to give me ideas to make it scarier.

JC’s peers were expecting something different from JC. When they saw that it did not meet their expectations, they offered ideas to make the work look scarier. JC liked to share her work with her friends in gym class and welcomed their feedback even if it was not what she expected to hear.

*Experimenting and play*. Experimenting and play was another way that participants’ generated ideas for their artwork. When students choose what to pursue in art class, solutions to problems are not readily available because the teacher had not defined specific outcomes. While I have suggested that peers and the teacher play a significant role in the experience of creative thinking through artmaking, answers to art problems were not always clear or provided. There were instances in the experience of art making when students played or experimented to find solutions to their own problems to meet their goals.

Playing with ideas fostered creativity because *original* interpretations were constructed (Runco, 2006) through “experimentation, risk-taking, and invention” (Fahey, 2012, p viii). In the examples below, students engaged in play to find the solutions most *effective* for their goals, a criterion for defining creativity. Playing and testing out ideas and material, holding ideas in a tentative state while experimenting to later decide (think critically) whether or not to pursue the ideas, was a theme in participants’ critical and creative thinking while making art. Students
played with ideas, tested them out to generate possibilities and make decisions about their work based on the goals for their art. As you will see, AX and JC shared how they tested something out then “liked it and kept it.” CB played with dripping paint and JC described how all of her work starts out in *play*.

AX tested out color schemes on the back of the artwork to decide which one would allow her to make a distinction between the blue, the blue tree trunk, and the purple on the panda (Figure 56). She said:

I was originally going to make it more purplish but once I *tried* the blue I liked it so I kept the blue. I did a few test strips on [Pictures] G and H to *see which* color scheme I would do.

AX *tried out* possibilities to *see*. In other words, she tested out the blue to decide what to do. She engaged in creative thinking to generate possibilities from which to decide. I asked, “Were you comparing to make sure that this purple would not blend too much?” because I remembered, while I observed AX make her artwork, she was looking for two distinct colors within a blue and purple hue. She responded, “Yeah, so that it would pop out. I *played* around with the colors and finally got my scheme. It seemed to be working. It was looking pretty good.”

*Figure 56:* AX played with color schemes to determine the colors for the night sky.
AX selected her Red Panda as her subject but allowed her background to develop as she made her artwork (*Figure 56*, above). She took Ms. Mona’s suggestion for the background and tested out which colors best would define her depiction of a night sky alongside what she had already drawn.

During my observations, I noticed that CB experimented with paint (*Figure 57*). The first time I saw her dripping paint she said, “I’m really into these drips.” While she was in the process of making her geisha ink batik, she began a new watercolor painting and dripped paint again. She said, “I can’t stop *playing* with it.” She worked on this portrait because she had left her geisha at home. While neither of these pieces made it to her final portfolio submission, CB enjoyed the process of playing and experimenting with watercolor.

*Figure 57: CB experiments and plays with materials.*

JC articulated how her work developed from sketches, or experimentation. She told me that her artworks start out as tentative ideas. She sets the work aside if her “creative energies” toward the piece have ended. She said,

“All of my art starts off as a sketch. I start drawing it just for fun then as I am drawing it whether or not it turns out to be something more, you could say that that is dependent on
me, but it is really on how it has evolved…I would say I play around with it a lot. I am always trying something new. I will walk around the art room and thinking, "What can I play with next?"

During my observations, I noticed that JC had several pieces of art in her portfolio that seemed to be in process, partially drawn or painted. So I asked, “Do some pieces stay in play?” She responded, “Yes.” JC described how the headpiece of the priestess began as play. She said, “The ornament crown thing, I was just kind of me playing around. I wasn’t going to keep it but I liked the way it looked so I kept it.” JC took about one week to decide whether or not to add paint to her drawing of a priestess. She explained,

Between [Photos] L and M I played around with a bunch of stuff. I think I actually did paint with in that time and I was happy with it so that may have been what led me to the decision to go ahead and paint it.”

In this excerpt of JC artistic process, playing was a way to ease the tension of possibly “ruining” a drawing that she was pleased with by painting it. The time to think about it and possible success with paint during the week, led her to paint the priestess. She considered the possibility that the success she found that week “playing” with painting contributed to the decision to paint the priestess.

Emergent Themes

Three emergent themes in this study rose from engagement with the data: finishing, multiprocessing, and transitions. Finishing in this study describes the delicate decision making involved in determining when a work was completed. Multiprocessing and transitions are related themes that describe the behavior of keeping multiple unfinished artworks and the reasons for switching their attention between them.
**Finishing.** Finishing was an emergent theme in the experience of critical and creative thinking of the art making process of selected high school students in a learner-directed class. Finishing was a critical decision made by the student artists based on goals for the artwork. For some students, finishing was a delicate balance between leaving an artwork in a state where the student was satisfied with it and continuing on with the possibility of “ruining” it.

**Countdown to finalizing.** CR envisioned her final portrait of Ela clearly when she began to draw. She signed her name when she was done. I asked her how she knew when to sign her name. She explained:

I take a step back and I look at it. I look up close and I look at it. I find things, abnormalities, or smudges or whatever. I clean it all up. Then, with an eraser or pencil or whatever needs to be fixed or if something is uneven, but a lot of times I just feel complete.

I just thought of this now. Drawing for me is like downloading something off of the computer. You see it going and going, then at 99 percent it stops for 2 minutes and ok, [and] then it’s finalized.

There was a period of judging the final product for abnormalities, smudges, and balance to determine its completion. CR looked for “abnormalities” and “smudges” and then cleaned them up before considering the work complete. She paused and looked and stepped back to find what needed “fixing.” Once she felt that there was nothing else to balance or even out, the work was finished.

During her interview, AB shared that she knew she was done when she “shaded in a few more areas with shadows and darker tones. Because there wasn’t anything else I wanted to do to it. I accomplished the way I wanted it to look.” Like CR, AB went through a period where she
darkened and lightened areas before deciding she was finished. AB hinted at the fine-grained decision making involved in deciding when to consider it completed, when she said, “I could have done more to it but I didn’t want to. I liked the way it looked.” JA and JC further elaborate on the delicate decision making process, next.

**Fine line between good and bad.** JA and JC revealed that judging when the work was complete was a decision that took time to deliberate and consider. JA was cautious about painting her leopard with India ink to make a tempera and ink batik when she saw how pleased she was with the pattern in portrait of her leopard. She told me that she didn’t want to “risk it not looking as good” as it did as a painting. She revealed the decision making process when I asked JA how she knew she was done with her wolf portrait. She surprised me when she said, “I still don’t know if I am done. That is something I am discovering. I still want to go back in and put in more fur in there.” I was surprised because she had stated she was finished when she took the last photo for our interview. She continued, “But I also like the way he looks right now and I don’t want to end up making it not as good. There is fine line between adding a little extra to make it look good and ‘Oh no! It’s turning out bad!’”

JC expressed a similar essence to deciding when the work was finished when she described whether or not to add paint to her priestess drawing. She said, “Sometimes I will be really happy with [and artwork] in black and white then I’ll color it and think, “Oh no! I ruined it.” JC shared that in the past she had crossed the line between good and bad, judged that she had ruined her work, and is now more careful before making a decision she might regret.

Both young artists took time to decide whether or not to add more to their artwork and risk a poor self-evaluation or possibly revel in improving the artwork. They had to decide whether to finish at a point when they were self-satisfied with their work or think through
decisions for improvement toward their criteria for the work. AB and WR elaborated this point in the focus group. WR said, “I was terrified to do things that I wasn’t comfortable with. I think now I can approach it.” AB added, “Well if you only do what you are good at then you will be stuck.” WR agreed, “Exactly, well, it’s just so scary to try something new because you don’t want to be bad at it but the only way you are going to be good at it is if you keep trying it.”

While CR, was decidedly finished once she signed her name, JA and JC took more time to decide whether or not to continue working on a piece. AB left “some paintings [incomplete] because I want them to be perfect.” I saw AB return to a portrait and add a puddle to add a reflection, an added visual interest to the work. During the focus group she cited a portrait of four friends, which was still incomplete because she was did not feel confident in her portraiture abilities.

Artistic Multiprocessing & Transitioning Between Artworks

Two related emergent themes in this study emerged from engagement with the data: 

Artistic multiprocessing and transitions. I address these two issues together because multiprocessing describes a behavior and transitions are the reasons students cited for engaging in the behavior. Artistic multiprocessing describes students keeping multiple unfinished pieces and transitions are the reasons participants gave for switching from working on one artwork to working on another. Artistic multiprocessing occurred when (a) a student kept multiple incomplete works in his or her portfolio at one time; (b) a student selected an unfinished piece from their portfolio to continuing developing; (c) a student elected to leave a work unfinished; and/or (d) a student started a new piece. Transitions are explanations that students gave for shifting from one work to another. Transitions included “getting an idea down” (the need to
immediately transform an idea from thought to tangible object), short and long-term disinterest, and fear.

I first noticed *artistic multiprocessing* when RB worked on three projects one day early in the study. During his two-hour art block, RB worked on: a PowerPoint presentation of his works for a local art competition, a portrait, and a painting titled *Fantasy Architecture* (Figure 58). On this particular day, he began by creating the PowerPoint file and reviewing and selecting images from his folder on the class computer to add to the 12 image digital portfolio. After about 30 minutes, he closed the application and dug into his artwork portfolio and brought out an approximately 16 by 20 inch in-progress portrait painting of a man looking through a 3D reel viewer. RB put together a small acrylic paint palette of skin tones and added some dark and light skin color to the man’s face and neck. After about 40 minutes, I saw that he placed the painting on the drying rack and brought out another work in progress. I asked him about the subject matter of his new piece and he responded, “It’s called ‘fantasy architecture.’ I like geometric and abstract shapes. That is my concentration [for the AP portfolio submission].” I watched as he carefully added blue to the entry walkway until the end of his two-hour block in art class.

*Figure 58: RB multiprocesses.*
Days later, I noticed RB had several of his artworks out at one time, including the man’s 3D viewer portrait, while he worked on an acrylic painting of a bowl in a blue monochromatic color scheme. I asked him why he keeps several unfinished artworks in his portfolio at one time (Figure 59). He smiled because I had noticed, and said, “Yeah, sometimes you just need a break from one piece.” I asked him to expand on this aspect of his process when we sat for an interview.

Figure 59: RB considers multiple artworks.

Adriane: Why did you work on all of these that day?

RB: Mostly because of deadlines. Ms. M said there was less than a month away for the AP portfolio. I thought “Wow. I have a lot of unfinished work.” And I thought, "I have less than a month away."

But, I feel that if I work on the same piece everyday then I just work on the same thing. There’s only so long you can stare at a blue thing you need to, like, transition to other things, like yellow, green.

I just find it easier to work on different projects at once because I am the type of person that if it is unfinished it is okay, as long as I did something to it that day. As long as I got some progress, then it is fine.
Adriane: So, this day you were taking inventory of what you had?

RB: Once every few weeks, I pull out all the my artwork and just lay it down and see which one looks like needs more work or which one is more incomplete or which one I feel like working on. Then, I start off with that.

Whenever I put off the work [and then] whenever I get back to work on it, when I get inspired by what I might do next. I think, “That would be a cool idea. That would be a cool thing to try out.” I think a lot.

In the focus group AB stated, “Most of the time, I do works and continue them until I am done with it.” However, I did see her set aside two artworks: the profile portrait of the young women and the portrait of a classmate described in the Fear section below. She also set aside a plein air painting of a tree. Understanding why students transitioned from one work to another was elaborated by participants during the focus group when I asked them to cite reasons on their contact sheets when they saw that they changed from one artwork to another (Figure 60; Appendix E).

_get an idea down_. RB described moving between artworks when he thinks of “a cool idea…to try out.” RB paused his work on one artwork to begin a new one so he wouldn’t forget his idea. WR and JC further describe the concept of a initiating a new artwork as a sketch or developing and holding an idea tentatively. During our focus group, WR responded to my inquiry as to why students worked on multiple artworks, leaving them in a tentative state and then returning (or not) to them. She elaborated on her experience transitioning between artworks:

Well, I usually never finish anything at first and often when I get a better idea or want to add something to another piece, I will drop what I am doing and go pick up the other
artwork and put that one down. Because I don’t like to write it down, I go ahead and get [my idea] down while I still can--while I am thinking of it.

WR expressed that she moves between artworks as she gets new ideas for her works in progress. When she thinks of something to add to one of the in-progress works in her portfolio, she does. She doesn’t wait to finish one piece at a time. Her reasoning explains the behavior I observed in class as she worked on three or more artworks at a time. Often times she had several works on her desk, whether or not she worked on each one that day or not. As WR addressed the focus group, RB looked over his contact sheet and gave a specific example of starting new artworks to “get ideas down.” He cited the three new pieces he started from March 27 and April 4 and shared, “I just had a bunch of ideas. I think it was after a weekend. I had a bunch of ideas that I really wanted to do. So, I just kind of put them down” (Figure 60).

*Figure 60:* RB cites reasons for beginning a new work.
**Fear.** Fear of “ruining,” “messing up,” or “making it look bad” are other reasons for setting work aside tentatively. JC described how her experiences prior to making the priestess portrait make her “nervous about adding color [to a drawing]…Sometimes, I will be really happy with it in black and white and then I’ll add color and think ‘Ugh! I ruined it.’” JA similarly expressed sometimes feeling like her work was, “turning out bad.” She explained that her previous experience of regret led her to set the priestess aside for some time. She said, “I left the work alone for a while. Finally, after lots of contemplation, like about a week of doing other stuff and looking at it some more, I finally decided on painting it.” Toward the end of our interview, I returned to that moment in her description to inquire about what she did during the week of contemplating whether or not to add color to her drawing. I asked:

**Adriane:** Between here and here (pointing at photos) you had some days where you weren’t sure if you would color it or leave it alone. You said you worked on something else. What did you work on? And, do you have works that are in progress and then you pick what to draw or do you tend to finish one [at a time].

**JC:** Well, I have a lot that are unfinished and I will work on them when I feel like working on them. For example, things that I do normally, I might have stopped at Photo B and it might have gone to my portfolio for a week or so, just sat there, and then I’d be [looking] in my portfolio and think “Oh, yeah [I forgot about this one].” Or, I will be working on something else and think, “I don’t want to work on this today. I’ve gotten bored with this one, with working on it now.” So, I’ll set it down because my creative energies toward that one piece is done for the moment, and I need to move on to a different one. Yeah, I guess I do have a bunch all scattered about.
[During the time] between [Photos] L and M, I was just playing around, and I did paint within that time and I was happy with it. So, that may have led me to the decision to go ahead and paint it.

JC set the work aside as a way to think about whether or not she would add color to the artwork. She didn’t want to “ruin” the work with which she was satisfied. So, she left it in a tentative state and looked at it “some more.” She “played” with paint during the week and considered that playing may have influenced her decision to add color to her portrait (Figure 61).

![Figure 61: JC's took one week to decide whether or not to paint.](image)

In an extreme case, artwork was held in a tentative state for more than a year. During our focus group, AB noticed that she has a portrait of AF that was still incomplete from last year. She gave the reason, “I am afraid to make it look bad.” She pointed at another artwork and shared, “And the same for this one, I am finished with everyone else in this portrait except for Mary and I am afraid to make her look bad.” Both of the works originated in the previous school year, yet her fear of not being able to duplicate the likeness of the person has kept her from finishing the work. I saw AB add details to the profile portraits of her four friends with Mary’s face still waiting to be completed. I observed her add shading to the work after she had made her female figure drawing from books. Perhaps she was readdressing the piece as she found success with her figure studies.

**Uninterested.** Participants named disinterest as another reason for transitioning from one artwork to another one. JC said that all of her artwork starts off as a sketch: “I start drawing it
just for fun. Then, as I am drawing it, whether or not it turns out to be something more—you could say that it is dependent on me but—really it depends on how it has evolved.” JC’s explanation, above, that sometimes “creative energies toward one piece is done,” resonated in CB’s contact sheet annotation: “lack of energy/will to paint.” She expressed that she took a break from her geisha portrait and worked on the “crying eyes” (Figure 62). Annotating their contact sheets, AF and RB used the word “bored,” AB and AF cited that they “lost interest,” and CL said she got “tired” with her piece. JC doesn’t finish all of her pieces, and described the tentative state as “play” and whether or not it turns into something more than play, as in a finished piece, depends on how the work evolves. When I asked, “Do some artworks stay in play?” She responded, “Yes.” All students interviewed returned to pieces that they had temporarily set aside. But, some works were simply left unfinished. During the focus group, AB called it, “abandoning a work.” RB concurred during the focus group discussion and used the term abandoning on his contact sheet as a reason for stopping work on one artwork for another.

Figure 62: CB notes reasons for transitioning from one work to another on her contact sheet.
One student did not multiprocess. CR expressed that she must start and finish a work in one sitting. I interviewed CR about a stop motion video she made for this study using a GoPro camera to record herself drawing a portrait of Ela. We watched the video first and then discussed her process. She said:

CR: When I do drawings, they are really big, they are really detailed, and they are really fast. If I have a whole pencil by the time I am done, then [the artwork] not done. I probably used a whole ebony pencil for the drawing. I don’t know why, but it’s big and quick. Get it done!

I have artists come up to me, like RB especially, say “I don’t understand. Why do you sit down and draw something and be done with it?” Because sometimes people take a long process to paint and draw. It would bother me so much [to leave a work is unfinished]. I can’t just stop. It’s just how I am.

Despite her insistence to get her work completed in one sitting, after our interview, she allowed a painting of a girl (Figure 24) to develop over time. She explained that the detail she wanted to express did not allow her to work fast. Also, she worked solely at school limiting her time to work on it to one-hour segments. CR was not present during our focus group meeting, and RB reported that he had suggested that CR slow down to see what would happen.

**Multi-process summary.** Artistic multiprocessing describes multiple simultaneously unfinished works. Transitions describe why students shift from one work to the next. Transitions included getting an idea down, disinterest, and fear. Identifying transitions was helpful in understanding how and why participants navigated multiple artworks in their artistic process.
Summary of Themes

Patterns emerged from my observations, informal interviews and students’ accounts of critical and creative thinking while making art in a learner-directed high school art class. I detailed their thematic relationships (Eisner, 1998) in the preceding. Themes were presented using participants words, my observations, and organized by prefigured and emergent themes. The prefigured themes were critical thinking (Ennis, 2004; Paul & Elder, 2008), problem solving (Fasko, 2003; Hunt, 1994; Lipman, 2003), envisioning (Hetland et al., 2013), and generating ideas (Wallas, 1928). The emergent themes were finishing, multiprocessing, and transitions. In the next section will explain what I discovered that fills the gap that I identified in the review of the literature. Then I will discuss my conclusions in relation to the ideas presented by Anderson and Milbrandt (2005), Chapman (1978), Dewey (1933), Hetland et al. (2013), Jaquith (2012), Marshall (2010), and Marshall and D’Adamo (2011).

Conclusions

The literature indicated that Walker (2001, 2004) studied professional artists and college students, Schön (1985) studied architects and graphic designers, Barkan (1962) studied art professionals, and Getzel and Csikszentmihalyi (1976) studied college art students. Marshall and D’Adamo (2011), Andrews (2001, 2005, 2010), and Milbrandt et al. (2004) presented their examinations of high school students in student-centered learning environments. One purpose of this study was to fill a gap in the literature about high school student’s artistic process, as told from his or her own perspective. Through this study, I documented a detailed examination of how a selected group of high school students creatively and critically engaged in the process of making art.
Documentation through photographs and talking about the process provided evidence of the critical and creative thinking, which was the focus of this study. In this study, students engaged in critical and creative thinking within the context of (a) making choices about content, media, and processes; (b) judging their progress based on criteria and setting goals for their work; (c) generating ideas for possible solutions; (d) solving artistic problems to meet goals; (e) through talking with peers and their teacher; and (f) decided when they were done. Participants made things, faced and overcame challenges, abandoned some works, learned from experience, and applied what they knew from a previous art course.

When creating artwork students both generated ideas and processes (creative) and judged and assessed those processes and products (critical) with an eye to expressing something meaningful and significant (Anderson & Milbrandt, 2005) to the maker. In this study, I found critical and creative thinking to be an interchange. Critical thinking set goals and creative thinking generated possibilities toward goals from which critical thinking made decisions; then the cycle happened again, creative thinking generated additional possibilities from which critical thinking made additional decisions and so on. Like a looping dialogue, critical and creative thinking engaged each other until possibilities were exhausted and the work was complete (or at times abandoned). Participants’ critical thinking through the art making process supported defining goals (whether short or long term), defining criteria for artworks, and guiding decisions about process based on their goals and criteria. Students also engaged in critical thinking through problem solving and persisting through challenges. Problem solving related to creative thinking when participants generated possibilities to choose from to find solution to art problems. The two thought processes happened in response to one another as the student moved through the phases of making art.
The art process was open ended; the artist didn’t always know where the work would end up. While young artists had general goals for their work, the results of their actions in media guided their decision-making. Two students clearly pictured mentally what their final artworks would look like, some students envisioned in shorter bursts in reaction to their action, and others clearly envisioned aspects of their artwork and let other features develop during the course of making art.

Participants conferred with their peers and teacher for suggestions to solve art problems. At times students multiprocessed, or worked concurrently on other artworks, until a solution to the problem was clear. Allowing for a period of incubation, when possibilities for a solution were generated and evaluated. The young artists also multiprocessed to get new ideas down to later return to them after letting them incubate. Other times works were abandoned.

External and internal motivation guided engagement in critical and creative thinking to make artworks. The teacher provided opportunities to participate in exhibits about things that counted, so students met deadlines to exhibit. Submission of the portfolio for Advanced Placement Studio Art also motivated students to work regularly. Internal motivation also directed the work of students eager and willing to face challenges to get an expression out.

The teacher acted as technical advisor, skill developer, and inspirer of ideas, which gave confidence to students to expand and grow their critical and creative thinking. She created a safe environment where students met dead-ends without judgment, found successes with sensitive guidance, or were left alone when necessary. Finishing the artwork was expressed as a felt intuition rather than a formalized, cognitive decision making process.
Discussion

I expected that students would engage in creative thinking based on the literature review (Freedman, 2010; Heid, 2008; Hetland et al., 2013; Marshall, 2010; Marshall & D’Adamo, 2011) but I wondered whether as Hetland et al. (2013) suggested, there were other aspects to be discovered or further understood through an examination of a learner-directed artmaking experience in school. Walker (2010) concluded that long-term engagement with a topic in an inquiry based instruction encouraged critical thinking. But details of how high school students would experience critical and creative thinking in a learner-directed class was a focus of my inquiry to address the paucity of literature on the topic. In the following, I situate the findings within the work of others to illustrate the contributions of this study and clarify my conclusions.

Critical and Creative Thinking while Making Art

Paul and Elder (2008) framed critical and creative thinking occurring as inseparable aspects of thought; “they function in tandem, like the right and left legs in walking” (p. i). In art education, Anderson and Milbrandt (2005) described, “In problem solving, creative thinking is applied continuously along with critical thinking…critical thinking is applied to select the best solutions from all the ideas generated” (p. 70). Freedman and Stuhr (2004) similarly asserted, “creative production and critical reflection are not separate in art; they are dualistic and mutually dependent” (p. 825). In this study, it became clear to me that when students made choices during the artmaking process, artmaking became a dialogue of possibilities, as described by Dewey (1933), to express ideas and feelings. Observations of students at work, documentation through photographs, and talking about the artmaking process provided evidence of the dialogue between critical and creative thinking. Making choices about artmaking required the young artist to consider and create possibilities and develop criteria for judgments.
Envisioning

A theme in the creative process of the participants in this study was mentally creating an image of what artwork would look like. I used Hetland et al.’s (2013) term envisioning to describe when participants expressed learning to picture mentally and generating possible next steps. In my findings, participants generated and played with ideas and prepared for their work by talking with each other and their teacher; seeking and finding images on the Internet; and testing out a hypothesis of cause and effect to mentally picture possible next steps. As elaborated in the previous section, Thematic Assessment, my findings extended Hetland et al.’s (2013) concept of envisioning into a continuum of long-term and short-term envisioning. Some students (CR, WR) clearly pictured mentally what their final artworks would look like, some students allowed their envisioning to occur in shorter lengths of time, as the work progressed (RB, JC), and others (AB, AX, CB, CA, JA) envisioned aspects of their artwork clearly and let other aspects develop the course of making art. Walker’s (2004) concept of delaying closure also shed light on the phenomenon of long-term and short-term envisioning and is discussed next.

Seeking Closure

In her study of college students, Walker (2004) described a theme in the art making process where students either delayed or sought “closure” (p. 10). Delaying closure meant that the “artmaking solution gradually emerged during the process” (p. 10). The artist started working without a clear vision in sight and engaged in redefining the art problem as they worked (Walker, 2001). Some of her other students had a clear vision and worked seeking closure of the art process. The difference was that some students kept their options open throughout the artmaking process with openness to seeking new solutions rather than relying upon more obvious
and normative possibilities” (Walker, 2004, p. 9).

In my study, of a younger population, I analyzed high school students’ engagement in short and long term envisioning, which may help to describe one approach to delay closure. I drew on Hetland et al.’s (2013) term, envisioning, and extended it to long-term and short-term envisioning. Short-term envisioning may be considered a characteristic of an artist whose approach to artmaking delays closure because students (e.g. JC, RB) who engaged in short term envisioning in this study kept their options open and allowed the artwork emerge during the process. JC’s and RB’s processes generated possibilities frequently throughout the process and they made decisions based in short-term bursts. Delaying closure described an overall approach to artmaking while short term envisioning describes how participants considered short bursts of critical and creative decision-making without seeking immediate closure.

Walker (2004) also defined delaying closure as the engagement in redefining of the art problem. The finding of the emergent theme multiprocessing suggests one way that the participants in this study delayed closure rather than altogether abandoning their artwork. JC explained the reason for transitioning from one art process to another, the “creative energies toward the piece,” had exhausted for the moment and she returned when a solution was found or she was ready to readdress the artwork. Participants delayed closure through multiprocessing to consider a new solution, reconsider their work, and return to it when they were ready. Significantly, the teacher did not penalize students for multiprocessing and frequently gave “progress” grades as students advanced through art processes rather than reduced grades for “incomplete” work. She viewed works in progress as developing rather than incomplete assignments. She provided a safe working environment (Anderson, in press; Anderson & Milbrandt, 2005; Bayles & Orland, 1993).
There were other reasons for multiprocessing. The emergent theme *transitions* described when students moved from one work in progress to another work, not only to redefine their art problem (delayed closure), but also when they transitioned to “get a [new] idea down.” They also cited “frustration” as the cause for setting the work aside. Fear also kept students from moving forward with a work leading them to set it aside for a time. And, some students cited abandoning works altogether.

Jaquith (2012) described transitions as *temporary abandonments*. I used the term transitions to describe reasons moving from one work to another (multiprocessing) instead of Jaquith’s temporary abandonment because in my study, students reported *purposefully* setting the work aside to later return to it. Students did not always give up as the term abandonment suggests. For example, RB used the term “get an idea down” to describe a reason for transitioning to another art process (*Figure 60*). WR also described transitioning because she wanted to record a new idea for an artwork and she would stop to get her “idea down” and later return to her original work; *purposefully engaging in multiple art processes*. WR and RB did not always abandon or give up when they transitioned. They tentatively set their work aside to ensure that new ideas were not lost. WR explained why; “I don’t like to write it down.” Altogether abandonment (Jaquith, 2012) was but one reason that students cited transitioning from one work to another. So given the findings in this study, abandoning, whether altogether or temporary, is one type or reason for transitioning between art processes for these students.

Chapman’s (1978) descriptions of convergent and divergent approaches to artmaking are similar to Walker’s (2004) seeking and delaying closure. Chapman (1978) explained that in the convergent approach, the artist’s “method leads directly from the germ of an idea to its execution in a medium, with only a few stops along the way” (p. 54). The divergent approach explored
“several directions and tentative variations before deciding on a particular direction” (p. 54).

CR’s long term envisioning of the portrait of Ela better described by Chapman’s description of an approach to art than Walker’s seeking closure. Walker (2004) concluded that seeking closure was evidence of succumbing to convention and “seeking balance and stability.” I am not ready to dismiss CR as having “misdirected attention” (Walker, 2004, p. 11) or lack of “critical thinking” (p.11) since she seeks to complete her drawings in one sitting. As CR described her process to develop her idea for Austrian Skyline, she stated that she looked for images on the Internet for ideas of what the skyline looked like and then based the composition on her imagination of what the city could look like and an imaginary girl. She thought of possibilities first, let them incubate until the idea “popped,” and then expressed her idea in a burst of execution. Her process does not imply a lesser engagement with criticality than if she had solved the technical problems over time. Her technical skill was strong and she could execute her ideas quickly. She engaged in divergent thinking prior to executing the work. That is not to say that all art students engage in high levels of critical thinking, simply that seeking closure in this study did not imply misdirected attention or lack of critical thinking.

**Incubate and multiprocess.** Anderson and Milbrandt (2005) recommended allowing problems to incubate for several days so that the mind can organize the project. In the meantime, students can consider how to pursue the project through sketches or work on another project. In this class, I observed and talked with students about what I called multiprocessing, or engaging in multiple ongoing, concurrent art processes. WR explained that she needed to get her idea down when the germ of an idea initiated so that she would not lose her thought. RB concurred and said that over a weekend he had developed several ideas for artworks and sketched them out. When I asked him about having multiple artworks in process, he explained,
Once every few weeks I pull out all the my artwork and just lay it down and see which one looks like needs more work or which one is more incomplete or which one I feel like working on. Then, I start off with that. Whenever I put off the work, whenever I get back to work on it, when I get inspired by what I might do next. I think, "That would be a cool idea that would be a cool thing to try out."

Both students returned to their original works, after temporarily setting them aside, but they made the active decision to initiate ideas for new projects. Initiating new projects while still engaged in a process allowed time for incubating ideas.

**Examining Creativity through Observations and Interviews**

In the review of the literature, I found that Julia Marshall’s research interest in cognitive and creative processes led her to examine creativity through observations in two high school art classes. The findings of my research confirm the findings and conclusions of Marshall’s (2010) and Marshall and D’Adamo’s (2011) work and I situate the findings of this study within the context of their work next.

Marshall (2010) adapted Wallas’ (1926) creative process theory for art classroom use and applied it to examine practice in a secondary school art class. She reported her observations of students at work on a teacher-directed assignment. She acted as a co-teacher and provided secondary school students with parameters to create a tool and a container for the tool including how to use it (Marshall, 2010). She concluded that Wallas’ theory generally helped to describe the process her participants went through to make art.

Later, Marshall and D’Adamo (2011) examined creative thinking in an arts-based research in a high school class through observations and analysis of a student’s research workbook and interviewed other students about their perceptions of learning. They found that
the art making in the particular arts-based research course was a “path, a trail” (p. 15) in a theme-based inquiry that fostered perceptions of autonomy. While they provided valuable insight to Claire’s process over several artworks, my study extends insight into how one individual artwork develops. My research compliments Marshall and D’Adamo’s observational and document analysis of students’ creative thinking with in-depth interviews and adds themes of critical thinking while making art. I did not read evidence of Claire working on multiple art processes, as did RB and JC. In my study I extend what is understood about developing a theme through artmaking with details about developing one artwork. My work compliments Marshall and D’Adamo’s (2011) findings, filling a gap in the literature that calls for more close up examinations of learning in art, particularly from the students perspective.

**Open-ended process.** The artistic process was generally open-ended; while the artists had broad goals, they didn’t know exactly where their work would end up because the desired outcome was not known ahead of time (Anderson & Milbrandt, 2005). Participants described finishing as an intuition rather than a cognitive, formal evaluation of completion. CR, who had the clearest vision of her final work of all participants, expressed finishing as, “I just felt complete,” when she knew she was done. Dewey (1933) described the feeling of satisfaction when the artist completed an expression.

**Learner-Directed Curricula**

In the Chapter Two I reviewed studies in several learner-directed art classrooms. I reviewed them in the following categories: Students as artists, role of the teacher, pedagogy, and context and use of materials. In the following, I situate my findings within the same categories to better understand the context in which students experienced critical and creative thinking while making art.
Students as artists. Ms. Mona shared that she wanted her students to “work as artists…. where everybody is doing different things…. following their own passion.” Like Andrews (2001, 2005, 2010), Douglas and Jaquith (2009) and Gude (2007) Mona gave students the freedom to choose their topics and/or media. She supported active learners by giving student choices about subject matter, materials, and approach to increase students’ intrinsic motivation to be creative (Douglas & Jaquith, 2009).

Role of the teacher. Anderson and Milbrandt (2005) recommended a teacher’s gentle guidance to facilitate technical skills and connections between meaning and process. In the Thematic Assessment, I provided detailed accounts of how Ms. Mona gently guided students in their art process when they asked for support. The role of the teacher in this study is consistent with the characteristics of the teachers in learner-directed classrooms reviewed in the literature. In this study, I concluded that the role of the teacher was as technical advisor, skill developer, and inspirer of ideas. Andrews (2001) described her role shift in the class from “commander to facilitator” (p. 45) when she implemented a student-centered curriculum. Jaquith (2011) described the teacher as one “who creates structure that promotes independence” (p. 16), which support critical and creative thinking in art. Ms. Mona made “educational gold” (Eisner, 2002, p. 152) through facilitating students’ interests through her familiarity with a wide array of art materials, processes, and knowledge of contemporary and historical art movements. She provided opportunities for students to find success through exhibiting in the Generations Project, making meaningful artwork for the Memory Project, and making personally satisfying artwork. Students expressed appreciation for autonomy and gratification with their work as artists.

Pedagogy. Consistent with the learner-directed art classrooms reviewed in the literature (Andrews, 2001, 2005, 2010), Ms. Mona employed an emergent curriculum (Jaquith &
Hathaway, 2012) that was responsive to students’ thematic and technical interests while making sure that the state standards we met throughout the term. She engaged students in conversations about their work and helped students think creatively during the art process (Burton, 2000). She allowed students to meet dead-ends without penalty (Anderson & Milbrandt, 2005). And, built their self-confidence through participation in numerous art exhibits, finding support and recognition for her students and their school (Hetland et al. 2013). Another pedagogical practice consistent with learner-directed curricula reviewed in Chapter Two is the arrangement of art materials discussed next.

**Context and materials.** Consistent with Douglas and Jaquith’s (2009) approach to distributing art materials, Ms. Mona supported student independent thinking in art by making accessible a variety of art materials stored in clear, plastic, shoe-box sized containers on shelves around the room. Specialty materials such as Exacto-knives and sharpie markers were kept in the teacher’s office for safety and to prevent loss.

**Limitations**

A methodological limitation of this study is that while students made active decisions about when to photograph their work, the interviews were largely reflective, performances of memory (Kuhn, 2010). There was an image provided to guide the memory, which proved helpful in reminding participants of moments in the process, but the written record of the activity was solely from my own perspective.

This qualitative study used a convenience, purposive sample for data collection and therefore cannot make generalizations to a larger population. I purposively selected a site where students regularly engaged in making choices about their own art making expecting that in this context I could gain rich descriptions of experiences thinking while making art. The small
number of participants interviewed is also a limitation. While the ten participants interviewed for in-depth descriptions of experience demonstrated a variety of approaches to making art, the number of participants compared to the number of all adolescents making art is small. Furthermore, all participants attended the same schools and took class with Ms. Mona.

However, this qualitative study provides a rich description of the artistic process and the context in which students work, so readers can make use of they have learned in this study and “apply them to other aspects of the world to which [they] believe them to be relevant” (Eisner, 1998, p.199). Attending to the qualities of fewer cases allowed this research to focus on subtleties left unaddressed by broader quantitative studies.

In this study, participants were asked to document the process to make one artwork and then use the images to guide their memory what they were thinking and doing. A limitation of this study is that each vignette of making art is does not capture the possible critical and creative thinking involved in making decisions about the thematic inclusion of other artworks in each series.

A limitation of the study is that only half of students interviewed worked in a purely learner-directed approach (AB, AX, JA, JC, RB). That is they selected the media, techniques, and subject matter. Four students who volunteered to interview made connections between their theme and one of the teacher suggested artworks (CA, CB, JD, WR). CR worked on a self-selected artwork that arose from a conversation with Ms. Mona about how to participate in the Generations Project. When the students elected to work on the teacher suggestions, they were not purely directed by their own interest; the teacher helped structure their process. However, of the five that elected to work with teacher suggestions, three students connected the teacher
suggestion to their own thematic concept for their portfolio working within emergent curricula model provided in Chapter Two (*Figure 2*).

**Implications for Further Research and K – 12 Practice**

In the following section I offer implications for further research, learner-directed art curricula, and general practice in art education in response to this study’s findings and conclusions.

**Suggestions for Further Research**

In agreement with the findings of other studies and scholars (Chapman, 1978; Marshall, 2010; Walker, 2001, 2004) I found that “artmaking cannot be reduced to a formula” (Walker, 2004, p. 12) and instructional interventions support the engagement in reflective thinking (Walker, 2004). If artmaking is a thought process then reflection on the process, or thinking about thinking, is a metacognitive behavior, which can be analyzed for evidence of critical and creative thinking. Therefore, I recommend more studies that examine reflection on the process of making art. During reflection students are encouraged to consider the results of their thinking and making and can further uncover evidence of critical and creative thinking. In order to document reflective thinking, I suggest gathering data through visual, verbal, and written documentation from participants.

Visual documentation for future studies may include photographs as were used in this study. In order to extend the methodology in this study, a useful data collection method would be to ask students to reflectively write what they were thinking and doing alongside the photographs. The writing would allow students some quiet reflective time before the interview to think about their process.
Given that a limitation of this study is the photo-elicitation interview of one artwork, I recommend longitudinal studies of students developing a thematic body of work to further examine critical and creative thinking. Studies in classes where teachers employ learner-directed and inquiry-based pedagogies provide rich opportunities to learn about critical and creative thinking because of the opportunities students are afforded to make choices. Longitudinal studies by researchers, teachers, and students to document the evolving thinking of high school students through making multiple artworks focused on a theme would provide details of developing thought processes to inform instructional practice. Such studies could capture relationships and connections made between art pieces in a series. Furthermore, classes in which the teacher allows for flexible deadlines or assigns grades for progress on artworks may capture details about the emergent theme multiprocessing and transitions as a form of delaying closure (Walker, 2004).

**Suggestions for Learner-Directed Art Curricula**

The role of the teacher in this class was as technical advisor, skill developer, and inspirer of ideas. In order find success in addressing varying needs and interests in learner directed art classes teachers should become familiar with a variety of art making processes and techniques. Teachers can consider learning new techniques alongside students; in other words, becoming learners themselves. Teachers can support students exploring techniques even if the teacher is not familiar with the materials. Teachers may allow student experts in media and/or technique to emerge as in Milbrandt et al.’s (2004) study.

An implication for learner directed pedagogy to encourage critical and creative thinking is to provide a structure that supports students’ making connections to thematic interests. Students in this study made connections to suggested assignments even though they were not
required. This suggests that students seek some structure even when they are free to choose subject, media, and technique. In this study, suggested assignments provided a foundation for students who wanted to make art with a purpose other than their AP Studio Art portfolio. The suggested assignments were also helpful when students didn’t know what to do next with their series of artworks. CB connected her theme to the Ink Batik, RB made a blue bowl with his technique of random strokes for the Generations Project, and CA used her silhouette motif from her AP Studio Art concentration to participate in the Generations Project. The students made new creative connections that perhaps they would not have made without the structure provided by the teacher.

Consistent with a characteristic of learner-directed art classes reviewed in Chapter Two (and significant to art education in general) is the finding that art materials were easily accessible to students to gather themselves. Implications for practice are to provide small, handy containers of a variety of materials for students to use as they wish. Small, clear, shoeboxes of markers, color pencils, yarn, thread, magazines, and varied papers stored for easy access encourage exploration of materials. As JC stated, “Sometimes, I walk around the room wondering what I am going to play with next.” Specialty cases like Ms. Mona’s thoughtfully prepared suitcases for plein-air painting filled with art materials such as gouache, brushes, small water container, pencils, paper instil excitement to explore and play with new materials and techniques, encouraging creative exploratory thinking.

**Suggestions for Applications in K-12 Education**

In this study, I found evidence of critical and creative thinking in students’ articulation about making art. Implication for practice is that art educators ask students to verbalize their thoughts, ideas, and feelings about their artwork and/or their process to consider their developing
critical and creative thinking. Whether verbally or in writing, making thinking explicit facilitates/encourages/supports the artist to reflect and engage in critical and creative thinking. I offer two applications for practice.

**Writing about making art.** Throughout this study, I kept thinking, “If or when I go back to the classroom, I am going to create an assignment where students document and discuss their own process and write about what they are thinking and what they are doing.” Whether in their sketchbook or on a separate sheet of paper kept in the student folder, students periodically think and write their thoughts and actions at intervals in the process. The teacher can set a time during class for students to sit and reflect on their thinking and doing. Once students are familiar with the process of periodic reflection, the teacher may ask that students select the intervals in which they prefer to reflect.

Alternately, to mimic the photo-elicitation method of this study, students may photograph their art process for one week, no matter what they are working on. If they finish one assignment and start another, work on multiple assignments or even doodle, the goal is to document their art making for one week. Giving students parameters is helpful to guide their task. A manageable number is 12 images so that each student takes approximately two pictures a day. I recommend the following directions, which should be modified to meet instructional needs of different contexts (See Appendix K, for a sample assignment):

Photograph your art process (including your work or other influences) for one week.

- Take at least 12 images.
- For every two images briefly describe what were you thinking and what did you do?
- Thinking can include your goals as you worked, how you felt about the piece, possibilities you considered, challenges you faced, success your felt, etc., document how you thought about your art during your making process.

- Doing. List what you were doing in each image with special attention to the decisions you made and why. (What you did about challenges? What did you decided from possibilities you considered? What did you change, add, take away, start over, modify, etc.).

Engaging in the activity asks students to explicitly consider their process and how their thinking guides their action.

**Talking about making art.** In this study, I found that students engaged in conversations with each other and the teacher to generate ideas and make decisions about their work. An implication from this finding is to implement instructional activities that engender discussions between the teacher and between students about their works in progress. Through such conversations students articulate their developing criteria, generate ideas, and make decisions about their work indicating their thinking. I recommend a strategy called a Tell-Ask-Give (TAG) peer assessment (Bromely, 2011; Rog & Kropp, 2004) to frame constructive feedback to talk about artworks in progress. The discussion can occur as a whole class at first so that the teacher can model how to engage in constructive feedback and conversation. Then, depending on the group of students and the class schedule, the teacher may engage students in smaller groups while the others are at work.

The overall purpose of a TAG discussion peer review is for each student to receive feedback on their work in terms of how it is received and to help generate ideas for future possibilities. In the first round, Tell, students state something positive about the artwork. This
round builds up the confidence of the artist by discussing what is progressing particularly well and reinforces the artists’ efforts.

In the next round, Ask, students ask questions about the artwork. When asking questions students do not criticize, they ask for clarification when something may not be clear. The questions may address technique, materials, subject matter or developing ideas. These questions help the artist think about what he or she is doing. The artist may reveal the criteria, or developing criteria for the artwork. Answering the questions or at least thinking about the answers compels the young artist to consider his or her process.

In the final round, Give, the group of students gives advice. Again the advice may address technique, materials, subject matter or developing meaning. The teacher should clarify that this round is to help the artist generate possible paths for this artwork and not a prescription for what to do. The artist may even offer what he or she would like to hear advice about. Hearing others suggestions helps the artist consider ideas they may have not thought of on their own.

The role of the teacher in these two activities is that of facilitator. He or she can model the types of conversations with a volunteered artwork. The focus of the teacher is to ensure that students stay positive and constructive and to establish an atmosphere of trust so that students are comfortable sharing and getting feedback (Rog & Kropp, 2004). In this way, the teacher helps to develop a community of artists that support each other’s work and individuality in a constructive manner. There are no right answers and the artist has the final autonomy to make decisions about his or her own work.
<table>
<thead>
<tr>
<th>Commonalities in theories</th>
<th>New Bloom’s Taxonomy</th>
<th>Creative Thinking in Art</th>
<th>Creative Process Stages</th>
<th>Visual Cycle of Inquiry</th>
<th>Model of Creativity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Remember</td>
<td>Name. Identify the problem/subject for the art investigation.</td>
<td>Preparation-information related to ideas are gathered</td>
<td>Perception the process that allowed students to gather information using their senses.</td>
<td>Problem or Task Identification</td>
<td></td>
</tr>
<tr>
<td>2. Understand</td>
<td>Distill. Locate the essence of the problem. Analysis. Probe for solutions</td>
<td></td>
<td></td>
<td>External or internal stimulus</td>
<td></td>
</tr>
<tr>
<td>3. Apply</td>
<td>Hunt, Gather, and Collect. Search for and assemble background information, imagery, and other source material</td>
<td></td>
<td></td>
<td>Preparation Building up and or reactivating store of relevant information and response algorithms</td>
<td></td>
</tr>
<tr>
<td>4. Organize/Elaborate/Conceptualize</td>
<td>4.0 Analyze. Breaking material into its constituent parts. Differentiating Organizing Attributing</td>
<td>5. Connect Synthesize juxtapose. Combine and recombine ideas to create new ideas and concepts.</td>
<td>Incubation-materials is elaborated and organized</td>
<td></td>
<td>Concept was the process of moving from things that were felt to arriving at an abstract idea (by talking, elaborating).</td>
</tr>
<tr>
<td>7. Project/Extending. Take ideas further to new applications and possibilities. Play with ideas.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
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<td>New Bloom’s Taxonomy</td>
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<tr>
<td>Constructing</td>
<td>6.0 Create. Combining elements to form a novel, coherent whole or make an original product.</td>
<td>8. Construct. Put ideas into concrete form. Make the art object.</td>
<td>Illumination- idea emerges</td>
<td>Expression concrete examples in of the form of representation Communicates ideas, thoughts or feelings so that other people may understand.</td>
<td>Response Generation</td>
</tr>
<tr>
<td>Generating</td>
<td>Generating Planning Producing</td>
<td></td>
<td></td>
<td></td>
<td>Search memory and immediate environment to generate response possibility</td>
</tr>
<tr>
<td>Elaborate Reflect</td>
<td>9. Reflect. Analyze and find meaning in the process and product. 10. Elaborate/Extend further. Revisit and extend ideas through another creative investigation.</td>
<td>Verification - idea is evaluated and further elaborated</td>
<td>Reflection- suggests careful thought. Process of considering previous actions, decisions and ideas. Reflection occurred through perception conception and expression.</td>
<td></td>
<td>Response Validation Test response Possibility Against Factual knowledge and other criteria</td>
</tr>
</tbody>
</table>
## APPENDIX B
### DEFINITIONS OF CREATIVITY

Table 4

*Definitions of Creativity*

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Year</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Runco &amp; Jaeger</td>
<td>2012</td>
<td>The “standard definition” of creativity is bipartite: Creativity requires both originality and effectiveness” (p. 92).</td>
</tr>
<tr>
<td>Hutchinson</td>
<td>1931</td>
<td>Creative thought makes transformations in the world (p. 393).</td>
</tr>
<tr>
<td>Guilford</td>
<td>1950</td>
<td>“The creative person has novel ideas…the surviving ideas requires evaluation” (pp. 452-453).</td>
</tr>
<tr>
<td>Stein</td>
<td>1953</td>
<td>“The creative work is a novel work that is accepted as tenable or useful or satisfying by a group at some point in time” (pp. 311-312).</td>
</tr>
<tr>
<td>Barron</td>
<td>1955</td>
<td>“The first criterion of an original response is that it should have a certain stated uncommonness in the particular group being studied. A second criterion must be met if a response is to be called original is that it must be to some extent adaptive to reality. The intent of this requirement is to exclude uncommon responses which are merely random, or which proceed from ignorance or delusion” (p. 479).</td>
</tr>
<tr>
<td>Bruner</td>
<td>1962</td>
<td>Creativity requires effective “surprise” (p. 18).</td>
</tr>
<tr>
<td>Kneller</td>
<td>1965</td>
<td>Creative products must be “relevant” (p. 7).</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Year</td>
<td>Definition</td>
</tr>
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<td>---------------------</td>
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<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Jackson &amp; Messick</td>
<td>1965</td>
<td>Creative products must be “appropriate” (p. 313).</td>
</tr>
<tr>
<td>Cropley</td>
<td>1967</td>
<td>Creative things must be “worthwhile” (p. 67) and reflect some “compelling property” (p. 21).</td>
</tr>
<tr>
<td>Catell &amp; Butcher</td>
<td>1968</td>
<td>Used terms <em>pseudocreativity</em> and <em>quasicreativity</em> to indicate produces that were not worthwhile or effective.</td>
</tr>
<tr>
<td>Amabile</td>
<td>1983</td>
<td>“A product or response is creative to the extent that appropriate observers independently agree it is creative. ... and it can also be regarded as the process by which something so judged is produced” (p. 359).</td>
</tr>
<tr>
<td>Csikszentmihalyi</td>
<td>1996</td>
<td>“Creativity is any act, idea, or product that changes an existing domain, or that transforms an existing domain into a new one.” (p. 28).</td>
</tr>
<tr>
<td>Kay</td>
<td>1994</td>
<td>A process where by an individual finds, defines, or discovers and idea or problem <strong>not</strong> predetermined by the situation or task” (p.117).</td>
</tr>
<tr>
<td>Baer</td>
<td>1998</td>
<td>Creativity is best conceptualized as domain specific.</td>
</tr>
<tr>
<td>Nickerson</td>
<td>1999</td>
<td>“Creative thinking is expansive, innovative, inventive, unconstrained thinking. It is associated with exploration and idea generation It is daring, uninhibited, fanciful, imaginative, free-spirited, unpredictable, revolutionary” (p. 397).</td>
</tr>
<tr>
<td>Sternberg &amp; O’Hara</td>
<td>1999</td>
<td>It involves discovering something novel and useful.</td>
</tr>
<tr>
<td>Hennessey &amp; Amabile</td>
<td>2010</td>
<td>“Most researchers and theorists agree that creativity involves the development of a novel product, idea, or problem solution that is of value to the individual and/or the larger social group” (p. 572).</td>
</tr>
</tbody>
</table>
APPENDIX C
ROLE OF THE RESEARCHER

As a scholar, art educator, and artist, I have experience teaching, learning about, and making art. In this research, I orient myself to the life world as an educator and artist. Because I am interested in student learning in and through art, I orient myself pedagogically to student artmaking in a phenomenological manner (Van Manen, 1990). This does not negate my orientation to life as a wife, sister, daughter, and professional photographer but for research I am interested in knowing more about how students think while making art.

Interest in Teaching Art through Themes

On my first day as a high school art teacher, I had little experience teaching. I had volunteered at the YMCA but I had never even had a job as a substitute teacher. Having limited experience in the classroom, planning curriculum, organizing an art room, or classroom management, I asked my high school bunch, “So, What do you want to learn about?” I noted their requests and planned the semester from there. In subsequent years, I experimented with different curricula framed by discipline-based art education, Sunshine State Standards, and curriculum based-competencies. I presented themes such as visual culture (Barrett, 2003; Cosidine & Haley, 1999; Duncum, 2002; Efland, 2005; Freedman & Wood, 1999; Tavin, 2002), gender studies (Aapola, Gonick, Harris, 2005; Griffen, 2004; Keifer-Boyd, Amburgy, & Knight, W., 2007; Ivashevich, 2011; Smith-Shank & Keifer-Boyd, 2011), multiculturalism (Bastos, 2006; Blocker, 2005; Kuster, 2006), and earth art education (Anderson & Guyas, 2011; Graham, 2007).

I took studio art classes at night to fulfill the requirements for my Master of Science in Art Education. I was inspired by the duo Ed and Mirtha Del Valle who asked us to choose a theme for the semester. They held three critiques per semester and the other classes were work
time. Critiques were often constructive, but Ed wouldn’t hold back criticizing the students who took photos of their pets. During studio time, they sat around the studio and helped students with technique and theme development. I decided to apply a modified technique to my teaching of my advance art students.

My students made their own thematic choices and my curriculum design gave way to structural designs that facilitated students’ inquiries. I found that concentrating on key concepts that were important to them, students constructed meaning from various sources outside of art class. While addressing one topic of inquiry over time, they made connections to various fields, the works of contemporary and historical figures, and were genuinely supportive of each other’s learning through discourse and collaboration.

**A Personal Drawing Experience**

Van Manen (1990) suggested writing a personal experience about the phenomenon under investigation to understand our possible biases. In the following, I reflect on my recent experience drawing a human figure before painting the figure.

When I approach drawing the human figure, usually a line strikes my interest; a curve of the calf or a bend at the knee. I sketch the figure before painting to familiarize myself with the relationships of forms and spaces. My goal is to document the proportions of the figure. This is the challenging task for me. I struggle when adding the first line. I don’t want the first line to be too big or too small for the paper I am working on. I want the figure to fill the page. I like using sketches before painting because I find it easy to erase when I discover an imprecise connection between what I see and what I drew. Carefully, I add lines in relationship to each other. I consider the negative spaces that the human figure pose creates. I try to replicate the shapes with my pencil on the paper. Slowly but surely the figure begins to emerge on the white paper. There
are moments when I feel I made a mistake. I draw a line for the cheek and press the pencil too hard, making a young woman look old. I am glad I have the eraser to give me a second and, sometimes, third chance. The sketch is never completed during the observation of the model, and I work on it later noticing small subtleties that I fine-tune to better express the gesture. I know I am done with the sketch when I look at it and feel a balance of lines and details. More could always be added to increase depth and detail but I am done when the details and lines feel balanced and capture the pose of the model.
APPENDIX D
THEMATICAL MEMO SAMPLE

Thematic
Bring data from different sources (observation and interview) on an emerging theme.
1. What evidence is available to document a theme?
2. What additional data would help to develop the theme?
3. What theme is emerging?
4. What are its elements?
5. Where do I have evidence to support this theme?
6. What disconfirming or contradictory data do I have at this point?

(Aadapted from Rossman and Rallis, 2012)

April 18, 2013
Engage and Persist- Does it fit?

Learning to embrace problems of relevance within the art world and/or of personal importance, to develop focus and other mental states conducive to working and persevering at art tasks.
(Hetland et al., 2007)

“Multi Process” and “Transitions” could go in under Engage and Persist but not sure if it is completely covered. Engage and Persist would have to be rewritten. LOOK up WITHHOLDING CLOSURE in art making. Look at Studio Thinking and re-read it.

In final work I may define engage and persist and bring up the limitation of the definition based on what I learned in this class.

Added “encountering a challenge” in the work to code how JC avoided the lips. It may go under engage and persist because I include “finding a solution” but a solution to what? So “encountering a challenge” defines the what? Possibly problem solving?

“Finding a solution” might be similar to critical thinking because when faced with challenge students must figure out how to move through it, overcome the challenge to continue in their work. Oftentimes they use logic. They say that they saw this and that and that therefore they made such and such decision. They seek advice from the teacher, classmates, and even me! Once they have a handful of options they make a decision based on some criteria, their goal, maybe something that is within their skill ability. Making those decisions is critical thinking according to Ennis (2004).
JC didn’t look at lips to find a solution-- she thought about how light falls on objects. She reasoned that if light is coming from this angle some is reflected from the bottom lip. That upper lip is actually in shade from the light. After thinking about this she acted upon her line of thinking.

Going through each node and thinking of where I have missed anything from my sources. For ex. Today I found that I had not coded RB for any materials. So I went into his images and made some notes on the materials he uses and coded them to help my descriptions of the materials that students work with.

Creativity with these students is definitely not occurring in distinct stages. There are some broad ways to describe the process chronologically for example what happens first and second but when grouping themes together and trying to find an order for them I could not, other than things that happen first such as coming up with the idea…then somewhere in between there are challenges…and at some point the work is finished. So I can address the process in a broad chronological manner or in a thematic form, but generally the themes that occur from beginning and end, tend to overlap, occur simultaneously (generating ideas from classmates, teacher, both, or either, thinking critically), some themes occur at varying intensities for different students (generating ideas, challenges, multiprocess, transitions), or not at all for some (e.g. CR “says” always finishes her expression in one sitting). I can describe how each one of these themes were described by students to better understand how high school students experience the creative process in this learner-directed class.
APPENDIX E
IRB APPROVAL AND FORMS

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 03/21/2013
To: Adriane Pereira
Address: [Redacted]
Dept.: ART EDUCATION
From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
   Critical and Creative Artistic Processes in a High School Art Class

The application that you submitted to this office in regard to the use of human subjects in the research proposal referenced above has been reviewed by the Human Subjects Committee at its meeting on 03/13/2013.
Your project was approved by the Committee.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 03/12/2014 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing, any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to ensure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Tom Anderson
   Advisor
   HSC No. 2013.10113
Parent Permission Form

Student name: ______________________________

Dear Parent/Guardian,

My name is Adriane Pereira and I am a Ph.D. student from the Art Education Department at Florida State University (FSU). Your child is invited to be in a research study about art education. We are asking that your child take part because your child is in the art class that we want to study. We ask that you read this form and ask any questions you may have before agreeing to allow your child to take part in this study.

The study: The purpose of this study is to understand students’ artistic process in art class. It is also designed to find out how students engage in critical and creative processes in art class. If you agree to allow your child to take part, your child will be observed as part of his or her regular art class for the remainder of this (2012-2013) school year. Your child may be asked to volunteer to photograph the process of making one or two artwork(s) in class and tell me about his or her process. Your child may be asked to voluntarily participate in a focus group of about 5 students to discuss his or her artmaking process.

Photos and Video: I will photograph the classroom environment and use an audio/visual recorder to document short interviews. Your child will NOT be identifiable or recognizable in the final work.

Risks and benefits: The research involves no more than minimal risks to your child. There are no benefits to you or your child if he or she takes part in the study.

Compensation: There is no compensation for participation.

Confidentiality: The records of this study will be kept confidential, to the extent permitted by law. We will ask only for gender and age, and will not include your child’s name. It will not be possible to figure out your child’s responses. Documents will be kept securely for five (5) years after this study ends in a locked cabinet and office in the FSU Art Education Department.

Voluntary Participation: Your child’s participation in this study is completely voluntary. Your child may skip any questions he or she doesn’t feel comfortable answering. Your decision whether or not to allow your child to take part will not affect your current or future relationship with FSU or with Florida State University School. If you decide to allow your child to take part, your child is free to not answer any questions, skip any questions, or stop at any time. You are free to withdraw your child at any time without affecting your relationship with FSU or your child’s school.

The researcher for this study is Adriane Pereira. You may reach her at [redacted], or at [redacted]. Please feel free to ask any questions you have now, or at any point in the future. If you have any questions or concerns about your child’s rights as a research subject, you may contact the FSU Institutional Review Board (IRB) at 850-644-8633 or you may access their website at http://www.fsu.research.edu. You will be given a copy of this consent form for your records.

Please enter your child’s name and sign below if you give consent for your child to participate in this study.

Student’s name: ______________________________

Parent/Guardian Name: ________________ Signature ________________ Date ________

FSU Human Subjects Committee approved on 3/21/2013 Void after 3/12/2014 HSC # 2013.10113
assent |ˈəsɛnt|: noun

the expression of approval or agreement:

**Assent Form for Minors**

Dear Art Student,

My name is Adriane Pereira and I am a Ph.D. student from the Art Education Department at Florida State University (FSU). You are invited to be in a research study about art education. We are asking that you take part because you are enrolled in the art class that I want to study. I ask that you read this form and ask any questions you may have before agreeing to take part in this study.

**The study:** The purpose of this study is to understand students’ artistic process in art. It is also designed to find out how students engage in critical and creative processes in art class. If you agree to take part, I will observe your regular art class for the remainder of this (2012-2013) school year. I may ask you about your work. You may be asked to volunteer to photograph the process of making one or two artwork(s) in class and then tell me about your process to make the art piece. You may be asked to voluntarily participate in a focus group of about 5 students to discuss your artmaking process.

**Photos and Video:** I will photograph and video record the classroom and use an audio recorder to document short interviews. You will NOT be identifiable or recognizable in the final work.

Please talk this over with your parents or guardians before you decide whether or not to participate. We have asked your parents/guardians to give their permission for you to take part in this study. But even if you parents said “yes” to this study, you can still decide to not take part in the study, and that will be fine.

If you do not want to be in this study, then you do not have to participate. This study is voluntary, which means that you decide whether or not to take part in the study. Being in this study is up to you, and no one will be upset in any way if you do not want to participate or even if you change your mind later and want to stop.

You can ask any questions that you have about this study. If you have a question later that you did not think of now, you can call me at [redacted], or ask me next time. You can also email me: [redacted]. You can also contact my major professor, Tom Anderson, at [redacted] or at [redacted]. You will be given a copy of this consent form for your records.

Signing your name on this form means that you agree to be in this study.

Thank you,
Adriane Pereira

Student Name: __________________________ Signature __________________ Date _______

FSU Human Subjects Committee approved on 3/21/2013 Void after 3/12/204 HSC # 2013.10113
APPENDIX F
INTERVIEW PROMPTS

Prompt

Photograph the process of making one artwork from beginning to end. What are you thinking about to make this work? What are you doing to make it happen? I am interested in understanding your artistic process from beginning to end. The photographs will serve to remind you of what you were thinking as well as what you were doing.

Then, I will print the photos and ask you to sit for an interview and tell me about your artistic process that led to the making of your artwork.

Interview Questions

First I started by simply asking, “tell me about what you captured in these photos.”

What was it about in the art in Photo X that led you to take the photo? Why at this point?

What was it about the artwork at point in Photo 1 that led you to get to work as shown in Photo 2?

When appropriate to further understand his or her process, I asked students to look at two successive photos and tell me “What happened in the time between Photo 1 and Photo 2? What were you thinking and doing in between?” This question may be repeated throughout the interview.
### APPENDIX G
### CODED INTERVIEW TRANSCRIPT

Table 5

*JA's Coded Interview Transcript.*

<table>
<thead>
<tr>
<th>JA</th>
<th>Analysis of JA’s experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>JA</td>
<td><strong>Description of Experience by JA</strong></td>
</tr>
<tr>
<td>JA</td>
<td><strong>Meaning Units</strong></td>
</tr>
<tr>
<td>JA</td>
<td>• I wanted to do something fuzzier because the detail with the fur is a lot of fun.</td>
</tr>
<tr>
<td>JA</td>
<td>• I was just looking at different animals that I wanted to do and I thought a wolf would be kinda cool so I found a good picture of a wolf.</td>
</tr>
<tr>
<td>JA</td>
<td>• I wanted to do a night sky cause I am thinking that I might want to do night skies for my concentration [next year] but i didn’t want to do the same style that I tried with the leopard, which was the van Gogh style. And, I didn’t want a plain black night sky because he was black as well.</td>
</tr>
<tr>
<td>JA</td>
<td>• But I just wanted to get the basic color on him then I was going to go in and add detail.</td>
</tr>
<tr>
<td>JA</td>
<td>• I started by doing the graphite on the back of the page and then tracing it to get the basic shapes and the shapes of the colors of the fur.</td>
</tr>
<tr>
<td>JA</td>
<td>• I used water to make the black grey in some areas.</td>
</tr>
<tr>
<td>JA</td>
<td>• Most of it is tempera paint but there is also acrylic because I ran out of tempera. After about I ran out tempera so I used the acrylic.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JA</th>
<th>Analysis</th>
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</thead>
<tbody>
<tr>
<td>JA</td>
<td>Participant’s words (in vivo codes)</td>
</tr>
<tr>
<td>JA</td>
<td>Themes (pre-figures and emergent)</td>
</tr>
<tr>
<td>JA</td>
<td>I wanted to something fuzzy</td>
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<tr>
<td>JA</td>
<td>Goal/Criteria</td>
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<tr>
<td>JA</td>
<td>Wanted to do:</td>
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<tr>
<td>JA</td>
<td>Envisioning</td>
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<tr>
<td>JA</td>
<td>Generating</td>
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<tr>
<td>JA</td>
<td>ideas</td>
</tr>
<tr>
<td>JA</td>
<td>Looking at different animals</td>
</tr>
<tr>
<td>JA</td>
<td>A night sky</td>
</tr>
<tr>
<td>JA</td>
<td>Doing</td>
</tr>
<tr>
<td>JA</td>
<td>Creating</td>
</tr>
</tbody>
</table>
| JA | I used black acrylic to get more detail later. After I got the basic shapes in black I went in with browns and lighter got more fur in. But, I just wanted to get the basic color on him then I was going to go in and add detail.  
• I was doing detail with the fur…with acrylic and a tiny brush little bit of white acrylic. | I wanted to get the basic color then add detail | Developing technique |
| JA | Then I whitened him up then I darkened him some more. (JC, too) | Whitened and darkened | Developing technique |
| JA | Then, I went and add the eyes and the background to shape him up and not be so fat. | Shape him up | Developing technique |
| JA | Getting the colors to work right and to get the contrast was challenging. | Getting the colors to work right | Problem solving |
| JA | I still don’t know if I am done. That is one thing I am discovering. I still want to go back in and put some more fur in there.  
• But I also like the way he looks right now and I don’t want to end up making it not as good.  
• The fine line between adding a little extra to make it good and “Oh, no! It’s turning out bad.” (JC, too) | Don’t know if I am done | Finishing/Closure |
Figure 63: RB cites reasons why he transitioned from one work to another.
Figure 64: Images used in CA's interview.
Figure 65: Images used in WR’s interview.
Figure 66: Select images from CR's interview.
Figure 67: Images used in JD’s interview.
Figure 68: Images used in RB’s interview.
Figure 69: Images used in JC’s interview.
Figure 70: Images used in AX’s interview.
Figure 71: Images used in JA’s interview.
Figure 72: Images used in CB’s interview.
Figure 73: Images used in AB's interview. 1 of 2.
Figure 74: Images used in AB’s interview. 2 of 2.
## APPENDIX J
### TRIANGULATION TABLE

**Table 6**

*Triangulation Table*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Category</th>
<th>AB</th>
<th>AX</th>
<th>CA</th>
<th>CB</th>
<th>CR</th>
<th>JD</th>
<th>JA</th>
<th>JC</th>
<th>RB</th>
<th>WR</th>
<th>Focus Group</th>
<th>Observations &amp; informal interview</th>
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<td>Interactions with peers</td>
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</table>
Artistic Process Reflective Self-Assessment

- Photograph your art process (including your work or other influences) for one week.
- Take at least 12 images.
- For every two images briefly describe what were you thinking and what did you do?
  - Thinking can include your goal for the piece, your judgment about the piece, possibilities you considered, challenges you faced, etc, anything you thought about during your artistic process.
  - Doing (what you did about challenges, what you decided from possibilities, changed, added, took away, started over, modified, etc).

My goal for this artwork is __________________________

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Photo 1          Photo 2          Photo 3

Thinking & Doing                          Thinking & Doing

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REFERENCES


BIOGRAPHICAL SKETCH

Adriane Pereira is an artist and educator from Miami, Florida. She received a Bachelor of Art in Art History from Boston University and a Master of Science in Art Education from Florida International University. She holds professional teacher certification in the state of Florida, National Board certification in Early Adolescent and Young Adulthood Art, and professional certification from Florida State University in Program Evaluation, Preparing Future Faculty, and Global Partners. She maintains an active artistic practice and regularly presents her teaching and research at state and national conferences.