August 2016

SELF-INITIATED CREATIVITY IN THE ELEMENTARY CLASSROOM

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This Dissertation is brought to you for free and open access by the SURFACE at SURFACE. It has been accepted for inclusion in Dissertations - ALL by an authorized administrator of SURFACE. For more information, please contact surface@syr.edu.
In this study, the researcher used an action research methodology to investigate the self-initiated creative processes and artifacts of his fourth and fifth grade students over the course of one school year in an attempt to shed light on the pedagogical effects of an elementary classroom that allows its students significant creative agency. The majority of the literature on the self-initiated creativity of children examines the work of primary grade students in an art room setting, revealing a gap in the literature and the need for a study regarding self-initiated creative processes and products made by children in an intermediate general classroom setting. The research site was a democratically based, child-centered classroom in a private day school where students were encouraged to share in the development of the conceptual, curricular, and physical aspects of the learning environment. The self-initiated creative activities of the children provided a unique lens through which the researcher was able to view and understand his students’ learning styles, gain insight into their metacognitive processes, and observe the ways they navigated their classroom space. Empowering students to become critical agents through choice and autonomy led to arts-based approaches of inquiry and spontaneous creative learning experiences. An analysis of the data contributed to an understanding of six essential principles for facilitating self-initiated creativity within the everyday constraints of a traditional schooling environment, as well as cautionary revelations about how I could have been more effective at co-constructing an enduring culture that supported self-initiated creative learning in collaboration with my colleagues at the research site.
SELF-INITIATED CREATIVITY IN THE ELEMENTARY CLASSROOM

by

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Dissertation
Submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy in Teaching & Curriculum.

Syracuse University
August 2016
To the creative resiliency of children.
ACKNOWLEDGEMENTS

The most effective mentors are those who freely offer their time and energy for the betterment of others. I have had the good fortune to know many, and would like to acknowledge those mentors who have guided me through this dissertation process.

To my wife Laura - years ago you encouraged me to begin this journey and every day since, have offered unwavering support, guidance, and love.

To my son John - you have patiently helped me edit each word in these chapters and find my voice as a writer.

To my friend and colleague Greg - with a simple observation you made me realize the many joys to be found in teaching children.

To my advisor Dr. James Haywood Rolling Jr. - you instilled in me the confidence to enter the world of scholarship and the ability to recognize my own biases so that I may continue to learn.

To Dr. Mara Sapon-Shevin - you introduced me to the world of critical pedagogy and helped me challenge my own long-held assumptions about education.

To Dr. Sharif Bey - your wisdom and insights shared during our conversations continue to resonate and serve as constant inspiration.

To Dr. Laura Reeder - your clarity of vision and thoughtful advice has piloted me through the many highs and lows of the dissertation process.

And to all my students past, present, and future - I thank you.
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Prologue

This dissertation tells the story of my experiences as a general elementary classroom teacher at a private day school in upstate New York. My teaching partner and I desired to give our students increasing amounts of creative agency and self-governance in an attempt to establish our version of a child-centered, democratic classroom environment. However, we were part of a school steeped in decades-old traditions with a proud reputation as the most successful college preparatory school in the area.

In addition to being a teacher, I am also an artist. As an artist, my fierce sense of independence, resistance to established hierarchies, and creative tendencies have heavily influenced my own education as well as my professional teaching practice. As an educator, I am most interested in the ideas and perspectives of children and was reluctant whenever I was required to enact a comprehensive curricular program or make children follow school-wide protocol. Consequently, my research interests concern student agency and creativity in the elementary classroom.

For this study, I examined my students’ self-initiated creative activities and the resulting artifacts to see what I could learn about my own teaching practice. Reporting on my research was at the same time easy and challenging. The process of composing this narrative was easy because I recounted my own lived experiences. This process was also challenging for the same reason. It is an emotional story with both fond and unpleasant memories. In an attempt to be objective, I interviewed a number of colleagues with whom I worked to fill out the narrative. I reviewed hundreds of pages of email communiqués and examined over a thousand photographic and videotaped pieces of data to facilitate an accurate retelling. Yet, it remains my story told through my perspectival lens. Although I
did my best to recount a narrative based on empirical observations, fragments of my partialities and biases remain embedded throughout the text.

My teaching partner and I firmly believed we were developing an educational model wherein the children were happy and engaged because they were allowed to contribute their creative ideas and co-construct their learning. However, there was an educational model already in place as part of the school’s infrastructure and the pedagogy we wanted to practice came into conflict with many of the school’s long held practices, traditions, observances, ceremonies, and celebrations. Nevertheless, we were so steadfastly committed to our vision and so entrenched in our conviction that we held out hope that a large enough group of administrators, faculty, staff, and parents, would rally in defense of our classroom practices. As you will read, this did not happen. At the conclusion of this narrative, the majority of individuals who appear in this story, including my teaching partner and I, ended up leaving the school for one reason or another.

At the end of this dissertation, I will relate my teaching experiences since the time of this study and begin a new discussion on the feasibility of incorporating our unorthodox pedagogy into educational environments beyond the privileges provided at our private day school.
CHAPTER 1 - Introduction

It has become continuously more difficult for teachers to enact classroom practices that support student agency and promote self-initiated creative endeavors. Since the national move toward standardization in education following the No Child Left Behind Act of 2001, classrooms have become increasingly restrictive environments as discovery-based learning experiences, which offered relevant and meaningful ways of understanding, were replaced by teacher-directed instruction, prescriptive projects, and top-down educational initiatives (Giroux & Schmidt, 2004; Smyth, 2008; Zhao, 2006). Anderson & Milbrandt (1998) recognized that traditional schooling practices resist spontaneous expression and Freire (2005) maintained that traditional schooling practices negate “education and knowledge as a process of inquiry” (p. 72). In his elaboration of Flow Theory, Mihaly Csikszentmihalyi described the optimal learning experience as one in which participants find “a sense of exhilaration, a deep sense of enjoyment” (1990, p. 3) becoming “so involved in an activity that nothing else seems to matter” (p. 4). In this state of flow, people are intrinsically motivated as they engage in self-initiated activities. Csikszentmihalyi characterized young children as “learning machine(s)” (p. 47) who enter into this state of flow naturally.

However, the dominant culture of education in the United States requires children to follow “standardized curricula” that define “knowledge narrowly in terms of discrete skills and decontextualized bodies of information” (Giroux & Schmidt, 2004, p. 220). Topics are imposed in a way that impedes children from pursuing their own interests and enjoying optimal learning experiences. Critical theorist Joe L. Kincheloe (2008) argued that educators should replace scripted curricula, reductionist epistemologies, positivist
attitudes, rigid classroom practices, and decontextualized learning environments with a focus on “generative themes” (p. 11) that connect with the students’ life experiences.

Statement of Purpose

As a professional teacher, I am fascinated by the self-initiated creations of children and the resiliency with which they engage in creative acts. Regardless of their circumstances, children find ways to initiate and partake in creative activity, or creativity. In Art and Intimacy, Ellen Dissananyake (2002) argues that children have a biological predisposition for art making and in What is Art For? she affirms that there is an “artistic proclivity in human nature” (p. 64). From my experience as a general classroom teacher, I have witnessed similar tendencies throughout my career. I have taught in situations that have invited creativity and in circumstances that have suppressed it. In each of these environments, I have witnessed the unremitting creative tendencies of children.

This dissertation will examine the self-initiated creativity of children in a general elementary classroom setting to see what, as educators, we might learn from learners. A study of the self-initiated creative activities of children within the structure of the elementary classroom provide a unique lens through which teachers may view and understand their students’ learning styles and gain insight into their metacognitive processes. Fostering this type of creativity requires an environment where children are allowed agency in their learning. In this study, agency is informed by Giddens’ theory of structuration (Nicholls & Cho, 2006). Structuration recognizes that “structure and agency exist in a complicated, endogenously determined, continuously evolving relationships with each other” (p. 109). Giddens’ theory states that individuals “are not always free to pursue an unlimited array of choices” within established systems and structures, but
neither are they “powerless in the face of a hegemonically deterministic social structure” (p. 109). Instead, “agents operate in an evolving and dynamic relationship with their social environments” (p. 109). I endeavored to empower my students to become self-directed participants in our classroom community, resistant to the domination of their self-initiated proclivities by teachers or traditional American classroom structures. Choice and opportunities for self-governance are necessary to facilitate educational experiences that are meaningful, relevant, and lead to ownership of learning (Glasser, 1969).

Research Questions

The questions that guide this study are:

- What does the self-initiated creativity of children in a general elementary classroom tell us about the ways in which children go about the learning process and navigating a classroom space?
- What does it mean to facilitate self-initiated creativity within the everyday constraints of a schooling environment?

Terminology

Throughout this dissertation, the terms “traditional” and “progressive” are used to convey the distinction between two general approaches to education. However, conceptualizing schooling using dichotomizing descriptors such a traditional versus progressive requires clarification since there can be variations on the amount of traditional or progressive practices within one school and even within a single classroom.

In the literature it was found that schools or classrooms that identified as traditional were teacher controlled (Cuban, 1993; Elmore, 1996; Lefstein, 2012), relied on a formulaic production of art products (Anning, 2002; Douglas, 2012; Gardner, 1980)
and resisted spontaneous expression (Anderson & Milbrandt, 1998). Whereas schools and pedagogical approaches that identified as alternative, progressive, or nontraditional such as Montessori, Reggio Emilia, Waldorf, and Summerhill embraced student agency and encouraged creative engagement.

For the purpose of this dissertation, the term traditional indicates educational philosophies and practices that value familiar, long-established practices, and reward quantitatively measured academic achievement. Traditional pedagogies privilege hierarchical classroom roles, structures, and designs. In a traditional classroom, the teacher is the sole authority responsible for arranging the classroom space, setting the rules, and directing the learning. In some traditionally situated classroom settings the students are allowed choices in how they go about their learning, but only those choices that have been predetermined by the teacher.

Similar to the teacher being the head of the classroom, the principal or division head is the chief authority within the school building. Although teachers may be invited to share their thoughts and ideas, the principal is in control of making final decisions regarding curriculum and school protocol. Finally, the superintendent or headmaster is in charge of the district or school campus and may influence or override decisions made by the principal or division head.

Conversely, in this dissertation the term progressive indicates classrooms that are democratically based, where the students have a role in determining portions of the curriculum, the organization of the classroom space, and the daily schedule. The term progressive is also used in this dissertation to suggest continually shifting pedagogical approaches that invite change, foster student individuality, and welcome student critique.
Progressive pedagogies privilege student interests over standardized curricular scope and sequences. Teachers and administrators act as guides and mentors rather than authority figures. Students are invited to create their own learning objectives and often direct their own learning.

During my time as a teacher, most of the classrooms I have observed fall somewhere within the continuum between traditional and progressive as described above. Therefore, when the term traditional is used in this dissertation it refers to a classroom, pedagogical practice, or philosophy that is closer to the traditional end of the continuum. When the term progressive is used in this dissertation, it refers to a classroom, pedagogical practice, or philosophy that is closer to the progressive end of the continuum.

**Overview of Methodology**

For this study I observed how my students engaged in creative agency over the course of one full school year. I collected and examined photo and video documentation of their self-initiated creative artifacts and processes to understand how they navigated the classroom space and to discern the effect of creative agency on their overall learning. At the same time the larger institution of which our classroom was a part was undergoing changes in leadership, personnel, philosophy and vision.

This dissertation is a research story. It is a narrative that provides a way of “representing and understanding experience” (Clandinin & Connelly, 2000, p. 18). It presents a “lived experience” (Ellis & Flaherty, 1992, p. 80) and offers a “description and meaningful interpretation of experiences, artifacts, phenomena, performances, and events as research data” (Rolling, 2010, p. 7).
In this study I used action research to examine the self-initiated creative processes and artifacts of my fourth and fifth graders over the course of the 2012-2013 school year at a private day school in upstate New York in an attempt to shed light on the pedagogical effects of a general elementary classroom that allows its students greater creative agency.

How I Became a Teacher

I never wanted to be a teacher. I entered elementary school in 1967 and graduated from high school in 1980. During those years my classroom experiences felt constricting and compulsory. Here and there I recall a few hands-on projects: some teachers were more interesting than others, but their teaching methodologies were generally the same. As I sat at a desk, a teacher positioned in the front of the classroom guided students through unit chapters, worksheets, and reading passages. In each class there was a curricular scope and sequence to be completed between September and June. Rarely did I feel a sense of possibility, serendipity, or excitement, except when I was in the art room. During my junior year, an art teacher noticed my burgeoning artistic talents and suggested I apply to art school, which I did, and was accepted to Syracuse University.

Four years later I had a degree in Fine Arts but no job prospects. That summer I moved to New York City and for the next five years worked odd jobs. I was a bartender and bouncer while making paintings on the side. I moved back to upstate New York in 1989 and married in 1990. I continued making artwork but only sold sporadically.

Ever since I was a teenager, family and friends suggested I get my teaching degree because they saw I was patient with children and had an aptitude for facilitating learning moments. However, I resisted this idea because of the tedium I experienced as a
student. I never caused trouble and did my best to please my teachers. I was a well-behaved, solid B student with the occasional A. But for me, educational environments were largely lackluster and predictable.

Eventually, with the encouragement of my wife, I took a course on reading education offered in the elementary education department at a local college. It was the early 1990s and the Whole Language movement had taken hold. Whole Language was a progressive educational approach that included elements of constructivist learning theory, and focused on integrating language arts with other subject areas in meaningful ways. It was in this context that I felt education could be more than what I had personally experienced. Subsequent coursework included progressive concepts and classroom practices I found exhilarating and liberating.

I went on to earn my teaching certification and landed my first teaching job in a local public elementary school in 1995 as a general classroom teacher.

**Subjectivities and Biases**

In this introduction I will recount my tumultuous career as a general elementary classroom teacher. The action research framework of this dissertation, which will be elaborated later in the writing, necessitates the openness of this account. Since “action researchers are, relative to conventional social scientists, more autobiographical in their expression,” they need to “contextualize the claims” in order to “create transparency” (Huang, 2010, p. 95). I will also describe how after 18 years, I decided to study the self-initiated creativity of children to see how their creative processes and artifacts might inform my pedagogical practices. My experiences as a teacher and artist influenced this study and each role provided certain competencies and proficiencies that helped guide
this investigation. However, the inherent subjectivities and biases embedded within these roles also had an effect. During this study I have done my best to remain objective, but each role brought with it a complex set of sentiments, beliefs, positions, and attitudes.

**Subjectivities and biases as a teacher.** Teaching is at once an emotionally edifying and draining profession. As a teacher I was responsible for the educational well-being of hundreds of students over the course of my career. Some parents told me that I imbued their children with new life. Others said that my classroom was a waste of a year. Each student I taught had an effect on my development as a teacher. My experience with some students even precipitated fundamental changes to my philosophies and practices.

Teaching takes dedication. Teacher salaries are relatively low compared to other professions (Raad, 2009). In my professional experience however, what draws many to teaching is not the salary but a strong sense of duty to the education of children. Many of my colleagues told me teaching was their vocation. Teaching is also a profession, yet one that is rife with outmoded bureaucratic hierarchies (Grant & Murray, 1999). As professionals, teachers should have the “autonomy, authority, and rewards of other respected professions” (p. 144). Instead, teachers are typically placed “at the bottom of the administrative hierarchy” (p. 97).

I always had a difficult time accepting the traditional hierarchies found in education, especially when I felt those hierarchies impeded my autonomy as a teacher and the agency of my students. Schools have become increasingly regulated, with curriculums becoming more standardized, while teachers are afforded less freedom in how they go about their professional objectives (Feldmann, 2011). Studies have shown that teachers who were given a measure of autonomy in their classrooms “expressed
greater satisfaction with their job” (Fernet, Guay, Senecal, & Austin, 2012, p. 517) which in turn led to a greater sense of professionalism (Pearson, 2005). Yet educational institutions remain “too hierarchical, too rule-bound, too formalistic to allow for the kind of autonomy and professionalism schools need if they are to perform well” (Chub & Moe, 2011, p. 520).

I had a varying degree of professional autonomy during my 18 years teaching in both private and public school settings. In my experience, teachers were generally rewarded for attending to that year’s prevailing administrative guidelines and directives. Conversely, we were chastised when we strayed too far from the status quo expectations. It was rare to find an administrator who allowed a great degree of faculty autonomy in curriculum, classroom management, and the physical appearance of the learning space. This hierarchy of power became replicated in the classroom where student learning was typically “imposed from the top down” (Shore, 2012, p. 22). The pressure to cover standardized content resulted in teacher-led, direct instruction instead of hands-on or creative modes of learning (Robinson & Aronica, 2015). I have known many teachers who began their careers hoping to have a positive impact on the lives of their students only to emerge disillusioned and defeated by the system years later.

As a teacher I chafed at the immutability of the school environment. Students were required to follow predetermined schedules and curricular outlines and act according to set customs, practices, and routines. Students were given very little say regarding their schooling experiences. Recess was the only time they had a semblance of autonomy but even these privileges were taken away if they did not strictly adhere to classroom rules and expectations. In my own teacher practice I tried to find ways for my
students to have agency in their learning experience. I looked for opportunities to include them in the development of the curriculum and encouraged them to critically analyze the customs and conventions of the schooling environment.

Since I utilized an action research methodology to investigate my own classroom in this study, my perceptions, feelings, and reactions concerning schooling hierarchies are also naturally reflected in this study. According to Herr and Anderson (2005), “we all enter research with a perspective drawn from our own unique experiences” (p. 60) and so “one way to deal with bias is to acknowledge one's presence in the study and build in self-reflection” (p. 35). Throughout this introduction I attempted to acknowledge my bias against educational hierarchies and the effect of my presence within the research setting. Since I spent a significant portion of my professional career working in a co-teaching or team teaching format, in order to provide a wider context I have included the voices of my colleagues to broaden the perspective of the narrative.

**Subjectivities and biases as an artist.** As an artist I enjoy being part of a contemporary visual dialogue. I am interested in the studio practices of other artists and finding out how and why they make art. I find the language of visual art easier to engage than textual information. It is an expeditious mode of communication via colors and forms that interact in animated and surprising ways to generate internal coherence and discernable meaning.

On the one hand, I see the language of visual art reflected in much of what children do and feel they deserve to be part of the conversation; on the other, I do not believe children should merely mimic or pay homage to what has already transpired in modern and contemporary art. They have valuable ideas to offer and should be allowed to
enter into the contemporary visual dialogue on their own terms. As an artist I was greatly interested in examining how my students engaged in creativity and felt it could provide essential insight into how children learn. Consequently, my preoccupation with visuality and bias toward artistic invention affected every aspect of my classroom practices.

**From Public to Private School**

During my first three years as a public school elementary classroom teacher, I did my best to make my classroom a place where students found learning exciting and invigorating. The principal who hired me was interested in progressive educational practices and encouraged me to integrate what I had learned during my coursework into my classroom. My students responded positively to arts integration strategies and so I incorporated this interdisciplinary approach to fostering creativity whenever possible. In language arts the children acted out scenes from their favorite books. During social studies we made movies and documentaries. In math we created games based on algorithms and other mathematical concepts. In science we kept illustrated journals. However, this principal left in my second year as a professional teacher and her replacement required standardized methods of instruction and my initial approaches to integrated learning in the classroom were no longer welcomed.

A neighbor who served on the board of a local independent school suggested I apply for a teaching position that had just become available in a third and fourth grade multiage classroom. I got the job and in the Fall of 1998 I began teaching at a Pre-K to 12 private day school with established Lower, Middle, and Upper School divisions located in upstate New York. I was thrilled to be added as a member of a group of three veteran teachers who were piloting a new multiage, team-taught classroom experience called the
3-4 Blend. It was an exciting time. Our team shared two large classrooms where we taught upwards of 60 third and fourth graders. Each day the teachers met to plan lessons and develop curriculum. We valued hands-on learning and active student participation. Each team member was allowed to integrate her/his interests into the lesson planning. One team member was passionate about social justice, another scientific investigations, another literature, and I contributed my passion for the arts.

But that experience was short-lived. I was the youngest member of our teaching team, and over the next few years, my three colleagues either retired or moved on to other positions within the school. During the rest of my tenure at the school, many other teachers cycled through the program, but we were never able to recapture the excitement and synergy of the first few years. By 2001, the multiage program had changed drastically. What was once a thriving team teaching situation became divisive and disconnected. When I first joined the 3-4 Blend, the students were mixed in a variety of ways throughout the week to provide a diversity of learning experiences. Two large classrooms each housed a combination of third and fourth grade students and a pair of teachers. Sometimes the four teachers would meet with all the third and fourth graders as a whole group. At other times, two teachers would team-teach in one of the classrooms with half the students. When we felt the need to work in smaller groups we divided each classroom in half by closing sets of large curtains. But when two of the original four members left the team, the group no longer shared a common vision, philosophy, and methodological framework. According to Carol (a pseudonym), who was the head of Lower School at the time, “things changed with their departure because as ‘founders’ they had a clear picture and great control over things. As things became more a result of a
shared or distributed leadership, compromise became even harder” (personal communication, July 27, 2015).

Although the school still advertised the 3-4 Blend as a team teaching venture, no real team teaching occurred because of the conflicts that arose between the four members. I was interested in continuing what I considered to be an innovative educational journey started by the team in 1998. One of the new teachers in our team was planning on retiring within a few years and was not interested in further developing the program. Another preferred a traditional approach. To complicate matters further, three different teachers cycled through our 3-4 Blend program between the years 2001 and 2006, disrupting continuity.

The Blend teachers were required to teach according to a shared schedule, plan and develop curriculum together, and collaborate on events such as Back to School Night, Open House, Opening and Closing ceremonies, and professional development days. But when in the classroom, the students mainly rotated through separate classes taught by each of the four teachers.

**Turbulent Times**

To expand beyond the limits of my own memory in writing this chapter, I contacted seven colleagues who I thought could offer a wider context, provide alternate perspectives, supply details, and most importantly, give me candid feedback on the effectiveness of my own teaching practice during those turbulent times. All seven agreed to share their recollections with me via email and provided me with pseudonyms: Eddie was my teaching partner for four years from 2009-2013; Leah and Rachel were the fifth grade teachers during the 2012-2013 school year; Carol hired me in 1998 and was the
head of the Lower School until 2008; Charlotte was the head of Primary Education (grades 2-5) from 2009 until 2011; Nicole was the assistant to the head of Lower School during the 2012-2013 school year; and Jessica was a member of the original 3-4 Blend who went on to other positions within the school including assistant head of Lower School before retiring. Except for Eddie, each of these colleagues was privy to information about the school that Eddie and I were not. Leah and Rachel were well respected throughout the school and other faculty would go to them for advice or just to vent. Carol, Charlotte, and Jessica were at different times the head of Lower School and involved in conversations at the administrative level. As an administrative assistant, Nicole could offer yet another perspective.

Jessica told me that from 2001 onward the Blend was “growing contentious, with serious disagreements surrounding curriculum, structure, discipline and rigor” and “it seemed that those concerns were shared by some, but not all, parents and most faculty and administration (personal communication, July 11, 2015). From 2001 to 2005, I felt as though my own teaching practice had become ossified. I shared my excitement about progressive teaching methodologies, but for the most part, the team did not feel the same way. Carol recalls that although my “relationship with students was always strong” and I could confidently articulate my reasoning for curricular enhancement, she “had to say ‘no’ to some ideas that may have been too out there for parents, and colleagues.” She emphasized, “some of your colleagues were very rigid” and “your ideas though intriguing seemed to be too much and I would have to pull things in” (personal communication, July 27, 2015).
Although I did my best to develop innovative lessons and activities, I wanted to take it much further. I felt uninspired and trapped with my teaching team and there seemed to be little hope of returning to the sense of possibility and excitement I had found when I first joined the 3-4 Blend. I was bored with the type of teacher I had become but I did not know what to do to remedy the situation.

For me, the answer came in 2006 when a new teacher was hired to our team. Eddie was a young idealist who was passionate about education and a zealous advocate for children. One day he walked into my classroom and asked me why I needed a teacher desk. I was taken aback by the question. Before I could respond he began pointing out aspects of my desk that interfered with the learning of our students. He mentioned the size of the desk and how much room it took up. He asked me to consider the placement of the desk at the front of the classroom and the power structure it symbolized. As the students entered the classroom we watched how it interrupted the flow of bodies, as they were required to navigate around it.

Over the next few weeks I realized the psychological impact the desk had on my students’ learning. Previously, I accepted the desk as just another classroom fixture. I gave it no more thought than I gave to the door or ceiling tiles. I was completely oblivious to the way it impacted the students’ lives. But suddenly I saw it as a physical impediment and symbolic monolith. There was an unequal hierarchy at play. My desk was much larger than the student desks. I could decide where to place it in the classroom but the students had to remain in predetermined seating arrangements. I could lock the drawers of my desk but the students had no way to secure their belongings. Like many
teacher desks, mine was filled with personal effects and mementos but the students were not allowed to personalize their desks.

Seeing my teacher desk through the lens of classroom power structures started a chain reaction. I began to examine every aspect of my classroom space. I considered other objects that were under my control and off limits to students. Filing cabinets, shelves, closets, whiteboards, doors, windowsills, and bulletin boards were all teacher-controlled domains. Supplies including construction paper, pencils, glue, crayons, markers, paint, scissors, and poster board were doled out and dispensed according to my schedules, timelines and agendas. As the teacher I was clearly the sole authority figure. I had jurisdiction over the classroom both physically and psychologically.

This led me to examine other aspects of classroom hierarchies such as the preset schedule and the predominance of teacher-directed lessons and activities. Although I incorporated some creative methodologies into my teaching, it was still a unidirectional approach. I realized that the reason I had become bored with my own teaching was because my students lacked agency in their learning. As a result, there were few surprises. Although I had the reputation of being a dynamic teacher, the students were not an authentic part of the decision-making processes. They had no real input in their learning. The schedule was set, the classroom arranged, and the lessons planned before they entered the room.

I began to confer with Eddie more and more. During my planning times I watched him teach. During recess I watched how he interacted with the students. We became friends and began discussing education outside of school during mountain bike rides and snowshoe treks in the winter months. The more we talked, the more I saw student agency
as the main element that was missing from my classroom. Without student agency, education is a unidirectional experience with teachers leading and students following. Of course, children do learn in unidirectional environments, but I wondered what type of learning might transpire if they were allowed agency in their educational experiences. How would learning differ? I assumed it would be a more appealing learning experience because the students would have a role in what they learned and how they went about learning. But I also wanted to find out what teachers like myself could learn from students who became empowered in their educational experiences. I was curious about the pedagogical insights greater student agency might offer the study of education.

Each new school year brought logistical changes as the administration attempted to settle the philosophical differences that continued to trouble our teaching team. They tried restructuring the Blend program by altering the schedule, remixing the student groupings, and reconfiguring the teachers. The conflicts and personnel changes within our team began to negatively impact the other Lower School grade levels as well. I remember a second grade teacher complaining at a faculty meeting that too much time and attention was put towards resolving personnel issues in the 3-4 Blend classrooms. However, Rachel, one of the fifth grade teachers, recalls that there were also degrees of dysfunction in many of the other grade levels, as well as within the administration. She said some of the “division heads had not had a smooth working relationship and this had created further tension and unhappiness among faculty.” She went on to say that “the Lower School was struggling with its identity” partly because “teachers were engaged in finger pointing and blaming rather than self-reflecting and self-improvement (personal communication, July 21, 2015).
To complicate matters further, “everything was playing out on a large stage” and because of the school’s policy of full tuition remission for faculty children, “teachers across the school had kids in the class” (Charlotte, personal communication, July 19, 2015). The resulting conflicts of interest became more pronounced when our long-standing Head of Lower School, Carol, left at the end of the 2007-2008 school year to take an administrative position in a private school in another state. She was a strong leader who was able to quell disputes among the faculty before any negative news reached the parent community. I had heard from other teachers that the problems at the school had precipitated her decision to leave. However, she told me that she “was not looking to leave, but the opportunity was too exciting to pass up” (personal communication, July 27, 2015).

We had three different heads of Lower School from the fall of 2008 until the spring of 2013. Each did their best to maintain control and put a positive spin on the school, yet disputes among the faculty intensified to the point where teachers in the Middle and Upper School as well as parents became aware of the infighting among Lower School faculty. During this time, Eddie and I continued to share ideas on education and develop a common philosophy. However, we could only go so far putting our theories and ideas into practice while being part of the 3-4 Blend. Every summer since Eddie was hired, we scheduled a meeting with the Lower School head to lobby for the opportunity to have our own classroom where we could team-teach separately from the other two teachers in the Blend. Every year our request was denied. We were told that since there were so few male teachers in the Lower School they wanted to keep us in separate classrooms so more of the third and fourth graders could experience an adult
male influence in the classroom. Carol offered her rationale for keeping Eddie and I in separate classrooms:

I had to have conversations about balance and the public perspective with some of the ideas you and/or Eddie would come up with. Although I can be and was excited by some of the more progressive ideas you guys came up with, I had to balance the reality of getting applicants into the school and ensuring the academic success in a way that families would recognize and have confidence in. Families had to have an understanding of what and how their children were learning. We just could not go to extremes though we were definitely left of center. (personal communication, July 27, 2015)

In 2009, Charlotte became the head of Primary Education (grades 2-5) and granted our request. Finally, Eddie and I became the fourth grade teaching team. However, there was one caveat. Since the school wanted to continue to advertise a third and fourth grade blended classroom experience, Eddie and I were required to plan a 35-minute block each day of integrated learning with the third grade teaching team. That year the school decided to have two heads for Lower School: Judy (a pseudonym) was the Head of Early Childhood Education (Pre-K through first grade) and Charlotte was the Head of Primary Education (second through fifth grades).

The 2009-2010 school year: Breaking away from beloved traditions. In the Fall of 2009 the third grade team was made up of a teacher who had taught in the Blend since 2002 along with a new hire. One day before school began, I went next door to the third grade classroom to see how they had arranged and set up their space. That year, Eddie and I planned to allow our students to co-create and co-curate our classroom space so I knew the rooms would look quite different when the students arrived for the first day of school the following morning. Since our students would be spending some of their time in the third grade room, I wanted to know how much of a visual discrepancy there would be between the two rooms so I would be prepared to address any questions the
parents might have after their children reported on their first day of school. After many years of instability in the Lower School, a few parents said their children needed more consistency and structure in the classroom. I knew that our increasingly fluid teaching style and organic approach to education could be easily misinterpreted as inconsistent or lacking structure. Add to this the disparity of appearance between the classrooms and I figured we would have to be ready to address some parental questions and concerns.

The third grade room looked similar to the other Lower School classrooms at the beginning of the school year. At the front of the room there was a newly installed Smart Board. Above the Smart Board ran a number line as well as a colorful alphabet strip with cursive upper and lowercase letters. To the right and left were posters displaying a multiplication chart, American currency, place value and a Classroom Constitution signed by each student.

Figure 1. Montage of the third grade classroom (2009)

Along one wall were two desks (one for each teacher), low bookcases containing teacher guidebooks, and large binders of master copies of worksheets to go with the
various math and language arts programs. Above the bookcases, colorful, oversized picture books were displayed. Behind one teacher desk was a Word Wall with vocabulary words on purple cardstock surrounded by a blue scalloped edge border. The other teacher desk was decorated with houseplants and family photos amidst a neat stack of file folders and lesson activity books. On the opposite wall were more bookcases containing books ranked by reading level, assorted supplies, and posters describing the Scientific Method and the writing process. On the back wall were maps of the world and North America, a bulletin board containing a calendar, notes and schedules. Off the main room a smaller area contained bookcases filled with non-fiction books, above which were hung posters of Ancient Egypt, Ancient Rome, and Ancient Greece. There was a small whiteboard with a second alphabetized cursive letter writing strip fixed above it. Surrounding the whiteboard were additional posters and charts and, to the left, a large cabinet containing art and craft supplies. In the center of the both spaces, pairs of trapezoidal tables were placed together to form hexagons that seated students in groups of six. Each seat had a small number line and personal cursive writing strip glued under the student’s nametag. Two individual desks on either side of the classroom were reserved for students who had difficulty focusing. As was customary in our school, the teachers prepared weekly schedules, lesson plans, and classroom rules before the start of school.

Conversely, in our classroom the stools remained stacked, the walls blank, doors unadorned, and supplies sealed in boxes.
Eddie and I planned on having the students help determine how the room was to be set up and arranged. Over the years we had noticed how some children became agitated when required to sit still at an assigned seat. So, instead of desks and chairs, we requisitioned stools and folding tables. We also recycled butcher-block tables that were being thrown out by one of the art teachers. Under the legs of each table we affixed furniture sliders so the tables could easily move to the perimeters when we needed an open space. We would allow the students to sit where they pleased. The previous year a group of students became interested in climbing so we constructed a climbing wall for our classroom that had a variety of colorful climbing holds running from floor to ceiling. During the long winter months, students complained about feeling confined inside all day so we hung a classroom set of snowshoes near our back door for students to use once the lake effect snows arrived in billowing drifts. Another group of students asked if we could have our
own classroom stage so we built one in a corner of the room for students to perform skits, present ideas, or debate issues.

Eddie and I were interested in developing what we envisioned as a democratically based, child-centered classroom, a concept that will be further delineated in Chapter 2. According to Eddie, we needed to “trust the kids and give them more responsibility in their learning” (personal communication, July 14, 2015). We planned to begin each day meeting with the students to determine what needed to be learned and how we should schedule the day’s events. We were aware of the skills and content the students needed to acquire over the course of the school year but we wanted to embed them in relevant and meaningful learning experiences. We believed meaningful learning happened when students had a say in how they went about their education. Our schedule included specified times for Language Arts, Science, Social Studies and Math, but we planned to use it only as a general guideline.

We agreed that students would be allowed to take personal breaks during lessons and activities. For instance, students who had difficulty concentrating during math class could take a few minutes to use our classroom’s climbing wall, go for a walk in the hallway or do their work at a picnic table that was setup outside our back door. We planned to leave a block of time at the end of each day to have a class meeting and critique the day’s events. If a majority of the students felt a lesson or activity was boring, we would have a brainstorming session on how it could be improved, modified, or abandoned for a completely different approach. We would then hold a vote to determine which direction to take. Conversely, if there was an aspect of the day students felt was
especially intriguing we might decide to continue with the activity over the course of a week.

Eddie and I were hopeful that, although we were going to practice a pedagogy that was quite different from the other Lower School teachers, our choices would be respected. Fortunately, the headmaster at that time allowed the faculty to try new approaches and was satisfied as long as the majority of parents seemed happy.

The day before classes commenced for the 2009-2010 academic year, our school hosted its annual Back-to-School picnic. The picnic also provided an opportunity for Lower School students to visit their classrooms and meet their new teachers. As was his tradition, an hour or two before the picnic the headmaster stopped in to various classrooms in all three divisions, from Pre-K to 12th Grade. Upon entering ours he was surprised at the visual contrast to the other classrooms he had visited. He gruffly exclaimed, “You’re not ready yet?” I told him that, in fact, we were ready and that the absence of any set up or decoration was purposeful. As I began to explain our philosophy and rationale surrounding this decision he impatiently nodded, adjusted his glasses, and walked out half chuckling to himself something to the effect of “This better work.”

Although he exhibited all the trappings of a quintessential private school headmaster, he also had a radical streak and a penchant for critical discourse. I recall him saying at faculty meetings that he purposely hired a diverse faculty and enjoyed it when they engaged in heated debate. He wanted his students and faculty to take risks. He spoke of education being a living entity that needed to adapt and progress to stay relevant. But unlike many private schools, ours did not have a large endowment. The headmaster believed that for the school to remain financially sustainable, he had to strike a delicate
balance between the parents who valued the time-honored traditions of private schooling and those who expected cutting edge pedagogical practices. According to Charlotte, “We needed the Lower School experience to make sense and we had to have a rationalization for why we would embrace radically different approaches. [The headmaster] loved the sparkle you brought and the liberal notions and enthusiasm but he was also a traditionalist” (personal communication, July 19, 2015).

According to emails from that time period, it is evident that Eddie and I were optimistic at the beginning of the school year. Eddie was confident that once parents saw our classroom in action they would see it as “a place where learning [was] happening” (personal communication, September 9, 2009). By the end of the first week of classes Eddie was convinced that both faculty and parents would embrace our educational approach when they witnessed our students joyfully learning in an “environment created collaboratively by teachers and students” (personal communication, September 11, 2009).

However, it soon became apparent that the third grade team did not share in our enthusiasm. They began to question what they perceived as a lack of structure in our classroom. Eddie recalled: “Our schedule was slightly different each day so from the outside it looked like there was no routine, but there was. Our routine was that every day could bring something new and different. More often than not, we went with the kids’ ideas” (personal communication, July 14, 2015). The relationship between Eddie and I and the third grade team grew increasingly strained. According to Eddie:

The third grade teachers did not like that we allowed our students to be active in ways that were not the norm in other classrooms in the Lower School. They did not like that the students had a role in making decisions about scheduling, protocol, and curriculum in our classroom. They complained that our classroom lacked structure and discipline. (personal communication, July 14, 2015)
This perspective was shared by some of the other faculty as well. Jessica who at that time was serving as the Head of Curriculum for the Lower School remembers it this way:

Much of the initial concern came from the impression that you were allowing your students to ‘run wild’ - running unescorted in halls to specials, sometimes unruly and not polite in assemblies, etc. Your classroom certainly looked and felt largely undisciplined. I believe Eddie, especially, did not agree or promote the general expectations for dining room behavior. If I recall correctly, it seemed like the impression was that you were breaking away from the ‘beloved’ traditions of the school and communicating your dissent to the kids. (personal communication, July 15, 2015)

In truth, we were breaking away. We challenged what we considered to be outdated classroom practices, especially teacher-student power structures. In an email I wrote to Eddie on November 3, 2009, I talked about my interaction with a disrespectful student during a math class while another adult was present in the room:

A student was vocally “sparring with me” which doesn't bother me in the least but I think it annoyed an onlooker. I try to teach respect by modeling respect. Forcing children to speak a certain way only makes them go underground with their feelings and then they resist in other ways.

Eddie and I thought our approach to teaching was in sync with the spirit of the school’s philosophy. A letter from the headmaster included in the school’s admission packet stated:

We challenge students to become inquisitive and independent learners. We emphasize intellectual and creative exploration. We have the freedom to develop a challenging curriculum and to adapt our teaching methods to suit our students. In doing so, we encourage them to seek their own solutions—to think creatively in all aspects of life.

We took these words to heart and used them to justify our methodologies. We thought the best way for students to become inquisitive and independent learners was to give them agency in the classroom even if it meant challenging, disrupting and dismantling the
customs and routines of the school. We did our best to share our ideas, philosophies, and rationale with other faculty, especially the third grade team. But, as Jessica stated, “In spite of your efforts to communicate your philosophy with anyone who would listen and your willingness to do assessments, share data, etc., it was a hard sell for most” (personal communication, July 15, 2015). Charlotte told me that the third grade team “felt threatened” and were upset that Eddie and I got to be the “fun teachers” while they were considered the “tough teachers” (personal communication, July 19, 2015). Charlotte went on to say:

They were right in a sense, because they were so very influenced by the opinion of others and were ready to come down hard [on the students] when someone complained. You all on the other hand, thought many of those critics were wrong and so you completely ignored them or you would engage with the kids in a discussion about code switching. (personal communication, July 19, 2015)

When I asked Charlotte what she meant by code switching she said:

Explaining to [the students] about how different people had different beliefs about what is appropriate and how even if we disagree with them, we need to be respectful of those beliefs. Explaining that the community and code you had created together in your classroom didn't necessarily apply throughout the school. (personal communication, July 20, 2015)

Eddie and I had intended for these conversations to help our students gain a greater understanding of the complexities of different communities. But an unintended consequence was that the more we empowered our students, the more they would openly critique other teachers and classrooms practices. We wanted our students to become critical agents of their own learning, but at the same time we tried to teach them how to do it in a thoughtful manner and be aware of other perspectives. Like most learning, this took lots of time and practice before students could successfully navigate various learning environments and teacher expectations.
Although the school would never admit this publicly, the opinions of parents who paid full tuitions and made large donations to the school had considerable influence. These parents had an effect on some teachers more than others. According to Charlotte the third grade teachers were not willing “to stand up to [traditionally minded] parents and tell them that they needed to wait for longer-term results” (personal communication, July 19, 2015). As the year wore on, parental feedback on our classroom was mixed. Our methods seemed to elicit strong feelings, one way or the other. During that school year I received emails from parents with positive messages such as:

- Thank you very much for the continuous communication with us. This is awesome and it really helps us strike up school-related conversations at home
- 34blend rocks this year
- Thanks for all the updates. I know it takes up a lot of your time. I hope that I can express how invaluable it is to us.
- I think it is important to keep kids' interest focused on intellectual things as well like this and you are doing an excellent job. Thx.
- Thanks as always for the amount of time you give each child.
- Thank you for everything you all do, and all you put up with.
- Great job today guys! Many, many thanks for being such dedicated educators.
- I can see that your classroom structure is awakening and enlivening to the children who have the opportunity to experience it. As a parent, I feel blessed that my child can partake in this type of environment.
- Thank you for the great communication! Thank you also for always providing quality instruction and interesting projects for your students. I just wanted you to know that it does not go unnoticed and is very much appreciated!

There were also a few parents who voiced their concerns:

- We have to admit that we still do not fully have a grasp of how things are now working in the Blend given adjustments made this year.
• My son believes that reading comic strips like Calvin & Hobbes, Asterix, etc. is acceptable and I strongly disagree. Could you please clarify this?

It was difficult to decipher how many parents were unhappy with our classroom practices since they usually did not contact us directly as in the above email excerpts. For the most part, Eddie and I were informed of any negative parental feedback from administrators who said they heard it directly from parents whom they would not name and also from faculty members whose children we taught. Jessica went on to say:

Although there were some parents who appreciated the experience you offered your students, I believe there were more who were skeptical, at best, and often disappointed. ‘It could have been so much more.’ I heard that mostly from faculty whose children you taught, but was aware of other parent concerns as well. The gaps in curriculum had become increasingly apparent and parents expected more. Overall, your style, philosophy and implementation was very controversial, as you know. (personal communication, July 15, 2015)

The second, third, and fourth grade classrooms were all housed in a single building on campus and so Eddie and I wondered how much of the parental concerns were actually influenced by the second and third grade teaching teams. Charlotte recalls that the “2nd grade teachers had strong opinions” and “what you were saying seemed to be in opposition to other grades” (personal communication, July 19, 2015). Fifth grade teacher Leah claimed that “among the Lower School faculty there was an outspoken component, a constant message from four loudmouth teachers who were always talking shit about you guys but it wasn’t how the rest of us felt” (personal communication, July 15, 2015). Whatever the reason, Eddie and I quickly gained a reputation as educators whose teaching style either provoked opposition or elicited approbation. Jessica ended her email with these final thoughts:

You know that you generally had my support, and that in spite of my efforts to understand and embrace your enthusiasm and philosophy, I often disagreed with
your methods and would have opted for a different experience for that age group. That being said, I so respected your intellectual energy, passion and desire to offer a developmentally appropriate and joyful learning experience for children. (personal communication, July 15, 2015)

The more Eddie and I continued to develop our philosophy and put it into practice, the more upset the third grade team became. At the end of the school year, the headmaster called a meeting with the Blend team and both of the Lower School heads. I recall being surprised by some of the things he said. I was especially curious as to why he opened the meeting with the words: “Don’t worry, no one here is getting fired.” He informed us that we would have to somehow compromise because he was not going to change the team. He told Eddie and I that we would have to teach reading, writing, and math every day and that it should be more in line with the other Lower School classrooms rather than in an experimental or radical fashion. I responded that he was misinformed and that Eddie and I did in fact teach reading, writing, and math each day but it was often in an integrated fashion so our approach looked different from the way the other teachers taught those subjects. I told him that our methods were not experimental or radical but well researched and pedagogically sound.

Charlotte believes that the headmaster was grandstanding for the third grade team who were “at the heart of a very persuasive school clique.” She recalls that the headmaster, “was worried that you all had become too much of an island and he needed to assert that you needed to come back to the fold.” She then added that the third grade team, “were also very upset after the meeting because they too felt reprimanded. They wanted [the headmaster] to say they were great and you were bad and he didn’t. He said you all needed to work together as professionals. They didn’t want to work with you.”

She also clarified my confusion about his comment that no one was getting fired: “Oh
they [the third grade teachers] totally wanted you fired” (personal communication, July 19, 2015).

**The 2010-2011 school year: Tragedy befalls the headmaster and turmoil**

ensues. It was clear that advocates in administration and advancement wanted the 3-4 Blend to remain intact. Over the years the 3-4 Blend was used to advertise a curricular approach our school could offer that was not available in the local public schools. Carol told me the Blend “was attractive as an alternative approach to learning in the [local] market” (personal communication, July 27, 2015). According to Jessica “The Blend, in its day, had been perceived as so successful and really was a selling point for the Lower School” (personal communication, July 15, 2015). Charlotte recalls that the school had “really built up public relations around ‘The Blend’ and had crafted it as a selling tool. We were dipping in enrollment and they didn’t want to mess around with our public relations” (personal communication, July 19, 2015).

It was also clear that Eddie and I would not be able to work with the third grade team. It was proposed that the Lower School develop other types of teaming and blending situations such as kindergarten working with first grade, second working with third and fourth with fifth. According to Charlotte, this would provide a way to “put space between [the fourth grade team] and the third grade team and say we were building on the blending idea, not rejecting it. Growth not retreat” (personal communication, July 19, 2015). However, once the school year began, the prospective plans for alternate types of teaming fell by the wayside and were never fully realized.

During the 2010-2011 school year, Eddie and I finally had the opportunity to be an independent fourth grade teaching team. For the first time in our teaching careers we
did not have to consider other grade level teams as we planned our lessons and activities.

Eddie and I allowed our students an increasing amount choice in their learning and governance in the classroom. Our main goal was to have students become empowered in their learning and have ownership of their work. But we knew the administration, faculty, and parents would be closely monitoring our activity. Charlotte recalls that amongst the faculty there were a lot of “skeptics who were interested in seeing what would come of it” (personal communication, July 19, 2015).

Eddie and I knew we had a formidable task ahead of us and that it was imperative for us to have a successful year. We decided to have our program be as transparent as possible. From the first day of school until the last, we sent out a daily email blast to parents (seven of whom worked at the school as teachers or administrators) that gave a brief description of each day’s lessons and events along with multiple photographs of students engaged in various learning activities. The emails included information from across the curriculum such as how our students used the climbing wall to learn the properties of geometric figures, incorporated writing skills with science investigations, or creatively presented independent research projects. Additionally, we hosted a series of after-school forums where we invited parents in to discuss a variety of educational topics to give them a sense of how our classroom operated and provide a better understanding of our philosophy in action.
In February of that year, the headmaster passed away unexpectedly. Although it was evident that he was in poor health due to his smoking and obesity, we were still shocked at news. Many of those who spoke at his memorial service described him as beloved. Rachel, who was teaching fifth grade at that time, recalls the power struggle that ensued:

When [the headmaster] passed away, there was a power vacuum and many people were grasping for power or a sense of control. I think this came from the lack of continuity, the lack of leadership, the lack of a clear sense of purpose, and the lack of identity in the Lower School. (personal communication, July 21, 2015)

Our headmaster was a visionary leader who, even during times of internal unrest, could provide a semblance of continuity, purpose, and identity. With his passing, the situation at the school became increasingly unstable.

During the speech Eddie and I gave at the end of the year during the Lower School closing ceremony we did our best to communicate our enthusiasm and pride in our students who in our eyes had become confident learners, critical thinkers, and reflective, caring human beings. But our efforts did not result in widespread acceptance as we had hoped. Instead, it might have led to greater dissension among the faculty. Charlotte explained it this way:
You got lots of positive feedback from visitors. You made learning fun and alive. You offered an educational experience that couldn’t be had at any other local school. So that was good. But the light of your success didn’t shine back on the other grades and that was bad. I think having the spotlight on you all made things both better and worse. People were jealous of the celebrity. It put a lot of pressure on you all in ways that others didn’t have to contend with. I also think that there is a very real question about whether or not that kind of progressive philosophy would be embraced in the community.

The 2011-2012 school year: Unexpected allies. Charlotte left at the end of the 2010-2011 school year. Judy, who was the Head of Early Childhood Education took over leadership of the Lower School with Jessica as the Head of Curriculum for the Lower School during the 2011-2012 school year. The Chief Financial Officer took over as interim headmaster and search committees were formed to find a new headmaster and head of Lower School for the following school year. Eddie and I used this interlude as an opportunity to go further with our philosophical vision. We continued sending home daily emails to show evidence of how the necessary skills were incorporated in our organic approach to education. We wanted to show parents that their children were involved in rigorous yet meaningful learning. Many of the emails we sent included attachments and links to articles on education that we thought helped to clarify and explain our methods and beliefs. We wanted to show that our teaching methods were anything but haphazard and arbitrary. We insisted that there was a structure to our classroom, albeit an organic and malleable configuration. That year I created a video short of our classroom in action. The video is titled “Buzz,” after a phenomenon Eddie and I experienced in our classroom when we noticed that all the students were deeply engaged in their learning. The buzz might happen whether the students were all doing the same activity, such as reading, or when they were involved in different activities.

Sometimes a buzz occurred when the classroom was active and loud and sometimes
when the classroom was very still and quiet. We called it the buzz because during these times we sensed a hum of synergistic learning energy permeated the classroom space. It was akin to what Csikszentmihalyi (1990) identified as Flow. We allowed parents to view the video so they could get an idea of what our classroom looked like during the day.

![Figure 4. Montage of “the buzz” in action (2011-2012)](image)

*From left: Student gathers rocks for a science project; students create a temporary studio space.*

Within the first few weeks of the new academic year it appeared our efforts had paid off and Eddie and I had won over the majority of the parents. Some parents emailed us with messages of affirmation and support:

- I’ve never seen problem-posing education in action the way it is in your room. Thank you for centering students’ intrinsic curiosities so completely in their learning process.

- As you know, I completely support your approach. It has a lot to do with why our family is making significant financial sacrifices to send our children to school there.

- Your classroom looks like a ball and the kids really have fun which truly enhances their learning experience.

- I just wanted to give props to Eddie and David. They have been very on the ball responding and following up on any question/concern that I have had about 4th grade.
• [my daughter] is loving fourth grade. My thanks to you and David for your hard work and thoughtful approach to her education.

• We also appreciate your positive feedback about our daughter. We know she feels very fortunate to have you as her teachers.

• It looks like such a blast! This environment definitely suits my boy!

• You are among the most innovative teachers at [the school].

But the parent accolades did not temper the overall divisiveness that had engulfed the Lower School in the wake of the prior year’s events. Even the handful of faculty members who acknowledge the positive aspects of our philosophy did not think it would ultimately prevail. In an email from Leah, one of the fifth grade teachers, I was told, “I do not think that your educational goals and ideas about education were unrealistic” but “I don’t think the school was ready for or will ever be the school that you both envisioned/hoped for” (personal communication, July 15, 2015). I was not surprised by this assessment because our classroom continued to look and operate very differently from all the other classrooms. Eddie and I have compared our teaching style to surfing with the classroom being an ocean of children who have many different needs and interests that might change in an instant. As with surfers, who constantly adjust their approach to the fluctuating waves on the surface of the ocean, we as teachers had to frequently adjust to the complex waves of energy in our classroom.

In October, Judy, the interim Head of the Lower School, dropped by unannounced to show a visitor our classroom. It just so happened that they walked in during an extremely loud and active juncture. The students had been working successfully for the good part of an hour and the buzz had already peaked. It was time for Eddie and I to
change things up, but because of the rain we could not take the students outdoors for a much needed break. Just as we were going to pull the class together to meet and refocus, our guests arrived. We held off on the meeting in hopes of showing our guests our students in action but instead it was as though a rip current tore through the classroom. Judy was embarrassed by what she saw. Later that night I called her to explain and apologize. Afterwards, she sent an email to me and Eddie describing her dismay at, “the condition of the room and the apparent chaos” and “how the noise level was so high at times it was hard to hear” (personal communication, October 27, 2011). Although other classrooms had their share of behavioral issues, events like this reverberated through the school and provided fodder for those who were critics of our teaching style and wanted to see our partnership terminated.

![Figure 5. Montage of classroom views from October 2011](image)

Clockwise from left: Student taking a break on the climbing wall; students solving math problems; reading at tables marked and decorated by students.
Fortunately for Eddie and I, in early November the fifth grade teachers, Leah and Rachel, approached us and asked if we wanted to team with them the following year to create a fourth and fifth grade program. Leah and Rachel were both relatively new to the school but were well liked and highly respected. Teachers as well as administrators often sought their advice on a variety of issues. I was astonished that they wanted to align themselves with Eddie and I considering the turmoil that had surrounded us. Leah explained it this way:

There were multiple reasons. Selfishly, I was really curious about working and focusing only on Humanities. Additionally, Rachel and I recognized the value of the education that you and Eddie were providing and we wanted to try to find a way to preserve that, while still having you both remain at [our school]. (At that time, you both were expressing feelings of wanting to leave based on the tensions you were encountering.) I hoped that Rachel and I taking over the reading/writing/history would free you both up to be more creative without so much outside criticism. Ideally, I had hoped that the kids would be exposed to the best of all worlds between what we would offer in Humanities and what you and Eddie would offer in STEAM. (personal communication, July 15, 2015)

In an email to Eddie and the fifth grade teachers Leah and Rachel, I recommended we move quickly toward developing our teaming idea and presenting it to Judy, the Interim Head of Lower School, and Jessica, the Head of Curriculum for the Lower School, suggesting the following rationale: “the school is getting 4 new heads [the headmaster and each division] and I think we have a window of opportunity here while things are in flux. I feel there is a better chance of success if we have something established, at least to some degree, before the new heads are in place” (personal communication, November 5, 2011). Just as I wanted our students to become empowered and have agency in their learning, I thought it important that we as teachers became empowered agents. I proposed that our program function as a distinct entity within the school:
I would also suggest that we have our own division called The Bridge…to signify a distinct developmental time as kids experience a two-year exodus from Lower School and entry into Middle School. We could base our philosophical statement on how and why that’s appropriate for such a unique time in a child’s educational experience. Since it’s a separate division, we don’t have a head. Instead, we each take on the various responsibilities of a head. As teaching professionals, we also determine our own professional development activities based upon our needs. (personal communication, November 5, 2011)

Leah liked my enthusiasm but felt the school would not allow us as much license as I suggested:

Although I’d love to see the four of us start our own deal I don’t think the school is in a place where it could respond positively to a suggestion like that (yet). The focus of Academic Council and the Search Committee has all been about finding a common voice, identifying who and what [our school] is and pulling together. I feel like we may need to carve out our niche and prove ourselves for a few years before that could actually be presented. (personal communication, November 5, 2011)

I continued to press my point:

Yes, cohesion is the key word this year. I think, however, we can make the argument that allowing us four to work as a unit, and have a larger degree of autonomy, will actually add cohesion to the school. True cohesion cannot be autocratically managed, it must develop from the ground up. The early Blend was a success because each teacher bought into it and helped design it. The later Blend was a total train wreck because the original team disbanded and folks were brought in who didn’t buy into the philosophy and had a stagnant mindset when it came to growth and change. (personal communication, November 5, 2011)

However, Rachel wanted more time to think things over and Leah remained unconvinced of the feasibility of my plan advising that we move ahead cautiously:

I love the name “the Bridge” but I’m not comfortable taking on a separate division. First, I think it’s going to be seen more as divisive than collaborative. If we were to pursue the idea of a separate division I think that all the baggage of the fighting within the blend, etc. will come up and this idea will be seen as our not wanting to “play by the rules” when everyone else has to. I think the Lower School is in desperate need of unity right now. Although I don’t want to disappoint you two renegades :-), I also want to be honest about where I am and what I’m comfortable taking on right now, as a new teacher to [our school] and a
new mom. (personal communication, November 7, 2011)

During that year various candidates were interviewed for the Headmaster and Head of Lower School positions. Of the three finalists for the Lower School division, two presented themselves as progressive educators and one as a traditionalist. Still reeling from the aftereffects of the 2008 national economic meltdown, our school desperately searched for a fresh vision and new identity in an attempt to secure the school’s financial future. My teaching partner and I hoped for a plan outlining progressive ideals, democratic learning environments, teacher autonomy, and choice-based education. Above all, we valued student voice and agency. We wanted our students to become critical thinkers, inventive problem solvers, and creative innovators. However, it soon became apparent that the school was not moving in the direction we had hoped.

The hiring committee chose Leeann (a pseudonym), the most conservative of all the candidates for the new Head of Lower School. I asked Rachel, who was on the hiring committee, how they settled on Leeann:

Leeann impressed us as having a strong sense of education and curriculum, and she had definite ideas of how to improve instruction and create a more consistent educational approach. I remember worrying that Leeann might be too structured for our environment, but Jessica had had many additional conversations with her and seemed to feel that she was open minded and would seek faculty input on important curricular decisions. (personal communication, July 21, 2015)

Eddie and I were disappointed by the choices made by the hiring committees for the Head of Lower School and the Headmaster positions. But we remained hopeful at the prospect of working with Rachel and Leah, which provided us with a psychological lifeline. We would not be an autonomous entity as I had originally hoped, but at least Eddie and I would be sharing students with teachers who supported our methodologies.
We continued to plan The Bridge program and it was decided that Rachel and Leah would teach Social Studies and Humanities while Eddie and I focused on Math and Science.

During the remainder of the school year Eddie and I continued to develop our version of a child-centered, democratic classroom and made plans to include an integrated science, technology, engineering, the arts, and math (STEAM) experience the following year. Part of our STEAM initiative included making fifth grader participation in the school’s Middle School Science Fair a choice rather than a requirement. We felt parents were too involved in the process, and that in our school, the science fair had become a competition between families instead of a meaningful learning experience for the children. In an email to Eddie, I shared my misgivings about our Science Fair tradition:

A child-centered, democratically based classroom demands an open-ended, fluid curriculum, which allows for playful investigations and serendipitous discoveries. Everything we do flows and interconnects. [You and I] know the skills and concepts that need to be covered by the end of the year but the ways in which this takes place is completely dependent upon the classroom dynamic and the daily buzz. A predetermined unit of study locks us into a schedule, disrupts the flow, and interferes with student agency and empowerment. The Science Fair in its current form would run counter to our educational approach. During Science Fair all students are required to take part in a highly stylized and predetermined mode of learning. Although there are myriad possibilities for the types of scientific investigations, the process requires adherence to strict protocols and methodologies. We feel that the Science Fair limits the ways in which we can engage with the various learning styles of each student and approach each based upon his or her individual needs. (personal communication, November 4, 2011)

We shared our thoughts and ideas with Jessica hoping to put a comprehensive plan in place concerning The Bridge program before summer break. I was especially adamant about changing the Science Fair requirement after hearing from Middle School teachers
that they dedicated a full three months of the school year preparing for it. However, the science fair issue was not addressed as we went into summer break.

On July 1, Leeann became the Head of Lower School and later that month sent an email to The Bridge team:

In meeting with Jessica, I understand there was a question, yet to be decided, about the 5th grade science fair… We probably need to talk about this all together, but I am wondering if you might be able to explain what the perceived ‘downside’ is to the science fair experience for 5th grade. Opinions???(personal communication, July 14, 2012)

Eddie and I both replied with lengthy emails detailing our concerns with the traditional science fair approach and new ideas regarding the science curriculum. In a portion of my email I shared my desire to make the fifth grade science experience less product-oriented and more process-oriented:

Our plan is to take the salient aspects of the Science Fair activity and teach them over the course of the two-year Bridge classroom experience. Students will learn about variables, procedures, scientific principles, sources of error, etc. but instead of packing this learning into a two-month intensive learning framework requiring a product-based outcome, students will have the opportunity to work through these concepts at their own developmentally appropriate pace. (personal communication, July 15, 2012)

My critiques had inadvertently offended the Science Department Chair who was a powerful political player in the school. In his email, Eddie tempered my fervor a bit and even offered to create an alternative:

I know there are a few who are frustrated with the idea that we want to change the fifth grader’s role in science fair. It is important to note that we mean no disrespect to [the Chair of the science department] (or anyone else). [The Chair of the science department] is a solid colleague and friend and I would never want to damage our relationship. We want 5th to play a role in the science fair by having a week of “Science Demo Days.” This would be planned the same week as the fair night. This new idea takes all the best of the traditional fifth grade experiences into a week long celebratory science experience- further details can
be discussed in person, but it is important to know we do not want to completely abandon the 5th grade connection to the fair. (personal communication, July 15, 2012)

I became increasingly cognizant that time was of the essence and the ability for us to fully develop our pedagogical vision was drawing to a close. As if to confirm my apprehensiveness, the new headmaster and Leeann called Eddie and I into a meeting a few weeks before the start of the school year. During the meeting we were told that the fifth grade participation in the science fair was mandatory. As if to emphasize the exigency of the matter, Eddie recalls the Headmaster saying “I need to know now if you’re not going to be able to do this” (personal communication, August 9, 2015). Given no other options, we acquiesced to his demand.

The 2012-2013 school year: Pulling out all the stops. Our school was rapidly moving toward a more standardized framework and this would essentially be the final year teachers could develop curricular practices unique to their own classrooms. Eddie and I decided to take our philosophy as far as we could.

In the meantime, Leeann began researching a number of prepackaged curricular programs to adopt the following year. Her assistant, Nicole, recalled her choosing “a Guided Reading program, Math program, Handwriting Without Tears, [and] Spellography” (personal communication, July 22, 2015). Eddie remembers there was also talk of instituting a Lower School and Middle School science program which was being piloted in first and second grade classrooms (personal communication, August 16, 2015). That year the Lower School teachers took part in mandatory weekly training sessions to learn how to use the programs that would begin the following September. Rachel believed these changes were put into effect because the Lower School:
Essentially had little to no vertical articulation of standards or curriculum, which meant that each grade was a stand alone, doing what it wanted and felt was “right” for its students, but without looking at what came before and what came after thoroughly. While the independence and freedom was great for some who enjoyed creating dynamic curricula and figuring out the needs of each group of students, others were perhaps not updating their curricula to match the needs of their current students. (personal communication, July 21, 2012)

In addition to establishing a standardized curriculum, Leeann was planning to place Eddie and I in separate classrooms the following year. When I asked her about this, Leeann told me she felt students had a difficult time learning in non-traditional classroom settings, and that having us in separate classrooms would be more conducive to teacher directed instruction. In an email to me concerning her own daughter, who was a student in our classroom at that time, Leeann wrote, “as much as I love the fact that [my daughter] loves STEAM, I worry that she, and others, do not have enough structure or direct, undistracted instruction, to solidify concepts (personal communication, February 3, 2013). Leah recalls that:

The “state” of your classroom was a big issue for Leeann. It appeared “messy” and was judged by many parents as “messy” and that value judgment began to overshadow the work that you both were doing. We all had [Leeann’s daughter] in the Bridge and that added another layer of parental concern. Leeann was also much more aware of what was happening in our classrooms (versus other Lower School classrooms) because she had a child in our classes. That said, Leeann was dealing with massive issues all across the Lower School. She herself described things as a minefield. Classrooms and teachers that for years had been perceived as “running well” were finally being seen in a different light. (personal communication, July 15, 2012)

Eddie and I were accustomed to our classroom being critiqued as messy, disorganized, and chaotic by those who were not familiar, misunderstood or disagreed with our pedagogy. However, “misinformed critics misdefining what we do” (Little & Ellison, 2015, p. 28) has been an ongoing challenge for progressively minded educators.
Admittedly, the more agency we allowed our students, the less our classroom resembled a traditional learning space. I contended that, although our organic approach might have appeared unstructured, it actually necessitated a more complex structure. In fact, “engaging in messiness...does not mean the teacher neglects planning. Instead, it requires more thought than lessons ‘covering’ disciplinary material” (Marshall & Donahue, 2014, p. 9).

Other nontraditional schools have made similar observations. In The Absorbent Mind, Maria Montessori (1995) states “when we say that the children are free in our schools, organization is necessary, an organization more detailed than in other schools” (p. 363). The northern Italian Reggio Emilia approach to early childhood education regards the classroom space as “a third teacher” that brings with it a host of variables teachers must consider (Strong-Wilson & Ellis, 2007, p. 41). During the Open Classroom movement, which began after World War II in Britain and spread to the United States, teachers taught collaboratively and spaces were structured to foster student-directed learning (Cuban, 2004). In fact, embracing messiness has always been part of the philosophy of progressive education from since the turn of the century when Carolyn Pratt, an early pioneer in the progressive movement, exclaimed that in her classroom “nothing was fixed, nothing stayed put, not even the furniture; above all, not the children!” (Little & Ellison, 2015, p. 153).

Ours was a “counter-hegemonic classroom” where the students had the “right to direct the flow” of their learning and became “empowered democratic citizens” (Kincheloe, 2008, p. 12). The traditional American classroom structure places the “teacher in the front of the room” (Glasser, 1998, p. 6) where she “sets up her class her
way” (p. 97). Conversely, Eddie and I allowed the children to co-construct the space with us so we could “draw more deeply on children’s perspectives” (Strong-Wilson & Ellis, 2007, p. 41). It was important to us that we critically examined our classroom environment, routines, schedules, and curriculum with regularity to see how it affected our students (Wurm, 2005). This empowerment manifested itself as an unorthodox structure that for some appeared disorderly and threatening to the status quo of the school. It also manifested itself in a surge of student-initiated creativity.

Realizing this would be the final year the school would allow Eddie and I to practice our style of education together, I decided to use photographic and video data from the 2012-2013 school year for my dissertation study on the self-initiated creativity of children.

Figure 6a. Photo showing our classroom during the 2012-2013 school year. Students were allowed to affix their work to the walls and arrange the furniture as they pleased.
Figure 6b. Photo showing our classroom during the 2012-2013 school year with a view of the front of the room and the butcher-block tables.

Figure 6c. Photo showing our classroom during the 2012-2013 school year. Students were allowed to hang their creative artifacts from the ceiling.
Student Agency and Self-initiated Creativity

My focus during the 2012-2013 school year on documenting the self-initiated creative activity of children – a concept I will fully elaborate in the literature review of the following chapter – was born of my long-standing fascination with the way children organize and interact with their environments; I was curious to see what my students would do if given license to fully curate their own classroom space. I was particularly intrigued by the self-initiated creative endeavors that children engaged in within these spaces. I considered a creative artifact to be self-initiated if it was something the student created independently from a teacher-directed lesson, activity, or project.

I have found in my teaching experience that when children do not have agency, their self-initiated creative spaces are usually small and often temporary: a locker, cubby,
inside of a desk or the seat of a chair. Many times children carried their creation with them for fear of having it taken away. In these instances, the creative environment became a pencil box, pocket, or even a closed fist. The items were usually made from the detritus children acquired from classroom floors, while walking through the hallways or when they had an opportunity to surreptitiously pilfer from a supply cabinet or teacher desk. Traditional teaching methods suppress creativity and students have even been punished for taking part in creative activity that was not sanctioned by the classroom teacher (Beghetto & Kaufman, 2010).

Over the years I have witnessed many instances of teachers confiscating the creative artifacts of children and treating these objects as contraband. Students who chose to create surreptitiously during teacher-directed instruction were at the greatest risk. If caught, they were in danger of not only having their creative artifact taken away, but also of suffering punitive consequences such as a public scolding and loss of recess time. As an artist, educator, and researcher I was interested in examining these creations and did my best to put students at ease so they would feel free to engage in their self-initiated creative activities. As an artist I was interested in the commonalities of these artifacts with the work of adult artists and how they might parallel the discourse of contemporary art. On the other hand, as an educator and researcher, I was interested in seeing if these creative artifacts might help us understand the way children go about learning.

In 2009, I first began documenting my students’ self-initiated creations after purchasing my first iPhone. The iPhone was more convenient and less obtrusive than using film or digital cameras. Carrying it in my pocket made it readily available and it contained more storage space than my digital camera. The earliest photographs show
artifacts made using tissues, rubber bands, wire, tape, string, sticks, scrap paper, and cardboard. According to recent literature on creativity in education, “creating environments in which students have autonomy also boosts creativity” (Fairweather & Cramond, 2010, p. 116). This was my experience as well. As student autonomy increased, so did the occurrences of self-initiated creativity in my classroom. Each year I allowed my students more agency, which in turn led to an increased production in their self-initiated creative artifacts and additional opportunities for me to document their work. By the Fall of 2012, I was documenting my students’ creative artifacts on a daily basis then at night loading them onto an external hard drive where they were organized in digital files according to artistic medium and the date of creation.

As our students became active agents in their learning, they began to develop what Freire termed a ‘critical consciousness’ (2005) empowering them with a voice. This ‘critical consciousness’ enabled our students to influence curriculum and permitted us as teachers to support individualized student interests and learning styles. According to Shore, democratic classrooms draw on “the students’ interests…by basing the curriculum

Figure 7. Photo samples of my students’ self-initiated creations made during the 2009-2010 school year. Clockwise from top left: Throwing Weapon (stick, string, and tape); Tissue Ball (tissues and rubber bands); Paper Creature (string, wire, paper, and markers); Paper Box (copy paper, cardboard, tape, and string).
in their language and understandings” (1992, p. 143). However, contemporary schooling operates according to an established set of norms (Davis, 1995). Contemporary schooling practices incorporate structures and standardizations that actively repress student agency as they attempt to comply with federally mandated curricular outcomes and expectations (Rolling, 2009).

Our private school did not have to comply with federal mandates to the extent that public schools did, but these mandates and expectations had an effect in other ways. According to *U.S. News & World Report*, four of our local public schools ranked within the top 100 high schools in New York State (Morse, 2015). Having several districts in our area that boasted top performing schools put pressure on our school to justify its relatively high tuition costs. Many of our parents compared what was happening in our classrooms with their local public schools. Families would pull their children if they “didn’t feel like they were getting anything better or different from what [the public schools] could offer” (Rachel, personal communication, July 21, 2015). Parents liked the prestige of their children attending a private school that had smaller class sizes, and as stated in the letter from the headmaster included in the school’s admission packet, expected their children to be encouraged to “seek their own solutions—to think creatively in all aspects of life.”

Yet at the same time, parents wanted to be sure their children would be able to favorably compete with their age group peers in public school. The more traditionally minded parents expected our school to offer “a ‘rigorous’ academic experience” (Rachel, personal communication, July 21, 2015). It was this group of parents who were upset that our “class did not look like students were learning the traditional basics in a way that
parents understood them to be best ‘acquired’ and ‘retained’ (Charlotte, personal communication, July 19, 2015).

**Student Agency and Arts-Based Inquiry**

In my classroom I have noticed that offering choice and autonomy often produces children who use arts-based approaches to inquiry and learning. According to Thomas Barone and Elliot Eisner, arts based research uses “the forms of thinking and forms of representation that the arts provide as means through which the world can be better understood” (2012, p. xi). In *Arts-Based Research in Education*, Melisa Cahnmann-Taylor writes that the arts offer a way to make “thinking clearer, fresher, and more public” (2008, p. 13). James Haywood Rolling Jr. proposes that, “the arts lend themselves to blended spaces of naturalistic inquiry” (2013, p. 3, italics in original). In *Arts-Centered Learning Across the Curriculum*, Julia Marshall and David Donahue (2014) define arts-centered integrated learning as “applying the thinking strategies of art to knowledge in other disciplines” (p. 11).

However, I was less interested in using art as a vehicle to support the learning of academic subject areas than I was in the way my students gravitated toward practices similar to those of contemporary artists when allowed greater agency in the classroom. Contemporary artists may do research in language arts, history, mathematics, science, and the social sciences (Marshall & Donahue, 2014) as part of their working process, but these subject areas are only employed when necessitated by the work of art. Additionally, contemporary art studios are no longer romanticized ateliers but divergent sites of possibility “analogous to bricolage, ad hoc and fractured” (Jacob & Grabner, 2010, p. 4).

There were those in our school who expected a classroom to look and function in
familiar ways. Charlotte remembers parents, faculty, and administrators who wanted to see a “teacher at the board and students learning the rules in a teacher directed, organized fashion” (personal communication, July 19, 2015). Nonetheless, there were always others such as Nicole the administrative assistant, who were more accepting of our methods:

I hated interrupting your class to give you and Eddie handouts for backpacks, but you never made me feel bad about that. You were always welcoming and I appreciated that! I remember seeing the rock wall, stage, snow shoes, kids working together, collaborating on projects, conversing with you and Eddie about math problems, science experiments, etc. and thought to myself how innovative the classroom was! It was something I hadn’t seen before. It was new, fresh, out of box and the kids really seemed to dig it. (personal communication, July 22, 2015).

Our environment led to spontaneous creative learning experiences. In a child-centered classroom, an organic and malleable framework must be in place for teachers to properly engage with student interest as they arose. Teachers working like Eddie and myself must be able to adapt and adjust to the continual ebb and flow of the energy level within the classroom that is an evolving site for arts-based inquiry and reflection.

**Chapter Overview**

In Chapter Two, I provide a review of the literature as it pertains to my study. First, I discuss the term *creativity* by highlighting the dispositions and features associated with creativity in research literature. Then, I use these dispositions and features to generate a definition of self-initiated creativity for this study. Next, I discuss the role of agency in traditional, progressive, and contemporary education and describe self-initiated creativity from a variety of perspectives. Finally, I explore the relationship between student agency and self-initiated creativity in the elementary classroom.
In Chapter Three, I describe the research methodology used to conduct this study and the procedures used to gather the data. I first discuss how my multiple roles as a teacher, researcher, and artist impacted the study and then give an overview of action research and my rationale for using it to conduct this investigation. Next, I describe the research site and explain how the data was collected, organized, and coded.

In Chapter Four, I present my findings by offering detailed descriptions and photographs of the data set. The data is presented within the context of the classroom environment at the research site and includes the voices of my students along with accounts of their creative interactions.

In Chapter Five, I analyze the data set and explain how thirteen emergent themes eventually yielded eight fundamental attributes that characterize the self-initiated creative learning of children.

In Chapter Six, I describe and discuss six essential pedagogical principles that were in place allowing the attributes of self-initiated creative learning to occur in my elementary classroom.

In Chapter Seven, I conclude by summarizing the chapters and discussing the implications of a pedagogical practice that allows student agency and encourages creative learning explorations.
CHAPTER 2 - Literature Review

Dispositions and Features Associated with Creativity

According to Moran and John-Steiner (2003) contemporary research on creativity has focused on the “cognitive and personality traits associated with creativity” and “now it is time to study how those traits come to be, how they develop in specific contexts…to capture creativity in the making” (p. 84). That is what this study set out to do: to observe, document, and study children in the creative act and better understand what these acts tell us about the ways in which children go about the learning process and navigating a classroom space.

This dissertation examines the self-initiated creativity of children within the context of an elementary school classroom setting and the action research of a professional teacher. The first subchapter of this literature review is a discussion on the term creativity. Definitions of creativity are difficult to pin down because they change depending on different contexts and cultures (Kaufman & Sternberg, 2007; Starko, 2010; Tillander, 2011). Pitri observed that definitions of creativity “vary and focus on the person, the process itself, or its product or outcome” (2013, p. 42). This section will assist in the development of a working definition of creativity for this study in its focus on the self-initiated artifacts children make in the context of an elementary classroom setting.

A review of the literature yielded six main perspectives associated with creativity:

- Creativity does not have a universally shared definition.
- Creativity is part of the human experience.
- Creativity is organically structured, contextually dependent, and socially situated.
- Creativity requires supportive environments.
Creativity involves risk-taking, personal agency, and a departure from the status quo.

Creativity incorporates ideas, actions, and objects valued for their novelty and usefulness toward innovation.

**Creativity does not have a universally shared definition.** There has been much written about creativity but scholars have not yet developed a comprehensive and uniform definition (Baldwin, 2010; Gardner, 1993; Gardner, 2011; Hanson & Herz, 2011; Milbrandt & Milbrandt, 2011; Skiba, Tan, Sternberg, & Grigorenko, 2010; Sternberg & Lubart, 1999; Starko, 2010; Weisberg, 2015). Some researchers are concerned that the lack of a shared definition hinders the growth of creativity research in educational contexts (Milbrandt & Milbrandt, 2011; Skiba, Tan, Sternberg, & Grigorenko, 2010; Zimmerman, 2009). In the literature, the use of the term creativity encompasses a wide range of “situations, individuals, and products” (Gardner, 2011, p. 19) as well as practices, connotations, and implications (Csikszentmihalyi, 1997). Over the past six decades a variety of definitions of the term creativity have been developed.

In 1950, psychologist Joy P. Guilford “issued a call for psychologists to address creativity as a topic in its own right” (Weisberg, 2015, p. 111). Guilford was interested in determining an individual’s potential for creativity by measuring their ability to think divergently (Gardner, 2011). Three years later, Morris Stein proposed what has since become a popular definition of creativity (Runco & Jaeger, 2012). Stein defined creativity as the production of something that is considered new, useful, and “resonates with the needs or experiences of a group at some point in time” (Stein, 1953, p. 322) In 1969, Frank Barron used the criteria “originality and meaningfulness” (Richards, 2010, p.
Later, Bruner added “the element of surprise” (Nickerson, 1999, p. 393) to the criterion of “novelty and value” (Weisberg, 2015, p. 111).

Mihaly Csikszentmihalyi called attention to Stein’s dilemma of examining creativity through subjective and objective lenses. Although Csikszentmihalyi preferred to study creativity subjectively, he felt it was not feasible to do so without adopting criterion that included “a social or cultural evaluation” (Weisberg, 2015, p. 111). Therefore, his systems view of creativity developed in the late 1980’s emphasized that an individual’s work must become, or eventually become, “positively evaluated by the field” (Weisberg, 2015, p. 112) or domain in which they operate. Csikszentmihalyi defined the field as “the group of gatekeepers who are entitled to select a novel idea or product for consideration” and the domain as “the symbolic system of rules and procedures that define permissible action within its boundaries” (Csikszentmihalyi, 2015, p. 68). Csikszentmihalyi also chose to shift his explication on creativity from the standard, “What is creativity?” to “Where is creativity?” (Gardner, 2011, p. 37), determining that creativity exists in “the dynamic interaction among three nodes” (Gardner, 1993, p. 35) of the individual, the field, and the domain (Csikszentmihalyi, 1997). Csikszentmihalyi recognized that this type of definition “goes against a powerful axiom of the times” (1997, p. 403) by situating creativity outside the individual and within the social collective.

In 1993, Howard Gardner made a distinction between what he called “big C creativity” and “little C creativity” (Gardner, 1993, p. 29). According to Gardner, big C creativity encompasses exceptional creative breakthroughs that have a large-scale, social impact such as those by Picasso and Einstein whereas little C creativity happens more frequently and is the “sort which all of us evince in our daily lives” (Gardner, 1993, p.

Beghetto & Kaufman added “mini-c” to expand the nomenclature. They defined mini-c creativity as “the novel and personally meaningful interpretation of experiences, actions, and events” (2007, p. 73). According to Beghetto and Kaufman (2007), mini-c creativity differs from other forms of creativity in that it is solely up to the individual to determine novelty and meaningfulness, instead of depending on interpersonal, societal, or historical assessments of creativity. Mini-c creativity recognizes the connection between learning and creativity where learning is not a passive experience but an active “interpretive and transformative process” (Beghetto and Kaufman, 2007, p. 73).

Similar to the concept of big and little C creativity, Margaret Boden, designated psychological creativity or P-creativity, as the creativity possessed by a person who regularly produces creative ideas. Boden identified historical or H-creativity as something that takes place when a person is recognized as creative by the greater community. According to Boden, P-creativity happens when a person comes up with an idea that they find new, surprising, and valuable even if it already exists. Whereas ideas that are considered H-creative, “means that (so far as we know) no one else has had it before” (Boden, 1991, p. 2) or as Weisberg (2015) put it, creative on an “intrapersonal level” (p. 113).
Educator Enid Zimmerman found it problematic that any definition of creativity would be premised on “changing a domain and ways of thinking within that domain” (2009, p. 387), because this viewpoint excludes recognizing children as creative agents. Nickerson (1999) also suggested that definitions of creativity should not be dependent upon a creative act being widely recognized as such or equated with prominent accomplishments (Runco, 2014). Some believe creativity can be defined from both group and individual perspectives (Sawyer, 2003), while others believe the type of thinking that occurs during big C creativity and everyday creativity is essentially the same (Kaufman & Sternberg, 2007).

Clearly, it has been difficult for researchers over recent decades to define and derive one criteria delineating a single overarching definition of creativity (Baldwin, 2010; Milbrandt & Milbrandt, 2011; Skiba, Tan, Sternberg, & Grigorenko, 2010; Sternberg & Lubart, 1999); this necessitates the development of a definition of creativity designed specifically for this particular study.

Creativity is part of the human experience. The literature suggests creativity is integral to the human experience (Csikszentmihalyi, 1997; Gnezda, 2011). Researchers believe that, although people engage in varying degrees of creative interactions and production, everyone has the capability of creative thought (Amabile, 2001; Feldman, 1994; Florida, 2012; Gnezda, 2011; Kaufman & Sternberg, 2007; Moran & John-Steiner, 2003; Nickerson, 2006; Rubin, 1968; Runco, 2014). Some go so far as to suggest that creativity is a biological necessity (Dissanayake, 1988; Freedman, 2010), part of the evolutionary process (Csikszentmihalyi, 1997; Dissanayake, 2003), and makes Homo
sapiens unique from the rest of the animal kingdom (Csikszentmihalyi, 1997; Florida, 2012).

Most researchers make a distinction between “everyday creativity” and “world-changing creativity” that “requires extensive knowledge and mastery within a field” (Perkins & Carter, 2011, p. 20). World-changing creativity offers transformative contributions (Moran & John-Steiner, 2003) while everyday creativity provides day-to-day pleasurable experiences (Csikszentmihalyi, 1997; Freedman, 2010).

**Creativity is organically structured, contextually dependent, and socially situated.** The creative process is not a linear but a “complex construct” (Starko, 2010, p. 289) assuming myriad approaches involving adjustments, alterations, modifications, and revisions (Bryant, 2010; Csikszentmihalyi, 1997; Hanson & Herz, 2011; Jaquith, 2011; Marshall, 2010; Moran & John-Steiner, 2003; Piirto, 2010; Richards, 2010). In the literature, creativity is described as experiential, open-ended, multidirectional, multidimensional, complex, integrated, and interconnected (Csikszentmihalyi, 1997; Florida, 2012; Gneza, 2011; Hanson & Herz, 2011; Moran & John-Steiner, 2003; Starko, 2010; Zimmerman, 2009).

In addition to the attributes listed, creativity has a significant social construct and function (Florida, 2012; Freedman, 2010; Henderson, 2013; Milbrandt, M, & Milbrandt, 2011; Moran & John-Steiner, 2003; Rolling, 2013b; Tillander, 2011; Zimmerman, 2009). Florida (2012) considers various forms of creativity to be mutually beneficial, as they contribute inspiration, stimulation, and encouragement to the collective. According to Csikszentmihalyi (1997), creativity is a “systemic rather than an individual phenomenon”
because it happens at the intersection of a person’s thoughts and the sociocultural context in which they exist.

In classrooms, creative problem solving is a recursive, multitudinous process that “allows for diverse interpretations of situations and multiple uses of materials” (Pitri, 2013, p. 44). Creative engagement helps children adapt to new situations, work collaboratively and generate novel ideas (Csikszentmihalyi, 1997; Freedman, 2010; Pitri, 2013). Creativity encourages children to offer feedback and critically reflect on their own learning (Bryant, 2010; Milbrandt & Milbrandt, 2011).

In organically structured learning environments students “revisit an idea or process repeatedly to explore deeper and develop mastery” (Jaquith, 2011, p. 18) and “challenge themselves to take risks” (p. 15). Teachers, who allow self-governance and encourage ingenuity in their classrooms, generate creative behaviors in their students (Starko, 2010). Creative thinking is a central element in contextualized teaching and learning approaches where children are able to better retain information that is presented in relevant and meaningful ways (Starko, 2010).

However, standardized and regulated educational systems suppress opportunities for choice, intuitiveness, flexibility, contemplation, and divergent thinking integral to the creative process (Gude, 2010; Jaquith, 2011; Milbrandt & Milbrandt, 2011; Nickerson, 2010; Nordlund, 2013; Starko, 2010). Teachers, therefore, have the onerous task of generating creative experiences within environments that are resistant to holistic explorations and preference linear and formulaic approaches to education (Gude, 2010; Hanson & Herz, 2011).
Creativity requires supportive environments. Supportive environments are necessary in order for creativity to flourish (Bryant, 2010; Gnezda, 2011; Kaufman & Sternberg, 2007; Nordlund, 2013; Pitri, 2013; Shin, 2010; Starko, 2010). Environments that value individual input (Florida, 2012; Gnezda, 2011), provide safe spaces for exploration and experimentation (Gude, 2010; Nickerson, 1999; Richards, 2010), and allow choice and autonomy (Csikszentmihalyi, 1997; Gude, 2010; Jaquith, 2011; Pitri, 2013).

Starko (2010) claimed, “the procedures that are supportive of creativity also are supportive of learning” (p. 225). According to Milbrandt and Milbrandt (2011), “the most essential quality of self-expression and the construction of meaning is that students view their processes and/or products as a meaningful representation of their personal experiences” (p. 11). When students take part in learning of their own choosing, it is relevant to them, and leads to in-depth understandings (Starko, 2010).

Creativity involves risk-taking, personal agency, and a departure from the status quo. It is well documented in the literature that risk-taking is a fundamental aspect of the creative process (Csikszentmihalyi, 1997; Florida, 2012; Hanson & Herz, 2011; Kaufman, J., & Sternberg, 2007; Nickerson, 2010; Pitri, 2013; Piirto, 2010; Richards, 2010; Shin, 2010; Starko, 2013). Other traits commonly associated with the creative process include a strong sense of personal agency and a departure from the status quo (Bryant, 2010; Csikszentmihalyi, 1997; Florida, 2012; Gardner, 2011; Gude, 2010; Hanson & Herz, 2011; Moran, & John-Steiner, 2003; Nakamura, 2003; Nickerson, 1999; Nickerson, 2010; Pitri, 2013; Richards, 2010; Starko, 2010; Tillander, 2011; Zimmerman, 2009). Creative work “disrupts existing patterns of thought and life” (Florida, 2012, p.
19) through a practice of experimentation and unconventional methodologies (Shin, 2010). The idiosyncrasy of creative practices also provides a way for individuals to enact a sense of personal agency and empowerment (Milbrandt & Milbrandt, 2011).

In the classroom, engaging in creative modes of learning provides students a way to question assumptions, take chances, and subsequently, become more self-assured (Hanson & Herz, 2011). Students involved in creative problem solving think divergently and often generate solutions that go “beyond assigned tasks” (Pitri, 2013, p. 44) and “conventional ways of knowing” (Zimmerman, 2009, p. 386). However, communities and institutions reward those who propagate its routines and traditions (Nakamura, 2003) whereas divergent thinking that runs counter to conventional practices and expectations is “perceived as deviant by the majority” (Csikszentmihalyi, 1997, p. 74). Therefore, students who exhibit creative behaviors that question conventional thinking and challenge routine practices run the risk of being regarded as uncooperative, defiant, and difficult (Nickerson, 1999; Richards, 2010; Skiba, Tan, Sternberg, & Grigorenko, 2010; Starko, 2010; Zimmerman, 2009).

Creativity includes ideas, actions, and objects valued for their novelty and usefulness toward innovation. Contemporary understandings of creativity make us aware of how ideas, actions, and objects valued by individuals for their novelty and usefulness in the effort to innovate anew (Csikszentmihalyi, 1997; Florida, 2012; Freedman, 2010; Gardner, 2011; Gnezda, 2011; Gude, 2010; Hanson & Herz, 2011; Kaufman & Sternberg, 2007; Moran & John-Steiner, 2003; Nickerson, 1999; Pitri, 2013; Richards, 2012; Runco & Jaeger, 2012; Shin, 2010; Tillander, 2011; Weisberg, 2015; Zimmerman, 2009). Newness may come in the form of innovation, transformation or
fresh insights (Csikszentmihalyi, 1997; Florida, 2012). New attempts to innovate can result in novel theories, practical solutions to problems or aesthetically pleasing works of art (Florida, 2012).

Some scholars conceptualize creativity as the introduction of a product or idea accepted as revolutionary by a domain because it “transforms existing industries” (Florida, 2012, p. 19) or “changes a field of endeavor in a significant way” (Baldwin, 2010, p. 75) leaving “a trace in the cultural matrix” (Csikszentmihalyi, 1997, p. 27). According to Gardner (2011), “nothing is, or is not, creative in and of itself. Creativity is inherently a communal or cultural judgment” (p. 36).

Other scholars feel differently. They consider classrooms and individual experiences as significant domains (Milbrandt & Milbrandt, 2011; Perkins & Carter, 2011; Zimmerman, 2009). According to Jaquith (2011), “in education, ideas that are novel to a learner can be considered creative” (p. 14). Weisberg (2015) suggested that creativity might occur “on an intrapersonal level” or “within the frame of a person’s life” (p. 113). Csikszentmihalyi (2003) does not agree. He believes schools are not intended to enhance creativity, but instead are “designed to transmit the domain, the results of past creative achievements that have become part of the culture” (p. 220).

Creativity in the Classroom

At the turn of the 20th century, educators began to think of children as creative agents (Freedman, 2010). Children have qualities, such as curiosity, that adults associate with manifestations of creativity (Csikszentmihalyi, 2003; Feldman, 2003). However, some scholars make a distinction between adult creativity and the behaviors of children they feel are misconstrued as creative (Csikszentmihalyi, 2003; Nakamura, 2003). Others
“distinguish among various forms of creative activity” (Feldman, 2003, p. 219) and view creative actions in children as part of a developmental continuum (Moran, 2003).

Some recognize children as having creative potential or as creative agents in their own right (Parkhurst, 1999; Pitri, 2013; Runco, 2014). Jaquith (2011) considers students creative when they generate new ideas or make meaningful connections in the classroom. Although “education has historically ignored or even undermined creative thinking” (Skiba, Tan, Sternberg, & Grigorenko, 2010, p. 258) some researchers insist that creativity and learning are interconnected (Beghetto & Kaufman, 2007) and that creative thinking is, in fact, a “necessity in the classroom” (Skiba, Tan, Sternberg, & Grigorenko, 2010, p. 253).

Nevertheless, the attributes associated with nurturing creativity in the classroom contradict traditional schooling customs and protocols. For example, creativity requires time for contemplation, experimentation, and playful exploration but fixed schedules and predetermined curriculums found in schools prevent these practices (Baldwin, 2010; Csikszentmihalyi, 1997; Gnezda, 2011; Gude, 2010; Jaquith, 2011; Marshall, 2010; Moran & John-Steiner, 2003; Nickerson, 1999; Nordlund, 2013; Pitri, 2013; Richards, 2010; Shin, 2010). Creativity is an intrinsically motivated process requiring commitment and perseverance (Csikszentmihalyi, 1997; Feldman, 2003; Florida, 2012; Freedman, 2010; Gardner, 2011; Jaquith, 2011; Pitri, 2013; Shin, 2010). But “creative individuals almost always persist and struggle over self-selected tasks, not over those assigned by others” (Starko, 2010, p. 96), causing the intrinsic motivation for self-selected pursuits to run against the grain of rote classroom learning exercises that follow teacher-imposed rather than student-directed approaches (Gnezda, 2011; Gude, 2010).
Many scholars agree that creative thinking and doing provides ways of knowing, making meaning, and understanding the world (Freedman, 2010; Gnezda, 2011; Henderson, 2013; Marshall, 2010; Nordlund, 2013; Peralta, 2010; Rolling, 2013b). The argument can be made then, that children should be given time to engage in self-directed, intrinsically motivated, creative activities even in classroom environments (Freedman, 2010; Gnezda, 2011; Hanson & Herz, 2011).

**Creativity as Defined in this Study**

Although it would seem daunting to distill a common definition of creativity from the preceding compendium of research and diverse perspectives on creativity, it is also important to acknowledge the complexity of multiple definitions and theories in constructing a working definition to facilitate the remainder of this study. The working definition of creativity for this study is necessarily composed of attributes drawn from the various existing definitions discussed in this review of the literature, particularly those deemed relevant to the general elementary classroom environment in which this study took place.

First, the children in this study are considered to be creative agents since the data collected was in the form of student-produced artifacts and actions. Second, it is reasonable to assume that the children in this study regarded their artifacts and actions meaningful and valuable because of the self-initiated and voluntary nature of their engagement in the production of these artifacts and actions. Third, the classroom is considered a significant domain and the students who were members of that classroom, the field, reflecting a microcosm of Csikszentmihalyi’s (1997) systemic model of creative activity consisting of the interaction between the individual, the domain, and the field.
Therefore, for the purpose of this study, creativity is defined as the meaning-making process and the material results of the self-initiated creative actions of children within a general elementary classroom setting. These artifacts produced from these self-initiated actions include: two-dimensional renderings, three-dimensional objects, interior design and organization, and live or recorded activities such as music, dance, and movie-making.

**Agency in Education**

Agency plays an important role in the dynamics of a classroom environment. Having choice in and ownership of learning experiences fosters a greater sense of self, personal investment, and connectedness for students (Killeen, Evans, & Danko, 2003). However, the customs and conventions of most schooling environments are influenced by an emphasis on testing and highly regulated standardized objectives (Freedman, 2007). These practices result in the “subordination of students” (Winograd, 2002, p. 347) as a “culturally and socially dominated group” (Montandon & Osiek, 1998, p. 248). In response, many children view their time in school as a burdensome task rather than a fulfilling learning experience (Windograd, 2002). Yet, the amount of agency students are allowed has an effect on the level of their creative engagement (Andrews, 2005).

There is provocative literature concerning agency in elementary classrooms that examines the effects of choice in creative motivation (Amabile & Gitomer, 1984; Andrews, 2005). The literature demonstrates that opportunities for students to engage in self-directed learning are necessary for establishing classrooms conducive to creative modes of thinking (de Souza Fleith, 2000; Lund, 1994).

**Agency in traditional education.** In traditional classrooms, the teacher controls the learning and directs the action through a variety of practices, customs, and procedures
(Cuban, 1993). Of course, power structures between teachers and their students are “negotiated and constructed in the context of the experience” (Winograd, 2002, p. 353). However, traditional schooling and classroom disciplinary structures are designed to privilege teacher prerogative over student agency and clearly communicate the “teachers’ expectations to students” (Poole & Evertson, 2013, p. 189). Various methodologies and practices are established to govern the classroom discourse, physical setting, and movement of bodies (Kear, 2007). For example, the power of the teacher is demonstrated through common classroom management techniques and practices such as hand raising, predetermined seating arrangements, and transition management (Emmer & Sabornie, 2013; Sahlström, 2002; Wheldall & Bradd, 2013).

Traditional classroom discourses are led, organized, and moderated by the teacher (Cuban, 1993; Elmore, 1996). To participate in class discussions, students are required to raise their hands to get the attention of the teacher (Madsen, Becker, & Thomas, 1968). This method ensures that the teacher is “the main source of information” (Elmore, 1996, p. 2) and controls the conversation by choosing which students will be allowed to add to the dialogue and in what sequence (Beghetto, 2009). Additionally, the teacher has the opportunity to speak during every alternate turn within the sequence of the conversation while the students must wait to be called upon relegating them to a passive role (Narayan, Heward, Gardner, Courson, & Omness, 1990; Sahlström, 2002). Once allowed to speak, the students mainly direct their communiqués to the teacher. This unidirectional approach creates a dialogue between the teacher and the students as a “collective speaking partner” (Sahlström, 2002, p. 48) instead of each student acting as an individual agent. Therefore, the practice of hand-raising is used to monitor class participation and manage student
behavior as much as it is to engage students in learning (Reglin, Akpo-Sanni, & Losike-Sedimo, 2012; Sahlström, 2002).

Students are also managed and their behaviors controlled by prearranged seating arrangements. Requiring students to sit in assigned seats organized in rows is “one of the easiest, most cost-effective classroom management tactics available to teachers” (Bicard, Bicard, Baylot-Casey, & Ervin, 2012, p. 407). In traditional settings, “the teacher situates students in such a way as to minimize communication between them and to allow surveillance of all students” (Lefstein, 2012, p. 1629). Assigned seating, and row seating in particular, is an effective form of teacher control that results in the least amount of student autonomy (Simmons, Carpenter, Crenshaw, & Hinton, 2015).

Transition times are moments that occur in general classroom settings between activities. A transition occurs when students segue from one lesson to another or from an activity in the classroom to an activity in another part of the school. In traditional school settings, “transitions are unique in that there is no focal content or tight structure to help hold order in place” (Emmer & Sabornie, 2013, p. 390); transitions are considered to be a “catalyst for student misbehavior” (Pool & Everston, 2013, p. 189). Therefore, teachers employ classroom management strategies to ensure that students transition in an orderly manner, whether it be within the immediate area of their seat or when they are required to exit the classroom, navigate the hallways, or enter another room. Student compliance during transitions is so necessary to successful classroom management that transition procedures include a complex system of visual cues, auditory signals, and verbal reminders that are taught and then frequently practiced throughout the school year (Marzano, Marzano, & Pickering 2003; Pool & Everston, 2013). These methods are said
to help students “become self-regulating” (Pool & Everston, 2013, p. 189) and it has been argued that the “fundamental task of teachers is to influence or control students to behave in a manner that will lead to their learning” (Winograd, 2002, p. 346). However, teachers are also subjected to pressures from state and federal mandates that dictate curriculum and content through a framework of imposed standards and assessments (Sparapani, Perez, Gould, Hillman, & Clark, 2014). These hierarchical directives exacerbate a teacher’s need to maintain the tightest possible control over their classroom, further limiting opportunities for the creative agency of students (Beghetto, 2009; Freedman, 2007; Freeman, Mathison, & Wilcox, 2012).

These examples show how the hierarchical construct of traditional schooling environments with “tightly governed curricula and regulated pedagogies” (Roberts, 2008, p. 20) undermine student agency and diminish the space for student creativity (Beghetto, 2009).

**Agency in progressive education.** Many scholars trace the practices and ideologies of progressive education back to 1762 with the publication of philosopher Jean-Jacques Rousseau’s *Emile*, followed soon thereafter by the learner-centered ideas and practices put forth by Johann Pestalozzi and later Friedrich Froebel in the early 19th century (Cuban, 1993; Henson, 2003; Howlett, 2013; Montandon & Osiek, 1998; Reese, 2001; Vanada, 2010; Worley, 2012). Rousseau denounced institutionalized learning methodologies favoring instead a “natural education” (Masters, 2015, p. 6) free from societal demands, based on a child’s interests and self-initiated discovery (Little & Ellison, 2002; Reese, 2001). Rousseau’s writings inspired subsequent proponents of child-centered educational philosophies and practices although some considered his
notions an overly romanticized and sentimental interpretation of childhood (Bresler, 1999; Campbell, 2011; Engel, 1995; Leeds, 1989; Louis, 2005; Simpson, 1996).

Even so, most of America’s early public schools were influenced by Prussia’s educational system, “in which schools both looked and operated like factories, with strict routines marked off by the ringing of bells” (Little & Ellison, 2002, p. 35). Students sat at desks in rows bolted to the floor, learned by rote in crowded classrooms, and were subjected to corporeal punishment (Little & Ellison, 2002). It was in the context of this factory school model of routine, repetition, and uniformity that the progressive education movement grew (Cuban, 1993; Gill & Schlossman, 1996; Kincheloe, Slattery, & Steinberg, 2000; Waks, 2013). The contemporary conception of progressive education emerged at the close of the nineteenth century. In the late 1800s Francis W. Parker, as the superintendent of schools in Quincy Massachusetts and later as the principal of Cook County Normal School in Chicago, promoted classrooms that encouraged creative spontaneity and self-expression (Little & Ellison, 2002; Sidelnick, 1995). In fact, John Dewey referred to Parker as the father of progressive education (Biesta & Miedema, 1996; Cuban, 1993).

By the beginning of the twentieth century, ideas about progressive education were centered on the theories of John Dewey who promoted child-centered pedagogies within democratic learning environments (Burke, 2013; Elmore, 1996; Howlett, 2013; Kincheloe, Slattery, & Steinberg, 2000; Raywid, 1976; Stack & Wamba, 2011; Waterson, 2013; Wolk, 2008; Worley, 2012). Dewey believed that schools should be connected to their “surrounding natural and social environments” (Waks, 2013, p. 75). Dewey empowered children as active agents in their own learning by basing curriculum on their
interests and lived experiences (Kincheloe, 2008; Lim, 2004; Marshall & Donahue, 2014; Raywid, 1976; Roberts, 2008; Wade, 1995). Additionally, Dewey recognized creativity as an important part of the learning process (Boone, 2007; Hanson, 2006; Starko, 2010; Sternberg, 2015).

Other progressive educators soon followed Dewey by incorporating progressive educational practices into their classroom environments. Dewey’s contemporary, Marie Montessori, introduced her method of teaching young children based on their psychological, physical, and cognitive development (Howlett, 2013). Her implementation of sequenced lessons and activities included aspects of student choice but within a framework that some progressive educators found too limiting (Howlett, 2013; Mayer 2005).

A few years later Carolyn Pratt founded the City and Country School in Greenwich Village where she promoted student-centered approaches and encouraged free play and discovery-based learning (Christensen, Kohler & Aldridge, 2012; Little & Ellison, 2002; Townsend & Ryan, 2012). During the same time period Margaret Naumburg advocated for creative self-expression and is best remembered for laying the groundwork for art therapy (Mayer, 2005). In 1913, Naumburg studied with Marie Montessori but considered the Montessori method too restrictive. Instead, Naumburg founded the Walden School in 1914 emphasizing a philosophy of free exploration and creative expression (Hinitz, 2013). Both Naumburg and Dewey recognized the therapeutic aspects of art and made creativity a central part of the curriculum. However, Dewey emphasized art and creativity “more as an aspect of community experience and Naumburg, as an outlet for repressed feelings of the individual” (Engel, 1995, p. 10).
During the same time period, philosopher Rudolf Steiner opened his Waldorf School in Stuttgart Germany. Like Montessori, Steiner concerned himself with the developmental stages of children but with a focus on the child’s creative and imaginative capabilities (Edwards, 2002; Howlett, 2013; Nordlund, 2013). He wanted his students to be “self-reliant thinkers” who retained a “sense of wonder” about the world (p. 15). Steiner’s Waldorf School took a holistic approach to develop the spiritual as well as intellectual qualities of children (Edwards, 2002; Howlett, 2013). Meanwhile in England, A. S. Neil founded an independent boarding school he called the Summerhill School. Some considered Summerhill an extreme form of democratic learning because of the level of governance the students had, such as the “freedom to decide if they want to attend class or not” (Little & Ellison, 2002, p. 154). Others viewed it as the incarnation of an idealized democratic learning environment where children and adults were considered equal (Howlett, 2013).

Following the Second World War the Reggio Emilia school, named after the city in northern Italy, was established for preschool and primary age children. The Reggio Emilia approach enacted democratically based learning and student agency in a variety of forms. Teachers and students were co-constructors of the curriculum and children were encouraged to follow lines of inquiry that were of interest to them (Pitri, 2003; Tavin, 2010; Thompson, 2014; Wilson, 2005). Creativity was an important aspect of the Reggio Emilia approach and the arts were considered integral to the learning process as a way of “exploring, representing, solidifying and clarifying understandings of the world” (Thompson, 2014, p. 380).

Although there were variations in how the practitioners of the progressive
education movement enacted their respective pedagogical praxes, they each included child-centered, collaborative, and integrated pedagogies that empowered students to become critical agents in their learning (Bruce, 2013; Elmore, 1996; Howlett, 2013; Marshall, 2014a; Marshall & Donahue, 2014; Pecore & Bruce, 2013; Waks, 2013). The progressive movement attempted to change schooling from a teacher-centered to a student-centered pedagogical model that provided opportunities for children to engage in creative learning that was relevant and meaningful to them (Cuban, 1993; Elmore, 1996).

**Agency in contemporary education.** By the time of Dewey’s death in 1952 the progressive educational movement was in decline. The practitioners of the progressive education movement were criticized as having “a preoccupation with self-expression rather than learning” (Elmore, 1996, p. 10). It is widely accepted that the creative pedagogies, individual freedoms, and social justice issues of the progressive era were superseded by a pendulum swing toward increasing standardization, a reaction stemming from growing conservative values infiltrating education (Beane, 1998; Little & Ellison, 2002).

Creativity reentered the national discourse on education following the successful launching of the Soviet Sputnik satellite in 1957 (Doll, 1993; Esquivel, 1995; Glasser, 1969). A year later the United States passed the National Defense Education Act that was a “comprehensive educational reform bill to strengthen teacher practices in the areas of math and science, foreign languages, and creative arts” (Esquivel, 1995, p. 187). This movement shared some progressive educational practices such as students engaging in hands-on explorations, however, the main thrust was on mathematical and scientific content rather than creative expression (Elmore, 1996; Kincheloe, Slattery, & Steinberg,
During the 1960s and 1970s there was a brief resurgence of progressive educational ideas and practices that advocated “child-centeredness and social reform” over “deadening routines, tyrannical authority, and passive learning” (Cuban, 1993, p. 151). Integrated learning, cooperative group work, small group instruction, and flexible classroom arrangements were attempted to varying degrees. However, this new progressive era was short lived as a focus on basic skills and test scores started gaining traction in the mid-1970s (Cuban, 1993).

A national call for improved standards came in 1983 with the publication of *A Nation at Risk* by The Commission on Excellence in Education (Barrett, 2009; Elmore, 1996). The report started a chain reaction of educational initiatives that sought to attain academic rigor in core subject areas by standardizing curricula and using systems of high-stakes testing to measure student performance and assure teacher accountability (Schwarzmueller & Rinaldo). Then in 2001, President George W. Bush signed the No Child Left Behind (NCLB) Act empowering the “federal government to enact an overhaul of the educational system by constructing policies to revamp curriculum, instruction, assessment, and teaching” (Fletcher, 2006, p. 158). NCLB ushered in a new era of public schooling that privileged standards-based accountability and high stakes testing of basic skills over creative thinking (Chapman, 2005; Pecore & Bruce, 2013). Some argue that NCLB had a “larger agenda of privatization and marketization” (Apple, 2007, p. 110) where the marketplace became the prime concern allowing a “culture of testing” (Giroux & Saltman, 2009, p. 777) to replace teachers as autonomous professionals, students as engaged critical learners, and schools as democratic venues.
According to Hennessey and Watson (2016), “across the past few decades, opportunities for the development and exercise of creativity in the U.S. schools have been continually eroded” (p. 23). They argue that nationally mandated educational initiatives such as NCLB and the more recent Common Core pressure teachers to follow numerous regulations and employ frequent testing leaving scarce opportunities or space for creative classroom practices. However, Beghetto, Kaufman, and Baer (2015) contend, “teachers can still do much to support student creativity and meaningful learning in the context of the Common Core” (p. 12). They acknowledge the difficulties but feel that creativity and the common core standards are not diametrically opposed.

The Self-Initiated Creativity of Children in the Elementary Classroom

This study examines the self-initiated creative processes and products of fourth and fifth graders over the course of the 2012-2013 school year. In this research the term self-initiated is used to denote meaningful creative artifacts or creative processes generated by a student or group of students via their own agency and on occasions and in spaces of their own choosing. The creative artifacts include two-dimensional renderings, three-dimensional objects, interior design and organization, and live or recorded performances.

The term self-initiated has been described and classified in the literature as authentic art-making; autonomous; child-initiated; everyday creativity; the first pedagogical site; first site drawing; free drawing; non-directed; nonschool drawings; play art; self-directed; self-expression; self-generated; self-guided; self-motivated; spontaneous; student-initiated; unsolicited; untutored; and voluntary (Alter-Muri & Vazzano, Anning, 2014; Anderson & Milbrandt, 1998; Anning, 2002; Atkinson, 2002;
Much of the literature also refers to the artwork of young children between the ages of 2 and 6 (Anning, 2012; Boyatzis, 2000; Craft, 1999; Golomb, 1976; Craft, 1999; Craft, McConnon, & Matthews, 2012; Golomb, 2003; Richards, 2014; Thompson, 1995; Thompson, 1999; Thompson, 2003; Thompson & Bales, 1991). Whatever the term, children produce self-initiated artworks and artifacts for their own personal pleasure and satisfaction (Anderson & Milbrandt, 1998; Bartel, 2012; Efland, 1976; Kim, 2008; Kindler & Darras, 1995; Malvern, 1995; Matthews, 2003; Pinto, Gamannossi, & Cameron, 2011; Richards, 2014; Thompson, 2007).

A review of the literature that touches upon the self-initiated creativity of children may be categorized according to three main themes: self-initiated creativity from a classroom perspective, self-initiated creativity from a developmental perspective, and self-initiated creativity from a sociocultural perspective.

**Self-initiated Creativity from a Classroom Perspective**

The self-initiated artworks of children are informed by myriad external stimuli including popular media and visual culture (Duncum, 1997; Haanstra, 2010; Mitchell & Reid-Walsh, 2002; Thompson, 1999; Wilson, 2005). Children “access multiple pictorial systems” (Kindler, 1999, p. 331) which they examine, interpret, appropriate and embed within their worlds of fantasy, imagination, and personal narrative and reveal through self-initiated artwork (Duncum, 1985b; Duncum, 1989; Duncum, 1993; Kim, 2008; Thompson, 1999; Thompson, 2003). This results in a variety of visual repertoires from which children readily draw upon during their creative engagements (Boyatzis, 2000; Haanstra, 2010; Wolf & Perry, 1988).
The research suggests that students learn from observing one another’s creative investigations (Thompson, 1999) and “teachers can learn from the students' artistic activities” and see “how these activities can inform classroom practice” (Crum, 2007, p.44). Additionally, self-initiated creative engagement is beneficial to other types learning such as helping children understand their environments, make sense of the world, and develop their self-governance competencies (Anning, 2002; Craft, 1999; Douglas, 2012; Hanes & Weisman, 2000; Richards, 2014; Ulbricht, 2005).

In order for self-initiated creativity to take place within a classroom setting, students need choice and agency in their learning (Kindler, 1999). “Autonomy empowers young artists in their creative inquiry” (Jaquith, 2011, p. 17) and studies show that empowered children become enthusiastic and productive learners (Anning, 2002; Grube, 2009). Creative learning requires curiosity, divergent thinking, and imagination, which lead to authentic, relevant, and challenging learning experiences (Craft, 1999; Douglas, 2012; Grube, 2009; Hawkins, 2002; Jaquith, 2011). However, Haanstra cautions, “moving the domain of self-initiated art into schools may jeopardize it” (2010, p. 271). Teachers have been known to misinterpret, misconstrue and trivialize the type of learning associated with the self-initiated creativity of children, which can lead to a negative influence on children’s creative output (Davis & Gardner, 1993; Kindler, 1999; Leeds, 1989; Matthews, 2003; Watts, 2010). Teachers have censored, suppressed, ignored, misunderstood, altered, and prohibited the self-initiated creative learning of children (Anning, 2002; Crum, 2007; Davis & Gardner, 1993; Grube, 2009; Gude, 2013; Haanstra, 2010; Kim, 2008; Matthews, 2003; Wilson, 2005). In many schools the arts serve in an auxiliary capacity to academic subjects (Efland, 1976; Kim, 2008) where the
arts become “a vehicle for decorating the walls, or within art ‘lessons’ as a one-off directed activity to promote specific skills and techniques” (Anning, 2002, p. 208). Additionally, schools are sites where learning is evidenced through finished products (Gude, 2013) whereas creative activities such as drawing “provide insights that cannot be gleaned through scrutiny of the final product alone” (Boyatzis, 2000, p. 7). Katherine Douglas (2012) insists that educators must look “beyond the finished product to the far more important processes, decisions, and authentic learning that take place in student-directed work” (p. 10). In a child-centered approach, the art making process is as important as the product (Hamblen, 2002; Hanes & Weisman, 2000). According to Jaquith and Hathaway (2012), “contemporary skill acquisition is process-oriented, not product-driven” (p. 3). The art experiences of children are complex and sometimes the creative product is contained within the process (Richards, 2014).

**Self-initiated creativity in traditional classrooms.** According to the literature, traditional school sanctioned artwork is different than the artwork children create for themselves (Efland, 1976; Haanstra, 2010; Hamblen, 2002; Kim, 2008; Kindler, 1999; Richards, 2014; Thompson, 2003; Wilson, 1974). Children are cognizant of these differences and aware that schools restrict opportunities for self-initiated creativity. (Davis & Gardner, 1993; Douglas, 2012; Gude, 2013; Haanstra, 2010; Jaquith, 2011; Kim, 2008; Kindler, 1999; Leeds, 1989; Matthews, 2003; Thompson, 1987; Thompson, 2003; Wilson, 1974). The creativity found in traditional schooling environments consists of routine and formulaic production of art products and displays that privilege realistic renderings (Alter-Muri & Vazzano, 2014; Anderson & Milbrandt, 1998; Anning, 2002; Douglas, 2012; Gardner, 1980; Gehrke, 1979; Hamblen, 2002; Matthews, 2003;
Thompson, 1987; Wilson, 1974). Conversely, self-initiated creativity has been described as “spontaneous” (Efland, 1976; Haanstra, 2010; Leeds, 1989; Matthews, 2003; Richards, 2014) and includes expressionistic, design-based, decorative, imaginative, and non-representational works in addition to realistic renderings (Braswell & Callanan, 2003; Davis, 1997; Golomb, 2003; Haanstra, 2010; Hanes & Weisman, 2000; Iijima, Arisaka, Minamoto, & Arai, 2001; Winner, 1989).

More recently, researchers have presented ways to include creative integration in public school classrooms. In Art-Centered Learning Across the Curriculum, Marshall and Donahue (2014) describe how the processes used by contemporary artists may be applied to students doing independent research projects in secondary classrooms. In an art-centered integrated learning model, creativity is not used for purely expressive or aesthetic purposes, but is integral to the learning process (Marshall, 2006). Students adapt what they know to new contexts where they “apply knowledge in multiple, imaginative, flexible and often unscripted ways” (Marshall, 2010, p. 364). Art-centered integrated learning reflects the conceptual working processes of contemporary artists as students make “connections to the academic disciplines through artistic interpretation” (Marshall, 2010, p. 14). Teachers develop a curriculum with projects that guide students through individualized, arts-based investigations where students employ multiple modes of creativity to construct intricate and multifaceted understandings in ways that are meaningful and relevant to them (Marshall, 2014a). According to Julia Marshall (2014b) this model goes beyond merely using art to teach academic content, instead it offers a “transdisciplinarity” (p. 106) that dissolves the boundaries between disciplines. Arts integration helps students see how “real-world problem solving is done” (Nichols &
Stephens, 2013, p. 10) and creates deeper understandings through holistic learning. It must be noted, however, that although proponents of arts-integration encourage learner autonomy, student agency takes place within curricular and classroom parameters set forth by the teacher (Marshall and Donahue, 2014).

**Self-initiated creativity in progressive classrooms.** In progressive or alternative classroom environments opportunities for self-initiated creativity vary. Reggio Emilia, Waldorf and Montessori methodologies “view children as active authors of their own development” (Edwards, 2002, p. 5) and share common principles but differ in how they put their philosophies into practice.

In Reggio Emilia inspired schools, the arts are viewed as a “hundred languages” (Saab & Stack, 2013 p. 117) through which children may express their ideas and direct their own learning (Flevares & Schiff, 2013). The Reggio Emilia approach does not consider creativity an extraordinary gift possessed by a talented few, but something all children may develop as a tool for inquiry (Malaguzzi, 1998). In *Hundred Languages of Children: The Reggio Emilia Approach* we read, “visual and graphic languages provide ways of exploring and expressing understanding of the world that are easily available to most preschoolers” (Edwards, Gandini, & Forman, 1998, p. 56). In the Reggio Emilia approach, the curriculum is not preplanned but emerges from the interests of a child or shared interest of a group of children (Griebling, 2011). Classrooms contain a wide array of materials that young children may explore and use for their creations with the teachers acting as learning guides and facilitators (Caldwell, 2003; Edwards, Gandini, & Forman, 1998).

In Waldorf Schools, the youngest children have the most opportunity for self-
initiated explorations through sessions of independent free play. However, this takes place within a systematic structure where “every day of the week has its associated special activity” (Astley & Jackson, 2000, p. 23). Waldorf Schools place an emphasis on imaginary play for children up to age seven. According to the Waldorf system, play provides a way for young children to explore themselves as learners (Nicol & Taplin, 2012). Around the age of seven the children are presented with a more formalized and structured curriculum (Edwards, 2002; Rose, Jolley, & Charman, 2012). The integrated lessons are presented to the students using a variety of teacher selected stories, songs, recitations, and visual aids (Nicholson, 2000; Nicol & Taplin, 2012). A main theme is introduced and students are encouraged to engage in “multiple forms of representation” (Nicholson, 2000, p. 578) as they learn about the theme during daily lessons. The students chronicle and reflect on their learning by writing and illustrating a personalized notebook called a Main Lesson Book, which is later used as a portfolio for assessment (Nordlund, 2013). Waldorf educators value a child-centered approach, but the learning is teacher directed and “characterized by guidance and rules” (Nicholson, 2000, p. 579).

Montessori schools follow specific procedures and practices (Cossentino, 2005). In Montessori classrooms students direct their own learning in controlled environments where teachers act as guides and facilitators (Hanes & Weisman, 2000; Schenck & Stoytchev, 2012; Schwarzmueller & Rinaldo, 2013). The students may work at their own pace choosing from a variety of projects, materials, and activities prepared and presented by the teachers. (Edwards, 2002; Rose, Jolley, & Charman, 2012).
Self-Initiated Creativity from a Developmental Perspective

Interest in the self-initiated creativity of children began in the late nineteenth century at a time when students were expected to acquire artistic skills by copying the work of old masters and making sketches from the plaster casts of ancient Greek and Roman sculptures (Leeds, 1989; Pearson, 2001; Rosenblatt & Winner, 1988; Wilson, 2004). The advent of modernism at the turn of the century brought with it an interest in the self-initiated art of children (Leeds, 1989; Stankiewicz, 2007; Wilson, 2004). In the late nineteenth century, psychologists Bernard Perez and James Sully described the drawing development of children as an automatic and spontaneous evolution (Leeds, 1989; Sully, 1895; Wilson & Wilson, 1977). In *The Elements of Drawing* (1891), John Ruskin believed it was more beneficial for children to create freely without adult interference than to be taught “advanced artistic concepts at too early an age” (Leeds, 1989, p. 97).

In the beginning of the twentieth century, educators Franz Cizek and Marion Richardson encouraged free expression allowing children to explore a variety of materials and self-discover their creative capabilities (Malvern, 1995; Willats, 2005). Later researchers such as Lowenfeld and Kellog proposed various “developmental typologies” (Leeds, 1989, p. 101) based on Lucquet’s 1913 concept of stage theory to delineate common phases of graphic representation through which children progress (Robertson, 1987; Thompson, 2003; Watts, 2010). Researchers used these classifications to assess the cognitive and emotional growth of children (Pinto, Gamannossi, & Cameron, 2011; Rosenblatt & Winner, 1988). Others maintained that artistic growth in children unfolds naturally (Anning, 2008; Boyatzis, 2000; Jaquith, 2011; Kindler, 1999).
They argued that the self-initiated creativity of children does not always coincide with the benchmarks and sequential progressions found in stage theories such as Lowenfeld’s stages of artistic development, Piaget’s theory of cognitive development, or Goodman’s symbol theory (Alter-Muri & Vazzano, 2014, Atkinson, 2002; Kim, 2004; Matthews, 2004).

Most researchers agree that children become preoccupied with drawing in a realistic manner with the onset of adolescence. Some attribute this fixation to social influences found in schools where teachers and peers privilege representational depictions and graphic conventions over spontaneous symbolic expressions (Gardner, 1980; Matthews, 2004). They believe an “acquisition of school knowledge” (Davis & Gardner, 1993, p. 193) is the reason why many children discontinue their art making practices once they finish elementary school (Robertson, 1987; Rosenblatt & Winner, 1988). Gardner added that “children are socialized into perceiving the written word as the dominant mode of communication and since drawing is not important, they cease to engage with it” (Anning, 2008, p. 96). Others postulate that most children eventually stop drawing because they no longer have a developmental need to engage in make-believe or fantasy through graphic representation (Kim, 2004).

Recent literature suggests that neither stage development theories nor the free expression model can accurately and fully describe the ways in which children go about their creative endeavors (Thompson, 2003; Watts, 2010). Kindler (1999) regarded the classical stage theories of artistic development as too narrowly focused and argued that, in reality, children choose from a variety of pictorial repertoires depending on their need to make meaning at any given time. She suggested a broader definition of artistic
development that takes into consideration a wider range of visual imagery such as unintentional markings, unfinished works, tracings or artworks that are copied and replicated from preexisting pieces (Kindler, 1999).

Brent and Marjorie Wilson advocated that, “themes are more useful than stage theory for understanding children's art” (Robertson, 1987, p. 38) and these themes provide a rich source of ideas for the self-initiated creativity of children (Thompson, 1999). Wilson (2004) suggested that the spontaneous and expressive child art championed by educators is a mere construct created by art teachers such as Cizek and Lowenfeld. Cizek’s desire to promote creative self-expression and autonomous art (Malvern, 2005) greatly influenced the ways children created and, according to Willats (2005), actually interfered with their drawing development. Willats felt that schools need to teach the “technical aspects of accurate representation” (Anning, 2008, p. 96) and Efland (1976) suggested that while teachers like Cizek thought they were unleashing the child’s natural creative tendencies, they were in reality creating the school art style. According to Anning (2008), the legacy of free expression continues in early childhood education where children are given thick brushes and pots of primary colors creating “conditions whereby young children are bound to conform to their teachers’ constructs of art” (p. 98).

Matthews (2004) maintains that there is a dearth of recent studies on the self-initiated creativity of children because this type of art making is not valued in contemporary school environments.
Self-initiated Creativity from a Sociocultural Perspective

According to Alter-Muri and Vazzano (2014) theories of developmental stages in creativity do not take into consideration the social and cultural influences on children’s drawings. Stage theories map out linearly ordered developmental benchmarks that culminate with realistic renderings (Kim, 2004; Matthews, 2004; Pearson, 2001; Wilson, 1977). However, research has shown that children may exhibit a number of different developmental stages within a single drawing depending on context and purpose (Alter-Muri & Vazzano, 2014). Sociocultural theories of creative development posit that learning is “socially situated” (Hamblen, 2002, p. 19) and a “product of culturally and socially transmitted conventions” (Pinto, Gamannossi, & Cameron, 2011, p. 425). Children encounter graphic imagery from a variety of sources at home and at school (Haanstra, 2010) including adults, peers and siblings (Anning, 2000). Children decipher, interpret, synthesize, select, reject (Grube, 2009; Pinto, Gamannossi, & Cameron, 2011), ultimately reprocessing these images “for their own purposes” (Duncum, 1989, p. 253) in ways that are relevant and meaningful to them (Duncum, 1997; Robertson, 1987; Thompson, 1995).

Creating artwork is contextually based (Hawkins, 2002) and many children use drawing as a social event (Grube, 2009; Jaquith, 2011; Lund). From a sociocultural perspective, creative development happens through conversations (Lund, 1994) and other types of “interactions with people and objects” (Richards, 2014, p. 145). Children talk with each other and to themselves as they engage in self-initiated creativity (Thompson & Bales, 1991). Through these public conversations and personal dialogues children make
connections, address aesthetic concerns, and develop new understandings which “contribute significantly” (Thompson, 1995, p. 9) to their artistic learning.

Children understand the disparities between learning at home and learning at school and they find ways to navigate each environment (Anning, 2000). School learning is formalized requiring students to follow directions and produce standardized projects (Grube, 2009; Hamblen, 2002). Learning derived from social and cultural influences are often manifested through materials, techniques, and approaches such as tracing, copying, performing or marking on walls that are considered inappropriate and discouraged in classrooms (Hamblen, 2002; Richards, 2014). Teachers usually do not appreciate nor value crudely made drawings on scrap paper, simplistically rendered images or unfinished pictures commonly made by children (Kindler, 1999).

**The Relationship Between Agency and Self-initiated Creativity in the Elementary Classroom**

A view of the relationship between agency and self-initiated creativity provides further context for this examination of students in an elementary classroom setting. Student agency empowers students while disrupting traditional barriers that require adherence to teacher-centered approaches and ritualized schooling behaviors (de Souza Fleith, 2000; Pennisi, 2006; Wagner-Ott, 2002). The literature shows that the self-initiated art of students often transgresses the visual codes and conventions found in classrooms. The self-initiated creative processes and projects of children can appear messy and unfinished especially in classroom environments where student artwork is expected to be socially acceptable finished products that are realistically rendered and neatly presented (Anning, 1997; Bresler, 1999; Clandinin & Connelly, 1996; Glenn,
According to LaJevic (2013), when art is part of the general elementary classroom experience it is mainly used for decorative purposes, contributing to a “devaluation of the arts” (p. 6). Art as classroom decoration in American schools is well documented (Stankiewicz, Amburgy, & Bolin, 2004; Thompson, 2014). More recently, creative engagement in general classroom settings has been further cast in the “role of handmaiden to other subjects” (Thompson, 2014, p. 386) rather than being generally perceived as containing intrinsic educative value.

Conversely, in order to be meaningful to children, artistic expression must be initiated out of internal relevance rather than as a response to external directives. Teacher-directed art instruction often incorporates aesthetic practices that have little or no relevance to the pictorial repertoires or cultural contexts of children (Bullock & Galbraith, 1992; Hamblen, 1987; Haanstra, 2010; Wikstrom, 2005). Choice is an essential component in the creative act. Student agency leads to a diversity of new ideas and fresh approaches beyond the ability of a teacher to conceive on his or her own, ultimately enriching the artistic growth of the entire learning community. There is a marked increase in creative ingenuity and productivity when students have a voice in their learning. This not only affects the personal aesthetic repertoires of the students, but also recasts classrooms as significant and germane learning environments.

The idea that intrinsic motivation enhanced by student agency is conducive to creativity in the classroom is well documented (Amabile, 1982; Deci & Ryan, 1985; Greene & Lepper, 1974; Ross, Karniol, & Rothstein, 1975). Daniel Pink (2013) adds that
intrinsic motivation is “essential for high levels of creativity” (p. 45). Many researchers, educators and theorists cite the importance of creativity in education (Andrews, 2005; Brooks, 2005; De Petrillo & Winner, 2005; Edens & Potter, 2001; Glasser, 1969; James, 1997; Lodge, 2007). Ken Robinson (2013) emphasizes that schools should be “creating a climate of possibility” instead of promoting standardization. He goes on to say that a main function of education should be to “awaken and develop these powers of creativity” (n.p.). Yet children are seldom allowed to freely create in elementary school. General classroom teachers assign prescriptive projects narrowly restricting young students’ creativity.

Since the mid-19th century, the art created in response to external directives in classrooms has become a genre of its own: “school art” (Bresler, 1999). This genre does not take into consideration self-initiated art by children and the unique processes they use to create it (Efland, 1976; Hamblen, 1999; Wilson, 1974). School-sanctioned art privileges product-based and teacher directed creativity, while self-initiated art practices empower children by allowing them to direct their own discovery-based artistic inquiries, which they find relevant, meaningful, and engaging (Bresler, 1999; Broome & Broome, 2010; Danko-McGhee & Slutsky, 2007; Efland, 1976; Eger, 2008, Fiske, 1999; Grube, 2009; Gude 2007; Rosenblatt & Winner, 1988). While art educators like Graeme Sullivan advocated for art education in schools to be rendered more meaningful to the student (1993), the artwork children create outside of school was determined to often be much more relevant to youngsters than the work they were required to create as delimited by the institutionalized methods of contemporary elementary level art instructors and general classroom teachers (Crum, 2007; Szekely, 2006).
Nathalie Gehrke’s *Children in Time and Space* (1979) describes schooling as a process of traditional practices “imbued with a certain sacred air” (p. 111) that also discourage “spontaneity and creativity” (p. 119). These practices resist spontaneous expression while promoting a traditional school culture (Bresler, 1998; Anderson & Milbrandt, 1998). Paulo Friere (2005) expands on this idea with his “banking” concept of education, which features “knowledge [as] a gift bestowed by those who consider themselves knowledgeable upon those whom they consider to know nothing” (p. 72). Friere defines traditional schooling practices as a process “negat[ing] education and knowledge as processes of inquiry” (p. 72) which tends to “minimize or annul the students creative power” (p. 73). Teresa Amabile and Judith Gitomer write: “From the time they enter school, children are placed under behavioral restrictions. They are often told what to do, when to do it, and how it must be done” (1984, p. 209). Yet anecdotal evidence has shown that “the arts are associated with enhanced student motivation and achievement in non-art domains” (Edens & Potter, 2001, p. 214). Research studies have also shown that student engagement with the arts correlated with an increase in academic achievement and student motivation (Boyes & Reid, 2005; Burger, & Winner, 2000; Catterall, 1998; Cornett, 2007; Deasy, 2003; Eger, 2008; Gibson & Anderson, 2008; Gullatt, 2008; Hetland, 2008; Hetland & Winner, 2001; Rabkin & Redmond, 2006; Rome, 2008).

The literature argues that the arts have a role in the “construction and development of knowledge” and may be used by children to “represent increasingly complex ideas” (Brooks, 2005, p. 80). The arts provide “knowledge of the world” (Siegesmund, 1998, p. 212), and “creat(e) visual imagery of different kinds (that) can
have significant cognitive benefit” (Kindler, 2003, p. 294). Choice and ownership must be part of the creative process for artistic experiences to become meaningful and relevant to children (Gnezda, 2009; Jaquith, 2011; Thomson, 1999). One way in which choice and ownership can become part of the creative process is for teachers to better understand the self-initiated creativity of their students.

Given that the self-initiated processes of young learners are seldom acknowledged in elementary school classrooms, there is a need for research about students’ self-initiated creativity to aid in determining the pedagogical significance of greater artistic agency in the elementary classroom. Some educational researchers consider it advantageous to allow children to bring their off-site self-directed creative activities into school (Jaquith, 2011; Matthews, 2003; Richards, 2014; Ulbricht, 2005; Wilson, 2005). However, in the case of this particular dissertation research on the self-initiated creativity of children, only creative artifacts produced at the school were used. Out of 253 artifacts documented for this study, 173 were created inside our classroom, 66 were made outside during a snack break or recess, 9 were made in the dining hall, and 4 while attending the after-school program.

**Summary**

Children are drawn to creative activities and engage in them of their own volition (Anning, 2002; Kim, 2008; Wilson, 1974). This deliberate, self-initiated art making helps them interpret the world, deepen their understandings (Grube, 2009; Haanstra, 2010; Kim, 2008; Matthews, 2003; Matthews, 2004; Thompson, 1995) and “process their lived experiences” (Hanes & Weisman, 2000, p. 11).
Children are intrinsically motivated by their self-initiated creations and have a desire to work on them in school but instead are required to work on teacher-directed art projects (Anning, 2002; Haanstra, 2010; Jaquith, 2011; Matthews, 2003; Robertson, 1987; Thompson, 1995; Ulbricht, 2005). In general classroom settings drawing is often used as “busy work” (Anning, 2002, p. 206) and in art rooms teachers endeavor to develop their own approach to fostering artistic development rather than encourage the self-initiated creativity of their students (Haanstra, 2010). In response, children alter their drawings and adjust their pictorial repertoires to align with the expectations of their teachers (Kindler, 1999; Robertson, 1987). But children enjoy creating for their friends and for themselves more than creating school-sanctioned art (Kim, 2008; Thompson, 1987; Ulbricht, 2005; Wilson, 1974).

The research literature recommends that educators take the self-initiated creativity of their students seriously (Lund, 1994). If not, children may acquire school art conventions at the cost of losing the innate creative capacity that they had previously attained (Davis & Gardner, 1993). Duncum (1985b) warns educators against becoming too preoccupied with the developmental aspects of children’s art making and encourages the examination of their work in the “context of the children's lives” (p. 45). He invites us to listen to the ways children talk about their creativity and acknowledge both the pedagogical possibilities and challenges offered by the self-initiated creativity of children (Duncum, 1989; Duncum, 1993). Grube (2009) cautions that imposing “obedience to an adult-tested aesthetic” (p. 12) can lead to missed opportunities for rich conversations and relevant learning.
Observing the artistic processes of children provides insights into their learning (Hanes & Weisman, 2000). According to Matthews (2004) “children's spontaneous use and organization of visual and other media plays a central role in the development of intelligence” (p. 267). The voluntary drawings of children provide a way for teachers to know their students as individuals and appreciate their distinctive talents, interests, experiences viewpoints and ideas (Richards, 2014; Thompson, 1999).

Teachers may nurture the creativity of children by engaging in conversations with students about their artwork (Boyatzis, 2000; Davis & Gardner, 1993; Duncum, 1985b; Grube, 2009; Kindler, 1999; Lund, 1994; Matthews, 2003; Watts, 2010). Children seek adult recognition of their work (Kindler, 1999; Thompson, 1987; Thompson, 1995) and these conversations help teachers understand the perspectives of their students (Richards, 2014; Thompson, 1995; Thompson, 1999; Watts, 2010). Children’s uses for creativity include, but also go beyond, artistic concerns or visual representations (Pearson, 2001; Richards, 2014). Children use creativity to develop their personal identities (Duncum, 1985; Grube, 2009; Hawkins, 2002) and as a way to externalize internal fears and anxieties, desires and wishes, dreams and fantasies (Duncum, 1985b; Kim, 2004). Often the self-initiated creativity of children incorporates a host of contemporaneous motivating factors. According to Pearson,

drawing can be play activity, narrative activity, a measured strategy for social approval, or the equally measured pursuit of the inductively grasped competence appropriate to given representation systems. Drawing is also a strategy for coping with boredom, with isolation. It can be a retreat from violent social relations. It can be the means for pursuing a passionate interest in horses or trains which at the same time achieves some or all of the above ends (2001, p. 358).

Children experience pleasurable interactions, visual complexities and playful
spontaneity through the self-initiated creative tasks they set for themselves rather than the superfluity of the projects assigned in the classroom (Wilson, 1974). Of the various educational approaches examined in this literature review, the Reggio Emilia inspired schools offered the greatest opportunities for children to engage in self-initiated creative activity as defined in this study. However, even in Reggio Emilia inspired schools the creativity was orchestrated and influenced by the teachers. The children created art to communicate their ideas and express their thinking but teachers carefully prepared what they felt were “aesthetically pleasing environments” (Edwards, 2002, p. 7) by setting up the spaces, decorating the walls, and choosing the art materials (Hertzog, 2001).

A guiding principle of Waldorf education is teaching to the whole child by “balancing academics, art, movement, and spirituality (Christensen, 2007, p. 320). Waldorf schools offered their youngest students opportunities for self-initiated creativity as they were allowed to “dreamily drift” (Nicol & Taplin, 2012, p. 105) from one activity to another, but within a structure of predictability, recitations, and routines (Friedlaender, Beckham, Zheng, & Darling-Hammond, 2015). In the Waldorf schools, the teachers led the classes by reading stories, directing plays, and setting up art studios to create a curriculum that integrated academics with the arts. (Christensen, 2007; Edwards, 2002). In the older grades, the arts were primarily used as a way to illustrate and show student learning within the confines of their lesson books (Nicholson, 2000).

As with the Waldorf schools, Montessori schools integrated arts into their curricula but according to teacher directives (Oreck, 2006). And as with the Reggio Emilia approach, the Montessori method was primarily designed for early childhood education consisting children 2 to 6 years of age (Hewett, 2001; Wentworth, 1999).
Additional data needs to be gathered and analyzed on the self-initiated, autonomous, and spontaneous creativity of children in the upper elementary grades (Golomb, 2003; Matthews, 2003). According to the definition set forth in this study, self-initiated creativity occurred when a student or a group of students decided to produce an artifact or action they found gratifying and fulfilling. In my classroom the students were allowed to engage in self-initiated creative endeavors when they wanted, where they wanted, and using materials of their own choosing. Conversely, the pedagogical methodologies of Reggio Emilia, Waldorf, and Montessori included ritualized practices, carefully chosen materials, and meticulously prepared environments that influenced the way their students engaged in creative actions (Edwards, 2002; Nicholson, 2000).

The arts-integration practices suggested by Marshall and Donahue (2014) involved the combination of “structure with open-endedness and teacher-identified goals with learner interest” (p. 162). In this model, the teachers established curricular organizations, frameworks, and guidelines and then the students were invited to bring their interests to the learning. On the other hand, self-initiated creativity is not assigned by teachers but is initiated by the students (Kim, 2008). Self-initiated creativity is something “children do by themselves and for themselves” (Matthews, 2003, p. 5). In this study I sought to observe and examine a form of self-initiated creativity that came from my students with a minimal amount of teacher influence.

The literature in this review that directly referenced the self-initiated creativity of children touched upon the artistic expression of children in socio-cultural contexts, the development of subject matter and pictorial repertoires contained within children’s drawings, the art children make in school compared to the art they make outside of
school, teacher reactions to the self-initiated art of their students, the role of agency and intrinsic motivation in creativity, the developmental characteristics found in the artwork of children, the impact of schooling rituals on student creativity, the effects of student autonomy and agency in their art making, the self-initiated art making processes of children compared to the art making processes of contemporary artists, and self-initiated art as a valid form of learning (Alter-Muri & Vazzano, 2014; Anderson & Milbrandt, 1998; Anning, 2002; Craft, McConnon, & Matthews, 2012; Crum, 2007; Davis & Efland, 1976; Davis & Gardner, 1993; Douglas, 2012; Duncum, 1985b; Duncum, 1989; Duncum, 1997; Gardner, 1980; Gardner, 1993; Gaw, 2012; Gehrke, 1979; Golomb, 1976; Golomb, 2003; Grube, 2009; Haanstra, 2010; Hamblen, 2002; Hanes & Weisman, 2000; Hawkins, 2002; Iijima, Arisaka, & Minamoto, 2001; Jaquith, 2011; Jaquith & Hathaway, 2012; Kim, 2008; Kindler, 1999; Kindler & Darras, 1995; Longmore, 2012; Lund, 1994; Malvern, 1995; Matthews, 2003; Matthews, 2004; Papanicolaou, 2012; Pearson, 2001; Pinto, Gamannossi, & Cameron, 2011; Richards, 2014; Rosenblatt & Winner, 1988; Thompson, 1987; Thompson, 1995; Thompson, 1999; Thompson, 2003; Thompson, 2007; Thompson & Bales, 1991; Turgeon, 2008; Ulbricht, 2005; Wilson, 1974; Wilson, 2005; Wilson, 2008; Zimmerman, 2009).

Thompson (2003) suggests that educators provide “spaces in the curriculum where children are free to define and pursue personal projects that reflect their attempts to make sense of the world they inhabit” and believes children should be “encouraged to explore their unofficial interests” (p. 145). Students need to make choices in the classroom regarding their creative activities (Haanstra, 2010; Hamblen, 2002; Hanes & Weisman 2000). They must be able to interact with one another (Thompson & Bales,
1991), draw on their experiences (Kim, 2004), explore their interests (Richards, 2014) and develop projects that are meaningful to them (Thompson, 1995). Allowing this type of agency gives teachers opportunities to understand their students’ visual expressions and “realize the value of children's self-initiated work” (Kim, 2004, p. 31).

Educators must first take seriously the self-initiated art making of children before they can fully appreciate and understand its pedagogical value (Anning, 2004). To do this they must first set aside their “personal preferences, judgments, and preconceptions” (Kindler, 1999, p. 345) about creativity.

The majority of the studies in this literature review examined the self-initiated creativity of young children in the primary and early years of education in an art room setting. Only a handful explored the self-initiated creativity of children in a general elementary classroom setting or in the intermediate elementary grades. A review of the literature reveals a gap in the literature regarding a longitudinal examination of the self-initiated creative processes and products made by a group of students in an intermediate general classroom environment over the course of one school year. In the next chapter I describe how I used action research to study the self-initiated creative actions of my fourth and fifth grade students during the 2012-2013 school year.
CHAPTER 3 – Methodology and Procedures

An Examination of Action Research Studies in the Elementary Classroom

Before conducting this action research study on the self-initiated creativity of students afforded agency in an elementary classroom, a selection of five action research studies were reviewed to examine the efficaciousness of action research for gathering data in the elementary classroom. Each of the studies contained elements of student agency or creativity. The topics of the studies included third grade students using self-assessment to assist in the memorization of multiplication math fact tables (Brookhart, Andolina, Zuza, & Furman, 2004), third grade students practicing self-monitoring techniques during silent reading times (Kelley & Clausen-Grace, 2006), teachers using Readers’ Theater to promote reading fluency with second-graders (Young & Rasinski, 2009), researchers examining student initiative in a fourth-grade classroom (Wade, 1995), and the facilitation of musical learning through compositional strategies with elementary school students (Miller, 2004).

Action research in elementary classroom contexts requires participants to conduct research, take action, and reflect on outcomes to examine their own classroom and improve their pedagogical practice. According to Ferrance (2000), action research is “characterized by spiraling cycles of problem identification, systematic data collection, reflection, analysis, data-driven action taken, and, finally, problem redefinition” (p. 26). This examination of the studies will determine how successfully, and to what degree, the key features of action research were integrated and how the inherent strengths of action research can inform the research design for this dissertation.
Study #1: Minute math: An action research study of student self-assessment.

In this action research study university researchers and elementary classroom teachers collaborated to examine the effect of student self-assessment on weekly timed multiplication fact tests. The authors wanted to see if self-assessment would benefit students beyond simple memorization of basic math facts such as increased student motivation, engagement, confidence and independence. They designed a study where forty-one third graders predicted and graphed their test scores on weekly conventional timed test of the 0–9 multiplication facts. They chose action research as their method of study because they believed that action research was well suited for studying student self-assessment in a classroom context. The study was titled “The Minute Math Action Research Project” and involved two third grade classes at a suburban elementary school.

Before each of the weekly timed multiplication fact tests, the students were required to predict their success by filling out a GPAR (Goals, Plan, Action, Reflection) sheet. The GPAR sheet consisted of questions pertaining to students’ study strategies, their personal goals, and reflections on anticipated results. Before each test, students graphed their predictions on a bar graph and then graphed their actual score following each test. By the end of a ten-week period, the researchers collected data in the form of the students’ bar graphs (graphing 10 predictions and 10 actual scores) and weekly reflection sheets.

At the conclusion of the study, the researchers performed exit interviews with the teachers. During the exit interviews they asked questions to determine what the students learned from the Minute Math project and what the teachers might do differently if they had an opportunity to do the project again. While examining the data, the researchers
used descriptive statistics to analyze the data from students’ bar graphs and reflection sheets, and used a qualitative analysis to look for emergent themes and patterns in the student reflection sheets and teacher interviews.

It was concluded that on average, “students in both classes predicted their achievement very well” (p. 218). The researchers found that the children mostly used flash cards and timed tests for practicing their math facts before each test. From the student reflections the researchers could see that most of the students remained with a preferred study strategy throughout the project or gave a clear rationale if they decided to switch to a different strategy.

Although the authors of the study comprehensively described the procedures of the study, they left out important elements of action research, as there was no feedback from the participants that provided insight into their attitudes and feelings about the project. For example, the authors did not provide a “vicarious experience” (Herr & Anderson, 2005, p. 62) by describing the classroom culture or using their perspectives as insiders to contextualize the study (Sullivan, 1996). The authors shared their interest in finding out how student self-assessment might inform how well students performed on timed math fact tests, but they did not communicate how they arrived at this question or why it was important. Nothing is mentioned about the history of the classrooms or why these particular classrooms were chosen for the study. Instead, the study relied heavily on statistical data taken from the student predictions, scores, and reflection sheets. The authors recognized that “student involvement in their own assessment was context-dependent” (p. 225), but they did not provide any further insight on this notion.

The researchers could have conducted student interviews more effectively to
understand the rationale behind the student responses. The authors mentioned that some of the students reported not doing anything to prepare for the weekly timed tests, which led them to speculate, “perhaps they did not feel a need to practice because they were already achieving at a comfortable level. In some cases, perhaps they were not motivated to put forth the effort” (p. 220). Speaking directly to the students or asking follow-up questions on subsequent reflection sheets might have added clarity to these responses.

The data from the teacher interviews was more informative. The teacher interviews described how the teachers felt the students were responding to the process and gave teachers the opportunity to critically analyze the data and the validity of the research process. Concerning the student reflections, one teacher observed:

I don’t think they value writing down their thought processes as much as they value writing the right answer. So if they write ‘using flash cards,’ it might not be that they thought flash cards were good as much as that they thought it would be the right thing to say (p. 222-223).

The interviews provided a way for the researchers to examine the trustworthiness of their research methodology and techniques. The interviews also provided a catalyst for the researchers to reflect on their own teaching: “We need to teach them to be confident in their own thought processes” (p. 223).

The authors concluded that most of the students enjoyed taking part in self-assessment, but the data offered to support this statement was inadequate. The authors could have elicited responses from the students by conducting follow-up interviews or questions. Granted, they recognized that some students were simply filling in blanks rather than offering authentic reflections, and so they determined that students need guidance and practice when engaging with self-assessment techniques. But they failed to continue the action research cycle of reflection by offering suggestions for the next steps.
to be taken (Ferrance, 2000) such as identifying additional questions and offering ways the students might be taught to self-assess based on their experience with this study.

Study #2: R5: The sustained silent reading makeover that transformed readers. University instructor Michelle Kelley and third grade teacher Nicki Clausen-Grace teamed up in 2006 to “examine the metacognitive awareness or ability of third graders to monitor and guide their thinking during the reading process and to determine whether direct instruction in metacognitive strategies would benefit all learners” (p. 148). Their article titled “R5: The Sustained Silent Reading Makeover that Transformed Readers” described how they used the Developmental Reading Assessment to aid in the investigation of their action research questions.

The authors were concerned with the students’ lack of engagement during their in-class Silent Sustained Reading (SSR) times. Their purpose for incorporating SSR into their curriculum was to help their students develop reading fluency, word recognition, and comprehension as they read at their independent reading levels. The authors described their students as being unmotivated during SSR times and mentioned that a few would do anything to get out of reading. Kelley and Clausen-Grace made this claim after observing some of the students moving about the classroom or simply flipping through pages of their books during SSR times. The authors, however, failed to provide a thorough and vivid description of what transpired during SSR times in the classroom. Instead, they made assumptions based on cursory observations rather than taking advantage of the intimate relationship in the research setting (Anderson & Heer, 1999). Additionally, the authors did not locate themselves within this portion of the research and
therefore it was difficult to ascertain what effect the adults might have had on the students’ actions.

To address their primary concerns of engaging disengaged readers and gaining insight into their students’ metacognitive awareness, the authors had their students fill out Developmental Reading Assessment (DRA) student reading surveys. However, the use of DRA’s alone did not offer a robust way to gather data. The researchers could have garnered additional data by taking notes during class meetings or conducting informal interviews with individual students.

According to Kelley and Clausen-Grace, the baseline data from the DRA’s provided them “with a comprehensive view of each students’ needs as well as a measure of class trends and concerns” (p.149) and confirmed their suspicions that the students were not reading a wide range of genres, many lacked comprehension strategies, and most did not engage in reading for pleasure. However, the study failed to mention any attempt to engage with the students’ perspectives to discover how they perceived the reading experience. The DRA survey simply required the students to list authors or genres they enjoy reading, and describe why, after which responses were scored using a rubric that was designed for the program. But the survey alone did not offer opportunities for discussions relevant to the interests of the students so it is not surprising to read that the authors found the perfunctory nature of the student responses disappointing.

After reviewing the data from the Developmental Reading Assessment, Kelley and Clausen-Grace determined that direct instruction in self-monitoring strategies would benefit all the students by enhancing the achievement of their strong readers and creating a foundation for their struggling readers. This approach reflected the action research
spiral technique of fact-finding, planning, and action (Kitchen & Stevens, 2003). They also restructured the SSR block so that their students had a structured time to practice independent reading and become engaged readers. To help them redesign their SSR time, the authors looked at research on successful SSR programs, and found eight factors common to successful SSR programs, then determined which of these factors were already in place in their classroom and which needed to be added. Next, they generated a list of the obstacles commonly found in SSR practices and then designed frameworks and practices to help overcome those obstacles. The result was a program called R5 where students would explicitly practice metacognitive reading strategies during their SSR time.

The authors supplied a detailed description of what the revamped SSR program looked like in their classroom setting, which is a crucial component of any action research study. Throughout the process, Kelley and Clausen-Grace communicated how they wanted their students to feel a sense of ownership during the SSR process. However, they also mentioned practices, in the form of “several hard and fast rules” that they “put in place to set the tone for the R5 block” (p. 152). These rules impinged on student agency and seemed to run counter to their desire for the students to have ownership of their reading practices. For example, the students were required to keep a log of what they read each day so that the teachers could determine whether their students were making good reading selections. This technique reinforced a classroom hierarchy, which in turn served to weaken the data as it did not focus on students reading for pleasure but was a tool of oversight and supervision.

Seven months after the start of the study the students were retested using the Developmental Reading Assessment. The Developmental Reading Assessment data
showed a significant growth in comprehension. But this conclusion came from a single data source whereas action research studies require a level of trustworthiness, which is accomplished by collecting multiple data sources.

By the end of the study, Kelly and Clausen-Grace gave too brief a glimpse of their classroom observations and the ways in which their students evolved into a group of enthusiastic readers over the course of their investigation.

**Study #3: Implementing readers theatre as an approach to classroom fluency instruction.** In their article “Implementing Readers Theatre as an Approach to Classroom Fluency,” Young and Rasinski point to research that shows a correlation between oral reading fluency and silent reading comprehension in elementary age students stating that “students who read with little or inappropriate expression during oral reading are more likely to have poor comprehension when reading silently.” (p. 4). Young and Rasinski believed having students practice and perform reading through Readers Theater would provide an authentic approach to fluency instruction. They used action research to study the effects of Readers Theatre on fluency and overall reading achievement among the 29 students in Young’s second grade classroom.

Young and Rasinski selected Readers Theater as a way to bring authenticity to their reading instruction. Each Monday the Readers Theater scripts were introduced as part of a language arts mini-lesson, and on Tuesdays, Wednesdays and Thursdays the students rehearsed the scripts. Friday was given over to Readers Theatre performances after which the students were allowed to partake in a reading activity of their choice.

Results of the study were measured both quantitatively and qualitatively. For the quantitative measurements, the authors used results from the Direct Reading Assessment
(DRA) and the Texas Primary Reading Inventory (TPRI). After comparing the fall and spring test results, it was concluded that consistent experience with Readers Theatre had a positive effect on the students’ reading achievement.

Reporting on the qualitative measures, the authors wrote that Readers Theatre offered a method for students to grow as readers in a way that was enjoyable and engaging. They backed up their claims by quoting positive feedback from three students and a parent and even mentioned positive feedback from the school nurse, guidance counselor, and secretary. The authors concluded:

The quantitative data was impressive, yet from a classroom teacher’s perspective the qualitative data presented the most convincing argument for implementing Readers Theatre. Being able to witness the unmotivated become motivated and the strugglers was incredible. The flagrant enthusiasm shared by the community of readers was truly a reading teacher’s dream come true (p. 12).

It would have been interesting to learn how exactly the unmotivated students became motivated. These detailed accounts are not provided. The authors presented their findings without giving readers an in-depth and varied accounting of this year-long study. Besides offering scheduling and logistical information, it would have been beneficial if Young and Rasinski provided information on how the process unfolded with descriptions of the ways the students engaged with the Readers theatre process.

**Study #4: Encouraging student initiative in a fourth-grade classroom.** In 1995 Rahima Wade, an educational researcher from the University of Iowa, partnered with an elementary school classroom teacher in a suburban setting to conduct an action research project that examined student empowerment. The main purpose of this study sought to document the curricular events that promoted or prevented student empowerment. Wade was interested in seeing if she and her host teacher could establish a classroom
environment in which students felt empowered and would present issues associated with social justice and then design accompanying service projects.

In her review of the literature, Wade found that in general, schools are resistant to change, student empowerment, and democratic educational approaches. Wade felt her own investigation would fill the gap for studies that examined student empowerment within public school classrooms.

Wade’s data collection consisted of written and audio-taped notes of classroom observations, teacher and student interviews, and meetings, among other classroom events. During the analysis phase, Wade began to identify emergent themes. From her observations and interviews, Wade found that her host teacher valued individual student agency as well as positive social interactions between students. Wade’s data supported this claim by pointing out how students were allowed choice in their learning. She also discussed her findings with the host teacher to provide an insider perspective.

Wade began the discussion of her research results by giving a detailed description of the culture of her research site to contextualize her findings. Her account helped establish a baseline and set the stage for her observations that followed. For instance, she learned that the school’s faculty maintained discipline and order through a system of authoritative discipline procedures, which offered insight into what Wade and her host teacher were confronted with as they embarked on their study. Wade portrayed the school as a conventional educational environment where the principal made decisions for the teachers and the teachers made decisions for the students.

Although both the teacher and researcher tried to establish a democratic classroom environment by encouraging student empowerment, adult control still held
sway. After the students decided that attending class meetings should be optional, Wade wrote, “After lengthy discussions, Sarah and I decided to tell the students that we would return to mandatory participation” because “it became clear to me that not attending the meetings was becoming a status issue among many of the boys in the class” (p. 348). Upon further reflection, however, Wade realized, “teachers and students do not always have the same interests” and “thus, I learned that student ownership is at the heart of empowerment. Teachers need to find ways to support students' interests as well as to seek out activities and learning opportunities that address the concerns of both teachers and students” (p.348).

The way she handled the next two service project ideas seemed more in line with a democratic classroom. The first was abandoned after not enough students showed interests in the project, and during the next project the students had the option of being involved or opting out.

Reflecting on the experience, and especially on her data from the service project, Wade came to the realization that students must feel they have ownership of classroom projects and activities for them to feel empowered by the experience. She noticed that when her students were interested in the projects, they became motivated to engage more closely in their learning.

By engaging in an action research approach, Wade became aware of the reality of classroom logistics. As a participant in the classroom, Wade engaged in all aspects of the classroom culture and realized the time-consuming nature of supporting student-initiated service projects in elementary classrooms.

At the end of her study Wade wondered why she witnessed so few student-
initiated projects and then summarized her findings into three categories: school context, mixed messages from adults, and how the students understood schooling. Her findings revealed the formidable obstacles created by conventional schooling practices when trying to encourage student empowerment.

Wade mentioned how the students received mixed messages from the three adults involved in this study, namely, the researcher, the host teacher, and the school principal. The classroom teacher placed an emphasis on teacher authority and as Wade writes, “she asserted that I should emphasize to the students the importance of adults having power over children” (p. 351). Wade’s data in the form of personal journal entries provided valuable insight into her experiences during her time at her research site. From this type of data she recounted her thoughts, feelings, and perspectives as she interacted with the students, host teacher, and others at the school.

Using an action research approach enabled Wade to immerse herself into the culture of the classroom and experience the variety of behaviors and expectations that influence a classroom setting and the difficulties of resisting customary schooling behaviors. This action research study successfully parsed out the ways in which specific ideologies and practices came into conflict with student agency and democratic classroom practices.

**Study #5: Designing compositional tasks for elementary music classrooms.**

Beth Ann Miller, an elementary school music teacher who taught students in grades kindergarten through fifth, wanted to “discover ways to facilitate student musical learning through developmentally appropriate compositional strategies within the limited context of the researcher’s own general music classes.” (p. 59). Miller’s inquiry into
constructivist theory informed her educational approach. From her research, she found that when students are allowed to construct their own knowledge, their learning is more meaningful and memorable than knowledge that comes from teacher directed learning. This insight led her to design a study to see if her students were able to better memorize and perform musical compositions if they created their own musical notations.

Miller was interested in alternative forms of musical notation called iconic representations of sound and felt that an iconic approach to music composition would more readily conform to the developmental stages of children. For this study Miller wanted to see if integrating compositional components into her curriculum would promote her students’ acquisition of musical learning and meet the intellectual and emotional diversity within her student body. Miller recognized that a hands-on approach would coincide with her students’ desire for tactile modes of learning. She accomplished this by having her students play various instruments and then use iconic representations to illustrate the sounds such as raindrops to symbolize a soft sound or lightening bolts to indicate a loud sound.

Miller identified herself as “an investigator working in my own classrooms” and her methodology as “naturalistic action research” that involved recurring cycles of “action/reflection and collaboration” (p. 61). Falling in line with the criteria of action research as established by Ferrance (2000), Miller embarked on an investigation that fit within her daily teaching practice.

To triangulate her data, Miller recorded her observations in a journal, videotaped students during the composing process, kept artifacts of student compositions, and
integrated critical feedback from students and teachers. Analyzing multiple sources of data allowed Miller to discern a variety of perspectives and validate her findings.

The perpetual implementation of action and reflection is a crucial element of action research (Bullough & Pinnegar, 2001; Ferrance, 2000; Kitchen & Stevens, 2003; Wamba, 2011) and according to Miller:

The process of action and reflection meant that I consistently reconciled practice with theory before and after teaching episodes, asking if the lesson plans were based on sound learning theory, then reflecting upon the success of the lesson with my own particular students. (p. 61).

Miller used what she learned from her study to inform her practice. Close observations of student interactions helped guide curricular development to best suit the needs of her classroom.

Summary. The key features of action research make it an effective methodology for studying elementary classroom contexts. The review presented a sampling of five action research studies in elementary classroom settings that illustrated the potential this method has for informing the professional practices of elementary school teachers. An analysis of these studies also revealed the need to implement this form of research according to its inherent strengths. Action research offers a unique framework for teachers to investigate their own practice but it is imperative that each fundamental element is addressed. Generally, the “steps of the action research spiral” (Herr & Anderson, 2005, p.76) include a qualitative methodology of problem formation, planning, taking action, data collection, analysis, reflection (Dick, 2000; Noffke, 2009; Sagor, 1992), and then repeating and adjusting the cycle as necessary. Some of the studies
reviewed here successfully met the criteria, while others did not fully incorporate all the best practices of action research.

In Study #1: “Minute Math: An Action Research Study of Student Self-assessment” the university researchers and teachers who collaborated did not take advantage of the classroom context of their study by establishing or chronicling the relationship between the researchers, teachers, and participants. They failed to give an in-depth and detailed description of the research site and its context within the framework of the study or thoroughly explain why action research was the best method for this particular investigation. Their data set relied on quantitative assessments rather than the variety of qualitative approaches common to an action research exploration (Anderson, Herr, & Nihlen, 2007; Myers, 1997). By the end of the study, the authors did not offer a next step or plan of action to continue the cycle.

In study #2: “The Sustained Silent Reading Makeover that Transformed Readers” Kelley and Clausen-Grace needed more data to establish a solid foundation for their research findings rather than relying on a single data source. Additionally, they should have taken advantage of having a classroom as their research site to engage with the participants in a fuller measure. They did, however, employ the cyclical practice of action research by reflecting on and then altering their methodology to improve the effectiveness of the study and their classroom practices.

In study #3: “Implementing Readers Theatre as an Approach to Classroom Fluency Instruction,” Young and Rasinski described what transpired during their study but should have offered more detailed accounting of the research setting and the perspectives of the participants. It also would have been helpful if Young and Rasinski
offered more in the way of reflection and suggestions for future proposals by the end of the study.

In study #4: “Encouraging Student Initiative in a Fourth-Grade Classroom,” educational researcher Rahima Wade worked closely with a fourth grade teacher to examine student initiative and empowerment in the elementary classroom. In this study, Wade first presented relevant literature on student empowerment and then established the context of her own investigation. By immersing herself into the research setting, Wade collected a wide variety of data and experienced an intimate perspective that lent credibility to her findings. At the end of her write up, Wade offered suggestions to other educators interested in empowering students in classroom environments.

Lastly, in study #5: “Designing Compositional Tasks For Elementary Music Classrooms,” music teacher Beth Ann Miller located her study within the context of a constructivist framework emphasizing student empowerment. She developed a strong research question and collected a wide range of data for her study. Miller repeated a sequence of research, implementation, and reflection throughout her investigation. Her study was successful because she crafted a relevant research question that was suitable to her teaching practice. It was also successful because Miller was sensitive to the needs and perspectives of her students who were the participants of the study. Miller carefully considered feedback she received from her peers and was willing to adapt and adjust her teacher practice as she viewed her research as ongoing tool for professional development.
How the Design of this Study Incorporated the Key Features of Action Research

The best practices of action research provide an excellent framework for investigating research questions in the elementary classroom. When using action research it is essential to include an in-depth description of the research site, develop relevant research questions, gather sufficient data, offer ideas for further implementation, and propose ways to modify what was learned for use in other educational venues.

In this study, I began with a narrative that described how I became a teacher at the research site, my relationship with the faculty and administration, the political climate of the school, and the evolution of my classroom space. I used this narrative to chronicle the complex and varied interactions that informed different aspects of this study such as data collection, analysis, reflections, and implications.

The research questions that anchored this study were pertinent to my professional practices as an educator and artist. The questions emerged from years of observations during my time as a general elementary classroom teacher and provided a line of inquiry that contributed to my growth as an artist, researcher, and teacher.

Studying my own classroom afforded me many opportunities to collect data on the self-initiated creative actions of my students. As their teacher, I was at the research site each day school was in session, which enabled me to acquire an abundance of data in a wide variety of creative mediums. This extensive database provided an ample number of artifacts that fit the requirements for inclusion in the final data set from which I gleaned pertinent themes and patterns. Conversely, my role as a classroom teacher added to the limitations and challenged the trustworthiness of this study. Although my goal was to develop a nurturing, democratic classroom where students became empowered as
learners, I was still a teacher who possessed the inherent privileges and authorities that came along with that title. Despite the fact that the children were encouraged to critically analyze our classroom practices, take part in debates, and determine many of our rules of conduct, they still showed deference to me as their teacher. Additionally, although I worked as part of a teaching team, I was the only researcher in this study and it was solely up to me to collect, categorize, analyze, and interpret the data.

Fortunately, an important aspect of action research is its ongoing cyclical design, which allows the researcher to reflect on the successes and challenges met during the research process. The lessons I learned from the reflective process will guide the formulation of a new action plan geared toward improving my professional practice. This cycle provides a framework for me to conduct future research, refine my teaching skills, and evolve as an educator.

**Artist-Researcher-Teacher**

Graeme Sullivan (2006) suggested we consider the roles of artist, researcher and teacher as research practices and “to view the Artist as someone who *en-acts* and embodies creative and critical inquiry; the Researcher [as someone who] *acts* in relation to the culture of the research community; and the Teacher [as someone who] *re-acts* in ways that involve others in artistic inquiry and educational outcomes” (p. 25). In the classroom, my avocation as an artist led me to critically examine how creativity informed learning. My role as researcher enabled my classroom to become a site for investigation and analysis. As a professional teacher, I reacted to what I had discovered by modifying, altering and transforming my practice.
I used action research to study the self-initiated creativity of children in a general classroom setting and examine how they engaged in various creative contexts. It provided a framework from which to conduct research and generate new understandings on the pedagogical implications of the self-initiated creative endeavors of my students.

During my professional practice as a teacher, I became what Donald Schön termed a “reflective practitioner” (1983). As a reflective practitioner I engaged in continuous critical reflection (Tsafos, 2009; Winograd, 2002) as an active agent in my own teaching practice (Hinchey, 2008; Tofteng & Husted, 2011). In the Fall of 2009, I began collecting photo and video documentation of the creative processes and products of my students to better inform my reflexive practice. As an artist, the photo and video documentation offered a way for me to further “en-act” the creation of an environment supporting the self-initiated learning processes of children that compares to my own art studio practice. As a researcher, the photo and video documentation supplied data from which I could study the pedagogical effects of creativity in the classroom and improve my ability to “act” as the educator I desired to be. As a teacher, the photo and video documentation provided a chronicle of the creative practices emerging in my classroom so that I could more effectively reflect on them and “re-act” in co-constructing future lessons and activities. Additional reflective activities on these documentations included published articles as well as numerous conversations and email communiqués with colleagues. For this study, the visual images helped to map my experiences and enliven my data set with “richness and clarity” (Liebenberg, 2009, p. 460).

Utilizing an action research framework provided ample time for me to examine and investigate the questions put forth in this study within the context of my daily
teaching routine. Being present with my students for the duration of their time in my classroom, allowed me to find out what the self-initiated creativity of children in a general elementary classroom tells us about the ways in which children go about the learning process and navigating a classroom space. At the same time I was able to observe the impact of facilitating self-initiated creativity within the everyday constraints of a schooling environment.

**Action Research as Narrative**

Narrative representation is integral to action research. Ernest Stringer (2013) described action research as “the story of participant experiences and perspectives” (p. 217). According to Anderson, Herr & Nihlen (2007) action research practitioners “use narrative and story as a way to communicate professional knowledge” (p. 34). *The SAGE Handbook of Action Research* offers a succinct rationale for the democratic aspects of action research: “Everybody’s story counts” (Yorks et al., 2007, p. 493).

Creative learning environments offer students unique and innovative learning opportunities and “the arts provide access to forms of experience” that are otherwise difficult to obtain (Eisner, 2006, p. 11). My students had opportunities to engaged in self-directed learning and used the classroom as a space for creative exploration and collaboration.

In this study, action research methods formulated a narrative from the local perspectives of an elementary classroom teacher and his students. An examination of the self-initiated creative endeavors of fourth and fifth graders within that classroom provided insights into how children navigate their learning when allowed creative agency.
**Action Research in the Elementary Classroom**

**Insider perspective.** Action research as a method of inquiry has been used in a wide variety of studies that incorporate numerous approaches and methodologies. These include producing artworks to explore the experiences of homeless women (Clover, 2011), offering children opportunities to make connections between famous works of art and their own creativity (Korn-Bursztyn, 2002), determining the implications of using photography as an autobiographical source of documentation (Prins, 2010), using theater production to illustrate power structures within the labor market (Tofteng & Husted, 2011), exploring how participants experience teacher-education programs (Tsafos, 2009), employing democratic pedagogical approaches in the classroom (Wamba, 2011), examining stereotypes in education (Weaver-Hightower, 2010), enacting social change through arts-based intervention (Hutzel, 2007), and investigating teacher-student relations (Winograd, 2002). Action research requires that participants take an active role in their own education via research, engagement, and critical reflection (Tsafos, 2009, May, 1993). This is also referred to as “the Lewinian ‘spiral’ of planning, taking action, observing” (Noffke, 2009, p. 7) or, as summarized by Ernie Stringer: “look-think-act” (Stringer 1999, as cited in Wamba, 2011, p. 165). According to Huang (2010), action research is said to have “originated in the 1950s with the social-psychology work of Kurt Lewin” (p. 95). Lewin was considered the “grandfather of action research” (Hinchey, 2008, p. 11) and felt it necessary for research to become part of real world contexts. In the classroom, action research is a “teacher-driven” (Cooper & White, 2008, p. 103) method of inquiry that “provides a way for teachers to explore their own questions for the purpose of improving their own practice” (Miller, 1996, p. 103).
Studies have highlighted a number of elements that illustrate the strengths of using an action research approach. Action research includes a variety of techniques (Anderson, Herr, & Nihlen, 2007), as educational practitioners are usually referred to as researchers who conduct “teacher research, classroom research, action research, teacher action research, classroom action research, and collaborative action research” or “critical action research, teacher inquiry, classroom inquiry, practitioner research” (Hinchey, 2008, p. 5). According to Kitchen and Stevens (2003), “most action research involves identifying an issue, collecting baseline data, implementing a plan, and documenting and reflecting on our present actions in order to revise our future actions” (p. 1).

All of the aforementioned approaches identify the teacher as an “insider” (Anderson, Herr, & Nihlen, 2007; Cochran-Smith, 2003; Hinchey, 2008; Smith, Bratini, Chambers, Jensen, & Romero, 2010). An “insider perspective” (Sullivan, 1996, p. 220) offers opportunities not possible to researchers coming from the traditional research standpoint of outsiders (Brydon-Miller, Greenwood, & Maguire, 2003; Clandinin & Connelly, 1996; Noffke, 1997; Philo, 2003). Outsiders are defined as those who believe that they conduct research from neutral positions (Anderson & Herr, 1999) and are “often social scientists” (Bartunek & Louis, 1996, p. 2). These social scientists “typically experience the setting under study as would visitors” (p. 3) making them “more detached from the research setting than is the insider” (p. 15). According to Anderson, Herr, & Nihlen (2007), “what makes practitioner action research unique is that practitioners/researchers are their own subjects” (p. 8). Other foci for this study included the self-initiated creative processes that my students generated and products that they produced under my tutelage.
Teachers have “daily access, extensive expertise, and a clear stake in improving classroom practice” (Bresler, 1993, p. 31) and through action research they combine their tacit knowledge of the classroom with systematic inquiry (Herr & Anderson, 2005). This orientation allows teacher/researchers to customize their methodologies to best serve their educational philosophies and the interests of their students (Weaver-Hightower, 2010). The conception of insider research harkens back to the writings of John Dewey (Kitchen & Stevens, 2003) and his view that teachers should be “critical inquirers of their own practice” (May, 1993, p. 114). Dewey promoted the standpoint of an insider perspective, arguing, “research shouldn’t be done solely by outsiders on behalf of teachers, but also by the insiders, teachers themselves” (Hinchey, 2008, p. 8).

Hilary Bradbury Huang, the Editor-in-Chief of the journal Action Research, defined action research as “an orientation to knowledge creation that arises in a context of practice,” with the purpose of “generating knowledge and empowering stakeholders” (Huang, 2010, p. 93). Action research is a type of “practical inquiry” that teachers use as a means to improve their practice leading to “immediate classroom change” (Richardson, 1994, p. 5). According to Peter Reason and Hilary Bradbury Huang, “a primary purpose of action research is to produce practical knowledge that is useful to people in the everyday conduct of their lives” (Reason & Bradbury, 2001, p. 2). This heuristic form of inquiry offers continual feedback (Pitri, 2006) for teachers and researchers as they examine and evaluate their particular circumstances (Hinchey, 2008). Action research is therefore a process in which researchers “privilege the context of practice over disembodied theory” (Huang, 2010, p. 93).

While the insider position brings with it a level of authenticity (Herr & Anderson,
2005), it also makes it challenging for the researcher to balance subjectivity with a level of objectivity (Anderson, Herr, & Nihlen, 2007) given that action researchers will invariably view the research from their professional practitioner perspectives (Kinsler, 2010). Objectivity may be accomplished by including a “self reflexive critique” (Wamba, 2011, p. 174), also known as “reflexive inquiry” (Cole & Knowles, 2000, p. 104) as a component of the research process, versus the “unreflexive modernist and positivist claims to truth” (Lau, 2007, p. 101) found in more traditional modes of inquiry. A reflexive stance requires that the researcher take a critical and objective look at how his or her presence and actions might effect the participants and impact the research site (Bresler, 2006) so that all involved may benefit from the experience (Cochran-Smith, 2003; Sullivan, 2006).


The important aspects of action research methodologies are its participatory and reflective qualities (Bullough & Pinnegar, 2001; Cochran-Smith, 2003; Kinsler, 2010; Wamba, 2011). Teachers and other educational practitioners frequently reference the dissociation between theory and practical classroom application (Bresler, 1993; Noffke, 1997) as a stumbling block to incorporating research findings into their curriculum (Freedman, 2004). There has also been controversy regarding the validation of practitioner research among research universities (Anderson & Herr, 1999). As Bresler (1993) points out:
Rarely did scholars read work produced by teachers, mostly because they did not see it as contributing to academic knowledge. Likewise, teachers rarely read academic publications because they do not see them as relevant to their practical concerns. The use of jargon made scholarly work even less accessible to practitioners and reflected the fact that the practical and the scholarly worlds did not share the same language (p. 32).

A major asset to action research is that it “bridges the traditional theory-practice, knowledge-action gap” (Noffke, 1997, p. 306) and “goes beyond the notion that theory can inform practice, to a recognition that theory can and should be generated through practice” (Brydon-Miller, Greenwood & Maguire, 2003, p. 15). These “implicit or local theories” (Bartunek & Louis, 1996, p. 5) have been critically characterized as “particular” (p. 15) as opposed to universal generalized theories. Yet, as Bullough and Pinnegar observe, “that for public theory to influence educational practice it must be translated through the personal. Only when a theory can be seen to have efficacy in a practical arena will that theory have life” (Bullough & Pinnegar, 2001, p. 15). Clandinin and Connelly refer to the space where theory and classroom practice converge as “the professional knowledge landscape” (Clandinin & Connelly, 1996, p. 24). This “intersection between theory and practice” provides an environment for developing “a robust and effective approach to enhancing education through practitioner research” (Kitchen & Stevens, 2003, p. 5). Furthermore, an action research approach allows theory to be seen “as a proposal, not a prescription” and teachers are therefore encouraged “to adjust it to their classroom and evaluate or even expand it in the light of practice” (Tsafos, 2009, p. 160).

An examination of the literature on action research reveals key features that make it an effective methodology for studying elementary classroom contexts. Action research offers a unique framework for teachers to investigate their own practice but it is imperative that each fundamental element is addressed. Generally, the “steps of the action
research spiral” (Herr & Anderson, 2005, p. 76) include a qualitative methodology (Dick, 2000) of problem formation, planning, taking action, data collection, data analysis, reflecting (Ferrance, 2000; May, 1993; Noffke, 2009; Sagor, 1992; Stankiewicz, 1997) and then repeating and adjusting the cycle as necessary.

When adhering to its best practices, action research works well in elementary classroom contexts. Unlike middle or high school teachers who teach specific content areas, elementary classroom teachers instruct students in a wide variety of areas including math, language arts, science, and social studies. In addition, elementary students spend most of the day in the same classroom, a setting that lends itself to in-depth observations and varied forms of data collection that are the building blocks of action research. According to Sagor (1992), “schools are naturally data-rich environments” (p. 31) and “action researchers embrace context as an integral part of their work” (Sagor, 1992, p. 29). Time spent with the same group of students allows elementary classroom teachers opportunities to become researchers. In the elementary classroom teachers can put theory into practice by incorporating the cyclical framework of action research and adapting their practice day to day, week to week, and month to month. Action research offers a unique method of inquiry for elementary teachers to understand and improve their classroom by “generating the knowledge that informs their practice” (Sagor, 1992, p. 4).

**Artistic Practice as Research**

A significant part of my artistic practice outside of the classroom involves reading texts, viewing documentaries, and visiting exhibitions that offer insights into the working processes of modern and contemporary artists. These aspects of my art making practice also provide a multifaceted foundation from which to examine the art making activities
and creative explorations of my students. In the classroom, the “texts,” “documentaries,” and “exhibitions” emerge as student dialogues, teacher observations, and an analysis of the students’ creative artifacts. As Marshall posited: “clarity and meaning are engendered when ideas, concepts, or information is transformed into visual images, objects, or visual experiences” (2007, p. 23). Observing the evolution of the creative process and analyzing the artifacts produced provided a “locally meaningful” (Finley, 2005, p. 682) way to study the self-initiated creativity of my students.

Whatever the form, arts practices challenge, critique and disrupt the status quo (Bagley & Castro-Salazar, 2012; Barone & Eisner, 2012; Bell & Desai, 2011; Brown & Strega, 2005; Higgins, 2010). Schools were conceptualized by Foucault “as being socializing instruments of the status quo, creating institutional sites of reproduction, strictly regulating the movement, behaviours, beliefs and presentation of children, causing them to internalize norms in unconscious ways” (Higgins, 2010, p. 40). In the research setting for this study, the status quo emerged as the traditional teaching framework adopted by the school.

**Interrogating the status quo.** Since its inception, American public schooling has become “increasingly standardized” (Gray, 2013, p. 64) which runs counter to the desire of children to “learn through self-directed play and exploration” (p. 65). The self-initiated creativity examined in this study provided a way for my students to engage in arts-based learning. This pedagogy also provided a way to interrogate the commonly held assumptions surrounding the ritualistic learning environments of elementary classrooms that constrain “individual actions” as “young people are schooled through repetitive embodied practice” (Chappell, Chappell, & Margolis, 2011, p. 56). Elliot Eisner wrote
“children spend a major portion of their childhood in school” (1994, p. 87) becoming so immersed in a schooling culture which eventually becomes the norm. He emphasized how “traditional views of cognition…have put the arts at the rim, rather than at the core, of education” (2002, pg. xi).

In this study an arts-based pedagogy allowed the artist-researcher-teacher and his students the agency to “unearth counter narratives” through engagement with their self-initiated creative endeavors. Those student desires, proposals and voices normally “silenced in mainstream discourses” (Bell & Desai, 2011, p. 289) were now empowered to challenge “the dominant discourses and conventional ideas” within their school (Bagley & Castro-Salazar, 2012, p. 241).

**Arts-based practices as a process of knowing.** Arts-based practices provide experiential ways of understanding (Marshall, 2007; Sullivan, 2006). Elliot Eisner described knowledge as something that is constructed through experience (Finley, 2005). Julia Marshall (2007) wrote, “meaning are engendered when ideas, concepts, or information is transformed into visual images, objects, or visual experiences” (p. 23). Art making as a method of research and pedagogy allows ideas to become visible and tangible, providing new insights for learning and instruction in the classroom environment (Eisner, 2006; Marshall, 2007; Sullivan, 2006). Learning through the arts has been described as “special” (Sullivan, 2006, p. 24), “imaginative” (Eisner, 2006, p. 10), and “accessible” (Marshall, 2007, p. 23). The arts invite playful learning, exploration, risk taking, and creative problem solving (Silverman, 2006).

The data in this study emerged from my students’ arts-based engagements as my students were given ownership of their learning environment and allowed to curate the
classroom space with their self-initiated creative processes and artifacts.

**Procedures of the Study**

During the time of the study (the 2012-2013 school year), there were 25 fourth graders and 29 fifth graders enrolled in the private day school in which Eddie and I worked. Collectively, the fourth and fifth grade classrooms were known as The Bridge Program. The fourth grade was comprised of thirteen girls and twelve boys. Eddie and I had the fourth graders during the first half of the day for our STEAM (science, technology, engineering, the arts, and math) class. The fifth grade was comprised of sixteen girls and thirteen boys who spent their mornings in the Humanities classrooms learning reading, writing, and history with Leah and Rachel. In the afternoon, the fourth graders went to the Humanities classrooms and the fifth graders came to ours. Each day, the first through fifth grades had lunch at 11:05 and then the students in The Bridge had recess together from 11:45 until 12:15. At 2:20, the fourth and fifth graders went to Physical Education after which the fourth graders came back to our classroom for dismissal at 3:05. Therefore, each student spent approximately two hours in our classroom each day.

According to the school’s online profile, total enrollment for the 2012-2013 school year was 513 students in grades Pre-K-12 with a minority enrollment of 31% (African American, Middle Eastern, Native American, Asian, Latino). Our private day school prided itself on being the only independent college-preparatory school in the area with students in the 2013 graduating class being accepted into seven out of the eight Ivy League colleges and universities. The number of students enrolled in the Lower School (grades Pre-K-5) was 156. Of the fourth grade boys, one was African American, one
Asian, one Middle Eastern, two were Native American, and seven were white. Of the fourth grade girls, one was Middle Eastern, two were Native American, and ten were white. Of the fifth grade boys, one was Native American and twelve were white. Of the fifth grade girls, one was African American, one Asian, three were Native American, and eleven were white.

The school day started at 8:00 a.m. School districts located within a 15-mile radius were required to provide bus transportation for the students in their district who attended our school. Some students took the bus to school, while others students were dropped off by their parents. In most of the Lower School classrooms there was a list of things the children were required to do when they arrived and, as some teachers put it, “get right to work.” However, there were a handful of parents who were chronically late and their children would often arrive frantic and disheveled. To relieve their stress, Eddie and I allowed the children to ease into the school day by allowing them to choose how they wanted to spend their time. Mostly, they chatted with friends, worked on a project, or played a game before they had to leave to go to their first encore class (art, music, world language, or library) at 8:15 a.m. Upon their return, we had a class meeting to catch up with each other, share ideas, and discuss how we wanted to approach the day’s lessons and activities.

Eddie and I preferred to teach math and science using a hands-on, discovery-based, creative exploratory approach. However, the Lower School administration required us to dedicate 30 minutes each day to traditional direct instruction teaching that focused on a list of math skills and benchmarks the sixth grade math teacher wanted the students to master by the end of fifth grade. We were also required to prepare the fifth
graders for the school’s annual science fair, which meant the students had to closely follow the scientific process and conduct an experiment to present to parents and faculty in April with an accompanying standardized final report. Other than that, we developed the schedule according to our wishes and together with the students, generated a weekly agenda that could be modified and adjusted when necessary.

Besides the thirty minutes of direct math instruction each day, our weekly agenda afforded the students ownership of their learning. On Mondays, we introduced and practiced a new math concept for the week and then guided the children through a science experiment. On Tuesdays and Wednesdays, the children developed their own science experiment or math activity that evolved from the Monday experiment and/or math concept, which they could do alone or in a group. Students who felt they needed additional help or practice with the math or science concepts had the opportunity to meet with a teacher or receive support via peer tutoring. On Thursdays, the students developed presentations that celebrated their learning during the first part of the week. Fridays were dedicated to tying up any loose ends and in the final hour we watched student presentations on our classroom stage. The children produced a broad spectrum of presentations that included skits, PowerPoint presentations, student-directed movies, musical productions, vocal and dance performances, comedy routines, scientific or mathematical demonstrations, and brief orations. Students could opt out of the Friday presentation; especially those who were shy or felt uncomfortable getting up on our classroom stage. Nevertheless, by the beginning of December, each student had volunteered to take part in the presentations.
How the students engaged in self-initiated creativity throughout the school day. Although the majority of the presentations could be considered creative productions, for this study, data was only collected on the self-initiated creative artifacts or creative processes produced by a student or group of students via their own agency and on occasions of their own choosing. The artifacts and processes found in the data were not an extension of a lesson, something a student identified as being learned in a previous classroom, or a school sanctioned project or event.

The students found opportunities and space to engage in self-initiated creativity throughout the day. I used an iPhone to take photo and video documentation of their self-initiated creativity as they arrived to school, learned and practiced new math concepts, developed and conducted science experiments, had snack breaks, ate lunch, played during recess, worked independently, moved through transition times, watched Friday presentations, and waited to be dismissed at the end of the day.

When students arrived at our classroom in the morning they had time to catch up with friends, play a game, work on a project, or climb on our classroom climbing wall. They organized and curated the classroom space by setting up work and studio spaces, moving furniture to suit their needs, demarcating floor diagrams with masking or duct tape, drawing and writing messages on the whiteboard, drawing on and marking the tabletops, playing music, projecting videos, and hanging creative artifacts and projects from the walls and ceiling.
The most restrictive time of day for our students was the direct instruction portion of math class. For this half hour all the students were required to take part in a teacher-directed lesson rather than choosing how they went about their learning. However, the students still found ways to engage in self-initiated creativity. The children designed their own portable and temporary art studios where artwork and academic work happened concurrently. Some gathered materials and set up mini-art studios at their seats before class began using supplies that were easy to transport such as pens, pencils, markers, string, scissors, tape, and paper. Others retrieved materials as the need arose, sometimes taking a detour to their locker or supply shelf on their way back from going to the
bathroom or getting a drink at the water fountain. Students were allowed to create during math class as long as it did not interfere with their learning or distract the learning of others. As the school year progressed, the math class creations became commonplace and in my view, were seldom a distraction.

Figure 10. Photo-montage of students creating during math class (2012-2013). Left to right: Making a Scented Marker poster, Drawing on tabletop and creating stickers out of paper, makers, and glue. Four girls sharing a mini-studio set up.

During the warm weather, Snack Time took place outdoors. It was during this time that students had a few minutes to explore the natural world and gather materials for their creations. When the children had Snack Time inside, the snack itself was often used as a creative element as they made pictures and designs out of Cheerios.

Figure 11. Photos of students creating during Snack Time (2012-2013). From left to right: Collecting stones for an insect cemetery, gathering plants for an inchworm habitat, and writing a name using Cheerios.

The classroom space itself also became a site for self-initiated creativity. This often happened while the children were engaged in self-directed learning on Tuesdays,
Wednesdays, and Thursdays. When not used during a climbing break on our indoor climbing wall, the crash pads were appropriated to construct partitions for private working spaces.

Figure 12. Left: Student taking a climbing break. Right: Students using crash pads as partitions for a private workspace (2013).

Lunch was served family-style in the dining hall where each Lower School student sat at an assigned table with a teacher and a mix of children from different grades levels. Playing with food was discouraged, but I allowed the students who were seated at my table to make self-initiated creations with their food as long as they were not wasteful. Dining hall creations ranged from drawing with ketchup and making paper gliders from placemats to carving apples.

Figure 13. Alien ship carved out of an apple with a working hatch and removable alien character (2012).

Recess provided the students 30 uninterrupted minutes each day to focus on their self-initiated creativity. During outdoor recess the children enjoyed making movies,
creating habitats for inchworms and salamanders they found by looking under leaves and overturning stones, and constructing forts in the wooded areas of the campus. During indoor recess the children had access to our classroom supplies and made mixtures and solutions with a variety of glues, paints, glitter and food coloring while others engaged in more traditional forms of creativity such as drawing and painting.

![Figure 14. Examples of outdoor and indoor recess self-initiated creativity. Left to right: Discarded items collected from the campus grounds and brought to a fort construction site in early spring. A “potion” made by mixing dishwashing liquid, water, salt, and dry watercolor pigment (2013).](image)

Most of our classroom time was dedicated to our version of student directed, integrated STEAM learning. During this time the students worked on their math and science explorations at their own pace and according to their interests. At any given time, the children could be found conferencing with a teacher, working on math problems, conducting science experiments, creating displays, and preparing presentations. It was also during this time that the children were free to take a break that involved a physical activity such as using the classroom climbing wall or engaging in a self-initiated creative exploration.
Figure 15. Photo-montage of students during our STEAM portion of the day (2013). Left to right: Painting a poster for a science project, exploring paints, and engaging in a climbing activity.

In our attempt to function as a democratic learning environment, classroom protocols and practices were proposed, discussed, debated, and voted on throughout the year. One such vote involved the conduct of audience members during the weekly presentations. Some of the children felt that audience members should sit quietly and give their full attention to the students who were presenting on the stage. Others argued that they should not be compelled to take part in every presentation either as a presenter or an audience member. Debates were held and a vote was taken. It was decided that participation as an audience member or presenter was optional. Those who did not take part in the presentations were allowed to engage in a different activity as long as it did not interrupt or interfere with the presentations. Usually, students who did not take part in the presentations ended up reading a book, working on an assignment, or developing a creative project.
Figure 16. *A student presents as others draw on the whiteboard* (2013).

The end of the school day provided an additional few minutes for the students to engage in self-initiated creativity. While waiting to be dismissed their favorite creative activities included drawing on the whiteboard and drumming on the tabletops.

Figure 17. *Students drumming on a tabletop while waiting to be dismissed* (2013).

**Data collection.** As mentioned earlier in this writing, I have always been fascinated with the self-initiated creativity of my students. When I started teaching in 1995, students would sometimes give me samples of their work, which I kept in a file folder. Within a few years I began to use a Sony Mavica FD5 digital still camera to record the creativity of my students. The Mavica was large compared to today’s standards and the photos were saved on removable 3.5inch floppy disks. Each disk had 1.44MB of space, which meant I could only take about 30 standard quality pictures before the disk was full. Since digital photographic technology was a recent addition to our classroom it
caused a lot of excitement whenever I used the camera so I had to be careful to use it in a way that would not disrupt the learning.

In 2003, I began using a Canon PowerShot S200 with a 16MB CompactFlash card that had enough space to store approximately 40 pictures. Although the Canon was smaller than the Mavica, it still caused a stir in the classroom. At that time the faculty borrowed digital cameras from our school’s library only using them on rare occasions to document special events such as field trips or our annual holiday program. It was unusual that I had a digital camera dedicated for my own classroom use and even more unusual that I spent time photographing the self-initiated creative work of my students.

Six years later I purchased my first iPhone 3G. The iPhone was much smaller than the digital cameras making it more convenient to capture photographic images of my students’ creative work. The following fall I purchased the iPhone 4, which also had the ability to capture video. By the 2012-2013 school year personal digital technology had become the norm. Many of my students had their own flip phones, mp3 players, iPods, iPads, iPhones, and laptop computers. This digital ubiquitousness made the documentation of my students’ creative work much less of a distraction. There was no longer a wave of excitement among the students when they saw me use my iPhone to document their creative work. The iPhone was also more convenient and less obtrusive than when I used the earlier digital cameras. I carried the iPhone in my pocket, which made it readily available throughout the school day. The iPhone contained more storage space than the older digital cameras allowing me to take pictures as well as videos on a daily basis. Each night I transferred the photos and videos onto an external hard drive to free up storage space on my phone.
By the 2012-2013 school year, it was common for students to see me document their creative work as part of my daily professional practice. Sometimes I would notice students working and ask permission to photograph their work and other times they would voluntarily bring their work to me. When they asked me why I was taking pictures, I told them that as a teacher, educational researcher, and artist I was interested in the creativity of children. I used the photos to help me recall and reflect on the day’s events, lessons, and activities and to inform my own creative practice. I refrained from documenting any work my students wanted to keep private but this only happened on rare occasions as when a student did drawings in a personal journal or diary. For the most part, they were happy to share their creative work with me. I also made it a point to inform the class that if for any reason they did not want me to photographic their work, they should feel free to simply tell me to not take any pictures. The students seemed to have no problem informing me when they wanted to keep something private. Some would address me as if I were a peer with a curt, “Go away, Rufo” when they saw me approach, iPhone at the ready.

Most students, however, seemed to enjoy the attention and enthusiastically shared their work. A few brought in works they created at home and ask that I document it. Although I would take a picture and have a conversation about the work, I did not use any of those photos as part of my data set for this study. It was important that the data was culled from work created at the school to best address the questions put forth by this study.

By the fall of 2012, I was taking photographs and videos of my students’ work throughout the day, everyday. Eddie and I team-taught every subject together, whereas
the other grade level teams shared academic responsibilities cycling the students between them. For example, one of the third grade teachers taught math and science in a separate classroom with half of the third grade students while the other taught language arts and social studies with the other half in the classroom next door. Team teaching with Eddie in the same classroom afforded me the ability to take advantage of those moments when I noticed an occurrence of self-initiated creativity underway. I also got very good at capturing photo and video documentation “on the fly” so to speak. I could quickly size up and recognize an opportunity, determine where to position myself for maximum lighting and the least amount of interruption, figure out the best angle for clarity, rapidly procure a number of photos or seconds of video, assess the context of the creative activity, and if possible, engage the student or students in a brief conversation about their work. Still, since the self-initiated creations looked different from the teacher-directed creativity that took place in the other grade level classrooms as well as the art rooms, I was aware that this practice might appear strange to some members of the faculty, staff, and administration. Therefore, when in the presence of other faculty, staff, or administration, I did my best not to draw attention to the fact that I was photographing and videotaping the creativity of my students. When not in the presence of these individuals, there were certain times of the day such as Morning Mingle, Snack Time, recess and dismissal when documentation was a relatively easy task since the children had more independence and less need for teacher assistance. Documenting during math and STEAM classes proved more challenging because I was teaching or assisting students as they worked on various projects. The most difficult time for me to document student work was during lunch. Most of the other faculty members as well as the head of Lower School did not approve
of students doing anything that fell outside the confines of our school’s protocols and practices. During lunch, students were expected to remain at their tables engaged in polite conversation. It was evident that the students’ self-initiated creations, especially those involving food, did not reflect our school’s dining hall etiquette.

Very few parents ever brought up the subject of my photo documentations. This might have been due to the fact that since the fall of 2010, I sent home daily email blasts that contained information and photographs of each day’s lessons and activities. Also, parental consent forms were not necessary for this study since, in July of 2013, the Institutional Review Board evaluated the proposal for this research as exempt. It was designated and authorized as such since it examined existing, unidentifiable data selected from digital photographic and video files of the self-initiated creative artifacts of fourth and fifth grade students that were captured by the researcher during the 2012-2013 school year.

**Data organization.** I analyzed the data and explored the self-initiated creativity of my students in a general elementary classroom setting using a grounded theory research approach (Strauss & Corbin, 2008), including photo-documentation (Rose, 2012, Suchar, 1997), and multiple text methods (Keats, 2009). According to Keats: “There are three main types of texts that can be used in a multiple text method - spoken, written, and visual” (2009, p. 185). The digital photographs and videos of the creative artifacts are presented as visual texts, my published articles and personal journal entries in the form of email communiqués are the written texts, and the spontaneous conversations I overheard as students described and shared their art making processes are the spoken texts. In order to protect the identities of my students and colleagues, I
adhered to Syracuse University Institutional Review Board criteria. These IRB criteria include filing and approval of the research design.

For this study, creativity was defined as the meaning-making process and the material results of my student’s self-initiated creative actions. All the photographs and video clips taken of the artifacts that fell within the definition of self-initiated creativity in this study were included in the initial set of 1038 pieces of raw data. These artifacts included: two-dimensional renderings, three-dimensional objects, interior design and organization, and live or recorded activities such as music, dance, and movie-making. 25 fourth graders and 29 fifth graders produced all of the creative artifacts at the research site from September 6, 2012 to June 5, 2013. A creative artifact or process was considered a piece of data for this study on the self-initiated creativity of children if the researcher could reasonably infer that it had not been initiated or directed by a teacher, an extension of a lesson, something a student identified as being learned in a previous classroom, or a school sanctioned project or event. For example, a piece of data in the form of a video clip was not considered a self-initiated creative artifact or creative process if in the clip, a student mentioned having previously learned the same creative technique in an art class. Or, for example, an original music video that a group of students filmed as a way to present their learning of a scientific concept was not classified in this study as self-initiated since it emerged from a science lesson. Decorations created for the school’s Christmas tree were not considered self-initiated creative artifacts since they were produced during a school sanctioned holiday party.

However, artifacts and processes influenced by a peer were considered self-initiated because the students had a greater level of agency and self-governance amongst
their peers that did not exist in their relationships with teachers. Within a peer group, the choice to create or not to create was essentially up to each individual student. Of course, creativity initiated and influenced by teachers and other classroom experiences can be considered richly creative pursuits leading to meaningful outcomes. The focus for this study was creative artifacts and processes that were ultimately produced by students via their own agency and on occasions of their own choosing. While documenting their creative activities I asked general questions such as “What are you doing?” though was careful not to direct the process, influence the outcome, or offer suggestions except to ensure the safety and wellbeing of my students.

During the initial reading of the data set, each photograph and video file was assigned a category according to the medium used by students (glue, string, masking tape, etc.) and/or type of creative artifact (fort, painting, movie, etc.) These digital files containing 1038 pieces of raw data were organized and stored on an external, password protected hard drive (Figure 18). Within each folder, the data was subdivided into the year it was collected (Figure 19).
Figure 18. *Computer screenshot detail of digital files containing 1038 pieces of raw data in the form of photographs and video clips (2016).*

Figure 19. *Computer screenshot detail showing digital files of raw data subdivided by year (2016).*
Within each year, the data was further subdivided according to the date each artifact or creative process was created and subfolders housed photographs and videos of creative artifacts or processes that were documented more than once (Figure 13).

![Subdivided Data](image)

Figure 20. *Computer screenshot detail showing digital files of raw data subdivided by date of creation* (2016).

**Criteria for data selected for inclusion in the final data set.** The data set was eventually narrowed down to 253 pieces of data that were coded and analyzed using a thematic analysis allowing emergent themes to develop (Saldana, 2009). Matrices were formulated to organize the information, identify themes salient to my research topic, and serve as a visual system and “scientific codification process to ‘interrogate’ the data” (Sagor, 1992, p. 49).

Many of the artifacts and processes were documented more than once and therefore it would have been redundant to include all of the photographic and video documentations of raw data in the final data set. A piece of data was not included in the final data set if it simply provided information already found the data set and did not offer additional perspectives or reveal new understandings. For example, one day during snack a group of students decided to decorate the keyboard and track pad of my laptop computer with Cheerios. However, since the two photos merely show different views of
the same event, only one was counted as piece of data to be included in the final data set (Figures 21 & 22).

![Figure 21](image1.png)

Figure 21. *Two views of the same piece of data showing a laptop computer decorated with Cheerios (2013).*

![Figure 22](image2.png)

Figure 22. *Computer screenshot detail showing a nested digital file opened to reveal two photographs of the same piece of data (2016).*

Other times, multiple photo and video documentations of the same event revealed new or discrete aspects of self-initiated creativity and were therefore included in the final data set. One example of this is when the students used the classroom whiteboard as part of their self-initiated creative processes. One piece of data shows how the whiteboard was
used as a survey instrument and the other as a surface for a large abstract drawing. In 
Figure 23, the image on the left side shows how a student used the whiteboard as a survey 
instrument asking her classmates to write their name under the letter font design they 
liked the best. The image on the right side shows where a student drew a large, patterned, 
abstract form over the whole whiteboard. Both pieces of data demonstrate how the 
students had ownership of, and access to, the whiteboard. However, each image also 
provides discrete pieces of information and therefore both were included in the final data 
set. In the image on the left, a student used the whiteboard primarily as a mode of 
communication whereas in the image on the right we see the whiteboard primarily used 
as a mode of expression.

![Image of whiteboard with survey and abstract drawing]

Figure 23. Left to right: Whiteboard diagram used as a survey instrument. 
Whiteboard used as a surface for a large abstract drawing (2013).

**Organization and coding of the final data set.** The data set was first organized 
digitally and labeled according to a creativity category. The type of creative artifact or the 
media used to create it determined each creativity category. The creative categories for 
this study are:

1. Amphibian & Insect Habitats
2. Cheerios
3. Classroom Space
4. Dance
5. Doodles on Math Pages
6. Drawing
7. Dyes
8. Food Creations
9. Forts
10. Frozen Creations
11. Glue
12. Head & Hands Accoutrements
13. Masking & Duct Tape Creations
14. Math Class Creations
15. Mixtures & Potions
16. Movies
17. Names
18. Painting
19. Sculpture & 3D Design
20. Sounds & Rhythms
21. String
22. Studio/Supply Area
23. Table Marks
24. Tools
25. Toys & Games
26. Weapons
27. Whiteboards

Within the folders each piece of data was organized by the date of production followed by a series title and number, and file name extension (.MOV for the QuickTime digital movie file format or .JPG for the digital image file format). For example, the file labeled 5.30.13- Model Magic Drawing3.MOV was created on May 30, 2013, is titled Model Magic Drawing, is the third in the series, and is a movie file.

During the initial coding process I watched a video or looked at a photograph to see if it contained information that could shed light on the pedagogical effects of an elementary classroom that allows its students creative agency. Thirteen different themes emerged from the data, which were then classified into a coding system while a theme code document was created for each category (Appendix B). Each theme code document
Page contained a header that listed a key for the codes, followed by the title of the category, the range of three-digit coding numbers of the data within the document and the number of times each code appears. Next, each piece of data was listed by its three-digit coding number, series title, and file extension.

The 13 theme codes were selected as I developed a coding system to organize the data. According to Bogdan & Biklen (2003), the researcher searches through the data for regularities, patterns, and topics found in the data and then provides “words and phrases” (p. 161) to represent them. There was evidence of each theme reemerging multiple times throughout the collection of data, which meant it was an important idea or concept that could inform the questions put forth in my study on the pedagogical implications of the self-initiated creativity of elementary school children.

As I looked at the photographs and viewed the video clips I noticed attributes and features associated with the self-initiated creativity of children. First, there were certain environmental conditions in place. As their teacher, my documentation of the student creativity ascribed value to it. By virtue of the students’ teacher showing an interest in their creative artifacts and processes meant it was deemed important and worthy of chronicling. Eddie and I also allowed students a great deal of agency within the classroom. Because of this agency, the data contained examples of students taking ownership of the classroom space, organizing objects, constructing structures, and freely expressing themselves within that space.

Furthermore, the data revealed things children do during the creative process such as adding aesthetic or decorative elements to an existing functional item, using materials and supplies in ways different from their intended purpose, and creating unique
fabrications. These creative practices resulted in the formation of original concepts, new ways of knowing, and innovative creative techniques and methods.

Finally, this open architecture afforded the children opportunities to communicate freely and find inspiration from each other as well as serendipitous occurrences.

The code key for themes that emerged from the data is as follows:

S: Serendipitous occurrence
I: Inspired by a peer
A: Aesthetic or decorative aspects added to a functional item
V: Valued by a teacher
U: Using materials and supplies in alternate ways
CI: Conceptual ideas
K: New ways of knowing
T: New creative techniques and methods
C: Communication
O: Ownership of the classroom space
SE: Student initiated structure and organization
E: Empowerment to creatively express oneself
CF: Creative fabrication

Below is an excerpt from the theme code parent page in the Drawing category showing the coding process for data code numbers 033 through 046:

**DRAWING**

**Data #033 – 046**

**Number of instances in which each type of code appears:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>14</td>
</tr>
<tr>
<td>S</td>
<td>4</td>
</tr>
<tr>
<td>I</td>
<td>1</td>
</tr>
<tr>
<td>A</td>
<td>0</td>
</tr>
<tr>
<td>U</td>
<td>6</td>
</tr>
<tr>
<td>CI</td>
<td>2</td>
</tr>
<tr>
<td>K</td>
<td>0</td>
</tr>
<tr>
<td>T</td>
<td>7</td>
</tr>
<tr>
<td>E</td>
<td>1</td>
</tr>
<tr>
<td>O</td>
<td>5</td>
</tr>
<tr>
<td>St</td>
<td>1</td>
</tr>
<tr>
<td>E</td>
<td>9</td>
</tr>
</tbody>
</table>

**033:** 9.24.12-Name tag.JPG

V
C – created name tag on scrap piece of paper
E - created name tag on his own and in his own way

**034:** 10.2.12- Girl Universe.MOV

V
CI - created a planet galaxy based on a theme with various planets given names and shapes that signified themes

**035:** 10.23.12 - Expressionistic Drawing.JPG
- heavily expressionistic drawing done by a student who was usually shy about his perceived lack of artistic talent

**036: 3.19.13-Random Scribble drawing in math2.JPG**

- while doodling in math class student noticed that she could create a realistic rendering from abstract scribbles
- found a new way to generate a drawing
- felt comfortable enough to generate this type of drawing in math class

A piece of data was selected to be included in the data set for this study if it:

1. provided a new type of code within the full data or a series title
2. provided a new type of evidence for an existing code within the series

As stated above, a piece of data was not selected for inclusion in the data set if a previously selected piece of data in the same series title provided duplicate evidence of the same code. However, once a piece of data was chosen, all codes pertaining to that piece of data were included. This method of data selection insured rigorous and thorough coding of the raw data without unnecessary redundancies within the final data set.

During the second phase of the coding process a visual record of the data in a PowerPoint slideshow was created showing each photograph, or a still image from each video, organized within the 27 creative categories (Appendix A). Bogdan & Biklen (2003) discuss the “process of data reduction” (p. 174) as part of the mechanics of working with data where the data may be reformulated and the coding categories assessed, modified, merged, or even discarded. After reexamining my data and coding categories, I saw the need to reorganize the original thirteen themes into eight focused, defined, and more salient attributes. The 253 pieces of data were then reevaluated and organized as evidence of one of eight fundamental attributes (Appendix C).
Below is a brief glossary describing each of the eight fundamental attributes derived from the analysis of the final data set:

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serendipitous Learning</td>
<td>Serendipitous learning occurred when students made unexpected discoveries while following their own interests.</td>
</tr>
<tr>
<td>Process as Important as Product</td>
<td>Student learning was evidenced by their engagement with the creative process as much as it was by a final creative product.</td>
</tr>
<tr>
<td>Cross-Pollination</td>
<td>Cross-pollination occurred when students learned from one another as they interacted, asked questions, offered suggestions, and exchanged ideas.</td>
</tr>
<tr>
<td>Autonomous Group Learning</td>
<td>Autonomous Group Learning took place as students spontaneously self-organized and formed working groups based on common learning interests.</td>
</tr>
<tr>
<td>Innovative Appropriation &amp; Adaptation</td>
<td>Innovative Appropriation &amp; Adaptation happened as students creatively appropriated or adapted objects and materials in new and unexpected ways.</td>
</tr>
<tr>
<td>Creative Transcendence &amp; Aesthetic Enhancements</td>
<td>Creative Transcendence &amp; Aesthetic Enhancements occurred when students created surprising works that explored new conceptual territories. They often included aspects of wit and irony that reflected the aesthetic-conceptual amalgam found in the artworks of contemporary artists.</td>
</tr>
<tr>
<td>Communication, Empowerment &amp; Self-Advocacy</td>
<td>Was made evident when students began to communicate and advocate for themselves to teachers, their peers, and other adults more confidently, frequently and effectively. They took ownership of their creative learning as well as their learning environment.</td>
</tr>
<tr>
<td>Conflict Within the Status Quo</td>
<td>Conflict Within the Status Quo happened when the students’ creative processes and creative artifacts came into conflict with the practices, expectations, and traditions of the school at which the research took place.</td>
</tr>
</tbody>
</table>
Research Framework and Design

Narrative inquiry and action research. I chose to use narrative and action research methodologies to study the self-initiated creativity of the children in my classroom because these approaches provided me with ways to describe, examine, interpret, and learn from my experiences as a general classroom teacher (Herr & Anderson, 2005). For the researcher, story telling offers a method of inquiry (Anderson, Herr & Nihlen, 2007; Bresler, 1993). Composing a narrative gave me the opportunity to revisit the background leading up to the events that surrounded this study: I could relate my story as a teacher, make sense of my experiences, and use it as an interpretive frame to improve my classroom practice (Anderson & Herr, 1999; Bresler, 1993; Bullough & Pinnegar, 2001). Narrative chronicling also revealed the micropolitics and “hidden transcripts” (Herr & Anderson, 2005, p. 18) within the research site. Therefore it was necessary that I situated myself within that context to provide a baseline from which I could later reassess and re-examine my understandings, perceptions, and biases of what transpired.

Action research studies often include background statements that describe the researchers’ pedagogical interests and practices (Cunningham, 2009; Flessner, 2009; Miller, 1996). Many studies also include portions of the author’s personal histories that help position them within their research environments. For example, in her dissertation, Moyra Evans (1995) included autobiographical elements that helped her contextualize her role as an educator at her research site. In “Admitting Their Worlds: Reflections of a Teacher/Researcher on the Self-Initiated Art Making of Children,” Vicky Grube (2009) recalls her childhood desire to escape into the world of drawings and doodles as she
observed a group of adolescent boys in an after school drawing club retreat into the imaginary realms of their sketchbooks.

After reviewing an early draft of this manuscript with my dissertation advisor, it was decided that I should expand my background statement to shed additional light on how I came to be an educator and the events that led up to this study. Granted, my account of what occurred at the research site is one that I constructed, and during subsequent drafts, reconstructed (Bresler, 1993) from my privileged position as a white, male-identifying teacher. Therefore, my version of the events that transpired during my time at the research site is merely one story among many (Herr & Anderson, 2005).

**Theoretical and conceptual underpinnings.** The theories and concepts that this study draws upon include Csikszentmihalyi’s Systems Theory of Creativity (1997), Vygotsky’s socio-constructionist theories (1978), Communities of Practice Social Theory (Wenger, 1998), and Wilson’s (2005) concept of transactional pedagogy. I was interested in how elements of these theories and concepts reflected my classroom practices of student agency and student-directed learning, to varying degrees, and the ways in which these theories offered insight that helped to shape my data collection and subsequent data analysis.

**Systems theory of creativity.** My theoretical lens reflects an adaptation of Csikszentmihalyi’s Systems Theory of Creativity (1997) that consists of the interaction between the individual, the domain, and the field. In Csikszentmihalyi’s model, the individual brings a novel idea or product into the domain. The field is a group of experts who act as gatekeepers to the domain where they evaluate an individual’s novel idea or product as creative and decide whether or not to allow it into the domain.
My classroom became a microcosm of Csikszentmihalyi’s model of creative activity. In our classroom, the students were the individuals and the domain was our classroom culture collectively generated by the teachers and the students. However, in the variation practiced within my classroom, the level of student agency generated a field that, depending on the creative context, could consist of the student collective, groups of students, and/or each individual student. Therefore, any student’s creative process or product was automatically recognized as a novel form of creativity to be included in the domain.

The domain, or our classroom culture, was co-created by the teachers and the students. This domain privileged student-generated ideas and concepts that were presented in visually stimulating ways. Protocols and practices were then co-developed that enabled students to engage in self-initiated creative learning actions. Self-directed learning and the agency to self-navigate and interact permitted the protocols and practices of our classroom’s visual culture to continuously be transmitted between individual students. Students desiring feedback from the classroom community as well as personal aesthetic stimulation internalized the protocols and practices, which led them to engage in additional self-initiated creative actions.

The creative agency that existed in our classroom allowed the students to devise creative processes and products that added new variations to the visual culture of our classroom. Since the field was constituted as a democratic classroom environment, and could be made up of the student collective, groups of students, or an individual student, all creative processes and products became part of the domain.
Social constructivism. Emphasized in Vygotsky’s socio-constructionist framework is the idea that knowledge is generated and co-constructed through personal interactions and social contexts (Koutselini, 2008; Palincsar, 1998). The classroom community plays an integral role in learning (Korn-Bursztyn, 2002) and helps students learn more effectively than when they work independently (Gutiérrez, Baquedano-López, & Turner, 1997). Vygotsky (1978) maintained, “learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers” (p. 90).

In order to examine the self-initiated creativity of our students, it was important that, we as team teachers, allowed the students to work in groups when they desired to do so. At the beginning of the school year our students had a role in setting up the classroom space and adjusted the furnishings within the space to accommodate their learning needs throughout the remainder of the school year. This practice was done in hopes of giving the children a sense of ownership of their learning environment and providing for those students who desired to engage in collaborative creative investigations. We made time and space available for the children to take advantage of the opportunities to use our classroom community as a democratic learning hub (Korn-Bursztyn, 2002). In this hub, teachers and students learned from one another. (Gutiérrez, Baquedano-López, & Turner, 1997).

Communities of practice. According to Pitri (2006), a socio-constructivist approach allows children to become empowered as they negotiate and construct their learning through encounters with peers and the environment. Similarly, the concept of communities of practice (Wenger, 1998) suggests children take an active role in their
learning (Corsaro, 1992). Lave and Wegner (1991) used the term *community of practice* to describe ways in which individuals who have a shared interest come together to learn from one another. In a community of practice, novices or newcomers watch and learn about a specific type of domain from experts in that domain. Through gradual participation within the domain, novices eventually become experts themselves.

In our classroom the students did not engage in learning through a single, hierarchical community of practice as suggested by Lave and Wegner, but through multiple communities as reimagined by McLellan (1996). Conceived as fluid constructs, students were allowed to create permanent or interim communities of practice, which they could enter and exit at will, according to their needs, interests, and desires. In this model, students enjoyed a more liberating and empowering schooling experience while still reaping the learning benefits afforded by a community of practice (McLellan, 1996).

According to Au (2002), a community of learning develops its own routines, rituals, artifacts and stories. During this study, our classroom functioned as a specific type of community of practice that contained a multiplex of micro-communities. Over the course of the school year, the children and teachers co-created a set of routines and rituals that permitted the unrestricted production of self-initiated creative artifacts and our own classroom story. In some ways our classroom could also be considered a “counter-cultural community of practice” (Duncan-Andrade & Morrell, 2008, p. 11) as we recognized the dominant set of institutional norms and practices in our school but then created a classroom community that in many ways countered the norms and practices.

Either way, our classroom community of practice provided a space in which I was able to develop personally and professionally as an artist, researcher, and teacher. As an
artist, I was inspired by and took an interest in my students’ self-initiated creative artifacts; as a researcher, I photographed and later analyzed the artifacts; and as a teacher, I reflected on the experience to see how it might inform my pedagogical practice.

Transactional pedagogy. In his research literature on creativity, Brent Wilson talks about three primary visual cultural sites. The first pedagogical site is located outside of the classroom where children “construct their own visual cultural texts” (Wilson, 2005, p. 18) and consume those made by others. The second pedagogical site is inside classrooms where the teacher directs the learning and the third pedagogical site is where a “transactional pedagogy” (p. 19) takes place and the visual cultural interests of teachers and students are equally valued and honored.

James Rolling engages with Wilson’s theories of cultural sites in his article, “Sites of Contention and Critical Thinking in the Elementary Art Classroom: A Political Cartooning Project.” James Rolling (2008) asks, “How does the young learner exercise agency if the reigning conception of children does not afford opportunities for them to demonstrate their agency in schooling practices?” (p. 9). In response to the query, Rolling (2008) looks to Wilson’s third pedagogical site where teachers and students act as “partners in pedagogy” (p. 9).

Wilson’s third pedagogical site reflects how the field in our classroom community acted as gatekeepers to the domain, but where all members had the ability to open the gate. Wilson envisioned situations in which all members of an educational environment may present their visual cultural artifacts for others to interpret and critique. What happened in our classroom during this study operationalized Wilson’s third site.
Data collection within the theoretical frameworks and practices.

Csikszentmihalyi’s Systems Theory of Creativity (1997), Vygotsky’s socio-constructionist theories (1978), Lave and Wenger’s communities of practice (1998), and Wilson’s (2005) concept of transactional pedagogy set the stage for collecting data on the self-initiated creativity of children in a general classroom environment and the subsequent analysis of that data to determine the ways in which children go about the learning process and navigating a classroom space. These theories and concepts also helped to illuminate what it means to facilitate self-initiated creativity within the everyday constraints of a schooling environment.

Our classroom practices that reflected aspects of the above theories and concepts removed many of the obstructions that normally hinder, discourage, or dismiss self-initiated creative actions to occur in an elementary classroom environment. For example, Wilson (2004) contends that the art of children is a “cultural construction” (p. 299) and “manifestations of various forms of cultural influence” (p. 300). These creative manifestations emerge from a multiplicity of visual cultural sources inside and outside the school environment. Inside the classroom the main sources emerge from teacher-directed instruction and other children. Teachers usually take notice of children’s artwork when it reflects the aesthetic styling of prominent adult artists within that culture. However, according to Wilson (2004), the most common forms of influence of children’s pictorial images are the graphic devices appropriated from other children. Furthermore, children must first willingly accept any cultural influence before it is internalized and then demonstrated within their own creative activities. Therefore, the self-initiated creative actions and activities of children are an amalgamation of elements within the
visual cultural environments that they choose to appropriate. The visual cultural amalgamation particular to our students eventuated in our classroom because they were given permission to freely engage in self-initiated creative endeavors and curate the classroom space with the visual aftereffects.

Lave and Wegner (1991) claim that knowledge among peers “spreads exceedingly rapidly and effectively” (p. 93). Knowledge acquisition is not an individual pursuit made independently of contextual influences; rather, knowledge is acquired by interacting within a community of one’s peers (McLellan, 1996). Our classroom contained a network of student and teacher generated communities of practice where each student had the freedom to develop their creative learning explorations as needed by taking advantage of a host of micro-communities of practice.

Our classroom practices enabled the students to engage in and share an abundance of self-initiated creative products and productions, which I would then document. Over the years this aesthetic license established a classroom environment where the children’s self-initiated creativity became a common classroom feature. These classroom practices led the Institutional Review Board to designate this research study as exempt from IRB review since it was research conducted in an established educational setting that involved the collection of existing data. However, my professional practice of regularly documenting the creative actions of my students influenced the ways my students engaged in creativity and subsequently, the data that was eventually used in this study.

**Trustworthiness and Validity**

Researchers use a variety of criteria to denote the validity of a particular study. Guba’s (1981) term *trustworthiness* has become the standard designation for “judging the
quality of action research” (Hinchey, 2008, p. 35). Guba suggested that the
“trustworthiness of qualitative inquiry could be established by addressing the following
characteristics of a study: credibility, transferability, dependability, and confirmability”
(Mills, 2000, p. 73, italics in original). There are different ways researchers may
demonstrate each characteristic.

Following Guba’s suggestions, credibility in this study was established in a
variety of ways. As a researcher who was also one of the classroom teachers at the study
site, I was “immersed in the setting” (Mills, 2000, p. 73). This immersion benefitted me
as a researcher because I could observe the participants for prolonged periods of time. As
their classroom teacher, I developed a rapport and built trust on a daily basis. This
immersion also gave my students time to become acclimated to my method of data
collection. Additionally, over the course of a full school year and during the subsequent
drafting of this study, I conferred with colleagues to help establish the context and culture
of the research site. Finally, because I worked closely with a teaching partner I engaged
in daily debriefing sessions to reflect, discuss student needs, and plan future lessons and
activities.

According to Creswell (1998), detailed descriptions of the participants and
research site “enables readers to transfer information to other settings” (p. 203).
Transferability was established in this study as I provided detailed descriptions of each
piece of data and the ways in which the data was collected. I also included historical and
contemporary portrayals of the research site, faculty members, and student body
permitting comparisons to “other possible contexts” (Mills, 2000, p. 74).
Lincoln and Guba (1985) suggest that researchers conduct an inquiry audit as a technique to demonstrate dependability. My teaching partner Eddie and fifth grade teacher Leah, took on the role of auditors for this study as we witnessed the data collection, read through portions of the report, helped to determine the accuracy of my findings, and offered feedback throughout the process.

According to Denzin and Lincoln (1998), “the use of multiple methods, or triangulation, reflects an attempt to secure an in-depth understanding of the phenomenon in question” (p. 4). For this study, data was collected using a variety of methodologies including photography, videography, first person, and textual accounts to assure dependability and confirmability. The data was then triangulated through comparisons and verifications.

**Generalizability**

In research studies, generalizability is considered to be a “process of theory formulation for further applications” (Mayring, 2007, p. 1). But the value of generalization in qualitative research has been debated. Critics such as Lincoln and Guba argue that all phenomena are context and time dependent, refuting the positivist version of generalizations as “truth statements free from both time and context” (1985, p. 38).

According to Myers (2000), qualitative studies cannot be generalized in the traditional sense by producing findings that can be applied from a group of participants in a single study to a wider population. Schofield (2000) added that, “one cannot just look at a study and say that it is similar or dissimilar to another situation of concern…one must ask what aspects of the situation are similar or different and to what aspects of the findings these are connected” (p. 88). Applying Schofield’s logic to a single classroom within a private...
school setting, the main line of inquiry focusing on the aspects of student agency and
creative learning offer insights that have relevance in a variety of elementary educational
settings, although this study pertains to the self-initiated creativity of children with a
particular group of students.

The stories chronicled in this study provide valuable insights to teachers who are
interested in exploring student agency and creative modes of learning in their own
classrooms. This study offers advice to teachers who are invested in democratic forms of
education but still have the obligation to find ways to manage their classrooms in
accordance with a school system and achieve the curricular learning goals of the school.
In the majority of schooling environments, teacher-directed approaches are commonly
found to be the answer to issues that arise regarding classroom management and the
delivery of academic content. Although the amount of student agency varies in different
classroom management techniques, most contain frameworks and protocols designed to
pilot student movement and direct student actions within a classroom space. It is easier to
“control” a group of students when their level of autonomy is allocated, regulated, and
monitored by the teacher.

The findings in this study reveal how children go about their creative learning
when offered agency and the types of classroom practices that support self-initiated
creative learning. The implications and degree of transferability of these practices to
other classroom contexts is dependent on a host of factors and variables. Nevertheless,
this study provides a basic pedagogical framework that may be customized, modified,
tailored, or adapted to fit many, if not all, elementary classroom contexts.
Limitations and Delimitations

This study included limitations and delimitations stemming from the demographics of the student body and the design of the study. Out of the 54 students in the fourth and fifth grade, 44 had parents who were medical doctors, lawyers, professors, professionals, or owned successful family businesses. Some of the fourth and fifth grade students were enrolled in our school because they had difficulty assimilating to the expectations of their local public school classrooms. For others, their parents enrolled them because they wanted their children to attend what they believed was the best college preparatory school in the area. During the 2012-2013 school year, all of the students in the fourth and fifth grade had parents who to some extent helped with homework, attended parent-teacher conferences, and advocated for their child’s particular learning needs. All the children in this study had some degree of parental support that helped them navigate the schooling environment and for many, established a position of privilege in the greater community as well. Therefore, this study was limited in that it examined the self-initiated creative processes, actions, and artifacts of a distinct type of student participant within a privileged sociocultural context.

The design of the study was framed by my dual roles as teacher and researcher. Data collection was restricted by my teaching responsibilities because they limited the amount of time I could spend documenting the self-initiated creative actions of my students. Being the sole researcher meant that I could only observe one creative activity at a time even if multiple instances were happening at the same time. Furthermore, this study only included the self-initiated creativity that I witnessed firsthand. Although I documented over a thousand instances of self-initiated creativity, many more went
 unnoticed because I was not there to witness their creation. For example, there were times when my students engaged in self-initiated creativity to in other classrooms, as they moved throughout the hallways, or while waiting in the bus line and parent pick-up area at the end of the school day.

**Summary**

During the 2012-2013 school year, I documented the self-initiated creativity of my fourth and fifth grade students in a private day school in upstate New York. An action research methodology allowed me to operate as both teacher and researcher in order to study acts of student artistry and agency in my own classroom. Studying my own classroom gave me an “insider perspective” (Sullivan, 1996, p. 220) yet at the same time I had to be cognizant of the personal biases and subjectivities that accompanying all forms of self-study.

Each day I used an iPhone to videotape and photograph my students’ self-initiated creative engagements. However, allowing my students the agency to openly engage in self-initiated forms of art making activities was in direct contrast to many of the traditions and conventional practices of the school, which led to a number of unintended philosophical conflicts with members of the faculty and administration.

By the end of the school year I had amassed 1038 pieces of raw data in the form of photographs and video clips in addition to hundreds of pages of email communiqués to help me form the narrative of my experience. After an initial analysis, 253 pieces of data were determined to be self-initiated according to the definition set forth in this study. Each piece of data was then organized into one of 27 categories based upon the type of artifact or the medium used to create it. After examining each piece of data, similarities
and patterns emerged resulting in 13 theme codes. Upon further analysis (described in the upcoming Analysis chapter) the 13 theme codes were reorganized into 8 fundamental attributes regarding the self-initiated creativity of children.

To establish validity, Guba’s strategies for ensuring trustworthiness were included as part of the methodology for this dissertation.
CHAPTER 4 - Findings

Introduction

During this study I assumed the dual role of classroom teacher and researcher. As a researcher I took photographic and video evidence of my students engaging in self-initiated creative activities and the resulting artifacts. Allowing my students creative agency in our general classroom environment and giving attention to their creative processes and products led to an implicit valuing of these activities. In turn, there was an increased production of creative artifacts and engagement with the creative process.

Over the course of the 2012-2013 school year my students produced a wide array of creative artifacts, 253 of which were classified as self-initiated according to the definition used in this study. They were then photographed or videotaped and organized into 27 different creative categories (see Appendix A):

- Habitats for Amphibians and Insects
- Cheerios
- Classroom space
- Dance
- Doodling on Math Pages
- Drawing
- Dyes
- Food Creations
- Forts and Spaces
- Frozen Creations
- Glue
What follows is a description of each piece of data found in each of the creative categories. All student names mentioned are pseudonyms.

**Habitats for Amphibians and Insects**

It was a warm, sunny, Friday afternoon in the first week of September. We had just finished lunch and taken the fourth and fifth graders out for recess. The previous Wednesday was the first day of school and the children were running about, becoming
reacquainted with old friends, and starting the process of making new friends. I noticed a few children watching Walter as he squatted in a dry patch of dusty earth carefully placing a handful of small stones in the shape of a tiny circle. Walter could usually be found making drawings and small constructions out of cardboard or paper. He enjoyed sharing his creations: holding them in the palm of his hand, dark bangs covering his eyes, his lisp at times making it difficult to discern his words. When I asked him what he was doing, he told me he was creating a cemetery for a spider. As the other children were running and playing, he was closely examining a small patch of ground to observe the activities of insects in their natural environments and noticed a dead spider. He decided to create an insect cemetery and gathered a handful of small rocks to serve as tombstones.

After this event, the self-initiated creative activity of my students involving amphibians and insects did not take place again until seven months later.

Figure 24. Data images 001 and 002. Walter using pebbles to create an insect cemetery. (2012)

Following a long winter of sledding and snowshoeing, spring had arrived and our recess time was once again devoted to exploring nature. I noticed a group of fourth grade girls turning over rocks that bordered a tree line at the edge of our campus. Every so often one would let out a squeal of delight. Curious to know what they were doing, I shouted to them across the field of patchy turf that made up our playground area. They huddled for a
moment and then ran toward me, the one in the lead cupping something in her hands. In a small soup bowl purloined from the dining hall were three Red-backed salamanders. I asked them how they started collecting salamanders. “We were looking for Roly polys (Armadillidiidae) and found salamanders so we kept on looking for salamanders because there’s so many of them” (personal communication April 19, 2013).

Figure 25. Data image 003. Red-backed salamanders. (2013)

Looking for insects and amphibians turned into a daily recess activity for many of the children. In May a group of fifth grade girls began collecting inchworms. This began after two of the girls, Tammy and Gloria, happened to find an inchworm on the underside of a leaf in a bed of Hyacinths that ran along one of the walkways. A third fifth grade girl named Stephanie expressed to me her plans, “they were so cool I wanted to do a project on them” (personal communication May 9, 2013).

Figure 26. Data image 004. Student gathers items for an inchworm habitat. (2013).
Instead of simply keeping their inchworms in bowls as the fourth grade girls had done with their salamanders, the fifth grade girls created extravagant habitats taking plastic containers and bins from our science supply cabinet. They decorated the insides with sticks, leaves, blades of grass, mulch and flower petals taken from flowerbeds around the school campus. They gave names to their inchworms such as Conway and Roxy and used Sharpie markers to write the names in bold block letters on the sides of the containers. Some names were cute while others were humorous. Stephanie named her inchworm Conway, while her friend Nadine named her inchworm Hopper because “it’s the opposite of his personality. He’s so lazy” (personal communication May 10, 2013).

Figure 27. Data images 005 and 008. Inchworm habitats decorated with petals. (2013)

Stephanie even mixed paint with Elmer’s glue and used an eyedropper to write, Conway, the name of her inchworm on a piece of wax paper to use as a cover for the habitat she made.

Figure 28. Data image 009. Name of inchworm written in glue mixed with paint. (2013)
Some plants and flowers in the habitats such as Bleeding Hearts (Lamprocapnos) were used for decoration while others were included as a food source. When I asked the students how they determined which plants were good for food they said they knew which plants the inchworms ate “because there’s always holes in the plants” (personal communication May 10, 2013).

After noticing the inchworm habitats lining the windowsill of our classroom, the fourth grade girls who were collecting salamanders also decided to use containers and bins from our science supply cabinet to create habitats for their salamanders. The salamander habitats appeared more utilitarian than the highly decorative inchworm habitats. Inside the salamander habitats were placed items such as mulch, twigs, moss, pond water, soil, rocks, leaves, ants, grasses and dandelions. The children displayed them in the classroom on a side table with signs containing the owner’s names, the names given to their salamanders (Rocky, Mary and Tyler) and the warning, Do Not Touch!

Figure 29. Data image 010. Utilitarian salamander habitats. (2013)
The girls told me they went online to research how to identify pregnant salamanders and found out how to tell the difference between male and female salamanders. They said the pond water (collected from a small canal that ran through our campus) and moss provided a place for the salamanders to lay their eggs, the rocks offered shade, and the ants were a food source.

![Image](image1.jpg) ![Image](image2.jpg)

Figure 30. Data images 011 and 016. Salamander habitats with moss, pond water, and rocks. (2013)

The salamander habitat projects continued throughout the month of May. Some of the children decided to use their salamander observations as part of a science experiment while others began to form partnerships to share in the construction and care of additional habitats.

![Image](image3.jpg)

Figure 31. Data image 013. Salamander experiment. (2013)
Libby was a loner. Even in a school such as ours that attracted its share of outliers, Libby stood out in this respect. I believe part of the reason was that Libby was constantly working on a drawing, painting, or sculptural object that left little time for developing relationships with her peers. She readily shared her creations with anyone who inquired, but she also seemed content to remain absorbed in her creative world.

Transition times were especially challenging for Libby. Often, Eddie and I would hear reports from her other teachers that Libby had a meltdown when asked to transition from one activity to the next such as cleaning up her area in the art room and going to music class. This happened in our classroom as well. Since Eddie and I team taught, while one of us escorted the rest of the children to their next class, the other could ease the transition for Libby by first having a brief conversation about her newest creation and then establishing a place in the classroom where her ongoing creations could be safely stored until she returned. Libby’s unique personality was reflected in her creative choices.

Watching the other children search for salamanders and inchworms prompted her to search for small critters as well. When I looked to see what she had found, I was surprised to see a small worm wriggling in the palm of her hand. She explained it to me this way, “I was trying to find a slug. I found some slug-like things but I also found Wiggles. I’m going to make a habitat for him because he’s adorable” (personal communication May 23, 2013).

Figure 32. Data image 015. Wiggles the worm. (2013)
Cheerios

During the 2012-2013 school year Eddie and I decided to give the students a designated snack time each day. The back door to our classroom exited directly to the playground and in good weather we would allow the children to have an outside break while eating their snacks. Because of dietary restrictions and food allergy concerns the school asked that we limit the snack options. We were able to get dry cereals such as Cheerios and granola from the dining hall and also fruits such as apples, bananas and oranges when available. At the beginning of the year I set up one of our folding tables by the back door where the students lined up to get their snack before going outside. Paper cups were used to scoop the cereal out of large plastic bulk-pack bags. Most students would eat the cereal by picking out pieces with their hands or pouring it from the cups directly into their mouths. A few students found creative ways to eat their snacks and also use them as a creative device.

A first, I did not think that Cooper was a child who liked to create. His powerful build, Mohawk haircut, and athletic prowess belied his penchant for artistic endeavors. During one of our snack breaks in early October, I watched as Cooper took a straw from our science supply cabinet and began to carefully string the Cheerios, one by one, over the straw. Thirty seconds ticked by as Cooper steadily and silently added Cheerios to the straw. Unable to resist I asked, “So, what are you doing?” Without missing beat he replied, “Making a Cheerio Kabob.” I followed up with, “Are you going to eat them or is it a design?” Before I could finish the last word of my question he said, “Yes, I’m going to eat them.” He then slid on the final Cheerio, turned and walked away.

A few weeks later during our snack break I saw a group of students, cups of
Cheerios and granola in hand, gathered around a fourth grade girl named Brenda, shouting something about a unicorn. When I approached, the children giggled and told Brenda to show me her unicorn trick. She responded that she was not a unicorn but that she had made a Cheerio Stick Hat. Brenda found a stick with a hooked end and placed it in her hair so that the hooked end protruded roughly six inches from her forehead. When I asked her to show me how it worked she bent her head forward putting the end of the stick into the cup to hook a single Cheerio. She then titled her head back up, took the Cheerio off of the stick, a popped it into her mouth.

Figure 33. Data images 017 and 018. Cheerio Kabob and Cheerio Stick Hat. (2012)

Our Snack Time gradually increased in length. By January it had become a 20 minute break where students could choose to do a variety of activities including using the classroom laptops, trying out routes on our indoor climbing wall, playing educational games on their personal digital devices, making artwork, or finishing up schoolwork. One student in particular, Tate, seldom ate a snack but instead used his cup of Cheerios as a creative medium. He would spell his name in large block letters by carefully gluing lines of Cheerios onto sheets of bright construction paper. This prompted a second student to make a human figure out of Cheerios while a third simply colored a single Cheerio with a marker creating a tiny, magenta, minimalist artifact.
Using Cheerios as a creative medium during snack time became increasingly popular among our students. One day in late February I walked back into the classroom after our snack break to find the children sitting at their tables and watching me intently. I sensed they were up to something as I walked to a cart in the back of the room to retrieve my laptop. When I got there, the classroom erupted with laughter. The children had decorated my laptop by placing Cheerios on the keyboard and track pad.

Figure 35. *Data image 021. Computer decorated with Cheerios.* (2013)
Classroom Space

Our classroom operated as a democratic environment where children were empowered through agency, self-governance and ownership of the learning space. Throughout the year the students had opportunities for choice in how they went about their daily learning. In January, a student decided to create a personal learning space in one corner of the room by propping up a climbing wall crash pad against an AV cart. In this space he worked on his math by taping a multiplication chart to the crash pad and using the lower shelf of the AV cart as a writing surface. A few days later, three girls approached me, and having completed their scheduled work for the day, asked if they could paint a bookcase. I approved of their idea and suggested that they first remove the books and shelves, put down a drop cloth and then use paint rollers and large 5-inch commercial brushes to apply the paint.

As the year progressed, so did the choices afforded to the students in how they went about their learning. Eventually students were allowed to generate personalized learning plans. At times our classroom became an “energized cooperative working...
“paradigm” (Rufo, 2013a, p. 149), which Eddie and I referred to as the buzz. During a buzz students could be found working on a wide variety of projects and activities at the same time.

In late February students worked in small groups or alone restructuring the classroom space according to their needs. One morning was spent by a group of four boys working on the classroom stage to create a series of fitness challenges for themselves. They stood on benches to hang a poster they made containing the fitness plan exercises so they could see it while exercising. Another group of students set up laptops on tables set along one wall to work on their math skills using the Khan Academy website. One student moved about the room organizing supplies and using a Shop-Vac to clean the floor while two others stood at a center table observing the movements of a hamster for their science experiment. A group of boys and girls set up a private rehearsal space by propping up two large climbing wall crash pads in one corner of the room. Here they worked on a scene from Hamlet. In the back of the room a group of three girls decided to choreograph a dance routine. In the front of the room, two students sat on the floor with a ream of paper and rolls of masking tape constructing towers and other three-dimensional structures.

Figure 37. Data image 025. Students use crash pads for a private rehearsal space. (2013)
Mornings provided additional time for our students to have agency in how they navigated and interacted with the classroom space. As a private school, some of our students arrived on buses from various school districts while parents and caregivers dropped off other students on their way to work. Although our day was scheduled to begin at 8:00 a.m., most of the children generally arrived anywhere between 8:00 a.m. and 8:15 a.m. We felt our students needed time in the morning to transition to their school environment and so we allowed them to spend the first twenty minutes of the day mingling and catching up with friends before they left for Physical Education at 8:15.

One morning in late May students gathered around our large butcher-block style tables in center of the classroom playing a game they created. Others organized our classroom computers, drew and wrote messages on the whiteboard in front of the classroom and worked on a project in the back of the classroom.
Dance

Being able to transition quickly and quietly from one classroom to another was considered an important skill in our Lower School. As previously mentioned, Libby had difficulty during transition times. While the other students gathered their belongings and were exiting the classroom, she would usually be found in a corner of the room involved in some type of creative activity. One day in late February as students were cleaning up and organizing their materials getting ready to transition, Libby found two sticks with...
caution tape tied to the ends that another student had made during recess and brought into
the classroom. She picked up the sticks and performed a ribbon dance.

Figure 41. Libby doing a ribbon dance. (2013)

Doodles on Math Pages

While sitting next to each other during math class, I noticed Walter and Tate
drawing doodles along the margins of Tate’s math packet. I walked up to them and asked,
“What’s going on here?” Walter tapped the eraser end of his pencil on the images as he
identified each one, “Well, that’s a baby, ghost, evil dude. Tate drew that guy who’s
going ‘what the heck,’ car, worm, light bulb” (personal communication January 17,
2013).

Figure 42. Data image 028. Walter and Tate’s doodles. (2013)
Math class was a time when even the more reticent children engaged in self-initiated creativity. When they first entered our classroom as fourth graders, Hannah, Jodie, Nolan and Natasha were shy and timid. Hannah’s mother told me that Hannah was bright and capable, but seldom put forth her best effort. This was Jodie’s first year at our school and her personnel file indicated that she became withdrawn after having a difficult experience at a local public school. Nolan and Natasha’s third grade teachers informed us that they both struggled academically and would often “check out” when it came time to do class work.

Early on, Eddie and I noticed that all four children had a sense of humor. When we would tell a joke or share a humorous anecdote they would quietly chuckle and try to hide their amusement by covering their faces with cupped hands or a sheet of paper. All four children were also artistic and enjoyed drawing cartoon characters. Eddie and I thought the best approach to helping these students would be to first build their self-confidence. One technique we used was acknowledging their artistic talents by entering into conversations about their creations. By October they started to become more outgoing and by December they voluntarily shared their drawings, which were usually accompanied by witticisms and amusing anecdotes.

Eddie and I could see their increasing self-confidence in the self-initiated drawings they made on their math papers and homework assignments. One day in math class Jodie drew a humorous cartoon on a math page of long division problems. On the left panel she wrote “Miss Hunters Candy Shop” and “Children are not welcome.” On the right panel she wrote, “I hate children!”
Hannah created a series of tiny illustrations with captions on a homework page containing division problems. Interspersed were additional drawings: a small and large flower with the words “before” and “after”, tiny grid structure titled, “mini-COMIC” with the words, “Cow-Boy Guy” in the last panel. She drew decorative dots, lines, stars, moons and flowers. She wrote, “C.O.O.L. is bad” with a double arrow connecting it to the next problem under which are written the words, “Awsome [sic] is good!” At the bottom of the paper she drew a cloud shape with the word “Messy” written inside. I found out later that C.O.O.L was an acronym for Constipated Overrated Out-of-style Loser.
Nolan created a drawing of six small stick figures contained within a stepped structure and Natasha used a Common Factor practice sheet to create fingerprints. She drew a series of stars at the top of the page and a stick figure with horns on the bottom right with a head filled in with deep blue marker ink. To the right of the figure’s head was an arrow with the words, “insert thumb here if you want to make this.” A line went from the word “this” to encircle one of seven thumbprints dotting the page.
Figure 45. Data images 031 and 032. Doodles on math pages by Nolan and Natasha.
(2013)

Drawing

Harlan was another student who was new to our school and coming off a difficult public school experience. Harlan was very bright, but very resistant to doing traditional schoolwork such as reading and writing. Harlan always had some type of side project in the works. Whatever activity was happening in the classroom, Harlan would also be dismantling a small gadget he brought in from home, fabricating a toy from detritus he picked up around the room, or working on a drawing. In late September I saw him create a nametag on a piece of torn scrap paper. He used a yellow highlighter to write his first and last name and then a black Sharpie marker to color in the background.
In early October Libby created a drawing titled, Girl Universe. Various planets and stars we colored in with the names, Alien, Moon, Flower, Champion Planet, Old Fashioned, The Star, Ballet Planet, S.Q.U.A.R.E. and Disco Hip Hop Rock and Roll Cool Lilly described her drawing this way:

“This is Girl Universe. There’s a planet for boys, Planet Boy, and there are black holes to go to other universes. There’s Planet Flower; it’s all about gardening. There’s Alien and Moon too and this is Champion Planet over here [where] everyone wins! [On Alien Planet] it’s just like Earth but everything’s opposite. And there’s Old Fashioned where everything is like black and white. There’s The Star, which is like the sun. Disco Hip Hop Rock and Roll Cool it’s just all about dance. S.Q.U.A.R.E. is actually just like Minecraft and there’s Ballet Planet; it’s just ballet” (personal communication October 2, 2012).
In our class we had a number of students who liked to create but did not like going to art class. Usually it was the children who had attended our school since Pre-K or Kindergarten who made this complaint. They criticized the activities as repetitive, the teacher demonstrations as too time consuming, and the fact that they were never allowed to come up with their own projects. This led some of the students to self-identify as being non-artistic. Meanwhile, in our classroom three of the students who fell into this category created a variety of artworks. One boy made a highly energetic and expressionistic drawing of figures he named Bill, Josh, and Bob. During a snack break a fifth grade girl named Lydia, showed me how she came up with pictures by first scribbling on a page and then looking for images within the scribbles to develop into realistic renderings. In

Figure 47. Data image 034. Libby’s Girl Universe drawing. (2012)
one drawing she identified a penguin, frog, hummingbird and snake. A few days later a fourth grade girl named Nicole, created an abstract drawing on a piece of cardboard she found in the garbage.

Figure 48. Data images 035, 036, and 037. Expressionistic drawing, random scribble drawing, and abstract drawing. (2012-2013)

A week later, Lydia taped together nine sheets of copy paper and drew a large geometric figure she called Triangles of Snow. She then asked that it be hung on the ceiling.

Figure 49. Data image 038. Triangles of Snow drawing hanging on the ceiling. (2013)
In late May, Libby who had made a habitat for her worm Wiggles, choreographed an impromptu ribbon dance, and created the Girl Universe drawing, kept coming up to me in math class and asking for tissues. She had a head cold and was going through our supply rather quickly. Since Eddie was leading the class I was able to go to the nurse’s office and gather an armful of boxes to replenish our supply. When I returned I placed a box next to Libby and joined in for the remainder of the lesson. A few minutes later Libby came over to me and whispered that she could not find any of our Sharpie markers. I asked her why she needed a Sharpie marker and she told me that she wanted to draw something on one of the tissues. I told her that a Sharpie marker would immediately bleed through a tissue and that she should use a sheet of copy paper. She began to argue that it had to be on a tissue. Sensing that she would not be persuaded, I gave her a Sharpie marker from my personal supply.

At the end of class after the students had left for an encore class I went around the room picking up items that some of the students left behind. At Libby’s seat I noticed a drawing of a large black heart in the center of a tissue.

Figure 50. Data image 040. Libby’s heart drawing on a tissue. (2013)
Ally was the daughter of Leeann, our new Lower School head. The same day Libby made her heart drawing I observed Ally using Model Magic (a non-toxic modeling material sold by Crayola) to create marks on a sheet of loose-leaf paper. While Eddie was leading the class through a series of long division problems, Ally kneaded a golf-ball sized, black lump of Model Magic compound into various shapes and pressed the form onto the paper. She then peeled back the Model Magic leaving light charcoal gray marks where the compound had been. She continued this process until the sheet was covered with a string of looping blotches and stains, lifting her head now and then to see what Eddie had written on the whiteboard. The next day Ally placed strips of masking tape across sheets of white construction paper before applying the Model Magic. When finished creating marks with Model Magic she peeled off the strips of masking tape to reveal straight white lines cutting through the background imagery.

Figure 51. Data images 039 and 041. Ally’s Model Magic drawing on notebook paper and using masking tape to create stripes on copy paper. (2013)

The following day was raining and so we had recess indoors. The class voted on watching a movie. As the children were arranging chairs to sit on and climbing wall crash pads to lie on, Ally set up a temporary art studio space on one of our classroom tables. She placed a plastic container of water nearby so she could dip the Model Magic in the
water, knead it, and use different techniques to create a variety of marks. She pressed it into the paper, lightly dropped it on the surface of the paper, and squeezed it hard enough so that wet sludgy streams ran out between her fingers and onto the paper. These techniques yielded a series of 22 images ranging from light dusky gray impressions to heavy, dark, liquid compositions.

Figure 52. Data images 042 and 043. Ally’s Model Magic drawing studio and one of her drawings showing the effects of her Model Magic and water technique.

Later that day Ally gave me a tour of her studio and described her working process. She told me that she started using the water to extend the life of the Model Magic as it began to dry out. She then tried to make a splatter effect by throwing a wet ball of Model Magic at the paper but instead it caused the compound to stick to the paper and leave a dark impression. She accidently stumbled upon a technique that created deep black tendrils of meandering loops and blotches when she mixed too much water into the Model Magic and held it over a piece of paper so that it would not drip onto the floor. When other girls became interested in what she was doing she got a long roll of paper to allow multiple students to work at the same time and create a large picture using her techniques.

I worried about what Leeann would think of the fact that I allowed her daughter to
create whenever she was in our classroom, Ally produced a prodigious amount of
creative work and it seemed as though something inside compelled her to make artwork.
Earlier in the year, Ally’s mother told me Ally had a learning disability and difficulty
focusing. Because of this, I tried to have Ally engage in her academic work separate from
her creative work. However, this approach just made Ally become frustrated and want to
shut down. I decided that Ally needed to create, so I did my best to conceal the fact that
she was making creative work during Math class or STEAM. However, it was the final
week of school by the time that she was making her Model Magic drawings so I allowed
her to take this activity as far as she wanted whenever she wanted.

Dyes

In early February, Ally took a handful of small plastic vials from our science
supply cabinet, filled four of them with water and added drops of food coloring and
pinches of glitter. A few days later she took more vials to incorporate into a science
experiment involving reflection and refraction. This time she added glue, twine, copper
wire, foil, scrapes of masking tape, the bulb of an eyedropper and a rubber pencil grip to
the water and food coloring in the vials. Ally continued her experiments and observations
throughout the month of February doing things such as placing her food coloring and
water mixtures in our classroom mini-fridge and collecting dried paint fragments in a test
tube.
Figure 53. Data images 047, 048, 049, and 050. Ally’s vial experiments clockwise from top left: Food coloring with glitter. Food coloring with glue, twine, copper wire, foil, scrapes of masking tape, the bulb of an eyedropper and a rubber pencil grip. Frozen food coloring and water mixture. Dried paint fragments.

In April Ally teamed up with a friend to create a color series by removing the ink cores from markers and pouring water through them into small plastic containers. They described their process:

“We cut open the markers and took this part [end cap] of the marker off. There’s this long thing full of ink [marker core] and we took that out. Then we poured water inside of it and it would come out. If it was too dark we’d pour some out and add more just plain water and we got our colors. This is red, orange, yellow, green, blue, indigo, purple, and pink” (personal communication April 19, 2013).

The practice of obtaining color from marker cores became increasingly popular. A fifth grade girl named Tammy, added liquid soap to her ink and water mixture and called the resulting substance “unicorn foam.”
Figure 54. Data images 051 Color series from marker cores, and video still image of Tammy’s unicorn foam.

During recess the students enjoyed creating structures and spaces in the wooded areas that bordered the campus of our school, which they called their forts (Rufo, 2012a). As the number of forts increased, students began to develop tools to perform various functions. A group of girls set up a craft studio in a clearing in front of their fort. Using a cinderblock as a motor and a rock as a pestle they ground up plants to create dyes and potpourri. They told me, “We’re making dye, natural green dye. We get a bunch of these garlic mustard leaves and crush them with a rock. It smells good, like a pizza!”

Figure 55. Data images 053 and 055. Creating green dye and potpourri.
Back inside the classroom a fifth grader named Nadine accidentally discovered that tissues soaked with hand sanitizer absorbed the ink from drawings our students made on the classroom tables (Rufo, 2012b). Nadine continued to experiment and eventually developed a process where she created a design on a tissue with hand sanitizer then flipped the tissue over on a table and gently pushed down so ink from the table drawing absorbed into the tissue. She then carefully rubbed the tissue around the surface of the table to absorb more of the ink and placed a second tissue on top of the first pressing firmly with an open palm to soak up the excess. Finally, Nadine opened the ink stained tissue back up, tore it into little pieces rolled up the pieces into a ball, wrapped it in cellophane and affixed the end with a rubber band.

![Figure 56. Video stills showing tissue dye process.](image)

**Food Creations**

At our school the children and faculty ate lunch together in the dining hall. Each teacher sat at a table with eight students. At my table I allowed students to use their food and other dining hall items for their creative expressions. In early September one of the girls who would later make the green dye in her fort, created a figure out of her placemat.

![Figure 57. Data image 056. Placemat figure.](image)
Apples were plentiful in the dining hall and provided a ready-made material for carving. Harlan, the boy who a few days earlier made the nametag, used a butter knife to carve an alien spaceship out of an apple. He created a front hatch that lifted up to reveal a rectangular space out of which he carved the alien figure. The figure fit perfectly in the rectangular void so that the hatch could close. He also hollowed out a space for a trunk on the opposite side of the apple with a hatch that could be raised or lowered.

![Image of carved apple](image1)

Figure 58. Data image 057. Alien spaceship carved from an apple.

Tate, the boy who liked to write his name in Cheerios, used his teeth to carve out a bespectacled face on an apple. A fifth grade girl also used her teeth to carve a ribbon-like strand of skin and flesh from an apple. The next day Walter, the boy who created the spider cemetery, used a butter knife to carve what he called an Apple-O-Lantern.

![Image of carved apple](image2)

Figure 59. Data images 058 and 059. Apple strand and Apple-O-Lantern.
Hannah, the fourth grade girl who liked to create humorous doodles on her math homework, decided to put ketchup on her chicken patty after taking three bites. When she took off the top part of the bun and placed it next to the bottom part, she found it resembled an angry face. She used ketchup to draw in eyebrows, eyeballs and a nose. She described it as an angry old man with a beard.

![Angry Face](Image)

Figure 60. Data image 060. *Angry old man with a beard made from a chicken patty.*

Ketchup was also used to convey messages. Toward the end of the spring semester a fifth grade girl used ketchup to write the message, “We will miss u” on the top portion of a hamburger bun, which she presented to a student teacher who was spending her last day with our class. The next time ketchup was available she wrote, “! Smile” along with a happy face on her plate of fries.

![Message](Image)

Figure 61. *Data images 063 and 064. Messages written in ketchup.*
Periodically the dining hall would run out of stainless steel flatware and the students would be required use plastic utensils. These items also provided creative fodder as can be seen from a February 14 photo showing Cooper (the boy who made the Cheerio Kabob) with fangs made from plastic fork tines.

Figure 62. Data image 062. Plastic fork tine fangs.

Forts and Spaces

In the fall of 2009 Eddie supervised our students as they began to explore areas beyond the school’s playground during recess. Within a few weeks the children constructed numerous fort structures with connecting pathways. Soon the forts “had become so popular that at any given recess up to 25 students could be found working on them” (Rufo, 2012a, p. 42). Many of the younger children in the earlier grades would peer through the chain-link fence boarding the small playground and watch our kids moving about their fort areas. Each fall our new students would excitedly ask if they too, could take part in the fort building activities.

On the first day of school in 2012, the students organized themselves into groups and assigned each a role to construct the first fort of the school year. They found a deflated kickball and placed it on the end of a long branch wrapped with duct tape to use as a flagpole. The fort included other elements such as a ring of rocks to serve as a
pretend fire pit and a gate structure made out of branches along one of the paths.

The next day, two students organized a method to harvest long stems of golden rod to use as insulation in the fort. At the same time a group of girls decided to inhabit an abandoned fort constructed by students who had graduated the previous year. They created a broom from long grasses attached to the bottom of a branch and used it to sweep and clean the grounds around their fort area.

A few days later a student brought in fifty feet of nylon rope and a pulley to create a rope tow to transport supplies and visitors to a fort built at the top of a steep hillside. The next day a boy and girl used a similar rope to drag heavy limbs up a hillside in a wooded area where they decided to build a fort. They added additional rope creating a tandem rope tow so they could access their fort at the same time.

![Image](image071.jpg)

Figure 63. *Data image 071. Students using a double rope tow.*

On another portion of the wooded hillside a student created a raised structure of branches and ropes. He propped a dead branch in the forks of trees to use as a handrail allowing safe movement from one raised portion to the next.
In late September a team of three students constructed a roof by weaving sections of dead branches while at the base of the hill, the girls who made the green dye and potpourri used shorter branches, sticks and grasses to create a thatched style roof design.

Figure 64. Data images 073 and 074. Branch and thatch fort roof structures.

The following day they made a window by opening up a hole in the fort wall and one girl used a sharp stone to carve a stick she planned to use as some type of tool. They rolled large stones into their fort to use as chairs and stored rolls of duct tape on a low hanging branch. They then designed a path with a decorative stone border leading to their fort.

Figure 65. Data image 077. Stone path to fort.
Two days later the students who had built the original fort atop the hillside added a roof by feeding two long branches through the forks of Sumac trees and laying rows of shorter branches across them and a member of the fort with the stone pathway created a crude basket made of sticks and masking tape.

The students were allowed to expand their fort boundaries as long as they adhered to a few safety rules. One was that they emerged from the wooded areas and gathered together when Eddie whistled signaling the end of recess.

![Figure 66](image080.jpg)

Figure 66. *Data image 080. Students emerging from woods at the sound of Eddie’s whistle.*

Cooperation became integral to the success of the fort building projects. Students soon became known for specific skills that could be used as bartering units. One such example was when a group of girls employed a student who was adept at designing and constructing roofing systems. He was allowed access to their fort if he showed them how to construct a stable roof.
Eventually, students found additional ways to entertain themselves in and around the fort structures. In early October a group of girls noticed a low hanging branch that sagged and sprang back up when they put weight on it or took weight off of it. They called it their Bouncy Seat Toy and took turns gently bouncing on it. The following week they added a gate to their fort by feeding a long thin branch through scrub brush on one side and a low hanging branch of an old massive Sugar Maple on the other. In November after the leaves fell, students noticed loops of thick vines hanging a few feet off the ground and used them as swings.
As forts were completed some of the students began to use their fort areas as settings for imaginary games. Two groups played what they called the Queen Capture Game. The participants “captured” the opposing team’s queen by gently tapping her with sticks they decorated with duct tape. Once tapped, the queen would be required to accompany them to their “jail” which consisted of a small clearing hollowed out in the undergrowth near their fort area.

The next day the game morphed into an activity they called The Fort Capture Game where the goal was to capture all the members of the opposing side in addition to their queen. Many students integrated a slow-motion choreographed jousting routine into the game. As popularity grew and more students participated, teams began to apply specific patterns of colored duct tape to their faces to signify their team affiliation and to alleviate confusion during gameplay. Duct tape became a sought after commodity in and around the fort areas. Students brought in rolls of various colors and patterns to decorate, personalize and identify their walking sticks. Broken branches made convenient holders for multiple rolls of duct tape.

Figure 69. Data image 095 and 087. A student points to his team affiliation marking made of duct tape and a broken branch used as a duct tape dispenser.
Sometimes the fort activities brought children together who would otherwise have not associated with each other. Lydia, the girl who made the scribble drawing, was considered by the faculty to be courteous and bright. Tammy, the girl who made the Unicorn Foam, had a reputation for being a troubled student who fabricated stories and was a bad influence on others. But during one recess in early October as I was checking in on the fort building activities, Lydia and Tammy excitedly called me over to see their new creation. I saw a long branch with what appeared to be trash hanging from thin shoots growing from the main branch. In her clipped, rapid fire delivery Tammy described what I was looking at:

“This is our stick of fame. We have gloves, all the duct tape we’ve traded, a little popper thingy we found, and a hand wipe. She [Lydia] had to wipe her hand after touching a boy’s hair and we hung it up here and it looks mah-ve-lous! The popper thing actually pops and this is the empty Rufo duct tape holder and that goes right here on the stick of fame” (personal communication October 10, 2012).

Figure 70. Data image 085. Stick of Fame.
After making my rounds to see how the children at the other forts were doing I returned to Lydia and Tammy’s fort. As I slowly made my way up the hillside I noticed a few other girls had joined them. Tammy excitedly announced, “Mr. Rufo guess what? We’re tiling the floor with smooth rocks!” Suddenly, Gloria jumped off of the nearby bouncy seat branch and interjected, “Tiling was my idea Rufo” (personal communication October 10, 2012). As I watched, Tammy used a stick broom to sweep away leaves while Gloria fetched the stones and Lydia laid them in place.

Figure 71. Video still. Looking up the hillside toward Lydia and Tammy’s fort

Lydia also developed a technique to create a wind and rainproof roof. Gloria brought her handfuls of uncut grass from the edge of the playing field, which Lydia twisted into long clumps and tucked in the crevasses between the branches and then covered with a layer of sticks.
Figure 72. *Data image 089. Lydia constructing a wind and rainproof roof.*

Many of the students became territorial about their forts. Each fort had a specific number of members based on the size and popularity of the fort. Newcomers who wanted to join a fort had to be voted in by its members. Alliances were created and dismantled on a weekly basis. Occasionally agreements over boundaries would erupt and fort members would usually ask Eddie or I to help mediate. However, Libby took a different approach and created what she called a Fort Resort. The Fort Resort did not contain a structure but consisted of a small clearing among young maple and boxelder trees onto which were attached a variety of objects and artifacts made from paper cups, string and masking tape. Students were invited in and given tours of the decorative elements such as a miniature hammock and flower holders.
A week after it had began, Lydia, Tammy, and Gloria developed new tools and techniques to install the large flat stones they gathered as tiling for their fort floor. Each day they cleaned out the channels and grooves between the stones using short, thick sticks. They used a scrap piece of 1 x 2 furring strip as a lever to position the heavier flagstones they procured from the backyard of the old and recently vacated Headmaster’s residence that bordered their fort area. They were joined by Ally who showed them how to move the stones longer distances by employing a “walking technique” moving one side forward then rotating the other side forward and so on.
The fort building tasks required cooperation among the students. Over the course of a week, three boys were willing to spend most of their recess time brainstorming ideas and methods on how to remove an old tree stump. As the weather turned cold, Lydia, Gloria, Tammy, and Ally figured out an effective way to create an insulated fort wall by turning a discarded wood pallet on end and stuffing it with grass, twigs, and leaves.

![Image](image1.png)

**Figure 75.** Data images 096 and 097. Boys removing a tree stump. Lydia, Gloria, Tammy and Ally insulating their fort.

By late November the best locations for fort construction were taken. Hannah and Natasha decided to leave one of the larger fort groups and create their own. However, one of the few spots left included only a handful of mature trees set wide apart. To solve this problem the girls brought in a large coil of nylon rope, which they weaved around the trucks of three large trees and multiple saplings in a spider web pattern. To create a roof, they simply tossed a variety of branches and sticks atop their nylon web.
In early December brown leaves littered the network of pathways that weaved throughout the woods between fort structures. Harlan (the student who carved an alien spaceship from an apple) used a hooked branch he called a Sweep Tool to push the leaves aside.

Throughout the year the students asked for permission to expand the boundaries where they were allowed to build forts and requested that I accompany them to explore new areas around the 26-acre campus. During one of these treks we came to an embankment near a service road where the school’s maintenance department dumped
brush and surplus building materials. At the top edge of the embankment were piles of leaves, brush, mulch, asphalt, gravel, sections of PVC pipe, pressure treated 4 x 4 timbers a few bales of hay and cinderblocks scattered about. One of the girls from the group who had created the green dye and potpourri happened to poke her walking stick into one of the piles, and discovered broken bricks and old pavers buried under the mounds. This led to an organized effort where the children foraged for bricks and pavers by poking their walking sticks deep into the piles until they hit something hard. A few students grabbed armfuls of bricks to construct a wall between two trees in their fort. To make their job easier, they obtained disc sleds to which they attached pieces of nylon rope to use as a long handles. They loaded the sleds up with bricks, pavers, and cinderblocks then multiple students took hold of the rope and drag the sled to their fort area.

![Using sleds to transport bricks and pavers.](image)

Figure 78. Data image 103. Using sleds to transport bricks and pavers.

In January, February and March, as the forts became buried in snow, sledding and snowshoeing treks took over as the favored outdoor recess activities. When the wind chill fell below 10 degrees Fahrenheit, we spent recess indoors. Our students were allowed to
construct indoor forts and spaces from a variety of materials including climbing wall crash mats and large canvas drop cloths, AV carts and stepladders, and portable white boards strung with caution tape.

In early April the snow had melted enough to once again allow access into the outdoor fort areas. A group of students decided to expand their fort territories to include the backyard of the old headmaster’s residence. More nylon rope was procured and wrapped around trees in a thicket to demarcate boundaries. New roof designs were created. Thicker, stronger ropes were incorporated into the design of the forts. Wooden pallets served multiple functions as walls, ladders and floors. One student created a stone foundation to level the pallet floor of his hillside fort.

Figure 79. Data image 108. Fort building resumes.

Ropes became integral to the fort building experience. One student created a rudimentary pulley system by tying the end of a rope around a rock and tossing the rock
over a branch. He tied the other end of the rope around the trunk of a small fallen tree so he and his friends could transport it up the hillside to their fort. Two days later Ally, Tammy, Lydia, and Gloria used a similar rope to drag a fallen twenty-foot Cherry sapling up a hillside, across a practice field, and through the tennis courts to their fort area.

Figure 80. Data image 112. Harlan integrates nylon rope into his fort structure.

Figure 81. Data image 111. Ally adjusts the rope on a small Cherry tree.
By May, the forts continued to grow in popularity. New materials such as canvas drop cloths were integrated into the fort designs. The network of paths connecting the forts were further developed and expanded which led to increased trade and bartering. Two boys set up a “stick snapping” business along the side of one especially busy pathway. Their main tool was a heavy wedge of pressure treated lumber. With the forts established, attention turned to decoration, design and visual experimentation. Libby added a stone bordered entry to her Fort Resort area, carefully trimmed the grass with a pair of scissors and invited students to attend tours. Two boys made decorative bays by stacking branches atop low stonewalls they constructed from gabion stone taken from a nearby drainage system. Another student found that removing the bark from a young maple made it appear as a light colored pillar in the midst of the deep green wooded area.

Figure 82. Data image 113. Canvas drop cloth integrated into a fort design.
Figure 83. *Data image 114. Student running down a pathway in the undergrowth.*

Figure 84. *Data image 116. Libby’s Fort Resort entry.*
Frozen Creations

In the back of our classroom we had a mini-fridge. The students had access to the mini-fridge and through experimentation had found they could convert the whole unit into a freezer by turning the temperature control dial to its lowest setting. One day Libby saw her classmates filling latex gloves with water and “just playing with them like water snakes” (personal communication February 7, 2013). Libby told me the students were creating their own version of a popular stress relieving fidget toy called Water Snake Wiggles. She decided to do the same but also filled her glove with food coloring, secured the end with masking tape and placed it in the mini-fridge to freeze.
A few weeks later Ally created a similar frozen object and removed the latex glove after it froze to see what it looked like. Additional students began to use the classroom mini-fridge for a variety of frozen creative experiments that involved paper and plastic cups, string, scissors, latex gloves, food coloring, plastic wrap, kidney beans, wax paper, plastic containers, aluminum foil, beakers, tissues, and test tubes.
Glue

In January I started to notice geometric designs drawn in marker on graph paper covered in some type of transparent glossy coating drying on the windowsill in the back of our classroom. When I inquired, I was told that they were sticker projects created by three fifth grade students, Angela, Stephanie, and Gwen. I later learned that the sticker projects were usually made during our indoor recess times but there were some students who also made them during math class. I asked the three girls how they made these stickers. Stephanie told me that the first step was to draw a design on a piece of paper, “then laminate it with glue.” Angela added that it was then placed it on “a plastic surface so that it’s easy to peel off and then you put like double-sided tape on the back to make it sticky” (personal communication January 24, 2013).

A few days later Gwen experimented with a different technique. She first covered the back and front of her sticker design with glue. Then she set some on a wooden board and others on wax paper to see which would peel off more easily after the glue dried. She also showed me how she wrote her name with a glue and food coloring mixture on wax paper to create a three-dimensional nametag.

Figure 88. Data image 125. Gwen’s sticker experiment on wax paper and wood board backings.
Elmer’s glue quickly went from being used as an adhesive to being used as a creative medium. It began when another fifth grade girl, Stella, filled the bottom of a paper cup with glue, added red food coloring and gently stirred with a large toothpick creating red and white paisley swirls. This idea evolved as she added small bits of paper to suggest crackers and called it Fake Soup.

Figure 89. Data images 124 and 126. Stella creates Fake Soup.

Over the next few weeks using glue as a creative medium gained in popularity. In February I watched as Ally poured small pools of glue onto wax paper, added drops of food coloring, swirled the mixture then added a pinch of glitter.

Figure 90. Data image 127. Ally combines glue, paint, and glitter.
The day after Valentine’s Day, Tammy teamed up with Stella to create something they called Prank Chocolates. They did this by taking an empty heart-shaped box and pouring Elmer’s glue and paint into the plastic candy insert. They used Elmer’s glue to represent white chocolate, brown paint for milk chocolate, and black paint for the dark chocolate pieces.

Figure 91. Data image 128. Prank Chocolates by Tammy and Stella.

Soon more supplies were taken from the science cabinet and integrated into the students’ creative experiments. Ally observed a friend dribbling skeins of Tacky Glue onto the top of a water and food coloring mixture and decided to do the same. For her technique, she first poured the Tacky Glue into a small measuring cup for better control as she carefully dribbled it onto the top of a blue food coloring and water mixture in a small polystyrene jar.
The final project before the glue ran out was a work called Colored Glue created by Libby. She told me, “I was thinking I could start a fake business where I just give out glue that’s colored. It’s just glue with food coloring in it. These are dried cups of it.” When I asked her why she had toothpicks on either side she said, “They’re exclamation points, see?” (personal communication March 20, 2013).
Head and Hand Accoutrements

The children would often create a variety of accoutrements for their heads, faces, wrists and fingers. Nicole started this trend. Although Nicole was a fourth grader, she was the tallest student in our classroom. Her mother was very involved in the school, serving on numerous committees, volunteering for fundraisers, and scheduling meetings with Nicole’s teachers in addition to the parent-teacher conferences. Nicole seemed uncomfortable with the added attention and would attempt to feign a detached affect but her gregarious nature often made her the center of attention. During one snack break a Nicole walked up to me and pointed to the top of her head. Embedded in her hair were five Cheerios. When I asked what she had done she responded, “I decorated my hair with Cheerios” (personal communication September 13, 2012). A few weeks later she showed me a sprig of leaves from a Dogwood tree she had placed in her hair.

Figure 94. Data images 131 and 133. Nicole’s hair decorations.

My students also created items to cover or adorn their faces. One day Stephanie decided to make a Vandyke style beard out of masking tape. Jodie designed a heart-shaped mask that she cleverly kept in place with her eyeglasses. Later in the year I found a flyer that Stephanie attached to our door titled, Need a Moustache? The flyer included a row of tear-off paper mustaches along the bottom.
One day in February our classroom experienced a sudden surge in the creation of head and hand accoutrements. It began as the fourth graders were cleaning up and getting ready for lunch. One student had a roll of tinfoil that he was using for his science experiment. As if a flash mob had formed, they all, one-by-one, began to use the tinfoil to create earrings, bracelets, rings, armbands, belts, eyeglasses, beards, moustaches, prosthetic noses and facial growths.

Tattoos have always been popular with my students. Libby came up with a product she called Totally Temporary Tattoos. To create her tattoos she drew a design on a piece of duct tape with a water-based marker. She then pressed the side of the tape with
the design into her arm and peeled it off to reveal a faint image of the design on her skin.

She then made a sign to advertise her tattoos and posted it on our door next to
Stephanie’s moustache flyer.

Figure 97. Libby’s Tattoo advertisement

Masking and Duct Tape Creations

Masking tape and duct tape were used for a number of different applications and
activities in my classroom. I purchased a carton of masking tape hoping it would last for
the duration of the school year and two rolls of duct tape were included on the supply
lists for each student; however, “The masking tape became so popular that all 48 rolls had been used up by January” (Rufo, 2013b, p. 108).

Throughout the year students created jump ropes, pretend casts, animal forms, figures, bags and pouches, wallets, and mats. They also wrapped pencils, pens, and markers in masking tape. The students made items from masking and duct tape as props to go along with their imaginary games. There were duct tape ID bracelets that served as passes to enter specific forts. Libby made what she called a Monster Hunting Whip to use in a game she created and a group of boys affixed masking tape numbers to the backs of their shirts to transform them into their favorite soccer players. During a brief period, the toy Mighty Beanz became popular and students used masking tape to design houses, trailers, and ramps for their Mighty Beanz characters. Stephanie along with a group of friends made a key out of masking tape to play a game they created based on the book *Inkheart*.

![Figure 98. Data images 145, 147, and 155. Various masking and duct tape creations.](image)

**Math Class Creations**

During math class, Eddie and I allowed the children to work on their math and creative projects simultaneously. Some students set up mini-art studios at their seats before math class began so they could have their creative materials ready. It was common
to find one student using a Sharpie marker to draw on the table while a second doodled on his paper and a third continued work on an ongoing art project. One day in late January while the class was working on long division, Cooper created a scratch and sniff poster using scented markers. A few days later Stella showed me a vibrant pattern design she made based on a technique she learned from a friend the previous year. Nicole was always doodling and often her works turned into fully developed abstract pieces.

Figure 99. Data images 158 and 159. Cooper’s Scented Marker poster and Stella’s design.

Figure 100. Nicole working on a doodle pattern.

Mixtures and Potions

By the second half of the school year, the children were used to having access to all of our classroom supplies for their academic or creative needs. During indoor recess there was always as a group who would congregate in the back area of our classroom
where we kept cabinets with science supplies, carts of art supplies, tables on which to work, the classroom mini-fridge and shelves filled with odd and ends. By February, exploring liquid mixtures became a favored activity.

Tammy combined dishwashing liquid, blue paint and water with blue and green food coloring to create a concoction she called Foam. Four other fifth grade girls donned latex gloves to fill polyethylene bottles and graduated cylinders with food coloring and water mixtures. They then used pipettes to transfer the different colored liquids into test tubes set in a rack. When I inquired what they were doing Nadine (the girl who discovered a tissue dying process using hand sanitizer) told me they were making fake cures for cancer, aids, diabetes, allergies, and rabies. They also showed me a large beaker half full with a dark plum colored liquid that was a mixture of all the samples to cure the biggest problem. When I asked what the biggest problem was Nadine said, “Everything. It’s called the E-effect (personal communication February 8, 2013).

Figure 101. Data image 162. Nadine working on imaginary cures.

Gloria (the girl who made it a point to let me know that tiling the fort floor with flagstone was her idea) showed me how she made a product she called, Extra Liquefied Sticky Water. She told me she made it with “hot water and glue sticks. And I had to mush
it around a lot and I had to use a special tool that I made to mash and dissolve the glue stick in the water” (personal communication February 8, 2013). Later that month Tammy showed me how she created a “toxin to kill the Evil Queen” (personal communication February 27, 2013). She used a mixture of tacky glue, vanilla extract, green paint and blue and yellow food coloring to create her potion. She said, “Everyone’s trying to save the world; I’m trying to kill evil people” (personal communication February 27, 2013).

Figure 102. Data images 163 and 164. Gloria’s Extra Liquefied Sticky Water and Tammy’s Toxin to Kill the Evil Queen.

In March Nolan and Harlan along with a group of friends began making mixtures they referred to as acids and stink bombs. The boys worked in an excitable and hurried way compared to the methodical and systematic working methods of the girls, resulting in more spillages and overflows. The boys were less forthcoming when I asked them to describe and explain what they were doing. When asked, “Why are you guys making this stuff?” they answered, “Because it’s fun getting our hands dirty” (personal communication March 22, 2013).
In April, Stephanie, Ally, and Nadine created “a potion to make people forget” (personal communication April 12, 2013). At first they said it was a secret recipe but later Stephanie told me what the ingredients were as she used a wooden dowel to mix the concoction in a large graduated cylinder, “it’s leaves, two blades of grass, some sand, black glitter, a lot of water, salt, and feathers” (personal communication April 12, 2013). They first used a mortar and pestle to crush the leaves, grass, and feathers before pouring the mixture into the graduated cylinder and adding the water, salt, and glitter. After a few minutes of watching the girls creating their potion, Ally began cutting the tips off of highlighters and added them to a salt and water mixture to create was she referred to as glow in the dark liquids.
As I was cleaning and organizing the room at the end of the school year I found Harlan’s Potion Basket hidden behind a bookcase in which he had stored his ongoing potion experiments and creations. Neatly packed in the basket was a collection of test tubes, plastic science lab containers, funnels, scissors, paint bottles, markers, paint, and eyedroppers.
Movies

During a recess in January, I saw Gloria walking around the playground wearing a large paper hood painted black with a red tip. When I asked her what she was doing she told me she was playing the character in Nadine’s movie about a pen that magically grows larger. As I was about to ask her a follow-up question, Stephanie rushed in accompanied by a group of friends and whisked Gloria off to their movie set.

Months later in May, I came across a group of students filming a horror movie in the woods near the forts. Some were actors, others script writers, camera operators and directors. After a few days of filming they spent a week editing their movie before hosting a class screening.

Figure 106. Left: Video still. Gloria wearing her pen costume. Right: Data image 171. A group of students filming a horror movie.
Names

During the final days of school there was a spell of hot and humid weather so one day the students voted to stay inside and watch a movie during recess. During the viewing, a group of girls got markers and a stack of copy paper to produce giant nametags. Later that week Walter created a logo using the first letter of his surname: W. His design looked similar to the Westinghouse logo created in the late 1950s by the famous graphic designer, Paul Rand.

![Image of name tags and logo]

Figure 107. Data images 172 and 173. Giant name tags and Walter’s name logo.

Painting

In October, our school hosted an annual fundraising event called, Grandparents’ Day. During Grandparents’ Day the regular schedule was put on hold to allow for a variety of presentations and performances. It was difficult to schedule academic classes after the festivities ended in the early afternoon because some of the Lower School students would leave with their grandparents. Eddie and I allowed the students who remained at school to choose what they wanted to do. Many chose to paint.

Libby spread a large canvas drop cloth on the floor, laid a piece of poster paper on top, took a handful of brushes and filled paper cups with tempera paint. She began painting by brushing deep blue curved strokes arcing from the lower right hand corner of
the paper toward the center. She then added a thick layer of magenta along the bottom edge. When I asked her what she was doing she replied, “I don’t know actually. I need to mix colors” as she squirted a glob of white into one of the paper cups (personal communication October 19, 2012). After a few minutes Libby announced she had finished the picture, which she titled, Flood. When I asked her how she arrived at this title she told me that her brush strokes and colors reminded her of a flood.

![Libby's painting titled, Flood.](image174)

Figure 108. *Data image 174: Libby’s painting titled, Flood.*

Jodie and a friend were working nearby creating smaller works on pieces of copy paper. They tested out different paint application techniques that included dipping their hands into bowls of paint and pressing their palms into, or tapping their fingertips onto,
the paper. They told me they began using their hands after seeing another student create a painting of a bat using his handprints to form the wings.

![Image](image.png)

*Figure 109. Left: Video still of Jodie and a friend use their hands to apply paint. Right: A student’s painting of a bat with handprints as wings.*

Soon thereafter, I was informed that a fifth grade boy had organized a painting contest. As I spoke to the children who were painting, I noticed that the paintings for the contest were realistic renderings whereas the students who were painting for their own pleasure created more abstract works.

In another part of the classroom, Angela was mixing paint to try to get a specific red hue that she and Stephanie had in mind for a poster to go along with their science project. Once Angela was satisfied with the color, Stephanie began using a brush to cover the poster paper with paint. But suddenly, Stephanie tossed the brush to the side, got on her knees, leaned over the painting and began to spread the paint with both hands. When I asked her why she was using her hands she said, “Well the brush wasn’t getting anywhere and I wondered what would happen if I just used my hands with more pressure” (personal communication October 19, 2012).
Figure 110. *Data image 178: Stephanie spreading paint with her hands.*

Painting had become the activity of choice for many students during our indoor recess times and the experimentation with techniques and methods of application continued. Gwen used a paper plate as a paint pallet then after swirling the paint with a pencil decided she wanted to keep it as an art piece. Two girls asked if they could wipe the excess paint off of their brushes onto one of our art supply carts before washing them off in the sink. I told them they could. In January, a group of three girls showed me a painting technique they developed. They squirted three globs of paint onto a sheet copy paper then used a commercial paint roller to spread the paint.

Figure 111. *Data images 179 and 180. Wiping excess paint from a paintbrush onto the art supply cart and Gwen’s paint pallet artwork.*
The next day Libby designed her own line of greeting cards. She was pleased to have accidentally produced a color and told me how she did it: “I decided to put pink with white and I wanted to add some orange and it made like a Creamsicle color…it just kind of happened” (personal communication January 11, 2013). Other students working in close proximity began to share and appropriate techniques and methods of paint application such as using sponges, rollers or pouring paint directly onto the paper. Nadine and a friend mixed a set of six original color hues they placed into small bottles to sell online. As the purple paint began to run low, Nadine decided to make more by experimenting with various color mixtures. When she found a color she liked, her friend made a funnel out of a paper cup so Nadine could pour the paint from a mixing bowl into the empty bottle. This led to the development of an assembly line technique as they mixed batches of additional colors such as orange and green.

Figure 112. Data image 185. Nadine and a friend replenish the supply of purple paint with their own mixture.
Toward the end of the school year a group of students led by Stephanie wanted to build a series of wooden boxes they called Squirrel Houses as a science experiment to see which house the squirrels would visit the most. As Stephanie was telling me about the experiment the children took turns walking over a piece of plywood they had painted with wax paper laid over the top. When I inquired about this Stephanie said, “We just painted the wood and putting the wax paper on it and stepping on it will give it a really cool texture when we pull it off.” When I asked how she came up with the idea she added, “I was putting wax paper over the boards and I saw that the texture of the wood came through the wax paper. So I started drawing on the board with my nails and I saw when I pulled it off it made that [textured] effect” (personal communication May 30, 2013).

Figure 113. Video still. Children walking on a piece of plywood covered with paint and wax paper for their squirrel house.

Sculpture and 3D Design

My students made 3D objects throughout the school year. During a snack time in October, Nicole punched a ring of holes around the lip of a paper cup and attached a masking tape strap so she could wear it as a hat. In January, Libby made an object she called That Cup of Joe. She said it was funny because it was an overturned paper cup
with a drawing of coffee spilling out while a toothpick sun rose from the bottom. The next day, Tate fashioned a miniature a basketball hoop out of tissue, masking tape and a marker. He and his friend took turns shooting baskets with tiny wadded up pieces of paper during math class.

Figure 114. Data images 188, 189, and 190. Nicole wearing her cup hat, Libby describing her sculpture titled, “That Cup of Joe” and Tate’s basketball hoop.

Some of the 3D objects were replicas of commonplace items such as a pair of glasses Nadine fashioned out of duct tape. Others were traditional classroom toys with an added twist such as Cooper’s nesting airplanes. Figures were created out of Silly Putty as well as non-traditional materials such as mud and sticks. Libby made an unusual constructions such as a dream catcher made from paper, glue, water, and food coloring. For me the most fascinating was a conceptually based series by Nicole. She found a variety of small items (a shard of vinyl siding, a section of a rubber ball, a piece of glass and a small stone) on the playground, which she then colored with a silver Sharpie marker obscuring their identities.
Figure 115. Data images 193, 194, and 196. Nadine’s eyeglasses, Cooper’s nesting paper airplanes, and Nicole’s object fragments colored with a silver Sharpie marker.

Sounds and Rhythms

Ours was an active classroom where the children were free to engage in the visual arts as well as the performing arts. One day at lunch, individual pies were served for dessert. Many of my students cleaned out their pie tins and brought them back to the classroom. Libby created a drum by placing paperclips inside her pie tin and cutting out a circle of paper as a covering, which was held in place by crimping the edges of the tin. She decorated the top with marker and taped a loop of string on the underside to use as a handle. Libby also created what she called wind chimes by putting Cheerios inside of two paper cups and taping on paper lids connected by copper wire.

Figure 116. Data images 198 and 201. Libby’s pie tin drum and paper cup wind chimes.

Later that month a group of fourth grade boys who were part of the Lower School band ensemble decided to form a musical group they called the Iron Band. Most of the
instruments were percussive and included 5-gallon water bottles, wooden boxes, homemade shakers, tables, and metal stool legs. They used a number of different objects for mallets such as pencils with sponges attached to the ends, paintbrushes, rulers and pencils wrapped with masking tape. One band member tried to make a guitar by cutting a rectangular section out of a hand wipes container and stretching string around the opening. The band liked to practice while waiting to be dismissed at the end of the day, and if their instruments were not readily available they would use whatever was at hand including rolls of duct tape, plastic containers and paint rollers.

![Mallets and percussive instruments used by the Iron Band](image202)

**Figure 117. Data image 202. Mallets and percussive instruments used by the Iron Band**

**String**

In January the students began incorporating string into their creative activities. Libby made a weave design she called a caterpillar. Ally cut and recut short lengths of nylon string until they became light, fluffy puffs. She then used food coloring to dye them mauve, mint and yellow so she could make a tie-dye ball. This inspired others to partake in the string dyeing activities. Angela mixed water, food coloring and hand
sanitizer into a paper cup. She then shaped aluminum wire into a hook to dunk the string into the dye solution.

Figure 118. *Data images 204, 205, 206. Left to right: Libby’s string caterpillar, Ally’s dyed string puffs, and Angela’s wire hook tool.*

During a fifth grade math class I observed Cooper and a friend winding string around scissors and then cutting it. After class I asked them what they were doing. They told me they starting out just absentmindedly cutting string and after a while noticed that a pile of tiny clippings had formed. Eventually they developed a tandem cutting process where they held the scissors parallel and continued to cut while feeding the string segments through the cutting action of the both scissors. By the end of the class they had generated a small fluffy pile. Earlier the same day during our fourth grade math class, I saw Nolan and a friend wrapping string around Popsicle sticks. Nolan told me that he was planning on making a toy boat out of his string-wrapped sticks. His friend said he saw what Nolan doing and thought it looked cool so he started to do the same thing.

Figure 119. *Data images 207 and 210. Pile of string clippings and string wrapped Popsicle sticks.*
In February, Gloria did an experiment to determine how long it would take different lengths of string to soak up a certain amount of water. She placed the string segments in a series of small water filled vials and observed them over time. Seeing this led Gloria to experiment with string dyeing techniques and absorption rates. She cut three-foot lengths of string, which she then coiled into tight bundles and packed into vials. After adding a few drops of red food coloring, she snapped on the plastic caps and vigorously shook the vials. She told me she was hoping to get enough string dyed to open a String Stand and sell different colored string.

![Gloria adding red food coloring to a coil of string stuffed into a vial.](image)

Figure 120. Data image 211. Gloria adding red food coloring to a coil of string stuffed into a vial.

**Studio/Supply Area**

As the school year progressed, our students became increasingly comfortable with sharing ownership of the space and the supplies. As previously mentioned, Eddie and I kept most of the classroom supplies in the back area of the classroom. When the children were given the opportunity to roam freely during times such as snack or indoor recess they would often congregate around the art supply carts grabbing reasonable handfuls of materials to use for their creative projects and explorations.
During the week, students or teachers could schedule a class meeting to have discussions, share ideas, debate issues, perform skits, or give presentations. The class meetings were held in the front of the classroom where we constructed a small stage in the corner. By February, it was not unusual for a few students to excuse themselves from the meeting and quietly go to the back of the room where the art carts and science supplies were kept. The students would sometimes use science supplies for artistic purposes and vice versa.

By the end of the year the back area of the room was in complete control of the students. Except for cleaning the floor at the end of each day so the night cleaning crew could vacuum, Eddie and I allowed the students to interact within this area according to their needs and wishes. Usually this meant supplies remained scattered about on tables, shelves and windowsills.
Table Marks

During the previous school year, the children had decided that they should be allowed to draw on and mark our classroom tables (Rufo, 2012b). This year the students began using the tabletops as surfaces for games they created. They drew game diagrams and wrote instructions on top of and around the existing drawings and markings. By the spring semester, marking the tabletops was a commonplace activity (Appendix A, Data 218). By late April students started engraving messages and designs into the tabletops using scissors (Appendix A, Data 219).
Tools

Over the course of the year students made their own tools and utensils. During a math class in January, I watched as Cooper went to the supply area in the back of the room picked up a paper cup, large toothpick and black water-based marker. On returning to his seat he popped off the bottom cap of the marker, took out the ink core and squeezed the ink into a paper cup. Cooper dipped the large toothpick into the ink and used it as a stylus to write his math problems. Two weeks later, a friend joined him using a broken pencil as a stylus.
In May, Libby showed me how she used natural elements found around her fort area for a sewing project. She used a three-inch sharpened stick as a needle telling me, “I made the holes with my needle and the grass is my thread and the leaf is my fabric” (personal communication May 14, 2013). Nearby was an area teeming with garlic mustard plants where a classmate was using a large piece of curved bark as a basket to collect the garlic mustard and carry it back to her own fort.

![Sewing leaves and using a bark basket.](image)

Figure 125. *Data images 223 and 225. Sewing leaves and using a bark basket.*

That afternoon Harlan showed me a bubble level he made from a test tube filled with water dyed from highlighter ink. He said that he wanted to use colored water to make the bubble easier to see. A few days later Nadine created a whiteboard-type writing surface by wrapping tin foil around a piece of cardboard. She called it her Mini-Silver Board.

![Nadine’s Mini-Silver Board.](image)

Figure 126. *Data image 226. Nadine’s Mini-Silver Board.*
At the end of the year Angela and a friend showed me how they developed a system using conventional tools to create unconventional writing systems. They used diagonal cutting pliers to take the base cap off of markers and extract the cores. Next, they squeezed the ink from the marker core into a dropper bottle and added water. Then, they did the same but added hand sanitizer to ink in a paper cup. The said the next day they were going to test both to see which solution was better for writing.

![Image of tools and markers](image1.png)

Figure 127. Video stills showing tools to extract ink from marker cores and Angela squeezing the ink from a marker core into a dropper bottle.

**Toys and Games**

Throughout most days, the children created toys and games to entertain themselves. During a blustery afternoon in October, Libby fashioned a kite out of masking tape, sticks and copy paper and spent her recess time attempting to fly it. Months later, she made another kite design using a plastic bag.
Meanwhile, in the fort areas a group of girls made a swing by cutting a scrap of pressure treated lumber to size and drilling holes into each end. They strung a rope over a tree branch and fed the two ends of the rope through the holes in the board. Back in the classroom, Walter showed me an object he made from masking tape and pencils. He described it as, “a toy my friends and I made…it can fling washers” (personal communication, May 29, 2012).
Weapons

Ever since I began my teaching career I have seen children make bows and arrows out of pencils and rubber bands. During the year of this study, my students created a few variations including bows with decorative strips of duct tape, a bow made from a stick with a conveniently located notch to hold the arrow in place, and a longbow made from a tree branch to use as a prop in a student-produced version of the Hunger Games movie. Libby made the longbow and also made a slingshot rock pouch in hopes that these props would help her get a role in the students’ Hunger Games movie.

Figure 130. Data images 234 and 236. Bow with a conveniently located notch to hold a pencil and Libby’s longbow movie prop.

Other weapon designs were created based on actual weapons such as spears crafted by wedging a sharp rock into the end of a large stick. Some weapons were highly original concepts as when Nicole placed rows of pushpins into a sponge and called it a Self-Defense Weapon.

Figure 131. Data images 239 and 237. Spear and Self-Defense Weapon.
Whiteboard

In keeping with our pedagogical philosophy that children should have ownership of, and agency within, the classroom, students and teachers were allowed equal access to the whiteboards. The teachers mostly used the whiteboards for academic instruction whereas the students used the whiteboard in a variety ways.

Students used the whiteboard to make humorous drawings of oversize heads and teacher portraits. Often random drawings appeared as students arrived and waited for the day to begin or waited to be dismissed at the end of the day. When one student started drawing on the whiteboard invariably more would join in. Sometimes the drawings were purposeful as when a girl copied an image off of her iPhone, another created a large-scale abstract pattern, and a third diagrammed pretend weather reports. Many times students used the whiteboard as a message center. Comments and instructions were left next to drawings, surveys were created, goodbye notes scrawled and silly stories were composed.

Figure 132. Data image 248. Students writing messages and drawing pictures on the classroom whiteboard.
CHAPTER 5 - Analysis: Fundamental Attributes of Self-Initiated Creativity

Introduction

A number of approaches were used to analyze the data in this study. Information was gleaned from examining 253 photographs of students’ self-initiated creative artifacts (See Appendix A), video clips of the students’ creative processes, and email communiqués collected and journalized over the course of the 2012-2013 school year.

The photographs and video stills provided a visual record allowing the researcher to closely examine each piece of data. Video clips provided additional vantage points of the creative objects and processes. Multiple perspectives were captured depending on the placement, movement, pans and sweeps of the video camera. These points of view supplied contextual information such as time of day, the subject being taught or the activity underway.

Additional information was acquired from listening to audio portions of video clips. Background conversations and other off-camera sounds provided greater frames of reference to the activity seen through the camera lens. In some clips students describe their creative artifacts and processes. In others, fellow students or teachers are heard giving directions, asking questions and interacting with each other. The audio helps tell the story of the research site and gives a sense of the classroom atmosphere during the time of the data collection.

The email communiqués established the macro settings in which the research took place. The emails offered insights into the day-to-day operations of the school, the expectations of the administration, the relationships among faculty and the treatment of the students.
Using a participatory action research methodology ensured that the data collected was culled from my lived experiences as classroom teacher. While analyzing a photograph, videotape, audio recording or email journal entry, I was able to fill in the context surrounding each piece of data. For example, I knew what had transpired before and what happened after each piece of data was recorded. I was aware of additional details about the students such as their histories and reputation within the school, how they were perceived by teachers, categorized by administrators and what they were allowed to do or prohibited from doing during the school day. I witnessed how the children were treated by the faculty and knew the political clout or cultural capital of each child within their classroom. Action research makes this type of information readily accessible as opposed to an outside researcher who depends on information culled from observations and interviews.

It is evident, however, that I brought my own biases, perspectives and preconceived notions as a classroom teacher to the research site. Although there are abundant video, photographic, and textual resources for this study, it is understood that they provided a limited data source. As a documentation tool, the cameras were controlled and therefore edited by the researcher. As the researcher, I chose when and what to videotape and photograph. The email communiqués add to the story from the perspective of my teaching team and other members of the school staff and administration. The data in this study is not a complete record of every self-initiated creative event, but only the ones I was able to witness and document.

**Fundamental Attributes**

During the initial analysis phase, each piece of photographic and video data was
organized into one of twenty-seven creative categories. The type of creative artifact or the media used to create it determined each creative category. After examining each piece of data, similarities and patterns emerged that I arranged into thirteen general themes. Each theme was classified into a coding system and a theme code parent document (Appendix B) was created for each creative category. Each theme code parent document lists the creative category at the top, the data number, the number of instances each type of theme code appears, and the name of the digital file followed by my notes detailing the reason and rationale for why I chose to include each theme code.

Figure 133 shows the theme code parent document for the creative category of Dance. The Dance creative category only had one piece of data, which was a still photograph from a video clip of Libby doing a ribbon dance using two sticks with caution tape tied to the ends. In this example the creative category is Dance, the data number is 027, and the name of the digital file is 027: 2.27.13-stick and caution tape dance.MOV. The theme codes V (Valued by a teacher), S (Serendipitous occurrence), U (Using materials and supplies in alternate ways), O (Ownership of the classroom space), and E (Empowerment to creatively express oneself) are each assigned one time to this creative category. The remainder of the theme codes, I (Inspired by a peer), A (Aesthetic or decorative aspects added to a functional item), CI (Conceptual ideas), K (New ways of knowing), T (New creative techniques and methods), C (Communication), St (Student initiated structure and organization), and CF (Creative fabrication) were not assigned to this self-initiated creative act.

I chose to include the theme code V (Valued by a teacher) to this piece of data because halfway through her performance, Libby noticed that I was filming her dance
and could see that I took interest in it and therefore, valued it to some degree. I chose to include the theme code S (Serendipitous occurrence) because Libby did not create the caution tape sticks but happened upon them by accident. Libby did not preplan her dance but after noticing the caution tape sticks, picked them up and incorporated them into a dance routine. I chose to include the theme code U (Using materials and supplies in alternate ways), because instead of using official dance ribbon sticks, Libby used two small branches that had caution tape streamers attached to the ends. I chose to include the theme code O (Ownership of the classroom space), because Libby did her dance during a transition time and used a portion of the classroom space as a stage on which to perform. I chose to include the theme code E (Empowerment to creatively express oneself) because Libby chose to personally express herself using dance as a creative medium.

<table>
<thead>
<tr>
<th>Theme Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>0.27.13 stick and caution tape dance MOV</td>
</tr>
<tr>
<td>S</td>
<td>the student happened to see caution tape on sticks that another student made, picked them up and used them as part of a dance routine</td>
</tr>
<tr>
<td>U</td>
<td>the student used sticks and caution tape as part of a dance routine similar to Indian, Native American, or dance ribbons used in gymnastics</td>
</tr>
<tr>
<td>O</td>
<td>the student engaged in personal expression using dance as a creative medium</td>
</tr>
</tbody>
</table>

Figure 133. Appendix B theme code parent document sample for Data #027 (2015).

After a theme code parent document was developed for each piece of data in each creative category, I further analyzed the thirteen themes codes. I decided to embed and reorganized the original thirteen theme codes into eight fundamental attributes regarding
the self-initiated creativity of children. This process served to “remove redundancies and identify critical elements” (Lichtman, 2006, p. 170). The eight fundamental attributes are:

1. Serendipitous Learning
2. Process as Important as Product
3. Cross-Pollination
4. Autonomous Group Learning
5. Innovative Appropriation and Adaptation
6. Creative Transcendence & Aesthetic Enhancements
7. Communication, Empowerment & Self-Advocacy
8. Conflict Within the Status Quo

Two of the original thirteen theme codes were renamed to more accurately depict what they represented. Serendipitous Occurrence was renamed Serendipitous Learning and Inspired by a Fellow Student became Cross-Pollination.

Eleven of the theme codes were assimilated under new titles. Using Materials and Supplies in Alternate Ways, New Ways of Knowing, New Creative Techniques and Methods, and Creative Fabrication were all included under the attribute, Innovative Appropriation and Adaptation. Similarly, Valued by a Teacher, Communicating with Others, Student Initiated Structure and Organization, Empowerment to Creatively Express Oneself, Ownership of the Classroom Space and Agency of Movement Within that Space all came under the heading of Communication, Empowerment & Self-Advocacy. Finally, Aesthetic or Decorative Aspects Purposely Added to a Functional Item and Conceptual Ideas became part of Creative Transcendence & Aesthetic Enhancements.
Enhancements. I also saw the need to create three new categories, Process as Important as Product, Autonomous Group Learning, and Conflict Within the Status Quo.

Next, I created a document (Appendix C) listing all the data that showed evidence of each of the eight fundamental attributes organized by the creative categories. Figure 134 shows an excerpt from Appendix C. This sample shows the fundamental attributes Serendipitous Learning and Process as Important as Product. Under each principle is listed the creative categories with data numbers within those categories that show evidence of that attribute. For example, in the Drawing creative category, data numbers 036, 039, and 044 showed evidence of the Serendipitous Learning attribute and data numbers 036, 041, 042, and 044 showed evidence of the Process as Important as Product attribute.

Some pieces of data only show evidence of one fundamental attribute whereas other pieces of data showed evidence of multiple attributes. A matrix (Appendix D) was developed to graphically represent the layout of the data represented in each of the eight fundamental attributes. As can be seen in an excerpt from Appendix D (Figure 135), data number 043 shows evidence of one fundamental attribute (Conflict Within the Status Quo) and data number 044 shows evidence of four fundamental attributes (Serendipitous Learning, Process as Important as Product, Communication, Empowerment & Self-Advocacy, and Conflict Within the Status Quo).

The remainder of this chapter describes how the data in the various creative categories showed evidence of the eight fundamental attributes.
253 Pieces of Data Showing Evidence of 8 Fundamental Attributes

1. Serendipitous Learning
   (23 pieces of data within 10 Creative Categories showed evidence of the Serendipitous Learning attribute)
   Amphibian & Insect Habitats (4): 001, 002, 003, 015
   Dance (1): 027
   Doodles on Math Pages (1): 032
   Drawing (3): 036, 039, 044
   Dyes (2): 054, 055
   Food Creations (1): 060
   Forts and Spaces (7): 082, 098, 100, 101, 109, 114, 119
   Glue (2): 126, 128
   Masking & Duct Tape Creations (3): 140, 144, 149
   Painting (3): 174, 182, 186

2. Process as Important as Product
   (26 pieces of data within 9 Creative Categories showed evidence of the Process as Important as Product attribute)
   Drawing (4): 036, 041, 042, 044
   Dyes (4): 048, 053, 054, 055
   Food Creations (2): 058, 061
   Forts and Spaces (4): 086, 091, 092, 093
   Head & Hands Accoutrements (1): 137
   Painting (5): 175, 176, 178, 180, 181
   String (2): 207, 209
   Tools (2): 220, 221
   Toys & Games (2): 228, 230

Figure 134. Appendix C Excerpt: 253 Pieces of data showing evidence of 8 Fundamental Attributes (2015).

Figure 135. Appendix D Excerpt: Matrix showing 253 pieces of data organized within 8 Fundamental Attributes (2015).
Attribute One: Serendipitous Learning

Serendipitous learning is described as fortuitous accidental discoveries (Saadatmand and Kumpulainen, 2013). Serendipitous learning happened in my classroom when children made unexpected discoveries as they were allowed to engage in self-initiated creative activities. My students were given agency to follow their interests and empowered to make decisions in how they went about their learning. Our democratic classroom environment provided opportunities for unanticipated creative pedagogical discoveries. 23 pieces of data from 10 creative categories show evidence of the Serendipitous Learning principle.

Serendipitous Learning in the Amphibian and Insect habitats creative category. Within the Amphibian & Insect Habitats creative category, five pieces of data showed evidence of serendipitous learning: 001, 002, 003 and 015. Data numbers 001 and 002 show Walter holding a handful of pebbles he used as tombstones in a cemetery he constructed for a spider. He came upon this idea by closely observing a small patch of ground during an outdoor recess time. Walter decided to do his observations near an area where Eddie and I were discussing an upcoming lesson. Normally, teachers at the research site asked children to play elsewhere so they could speak in private to one another. However Eddie and I wanted our students to interact within their learning environment according to their interests. Walter wanted to search the area where we were standing. Because of this, he happened upon a dead spider, which led him to the idea of creating a spider cemetery.

During recess time Eddie and I allowed our students to explore and play in areas beyond the borders of the school’s playground. Data number 003 shows a salamander a
girl accidently found as she turned rocks over during her search for pill bugs. This discovery led to a group of students creating salamander habitats. Soon students began searching for other types of creatures. As Libby was looking for a slug she happened upon a worm. Data number 015 shows Libby holding the worm along with the habitat she created.

**Serendipitous Learning in the Dance creative category.** Data number 027 shows Libby choreographing a dance routine. In the photo she holds two sticks with caution tape attached to the ends. A boy created the stick and caution tape objects out of materials he found outside during recess and brought them into the classroom. Later that day, Libby saw the sticks propped in a corner, thought the sticks resembled the wands used during ribbons dances and used them to create her own ribbon dance.

**Serendipitous Learning in the Doodles on Math Pages creative category.** In our classroom the students wrote with markers in addition to using pens or pencils. Data number 032 shows Natasha’s drawing of a figure on a handout in math class with the face obliterated under layers of deep blue marker ink. Natasha noticed that when she placed her thumb into the damp ink she could create fingerprints on the paper. After creating a series of prints she wrote directions so that others could create fingerprints using the same method.

**Serendipitous Learning in the Drawings creative category.** In most of the classrooms at our school, students were required to take notes in a particular manner and organize them in specific notebooks or binders. In our classroom students took notes in whatever way they felt most comfortable. Some students used notebooks, some lined paper and others chose to write on blank sheets of copy paper. Some students copied
exactly what Eddie or I wrote on the whiteboard while others integrated drawings and sketches into their notes. Data number 036 shows a scribble drawing that Lydia did on a sheet of paper during math class. She noticed that she could discern various figures and objects within the random lines. She worked back into the scribbles, tracing the outline of a variety of mammals and reptiles.

In data number 039, Ally found that she could make drawings with a modeling compound. When pressed into white paper, the Model Magic left gray and charcoal colored smudges and marks. Ally added water when the modeling compound began to dry out. At one point too much water was added, causing the compound to become liquefied and run through her fingers. Seeing this effect, Ally added increasing amounts of water and began creating drip-drawing techniques as seen in data number 044.

**Serendipitous Learning in the Dyes creative category.** Data number 054 shows what happened when Nadine accidentally found out that hand sanitizer acts as a solvent for permanent ink. After using hand sanitizer Nadine dried her hands with a tissue and placed it on a classroom table. She noticed that portions of the tissue soaked with hand sanitizer absorbed some of the ink from the table drawings. Intrigued by this effect, she purposely developed a unique multi-step methodology to create and package tie-dyed tissue balls.

While playing in their forts during recess, a group of girls noticed a pleasant fragrance as they crushed plants to create dyes (Appendix A, Data number 055). This accidental discovery led them to intentionally create potpourri by grinding and combining various plants.

**Serendipitous Learning in the Food Creations creative category.** Data number 060 shows a picture of an open-faced chicken patty sandwich. Hannah noticed that the
bites she had taken out of her sandwich resembled an angry scowl. Hannah then used ketchup to add facial features.

**Serendipitous Learning in the Forts and Spaces creative category.** Serendipity played a large part during the fort building activities as students noticed objects in nature that could be converted for new uses. A springy branch became a bouncy toy (Appendix A, Data number 082), low hanging vines were transformed into swings (Appendix A, Data number 098) and a branch with a curved end was used as a broom (Appendix A, Data number 100). The unexpected discovery of a pile of left over building materials led to the construction of brick walls in the forts (Appendix A, Data number 101), and a pallet was repurposed as a ladder (Appendix A, Data number 109). Because of the traffic between forts, interconnecting pathways were eventually developed (Appendix A, Data number 114).

While absentmindedly stripping loose bark from a small tree, a student noticed the striking effect of the light colored trunk contrasted with the deep green of the wooded area (Appendix A, Data number 119) and decided to strip more of the bark off and turn it into an art object.

**Serendipitous Learning in the Glue creative category.** Having access to the classroom supplies and being allowed time to experiment provided opportunities for unexpected discoveries. Through trial and error, Tammy and Stella found that glue was the perfect medium for creating faux soup (Appendix A, Data number 126) and chocolates (Appendix A, Data number 128).

**Serendipitous Learning in the Masking and Duct Tape creative category.** As with the glue, students stumbled upon new creative possibilities when using tape as a
creative medium (Appendix A, Data numbers 140, 144 and 149). One girl told me how she created a platypus design, “I didn’t know what I was doing and I decided to make this little thing…and it ended up being a platypus” (personal communication, September 25, 2012). A second wanted to create a masking tape tote bag but instead decided to fold it in half to make an oversize wallet. A third said, “I just started making a tape strip and it ended up being a little pouch” (personal communication, October 31, 2012).

**Serendipitous Learning in the Painting creative category.** After painting a series of random brush strokes, Libby found that her painting resembled a great wave of rushing water (Appendix A, Data number 174) and decided to title the work *Flood*. While mixing paint another student stumbled upon a formula for creating a Creamsicle color (Appendix A, Data number 182). Libby told me, “I decided to put pink and white and I wanted to add some orange and together it made like a Creamsicle color… it just kind of happened” (personal communication, January 11, 2013). After playing around with wax paper, paint and plywood, Stephanie discovered a way to create a textured effect by pressing the wax paper into a still wet piece of painted plywood (Appendix A, Data number 186).

**Serendipitous learning possibilities.** Serendipitous learning encouraged a student-directed approach to knowledge acquisition. These serendipitous creative activities transpired because the children at the research site had agency and self-governance in their learning. At recess the students were allowed to play beside Eddie and I or request that one of us accompany them as they wandered and explored areas beyond the designated boundaries of the playground. Students were allowed to bring outside interests inside the classroom. Some of the creative artifacts were stored inside
the classroom for safekeeping and further examination and experimentation.

Students chose the way they engaged in their lessons and activities and how they interacted with the classroom space, materials and supplies. They could take notes in a variety of ways using whatever materials best suited their needs and interests. They could draw doodles and designs on classroom handouts or adapt them to fit their creative investigations. Some brought art materials to their seats for the sole purpose of making drawings. This agency led them to become more confident outside of our classroom space, be it in the dining hall or during recess.

The serendipitous learning led to increased creative engagement that in turn supported the students’ curiosity leading them to interact more closely with their learning. Serendipitous learning allowed Libby to choreograph a dance routine, Lydia to experiment with a new drawing technique, Nadine to develop her own method of dying tissues, and Hannah to find humor and wit in a simple chicken patty sandwich.

In the forts, children took advantage of serendipitous opportunities to entertain, construct and see things in new ways. Back in the classroom, children stumbled upon techniques to make imitation objects, faux textures, models and colors.

**Attribute Two: Process as Important as Product**

When children are offered opportunities to engage in creative learning processes aside from requirements to produce end products, they often experience a “moment of artistic insight or burst of creativity” (Engel, 1993, p.309). During these moments of creative discernment, children will experiment with materials in new ways and development unconventional techniques and methodologies. Creative processes demonstrate “aesthetic awareness” (Lund, 1994, p. 21) and “the construction and
expression of knowledge” (Honigman & Bhavnagri, 1998, p. 205). Eliza Petri suggests the “process of artmaking is more important than the product” (2003, p. 23). The data set in this study revealed moments throughout the school year when the students had time to explore diverse materials and discover new creative techniques and methods free from timelines, deadlines, templates, exemplars, or prescriptive projects. 26 pieces of data from 9 creative categories show evidence of the Process as Important as Product fundamental attribute.

Process as Important as Product in the Drawing creative category. New drawing techniques were developed when students were not required to produce final products from predetermined exemplars. Lydia found a new way to generate drawings (Appendix A, Data 036) by looking for figures within abstract lines and scribbles and then tracing back into them to highlight the new imagery.

Working according to her own timeline allowed Ally to discover a variety of mark-making techniques with a modeling compound by adding water, manipulating it into different shapes or masking off portions of the paper (Appendix A, Data numbers 041, 042, & 044).

Process as Important as Product in the Dyes creative category. Ally combined her interest in art with a science project on reflection and refraction by placing small objects into vials filled with water or glue and dying the solution with food coloring (Appendix A, Data number 048).

Through experimentation, students discovered and perfected techniques to create dyes by grinding plants (Appendix A, Data numbers 053 & 055). Nadine inadvertently discovered a way to make tie-dye tissue balls as she experimented with hand-sanitizer,
tissues and ink from permanent markers (Appendix A, Data number 054).

**Process as Important as Product in the Food Creations creative category.**

When allowed to play with their food, two students used their teeth as apple carving tools. A boy carved a bespectacled face into an apple (Appendix A, Data number 061) and a girl deftly used her lower incisors to remove a delicate strand from the circumference of an apple (Appendix A, Data number 058).

**Process as Important as Product in the Forts and Spaces creative category.**

During recess, Lydia, Tammy, Gloria, and Ally developed various techniques and a system of production enabling them to install a stone floor in their fort structure (Appendix A, Data numbers 086, 091, 092, & 093).

**Process as Important as Product in the Head and Hand Accoutrements creative category.** Data number 137 shows the process Libby developed to produce nonpermanent tattoos. She used water-based markers to draw designs on duct tape and then pressed the design onto the arm of a classmate. The glossy surface of the duct tape provided an easy, safe and temporary way to transfer her tattoo designs.

**Process as Important as Product in the Painting creative category.** When afforded opportunities to interact with painting materials in their own way, the students devised paint application techniques to suit their purposes and aesthetic needs. In data number 175, Jodie and a friend used their hands to apply paint - creating a series of effects that included dots, dashes, strokes and splatters as they tapped, slapped, rubbed and pushed paint with their fingertips and palms. Next to them, Libby set up her own studio space where she placed paper cups filled with paint on top of a canvas drop cloth spread on the floor (Appendix A, Data number 176). Libby chose to work horizontally on
the floor rather than using a traditional vertical easel set up. She also used a variety of commercial paintbrushes instead of student grade art paintbrushes. Stephanie, working close by, tossed aside her paintbrush, knelt down over her painting and used both hands to massage the paint into the surface of her poster paper (Appendix A, Data number 178).

Students also used tools in ways not normally associated with school art production. Gwen used pencils to mix globs of paint into paisley patterns on paper plates (Appendix A, Data number 180) while others used commercial paint rollers to create works of art with atmospheric layering effects (Appendix A, Data number 181).

**Process as Important as Product in the String creative category.** Manipulating string appeared to be a meditative process for some students. During a math class a boy was cutting string into small bits. Cooper joined him and together they silently developed a tandem cutting technique that resulted in a pile of string fluff (Appendix A, Data number 207). Working with string as part of a contemplative and relaxing creative process continued in other ways as can be seen in data number 209 where Nolan and a friend carefully and methodically wound string around popsicle sticks.

**Process as Important as Product in the Tools creative category.** When students were allowed free access to classroom supplies and items found in nature they used them in unexpected ways. Data numbers 220, 221 and 222 show the process Cooper undertook to create a writing tool out of a large toothpick and a paper cup filled with ink he obtained from a the ink core of a water-based marker. Data number 223 shows the process Libby used to make a sewing kit out of leaves, blades of grass, and a sharp stick.

**Process as Important as Product in the Toys and Games creative category.** Data numbers 228 and 230 show two different kite designs. It was evident that the
materials used and the design would not produce a working kite. However, Libby was determined to find a way to create a kite that would fly, and spent her recess time exploring this idea.

**Process in learning.** Many of the creative artifacts categorized under the Process as Important as Product fundamental attribute, are not as finished or polished looking than other artifacts in the data set. However, the processes undertaken to produce these objects were significant and germane experiences for the students. The students felt empowered to experiment, confident in their ideas, and safe to fail in their attempts. Each piece of data in this principle shows evidence of students taking risks as they explored unorthodox concepts, innovative ideas, and creative methodologies. The students were not apprehensive to use materials in new ways to achieve their objectives. Often these processes piqued the curiosity of other students who would want to join in, try to replicate or offer assistance. Finally, these processes and the accompanying creative artifacts were student generated, student-led, student-directed and therefore student-centered. These attributes ensured the learning was a satisfying and meaningful experience for the students.

**Attribute Three: Cross-Pollination**

Cross-pollination happens when discrete individuals or groups share insights and ideas (Anchan, 2015; Crawford, Witherspoon, & Brown, 2014). According to Raynor, Blanchard, & Spence (2015) cross-pollination is “critical to learning” (p. 103) and can be “deliberate or ad-hoc” (p. 5). The term “cross-pollination” in education often refers to “transdisciplinary approaches” (Mady, 2015, p. 1197). Cross-pollination occurred at the research site when children engaged in self-initiated creative endeavors. In this study the
instances of cross-pollination were student generated rather than the result of teacher-directed initiatives. A piece of data was considered to show evidence of cross-pollination if a student expanded on a self-initiated creative idea generated by another student. 50 pieces of data from 11 creative categories show evidence of the fundamental attribute I have termed Cross-Pollination.

**Cross-Pollination in the Amphibian and Insect Habitats creative category.** Data numbers 004-007 document inchworm habitats made by the students. After Tammy and Gloria found an inchworm, Stephanie decided to do a project that involved building habitats. Designing and constructing inchworm habitats caught on with a group of students who shared ideas including where to obtain containers to house the habitats, the type of water and plant life to put in the habitats, how to decorate the habitats, and where to keep them in the classroom.

**Cross-Pollination in the Dyes creative category.** According to the data, the idea of using food coloring as a creative medium began in late January when Stella mixed food coloring with glue. A week later Amy used food coloring to dye water and other objects displayed in small vials (Appendix A, Data number 048) and a few weeks after that she experimented with placing the vials in the freezer (Appendix A, Data number 050). Food coloring eventually became a popular creative medium among many of the students.

**Cross-Pollination in the Forts and Spaces creative category.** After a student created a rope tow to access his hillside fort (Appendix A, Data number 069), students in an adjacent fort produced a double rope tow design (Appendix A, Data number 071). Ropes were employed in other ways too. Ropes were also used to move heavy objects.
The students attached ropes to the handles of disc sleds to transports bricks to their forts (Appendix A, Data number 103). Ropes were tied around the stumps of fallen trees and dragged by groups of students (Appendix A, Data numbers 110 & 111). Ropes were integral to the design and construction of some forts (Appendix A, Data number 112). Ropes were looped and tied around stands of trees to demarcate fort boundaries (Appendix A, Data number 107) and two girls used rope as part of their fort’s roof structure (Appendix A, Data number 099).

As the forts grew more numerous, interconnecting pathways formed from the constant movement between them (Appendix A, Data number 114). Some students took advantage of the bustling activity along the pathways and set up bartering stalls (Appendix A, Data number 115) and tourist attractions such as Libby’s Fort Resort (Appendix A, Data number 116).

**Cross-Pollination in the Frozen Creations creative category.** The refrigerator was first used in the creative process in early February when Libby had the idea of freezing a latex glove filled with water and food coloring after observing other students playing with water filled latex gloves (Appendix A, Data number 120). A month later, Ally did the same thing and decided to remove the latex glove (Appendix A, Data number 121) because “the ice was freezing inside the glove and I kept it in there a long time so the ice is solid now” (personal communication March 5, 2013). Soon after, the classroom refrigerator was filled with all sorts of frozen experiments and creative artifacts (Appendix A, Data number 122).

**Cross-Pollination in the Glue creative category.** Glue was kept with other supplies on shelves and in cabinets in the back corner of the classroom. This area was a
favorite spot for children to congregate during indoor recesses and the small space would quickly become congested. Large folding tables were available to work on and wheeled carts held a variety of art supplies. The students had free access to all the supplies and working in close proximity offered many opportunities for cross-pollination.

Glue was first used as a laminate for sticker designs (Appendix A, Data numbers 123 & 125) and then mixed with food coloring (Appendix A, Data number 124). Glue eventually became the main creative ingredient when Gwen wrote her name in glue on wax paper, added a few drops of food coloring and peeled it off once dry (Appendix A, Data number 125). Further investigations led to faux sculptural objects such as the soup and faux chocolates created by Stella and Tammy (Appendix A, Data numbers 126 & 128), psychedelic three-dimensional imagery by Ally (Appendix A, Data number 127), and experimental mixtures by Ally and Libby (Appendix A, Data numbers 129 & 130).

**Cross-Pollination in the Head and Hand Accoutrements creative category.**

Every school year my students have applied tape to their faces to mimic facial hair. This year the students went beyond simply using tape. Data number 135 illustrates multiple examples of cross-pollination happening in quick succession when, in February, students used tinfoil to create a variety of head and hand accoutrements. It began when one fourth grade boy crafted a small boat out of tinfoil to use in his experiment on buoyancy. During clean up, another student took some of the tinfoil to fashion a mustache and beard. Others joined in creating a vast array of facial hair, jewelry, accessories and decorative features. There was a sudden burst of creativity as the fourth grade students embellished and expanded upon each other’s ideas.

Similar activities continued and eventually crossed over to the fifth grade
students. Months later, I found a flier Stephanie made advertising tear-off paper moustaches (Appendix A, Data number 136).

**Cross-Pollination in the Masking and Duct Tape Creations creative category.**
In most of the classrooms at the research site, students were not allowed free access to materials and supplies. Tape was an especially highly guarded commodity. A Scotch tape dispenser was usually kept on the teacher’s desk with a roll of masking tape in a desk drawer requiring students to first ask permission before using either. As previously noted, in my classroom the students had free access to all the materials and supplies. In addition to Scotch and masking tape, rolls of duct tape were available.

Students observed how their classmates used masking and duct tape in creative ways. This experience led to an increased interest in using masking and duct tape as a creative medium and resulted in a proliferation of ideas generated among the students. Students created masking tape ropes (Appendix A, Data number 138), hand and wrist wraps (Appendix A, Data number 139), sculptures (Appendix A, Data number 140), bracelets (Appendix A, Data number 141), bags (Appendix A, Data number 142), wallets (Appendix A, Data number 144), and mats (Appendix A, Data number 146).

**Cross-Pollination in the Math Class Creations creative category.** During math class I observed students who would “quietly get up as if to sharpen a pencil, only to segue to the back of the room and begin picking through various items in the [art supply] carts” (Rufo, 2014a, p. 232). They would bring supplies such as paper, markers, string, scissors and glue back to their seats and create while listening to the direct instruction portion of the math lesson. Creative activity stood out during these quieter and less active classroom moments. Here cross-pollination took place silently, as students watched one
another create. The students drew doodles (Appendix A, Data number 157), made posters (Appendix A, Data number 158), and created intricate designs (Appendix A, Data number 159).

**Cross-Pollination in the Mixtures and Potions creative category.** The creations that the students referred to as mixtures and potions took place in the back corner of the classroom, and similarly to the glue explorations, the close quarters gave rise to opportunities for cross-pollination. The students began to create their mixtures and potions in early February when subzero wind-chill temperatures required us to hold recess indoors. The first documented potion was Tammy’s soap, paint, water, and food coloring mixture she called “Foam” (Appendix A, Data number 161). When asked what it was she answered, “It’s something you just put by your bed and you shake it and it foams” (personal communication February 8, 2013). What began as simple mixtures soon developed into complex, playful and imaginary aggregates collected in test tubes (Appendix A, Data number 162), bottles (Appendix A, Data number 163), bowls (Appendix A, Data number 164) and jars (Appendix A, Data number 168).

**Cross-Pollination in the String creative category.** Students began dying string in late January when Ally tried to make a tie-dye string ball (Appendix A, Data number 205). The same day Angela refined the dying technique by fashioning a wire hook to more easily dip the string into the dye solution (Appendix A, Data number 206). These activities led other students, including Gloria, to conduct additional string dying experiments (Appendix A, Data numbers 208, 211 & 212).

**Cross-Pollination in the Table Marks creative category.** During the previous school year we traded our desks for plastic folding tables. One day a student had told on a
classmate when she found he had made a small drawing on one of the tables, and “this led to an extended classroom debate at the end of which the students voted that drawing on the tables should be allowed” (Rufo, 2012b, para. 7). The following summer we salvaged old butcher-block style tables that were being thrown out by the art department and added them to our table collection. Students continued the practice of drawing on the tables (Appendix A, Data number 218).

In late April a fourth grade girl engraved the word “Hi” into one of the wood tables with a scissors and soon other students began to develop techniques that allowed them to incise a variety of decorative patterns and pictures (Appendix A, Data number 219).

**Cross-pollination in learning.** Cross-pollination occurred at the research site as the students observed one another’s self-initiated creative endeavors and decided to add to the idea in some way. Finding an inchworm led to students researching, designing and constructing habitats in the Amphibian and Insect Habitats creative category. The Dyes creative category illustrated how the students used food coloring as a creative medium. In the Forts and Spaces creative category, the students developed a variety of uses for rope. Students used rope to access a steep hillside, install a double rope tow, transport heavy objects, establish boundaries and construct forts.

The classroom mini-fridge became integral to the creative process in the Frozen Creations creative category and glue was used in innovative ways in the Glue creative category.

The familiar masking-tape-as-moustache appliqué took on a new look as students used tinfoil in new and unexpected ways in the Head and Hand Accoutrements creative
category. The students created all sorts of items out of tape in the Masking and Duct Tape Creations creative category. During times of direct instruction creative ideas were quietly shared in the Math Class Creations creative category.

Indoor recess time provided a context for a medley of playful concoctions in the Mixtures and Potions creative category. Even a simple ball of twine stimulated artistic expression as documented in the String creative category. When wooden tables were added to the plastic folding tables in the classroom, the students found new ways to leave their marks on them as documented in the Table Marks creative category.

**Attribute Four: Autonomous Group Learning**

Theories of cooperative learning in education can be traced back to work of John Dewey and Kurt Lewin (Hmelo-Silver, Chinn, O’Donnell, & Chan, 2013). Dewey advocated for democratic practices in schools where students have a voice in what they learn, how they go about their learning and “have the right to express their will to the authorities in power” (p. 352). For the most part, cooperative learning practices today involve teacher-directed “methods in which students work together in small groups to help each other learn academic content” (Slavin, 2015, p. 5). However, the students at the research site were allowed to decide when and how they wanted to go about their cooperative learning by organizing their learning based on interest.

A piece of data was considered to show evidence of the Autonomous Group Learning principle if the students worked cooperatively to enhance one another’s ideas or served a specific function within a group to produce a creative artifact. A piece of data was not considered to show evidence of the Autonomous Group Learning principle if the students simply worked in close proximity or simultaneously on the same activity. 45
pieces of data from 8 creative categories show evidence of the Autonomous Group Learning emergent principle.

**Autonomous Group Learning in the Dyes creative category.** In April, Ally teamed up with a friend and developed a process where they created a series of water-based colors from disembedded marker cores (Appendix A, Data number 051). A month later, a group of girls set up a workshop in their fort to produce “natural green dye” (personal communication, May 6, 2013). One student gathered leaves and stems from mustard garlic plants in the wooded area surrounding their fort. A second student ground the plants using a rock and cinderblock as a mortar and pestle while a third collected the green paste from the mashed plants into a paper bowl (Appendix A, Data numbers 053 & 055).

**Autonomous Group Learning in the Forts and Spaces creative category.** Evidence of Autonomous Group Learning was common in the Forts and Spaces creative category because fort construction took place during recess when the students had ample opportunities to work, play and create together.

On the first day of school, a group of nine students gathered near the wooded area and set about assigning and selecting tasks as they built the first fort of the school year. While some erected a makeshift flagpole (Appendix A, Data number 065), others worked on installing a gate (Appendix A, Data number 066).

The next day the students once again formed teams to gather field grasses to insulate their forts (Appendix A, Data number 067) and fashioned brooms from branches and long blades of grass to clean their forts (Appendix A, Data number 068). Together they constructed a variety of rope tows (Appendix A, Data numbers 069 & 071) and
shared ways to use ropes as tools (Appendix A, Data numbers 070, 110 & 111). They brainstormed and developed methods to incorporate ropes into the architecture and design of the forts (Appendix A, Data numbers 109 &112). They designed a ropes course and created challenges for one another (Appendix A, Data number 072). The students demonstrated techniques for making roof structures (Appendix A, Data numbers 073, 074, 078, 081, 089, & 108).

In the forts, the students toiled (Appendix A, Data numbers 096, 102 &103) and traded (Appendix A, Data number 115). They used their forts to create toys and games (Appendix A, Data numbers 082, 084 & 088). The fort activities evolved into a subculture with its own rules, customs, amusements and significant artifacts (Appendix A, Data numbers 080, 085, 087, 094, 098 & 116).

**Autonomous Group Learning in the Masking and Duct Tape creative category.** Data number 151 shows students using masking tape and copy paper to create objects to use with their Mighty Beanz. Mighty Beanz are small, plastic, bean-shaped collectible toys. A pair of students worked together to construct a two-story house with a tiny bed on the second floor and a trailer with a flip-up roof for their Mighty Beanz toys.

Data number 153 shows a key Stephanie made from masking tape and a marker cap that was used as a prop in an imaginary game her and two friends created based on the book *Inkheart*.

**Autonomous Group Learning in the Movies creative category.** Data number 170 shows Gloria wearing a pen costume made out of painted paper and packing tape. She was working with a group of girls who were making a movie.

Data number 171 shows another group of students using the wooded area near the
forts as a setting for their movie. Many students were involved in this project and took on a variety of roles including directors, videographers, writers, actors, special effect designers, and editors.

**Autonomous Group Learning in the Painting creative category.** Nadine and a friend worked together in the Painting creative category by producing their own set of paint colors (Appendix A, Data number 184) and mixing new batches of colors that were running low (Appendix A, Data number 185).

**Autonomous Group Learning in the Sounds and Rhythms creative category.** Upon entering in the morning or waiting to be dismissed at the end of the day, large groups of students would gather and play rhythms on percussive instruments such as cymbals and box drums and instruments they had created out of pencils, stools, tables, water bottles, plastic containers and other readily available objects in the classroom (Appendix A, Data numbers 199 & 203).

**Autonomous Group Learning in the String creative category.** Cooper and a friend worked together in almost complete silence during the direct instruction portion of a math lesson to develop a cutting method to turn lengths of string into a small soft pile of string fragments (Appendix A, Data number 207). After the class the boys informed me the pile of fragments could be used for mattress stuffing and shared their technique, explaining that “when we have a lot [he] picks it all up and then he holds it and then he cuts the bottom off and then it all falls into a pile and I cut off all these tops to make it smaller” (personal communication, January 25, 2013).

**Autonomous Group Learning in the Toys and Games creative category.** One morning in mid April, a group of students pushed two large wooden classroom tables
together to play their own version of a table tennis game (Appendix A, Data number 229). The students formed lines on either side of the table and swatted a Ping-Pong ball back and forth using the crease between tables as a net. They added series of marks, lines and directions on the tables in bright red permanent marker ink signifying various boundaries and game rules.

A month later, a group of six girls worked together to construct a swing in their fort area (Appendix A, Data number 231). Two of the girls created the seat by sawing a piece of scrap lumber to the desired length and drilling holes on either end. After procuring twenty feet of nylon rope all six worked together to figure out how to suspend the swing from a tree near their fort area. After a variety of unsuccessful attempts, the tallest in the group climbed partway up the tree and following the instructions of the girls on the ground, successfully secured the ropes to a series of branches. I suggested they try to locate a tree with a cantilevered branch because the arc of the swing came close to the trunk on the tree they chose to use. However, their design allowed them to swing either parallel to the trunk or perpendicular to it and then gently push off of the trunk with their feet when swinging.

**Autonomous group learning.** When the children were allowed to group themselves autonomously, the choice-based learning that took place was meaningful and relevant. In the above examples, the students engaged in cooperative group learning when they were interested in producing a similar product, taking part in the same activity or solving a communal problem.

The girls who were interesting in making the colored dye from the garlic mustard plants formed specific tasks for themselves in an assembly line fashion.
The forts began as a collective activity where the students worked in large and small groups erecting a flagpole, building gates, gathering materials, creating simple machines, designing architectural structures and forming an imaginary society.

Autonomous grouping happened when the students came together around their shared interests. They shared ideas and created new elements for their Magic Beanz toys such as houses, trailers and ramps.

Giving form to a vision such filming a movie required a collective effort. A number of students were needed to fill the large cast of characters, help with the direction, operate the cameras and develop the storyline.

Other students autonomously formed groups either as a result of their playfulness and exploration, as when the series of paint colors were created, or to address a common need, as when they ran out of purple paint. Still other groups and pairs formed from serendipitous swarms.

At various times when children gathered, impromptu percussion sessions formed, downy piles of string fragments were produced, tabletop games were played, and new playgrounds were developed.

**Attribute Five: Innovative Appropriation and Adaptation**

Adaptation and innovation are considered necessary skills “for successful and productive lives in the twenty-first century” (Darling-Hammond, & Bransford, 2005, p. 42). According to Zhu and Engles, innovation is the “introduction of something new and useful, for example new methods, techniques or practices or new or altered products” (2014, p. 136). Cohen and Ambrose maintain, “adaptation is one of the most important issues relevant to the development of creativity” (1999, p. 22). Creative adaptation
“brings forth transformation within the individual as well as modification, or even paradigm shifts in the environmental context” (Cohen & Ambrose, 1999, p. 21).

At the research site, the students had opportunities to appropriate and adapt objects and materials to fulfill their self-initiated creative visions. For this study, a piece of data was considered to show evidence of Innovative Appropriation and Adaptation if students creatively appropriated or adapted objects and materials in new and unexpected ways. Although appropriation and adaptation were found in the Doodles on Math Pages and the Food Creations creative categories, it was determined that they did not show evidence of this principle because the objects and materials were not used in new or unexpected ways. Children can often be found doodling on school papers and playing with food.

48 pieces of data from 7 Creative Categories show evidence of the Innovative Appropriation and Adaptation fundamental attribute.

**Innovative Appropriation and Adaptation in the Amphibian and Insect Habitats creative category.** Data numbers 001 and 002 show how Walter used small stones as tombstones for bugs and data numbers 005 and 006 show how Ally, Nadine, Stephanie, and Lydia appropriated containers from our science supply cabinet to use for their amphibian and insect habitats.

**Innovative Appropriation and Adaptation in the Cheerios creative category.** During snack time the students innovatively appropriated and adapted Cheerios in creative ways. In data numbers 017 and 018, Cooper and Brenda used the hole in the center of each Cheerios cereal as an integral part of their eating process. Other students used Cheerios as creative and decorative elements (Appendix A, Data numbers 019, 020,
Innovative Appropriation and Adaptation in the Classroom Space creative category. Data numbers 023 and 025 show students appropriating AV carts and climbing wall crash pads to create private and personal workspaces in the classroom.

Innovative Appropriation and Adaptation in the Dance creative category. Data number 027 shows Libby appropriating and adapting sticks and yellow caution tape for her dance routine.

Innovative Appropriation and Adaptation in the Dyes creative category. The students used science supplies such as vials, test tubes and small plastic containers (Appendix A, Data numbers 047, 048, 049, 050, 051 & 052) to hold their liquefied and frozen creative artifacts.

Innovative Appropriation and Adaptation in the Forts and Spaces creative category. Many examples of innovative appropriation and adaptation were found in the Forts and Spaces creative category. Natural elements such as sticks, branches, grass, rocks, stones, trees, vines were used to fabricate flag poles, gates, brooms, handrails, chairs, toys, decorative elements, tools and pieces of art (Appendix A, Data numbers 065, 066, 068, 072, 082, 083, 087, 091, 098, 100, 110 & 119). Manmade objects such as balls, ropes, sleds and duct tape were used as flags, toiwines, architectural elements, transports, and boundary markers (Appendix A, Data numbers 065, 069, 070, 071, 099, 103, 107, 109, 111 & 112).

Innovative Appropriation and Adaptation in the Glue creative category. The students found new and novel applications for Elmer’s glue, using it as a laminate or casting material to create stickers or as an expressive medium (Appendix A, Data
Learning through innovative appropriation and adaptation. Learning through innovative appropriation and adaptation took place at the research site because the students were allowed to interact with items in ways that deviated from their intended functions. Students made modifications to classroom supplies. They altered, transformed and repurposed materials and procedures.

Attribute Six: Creative Transcendence and Aesthetic Enhancements

When my students engaged in self-initiated and self-directed creative learning some of the resulting artifacts reflected the aesthetic-conceptual amalgam found in the artworks of contemporary artists. Like contemporary art, the students’ work was often witty, ironic, surprising and explored new visual and conceptual territories. While the connections between children and adult artists are well documented (Antoniou & Hickman, 2012; Engel, 1993; Fineberg, 1997; Fineberg, 2006; Gardner 1980; Gheaus, 2015; Lark-Horovitz, Lewis, & Luca, 1973; Rosenblatt & Winner, 1988), they seldom examine the similarities or make direct comparisons between children’s creativity and the work of contemporary artists (Rufo, 2013c; Rufo, 2014a; Rufo, 2014b).

A piece of data was considered to show evidence of the Creative Transcendence and Aesthetic Enhancements attribute if the students used everyday classroom supplies or readily available materials found in nature to create beguiling artifacts similar to the work of contemporary adult artists, or if they added elements to everyday objects in a way that transformed them conceptually or aesthetically.

13 pieces of data from 7 creative categories show evidence of the Creative Transcendence and Aesthetic Enhancements fundamental attribute.
Creative Transcendence and Aesthetic Enhancements in the Cheerios creative category. Data number 020 shows a Cheerio that a student stained a deep magenta with a Sharpie maker. This simple creative act heightened the visual impact of a single Cheerio and at the same time negated its function as a snack food for consumption. Cereal is eaten en masse whereas this creative artifact emphasized the physicality of a single Cheerio.

Data number 021 shows how the children decorated my laptop computer keyboard by carefully placing one Cheerio on each key and a handful on the touchpad. This was done as a prank, yet as with much modern and contemporary art, it simultaneously plays with the notions of identity and purpose by creating an aesthetic transformation through the juxtaposition of disparate objects. The homogeneous circular shapes of each piece of the Cheerios cereal contrast with, and at the same time echo, the repetitiveness of the square and rectangular keyboard elements. The placement of the Cheerios on the keyboard keys renders the computer ineffective while the Cheerios cereal transform from a snack food into a decorative element.

Creative Transcendence and Aesthetic Enhancements in the Drawing creative category. Data number 040 shows Libby’s drawing of a single black heart in the center of a tissue. Heart designs are a common image in the drawings of young girls (Anning, 2002; Boyatzis & Eades, 1999; Nicholl & McLellan, 2007) yet the way this drawing was produced was very uncommon. Libby used a black Sharpie marker instead of a water-based, student grade marker. The Sharpie’s permanent ink is harder to control than a water-based maker and the rapid absorption rate of a tissue makes it a difficult surface on which to draw. The delicateness of the tissue imparts the drawing with an
ephemeral quality. The student was able to completely fill in the center of the heart with the black, heavy, maker ink and somehow keep the tissue intact without causing any punctures or tears.

**Creative Transcendence and Aesthetic Enhancements in the Dyes creative category.** Data number 048 shows a series of vials that Ally filled with food coloring and various small objects as part of a science experiment on reflection and refraction. These pieces evoke apothecary jars used to store and dispense medicine in the eighteenth century (Tunis, 1999). They also happen to be filled with the same liquids, water and food coloring, that the contemporary artist Damien Hirst filled his apothecary jars with as part of the *Pharmacy* series (Hirst, 2004). Like Hirst, Ally combined the practices of science with art.

**Creative Transcendence and Aesthetic Enhancements in the Food Creations creative category.** Traditionally, children have been admonished for playing with their food (Elffers, 1997). However, the self-initiated activity of food creation empowers children to see beyond “the appearance of things at face value” and “creatively see other possibilities” (Elffers, 1997, p. 8).

Data number 058 shows a ribbon like strand carved from an apple. The student’s carving was transformative, presenting an apple in a new way. Apples are usually seen as spherical or when cut, as wedges. However, here a portion of the apple was removed from its circumferential configuration and displayed in such as way that emphasized the relationship between the linear arrangement of the stretched out strand of apple peel and the void left around the girth of the apple. Children will usually use their food to create
representational imagery as seen in data numbers 057, 059, 060 and 061, whereas this student used her teeth as a carving tool to create an abstract design.

**Creative Transcendence and Aesthetic Enhancements in the Forts and Spaces creative category.** Data numbers 090 and 094 shows items created with masking tape and a few other materials attached to trees that Libby called her Fort Resort. When asked what made it a resort she said, “I just wanted something that rhymed” (personal communication, October 15, 2012). Libby identified a paper plate covered with strips of tape and marker scribbles as a shield. A paper cup wedged and taped to the fork of an old maple tree held a handful of wild flowers. A narrow 3-foot by 6-inch band fashioned from masking tape with a string on either end was suspended between two saplings. Libby referred to this as her hammock. Nearby loops of masking tape anchored sticks to the trunks of trees. This was created as a solitary space yet at the same time she encouraged others to tour her creation. Like artists who create installations, Libby made a personal space, public.

The contemporary artist Louise Bourgeois is famous for creating installations she called *Cells*. Of her *Cells* Bourgeois said, “When I began building the Cells I wanted to create my own architecture” (Lorz, 2015, p. 28). Like the masking tape constructions the student placed around her fort, in her *Cells* Bourgeois included “hand-made ephemera” that evoked significant childhood memories (Morris, 2008, p. 236). And like Bourgeois’ personal architecture, Libby likewise constructed an idiosyncratic and distinctive space.

Libby did not share her rationale or motivation for the creation and placement of these pieces. However, the unexpectedness of this woodland arrangement combined with the straightforward naming of the objects was in some ways similar to the visual and
conceptual conflicts generated by the stuffed animal based sculptures by the artist Mike Kelley. Kelley’s choice of materials, placement of objects and titles given to the works led viewers to charge the pieces with an unintended “psychological significance” (Barnes, 1992, p. 125).

Data numbers 117 and 118 show constructions made from branches stacked atop elongated piles of stone that three fifth grade boys made next to Libby’s Fort Resort. When I inquired they told me the constructions were “loading bays” (personal communication, May 31, 2013). They said that they were building their loading bays to do a sound experiment. Their plan was that one student would stand in one of the bays, while the other two would stand in the next bay and play their instruments to “see which bay keeps the sound in it better” (personal communication, May 31, 2013). Watching the boys construct these bays and experiencing the finished pieces felt calming amidst a school day otherwise filled with schedules and curricular demands, engendering a contemplative quality similar to the works of “artists such as Richard Long, Andy Goldsworthy and James Turrell” (Ede, 2012, p. 43).

Data number 119 shows a young maple tree with a portion of its bark stripped off by a student. When asked, “What are you doing?” the student replied, “Taking all of the bark off this tree.” When asked “Why?” he simply said, “Because it looks cool” (personal communication, May 31, 2013). There was consternation around this activity from some of the students and faculty who were appalled that a student would do such a thing. However, most of the children at the school did not have much interaction with nature during school hours even though an old canal ran through the back of the campus and a trail meandered around wooded areas surrounding the campus. With the exception of
students in our classroom, the children were confined to areas of grass, mulch, stone or blacktop during recess. Very few teachers took their students for a walk on the trail and although there was the occasional outdoor science lesson, there were seldom any opportunities for children to freely interact with nature.

From a purely visual perspective, the tree in data number 119 made a dramatic statement. Its lightly toned shaft contrasted sharply with the dark greens and deep umbers of the surrounding woods and could be classified as an environmental art piece. Artist who make environmental art use materials found in nature. Some environmental art pieces are “dramatic interventions with nature” (Parsons, 2008, p. 129) that involve moving enormous amounts of earth and boulders as in the work of Michael Heizer and Robert Smithson while others consist of manipulating small branches, twigs and leaves as in the work of Andy Goldsworthy. In his book Aesthetics and Nature, Glenn Parsons raises the question: “Is there something unethical about the treatment of nature in the creation of environmental artworks?” (2008, p. 130). This question is similar to the dialogue that transpired during the creation of data number 119.

**Creative Transcendence and Aesthetic Enhancements in the Frozen**

**Creations creative category.** Data numbers 120 and 121 show castings of gloved hands created by freezing latex gloves filled with water and yellow food coloring. The imagery elicits a peculiar yet intriguing visual effect, much like the 1991 work Self by the artist Marc Quinn. Quinn’s Self is a “cryogenic sculpture which consisted of a cast of his head in his own frozen blood” (Martyn, 2002, p.65).

**Creative Transcendence and Aesthetic Enhancements in the Head and Hand**

**Accoutrements creative category.** Data number 135 shows a variety of accoutrements
the students created out of tin foil. Some of these creations were fairly common, such as simulated beards and moustaches or jewelry such as earrings and bracelets. Others were prosthetic, such as elongated noses, tentacle-like protuberances and crescent-shaped objects balanced on noses. The contemporary artist Matthew Barney (Davis, 2006) uses prosthetics throughout his work and Cindy Sherman employs facial and other prosthetics in her work to explore the “idea of malleability or fluidity of identity” (Hoban, 2012, p. 77). When our students went to the dining hall for lunch, there were complaints from some of the faculty about the tin foil accoutrements our students were wearing. It was as if the accoutrements, especially the facial prosthetics, triggered a discomfort similar to the unsettling visual effects brought about by Barney’s use of prosthetics in his films or Sherman’s in her photographs (Lima, 2014).

**Learning through creative transcendence and aesthetic enhancements.**

Transforming everyday objects in visually and conceptually compelling ways is a creative approach many contemporary artists such as the ones mentioned above as well as others including Gabriel Orozco, Tara Donovan, Tayeba Begum Lipi, Jessica Stockholder and Richard Tuttle employ as part of their creative processes. The data shows that children will often aesthetically transform existing objects or make curious artifacts when allowed creative agency.

According to Fineberg: “for both the child and the adult artist, making art is an affirmation of existence in an often bewildering world” (2006, p. 95). Perhaps transforming common items such as cereal, tissues, apples and foil into new and strange artifacts offers a way for children to understand and have a modicum of control in an often perplexing and unpredictable world.
**Attribute Seven: Communication, Empowerment, and Self-Advocacy**

Agency and choice in the classroom allows students to tailor their learning according to their interests and it is “well documented that learning takes place most effectively when people are engaged through their interests” (Freedman, 2007, p. 211). In this environment, students are empowered to take more responsibility of their learning, which in turns leads to greater communication, interdependence and self-confidence among the students (Andrews, 2005; Roberts, 2008).

Self-governance in the classroom and ownership of learning led students to effectively communicate their learning to peers and self-advocate to teachers. These qualities came through in portions of the data set. A piece of data was considered to show evidence of the Communication, Empowerment, and Self-Advocacy attribute if it clearly expressed students effectively communicating with peers, becoming empowered through their creative endeavors, or advocating for themselves to an adult. 59 pieces of data from 10 Creative Categories show evidence of the Communication, Empowerment, and Self-Advocacy fundamental attribute.

**Communication, Empowerment, and Self-Advocacy in the Amphibian and Insect Habitats creative category.** Groups of girls constructed habitats for salamanders they found under rocks near the wooded section of the campus during recess (Appendix A, Data numbers 010 & 013). These girls became empowered in their learning by engaging in a self-directed activity. They decided to investigate salamanders, which was a topic of interest, and designed a way to observe them over time by creating habitats to be stored in the classroom. Additionally, they attached signs reading “Do not touch!” and “Salamander experiment” to their salamander habitats effectively communicating to
others in the classroom.

**Communication, Empowerment, and Self-Advocacy in the Cheerios creative category.** In public school classrooms “external regulations for teachers have subjected students to increased compliance to teacher authority” (Alderman & MacDonald, 2015, p. 53). Although the research for this study took place at an independent school that was not subject to high-stakes testing, there was a growing movement to raise enrollment by competing with the local public schools via increased academic standards. This practice resulted in classrooms dedicated to direct teaching methods with the teachers acting as the authority figures and students compliant subjects. This increased teacher authority meant students where not allowed to access classroom materials and supplies without teacher permission. Data number 021, however, shows students creatively empowering themselves by decorating the teacher’s computer with Cheerios.

**Communication, Empowerment, and Self-Advocacy in the Classroom Space creative category.** Data numbers 023, 024, 025 and 026 show some of the ways students implemented ownership of the classroom space and were empowered by exhibiting autonomy through creative means. In data number 023 a student used various classroom items to set up a personal learning space. In data number 024, a few girls decided to paint a bookcase. In data number 025, a group of students created a private rehearsal space and in data number 026 students had access to draw and write on the whiteboard when they arrived to school in the morning.

**Communication, Empowerment, and Self-Advocacy in the Drawing creative category.** Data numbers 038, 042, 044, and 045 students advocating for themselves to fulfill their creative visions. In data number 038, Lydia created a drawing, decided she
wanted it displayed on the ceiling and requested that Eddie help her with the task. Data numbers 042, 044, and 045 show the personal studio space Ally asked me to help her set up so that she could work on and develop a series of drawings.

**Communication, Empowerment, and Self-Advocacy in the Forts and Spaces**

creative category. There were many opportunities for students to effectively communicate their learning to peers as they constructed and enhanced their forts and the surrounding areas. Data numbers 066, 081 and 096 show how the students communicated and shared fort building ideas and techniques. Games were created and rules established in data numbers 071, 084 and 088. Students found creative ways to present their forts to fellow students in data numbers 090 and 116 and signify fort affiliations in data number 095. Students worked together and brainstormed ways to solve problems (Appendix A, Data numbers 096 and 103) and developed a series of paths so messengers could quickly and efficiently send communiqués between forts (Appendix A, Data number 114).

The students were empowered as they took the initiative to solve problems such as accessing forts built atop steep hillsides (Appendix A, Data numbers 069 and 071) or move heavy objects (Appendix A, Data numbers 070, 092, 110 and 111).

The students were allowed to move freely throughout the fort areas and exhibited responsible behavior by heeding the call to return to the classroom when recess was over (Appendix A, Data number 080). Students set up personally expressive spaces (Appendix A, Data number 094) and developed ways to barter for building materials (Appendix A, Data number 115).

Students advocated for themselves by requesting they be allowed to explore areas beyond the forts to obtain materials and resources (Appendix A, Data numbers 067 and
102) or by creating ways to engage in safe, adventurous play (Appendix A, Data number 072).

Communication, Empowerment, and Self-Advocacy in the Frozen Creations creative category. Data numbers 120 through 122 show frozen artifacts the students created by having access to the classroom mini-fridge. They were not required to first ask permission and could use it in a way that best served their creative visions. Since they could store their frozen creations long-term they were able to experiment and see how their frozen artifacts changed and progressed over time.

Communication, Empowerment, and Self-Advocacy in the Head and Hand Accoutrements creative category. The school at which this study took place had a comprehensive dress code policy. The policy addressed articles of clothing and other items not allowed such as piercings and unnaturally colored hair. The dress code also stated “Attire that is distracting to the learning environment” is not allowed and “Students in all three divisions are expected to dress in a manner that is neat, clean and appropriate.” These general statements allowed the teachers and administration to make broad interpretations of what they deemed appropriate and inappropriate dress. Data number 131 and 135 show Nicole and a group of other fourth grade students being empowered to make creative choices that altered the way they looked without first asking permission. In both instances they kept their accoutrements intact after they left our classroom until other faculty members asked Nicole to remove the Cheerios cereal from her hair and the group of fourth grade students to remove the tinfoil from their heads, hands, arms and faces.
Communication, Empowerment, and Self-Advocacy in the Studio and Supply Area creative category. The studio/supply area in the back of classroom eventually became a space over which the students had complete control. Data number 213 shows the art carts with new supplies organized in bins. Data number 214 shows students using materials from the art carts with supplies obtained from the nearby science supply cabinets. Data number 215 shows how the carts and tables looked after a few days and data number 216 shows a table in the studio/supply area in mid-April. The students were able to access and organize the materials and interact with the studio space that best fit their creative needs and desires.

Communication, Empowerment, and Self-Advocacy in the Table Marks creative category. Data numbers 217, 218 and 219 show one way the students were empowered by having ownership of the classroom. Our students “marked and decorated the walls, tables, floor, and ceiling according to their personal needs and interests” and “eventually our classroom reflected the collective aesthetic” (Rufo, 2014c, p. 20) of our student body. In data number 217 students drew diagrams on a table for a game they created. Data number 218 shows a student drawing on the table and data number 219 shows students using the tips of a scissors to engrave designs on the table.

Communication, Empowerment, and Self-Advocacy in the Tools creative category. Throughout the history of American schooling there have been teachers and administrators who resisted new or alternative writing technologies. In the book Rethinking Education in the Age of Technology: The Digital Revolution and Schooling in America there are listed a series of concerns by educators that highlight this point. Quotes reflecting this attitude are presented from 1815 such as “Students today depend on paper
too much…(t)hey can’t clean a slate properly. What will they do when they run out of paper?” to 1987 such as “If students turn in papers they did on the computer, I require them to write them over in long hand because I don’t believe they do the computer work on their own” (Collins & Halverson, 2009, p. 30).

At the research site, teachers and administrators had specific expectations and rules guiding the ways students engaged in writing in the classroom. Students were expected to use pencils to take notes and write rough drafts. For many years the fifth grade students were required to write final drafts in ballpoint pen. Once classrooms were outfitted with laptop computer carts, students were allowed to compose final drafts on the computer but expected to write drafts by hand. However, data numbers 220, 221 and 222 show how Cooper and a classmate made the decision to create alternate writing tools during math class. They made rudimentary fountain pens fashioned from toothpicks and marker ink and used them to solve their math problems.

**Communication, Empowerment, and Self-Advocacy in the Whiteboard creative category.** Since 1817, blackboards (and more recently whiteboards) dominate the front of classrooms and serve as an extension of the teacher’s authority (Rufo, 2013d). In other classrooms at the research site, children were not allowed access to the whiteboards unless they first obtained teacher permission and even then they were usually required to be used solely for academic purposes. In the classroom where this study took place, however, teachers and students has equal access to the whiteboard. Data numbers 240, 243, 244, 246, 248 and 249 show how the students became empowered by using the whiteboard for their creative expressions. They covered the whiteboard with colorful drawings of large cartoon heads, comical teacher portraits and abstract designs.
Data numbers 241, 242, 245, 247, 251, 252 and 253 show how the students used the white board as a tool to communicate with one another. They made sign-up lists, weather reports, humorous statements, one-liner cartoons, surveys, wrote messages and stories.

Learning through communication, empowerment, and self-advocacy. The students at the research site took ownership of their creative learning as well as their learning environment. They self-directed their movements in the classroom, accessed supplies, tested, and explored the materials to use them in new and innovative ways.

Attribute Eight: Conflict Within the Status Quo

Conflicts arise with the prevailing educational status quo when students attempt to engage in self-initiated creativity or exhibit agency in their learning (Amabile, 1998; Clover, 2006). At the school where this study took place, the status quo was made manifest by protocols and procedures that regulated every aspect of the students’ school day. Students were not given choices in their learning or a voice in their educational experiences (Rufo, 2014d). Classrooms were “designed to ensure compliance with direct instruction methodologies” and students “were seldom given opportunities for autonomous actions during the school day” (p. 393). It comes as no surprise then that all 253 pieces of data from the 27 creative categories showed evidence of the Conflict Within the Status Quo fundamental attribute.

Conflict Within the Status Quo in the Amphibian and Insect Habitats creative category. Walter, the student who decided to create a cemetery for a spider (Appendix A, Data numbers 001 and 002), would have been asked by other faculty at the school to play elsewhere because his activity was in the same location where teachers were talking. The students who created the amphibian and insect habitats (Appendix A,
Data numbers 003 - 016) would have not been allowed to take containers from the science supply cabinet, decorate their habitats with flowers picked from beds around campus, write the names of their pets on the habitats or choose where to place the habitats in the classroom.

**Conflict Within the Status Quo in the Cheerios creative category.** In the other classrooms at the school, students were not allowed to eat their snacks in creative ways (Appendix A, Data numbers 017 & 018) or use their snacks as a creative medium (Appendix A, Data numbers 019, 020 & 22), especially if it involved an item belonging to a teacher (Appendix A, Data number 021).

**Conflict Within the Status Quo in the Classroom Space creative category.** The administration expected all students to work at desks and frowned upon the idea of giving students options in how they wanted to go about their learning (Appendix A, Data numbers 023 & 25). Upon arriving, the school expected students to prepare for the day and begin working rather than socializing while drawing on the whiteboard (Appendix A, Data numbers 026). Students were not allowed to decorate furniture unless it was part of a teacher initiated or school sanctioned project (Appendix A, Data number 024).

**Conflict Within the Status Quo in the Dance creative category.** Throughout the grade levels students were scolded if they did not adhere to predetermined schedules or exhibit school specific decorum. Bodily movement and positioning was regulated and site dependent. For example, while in the hallways students were expected to be silent, look straight ahead, stay on the right side of the hallway and walk at a brisk pace without pausing. In classrooms, students were required to use “indoor voices” and move according to teacher directives. Data number 027 shows Libby violating the
aforementioned expectations as she chose to engage in a self-initiated dance during a pre-scheduled transition time.

Conflict Within the Status Quo in the Doodles on Math Pages creative category. In the other grade level classrooms, marking homework sheets or handouts aside from the intended purpose was frowned upon (Appendix A, Data numbers 028-032) and doodles were considered a distraction from learning, defacement of school property and a sign of disrespect.

Conflict Within the Status Quo in the Drawings creative category. At the school in which the research site was located it was acceptable for students to create self-initiated drawings or designs during indoor recess times but not during class time (Appendix A, Data numbers 033 - 038) and students were not allowed to use creative media in non-traditional ways (Appendix A, Data numbers 039 - 046).

Conflict Within the Status Quo in the Dyes creative category. In other classrooms students were not allowed to use science supplies for creative purposes (Appendix A, Data numbers 051 & 052) or combine science and art according to their own interests (Appendix A, Data numbers 047 - 050).

Students in the elementary grades were expected to use only school sanctioned playground equipment during recess (Appendix A, Data numbers 053 - 055). When they came into the classroom hand sanitizer was only to be used for cleaning hands before going to the dining hall for lunch (Appendix A, Data number 054).

Conflict Within the Status Quo in the Food Creations creative category. While at the dining hall, students were scolded if they used food and tableware for creative purposes (Appendix A, Data numbers 056 - 064).
Conflict Within the Status Quo in the Forts and Spaces creative category.

During recess children were expected to remain within the fenced playground area and over the years teachers had lodged complaints with the administration about our student’s use of the wooded areas surrounding campus (Appendix A, Data numbers 065 - 119). It was especially disconcerting to some when our students integrated manmade objects (Appendix A, Data numbers 069 – 072, 076, 085, 087, 090, 094, 095, 099, 101, 102, 103, 107 & 109-113) or made adjustments to the natural setting (Appendix A, Data numbers 067, 073, 074, 075, 077, 078, 083, 086, 089, 091, 092, 093, 096, 097, 108, 117, 118 & 119).

Conflict Within the Status Quo in the Frozen Creations creative category.

Other faculty who kept items in our classroom mini-fridge complained when the students were allowed to adjust the temperature and use it to make and store their frozen creations (Appendix A, Data numbers 120 - 122).

Conflict Within the Status Quo in the Glue creative category. School supplies such as glue were controlled by teachers and used for teacher directed projects. It was considered wasteful for children to use school supplies for personal creative projects in experimental or playful ways (Appendix A, Data numbers 123- 130).

Conflict Within the Status Quo in the Head and Hand Accoutrements creative category. As previously mentioned, the school at which this study took place had an extensive dress code policy. Making adjustments to one’s appearance that deviated from the dress code was only allowed during school sanctioned celebrations and activities such as the Halloween parade, Home Coming or during the Track and Field Day event. The head and hand accoutrements the students created in data numbers 131-
137 were considered a distraction from their learning.

**Conflict Within the Status Quo in the Masking and Duct Tape Creations creative category.** Most classrooms at the research site had cellophane tape for students to use and a roll or two of masking tape to be used only with special permission from a teacher. Using masking tape or duct tape for student initiated creative explorations like those found in data numbers 138 - 156 was not permitted.

**Conflict Within the Status Quo in the Math Class Creations creative category.** Self-initiated creativity in math class was considered a deviation from curricular objectives. The administration wanted a “targeted approach to instructional design” and expected that “instructional time will be preserved, used efficiently and respected as valuable time” (personal communication June 14, 2013). Data numbers 157-160 were in direct violation of these expectations as they show students engaged in self-initiated creativity during math class.

**Conflict Within the Status Quo in the Mixtures and Potions creative category.** Data numbers 161-169 show students using supplies designated for science class to playfully experiment with mixtures and create imaginary potions during indoor recess times. Most classrooms only allowed students to use specified items that were easy to manage such as board games, blocks, crayons and scrap paper during indoor recess.

**Conflict Within the Status Quo in the Movies creative category.** The administration stated that, “digital technology will be used for educational purposes only during appropriate times” (personal communication June 14, 2013). However, data numbers 170 and 171 show children using digital technology to film and edit their own movies during recess.
Conflict Within the Status Quo in the Names creative category. Although most teachers allowed students to draw during indoor recess times, the children were not allowed to use any new materials that were set aside for teacher-assigned projects and activities. Data number 172 shows students using multiple sheets of new construction paper and markers to create oversized nametags. Students were also expected to focus on the task at hand and not deviate from the objective of a lesson. Data number 173 shows Walter creating a name logo, which he then shared with his friends during math class.

Conflict Within the Status Quo in the Painting creative category. Data numbers 174-187 show a variety of ways in which the simple act of painting came into conflict with the status quo during this study. Even in the art room, making expressive abstractions or applying paint with hands was discouraged (Appendix A, Data numbers 174-176 & 178).

There was little time set aside for student-directed work in the other classrooms such as starting a painting contest (Appendix A, Data number 177). When there was, children were not allowed to paint the furniture (Appendix A, Data number 179) or explore alternative painting methodologies (Appendix A, Data numbers 180-183, 186 & 187). Also, the school expected art materials be used for predetermined projects and handled in traditional ways whereas data numbers 184 and 185 show students experimenting with paint mixtures.

Conflict Within the Status Quo in the Sculpture and 3D Designs creative category. When the students in our classroom made three-dimensional objects they often did so using unconventional materials such as paper cups (Appendix A, Data numbers 188 & 189), tissues, markers and tape (Appendix A, Data numbers 190 & 193), glue,
food coloring and plastic wrap (Appendix A, Data number 195), bits of plastic, glass, rubber and small stones (Appendix A, Data number 196), and mud with sticks (Appendix A, Data number 197).

Some of the objects were made with conventional materials such as paper airplanes (Appendix A, Data numbers 191 & 194) or figures made from Silly Putty (Appendix A, Data number 192) but were created and played with during direct instruction time.

Conflict Within the Status Quo in the Sounds and Rhythms creative category. For the most part, children are expected to be quiet in schools (Brooks, 2012; Leafgren, 2011). Teachers require their students to be quiet as they walk in hallways and transition in and out of the elementary classrooms (Leafgren, 2011; Prior, 2014). The customary thinking is that “good classroom management involves quiet classrooms” (Williams, 2009, p. 119). At the research site most of the teachers adopted this traditional approach. Upon arriving in their classrooms in the morning, students were given assignments and tasks to accomplish; students who created the artifacts seen in this study arrived at a classroom that was bustling with activity. They were allowed to socialize and take part in various student led games and activities before heading off to the gym for their Physical Education class.

A favorite morning activity was playing handmade percussive instruments (Appendix A, Data numbers 198-203). This loud and energetic activity made our room sound quite different from the other classrooms throughout the school.

Conflict Within the Status Quo in the String creative category. As with some of the other self-initiated creative activities, the children used string as a creative medium
during class time as well as during recess time. Other teachers did not allow their students to engage in self-initiated creative endeavors during class time nor did they allow them to experiment with classroom supplies in alternate ways. As seen in this study, our student’s creations included non-traditional applications. String was used to make objects (Appendix A, Data numbers 204 & 205), as a meditative device (Appendix A, Data numbers 209 & 210), for experiments (Appendix A, Data numbers 208, 211 & 212) or simply a medium to manipulate and explore (Appendix A, Data numbers 206 & 207).

Conflict Within the Status Quo in the Studio/Supply Area, Table Marks, Tools, Toys and Games, Weapons, and Whiteboard creative categories. Many consider teacher authority and control imperative for classrooms to be effective and successful learning environments (Krych, 2015; Savage & Savage, 2010). Teachers are expected to be in charge of managing student movement in the classroom and arranging furniture within the space (Duncanson, 2014; Hare, L. P., & Murawski, 2015; Simpson, Bakken, & Reuter, 2013). Teachers control access to objects such as whiteboards and use them as behavior modification tools (Cuban, 1993).

The school at which the research took place adhered to these belief systems and as previously mentioned, recess was a highly controlled activity where most children were required to remain in specified areas. However, the children in our classroom had agency in how they interacted with the classroom space during recess. There was an area in the back of the classroom the students were in charge of and they organized it in ways they felt best supported their creative visions (Appendix A, Data numbers 213 & 214). However, this space appeared disorganized and chaotic to many of the other faculty and administration (Appendix A, Data numbers 215 & 216).
The students were allowed to mark the tables, but then the administration eventually had the tables painted over (Appendix A, Data numbers 217-219). The students made their own writing tools during math class (Appendix A, Data numbers 220-222, 226 & 227) and objects made from natural elements found in the woods (Appendix A, Data numbers 223 & 225) during recess.

The children created toys and games without first obtaining school approval (Appendix A, Data numbers 228 & 232). They made weapons for target shooting (Appendix A, Data number 233, 234 & 238), movie props (Appendix A, Data numbers 235, 236 & 239) and self-defense (Appendix A, Data number 237).

Our students had full access to the whiteboard where they were allowed to draw pictures (Appendix A, Data numbers 240, 241, 243, 246, 248, 249 & 250), make statements (Appendix A, Data numbers 244 & 245) and communicate ideas (Appendix A, Data numbers 242, 247, 251, 252 & 253).

Learning through Conflict Within the Status Quo. The 253 self-initiated creative artifacts in this data set came into conflict with the traditional hierarchies, structures, and practices of the school at which the research site was located. When viewed through the lens of the status quo, the way the children produced their creative artifacts, the materials they used to produce them, the time and context in which they were produced, were considered as having no value or detrimental to student learning and contradictory to the school’s expectations. When the children engaged in creative activities that challenged traditional schooling practices, learning took place in ways that were unexpected, underappreciated and often went unnoticed.
CHAPTER 6 - Discussion: How the Eight Attributes Inform Pedagogy in the Elementary Classroom

Introduction

For many years the faculty of the school at which the research site was located took pride in the fact that, unlike public school teachers, they were allowed to generate their own curriculum. These teachers created themes, lessons, and activities to meet the academic needs and interests of the students. They could adapt and adjust their approaches and methodologies based on the dynamics of their students from year to year. Some teachers took advantage of this flexibility more than others. The majority of teachers repeated the curriculum they developed years earlier and only made slight revisions year to year. Eddie and I made considerable revisions each year and at times created completely new lessons and activities based on student interests, attitudes, and learning styles.

In recent years, however, a completely new administrative team was hired who decided to standardize the curriculum and required teachers to use commercially produced educational programs and traditional teaching methodologies. During the 2012-2013 school year it was evident that teacher autonomy was rapidly becoming a thing of the past and, as stated in the introductory chapter of this dissertation, my time to practice a progressive educational methodology was quickly drawing to a close. Fortunately, during the time of this study the commercially produced programs were not yet instituted at all grade levels and my teaching partner and I had one more year to surreptitiously allow our students to engage in self-directed and self-initiated creative learning.
An examination of the self-initiated creative processes and artifacts of the students at the research site provided insight into the ways children learn when they are empowered to have agency in their learning and ownership of their learning space. During the initial analysis phase of this study the 253 pieces of photographic and video data in the data set were organized into 27 creative categories. A further analysis of the data set revealed eight fundamental attributes that emerged as features of the self-initiated creativity of children. The Analysis section specified how various pieces of data showed evidence of these eight fundamental attributes.

An additional examination of the data revealed six essential principles that were in place that allowed for the eight fundamental attributes of self-initiated creativity to become evident in our classroom. Each piece of data that demonstrated evidence of the eight fundamental attributes happened within the context of one or more of the following essential principles:

- Time to engage in self-directed learning
- Agency to self-navigate through indoor and outdoor spaces
- Access to classroom materials and supplies
- Autonomy to make choices and decisions
- Freedom to explore unanticipated learning opportunities
- Ability to deviate from preplanned curricular activities and lessons

This chapter will discuss the pedagogical implications of the eight fundamental attributes of self-initiated creativity and six essential principles. Students engaged in the various modes of learning connected with the eight fundamental attributes because six essential pedagogical principles were in place. The students had time to engage in self-
directed learning, agency to self-navigate through indoor and outdoor spaces, access to classroom materials and supplies, autonomy to make choices and decisions, freedom to explore unanticipated learning opportunities, and the ability to deviate from preplanned curricular activities and lessons.

**Attribute One: The Characteristics and Pedagogical Implications of Serendipitous Learning**

The learning that took place from serendipitous events was atypical. When Walter created the insect cemetery during recess he made the choice to explore the grassy patches near where the teachers were gathered rather than play on the fields, in the fort areas or on the playground areas with the other children (Appendix A, Data numbers 001 & 002). When Libby was allowed to explore outdoor spaces she created a habitat for a worm (Appendix A, Data number 015). Libby also choreographed her own ribbon dance because she was allowed to disengage from the classroom schedule and engage in self-directed learning (Appendix A, Data number 027). Another student stumbled upon a way to create thumbprints while doodling on a math handout (Appendix A, Data number 032). The children discovered new drawing techniques because they had access to classroom supplies, autonomy to make decisions in how they used the materials, and time to playfully experiment with the medium (Appendix A, Data numbers 036, 039 & 044).

Nadine, along with a group of girls in one of the forts, found new ways to create dyes because they were allowed to investigate accidental discoveries and explore unintended creative elements (Appendix A, Data numbers 054 & 055). Lunch became a time to combine the acts of eating with art making (Appendix A, Data number 060). Students who were allowed to play in the wooded areas at the edges of the school’s campus found
that a low, horizontally hanging branch worked well as a bouncy toy, a vine as a swing, and a curved stick as a broom (Appendix A, Data numbers 082, 098, 100). Other children happened upon old building materials and used them to enhance their fort structures (Appendix A, Data numbers 101 & 109). Repetitive actions such as movement between forts developed into a networked path system (Appendix A, Data number 0114) and absentminded actions such as tapping a rock on a tree trunk generated into a piece of artwork (Appendix A, Data number 119). Having access to classroom materials and being able to experiment with those materials resulted in students using glue to make realistic looking edibles (Appendix A, Data numbers 126 & 128). Having time to play and experiment with materials such as masking tape and duct tape led to unanticipated sculptures and new designs (Appendix A, Data numbers 140, 144 & 149). Serendipitous learning meant students stumbled upon new painting techniques. Libby’s expressionist strokes dictated her painting’s themes and meanings (Appendix A, Data number 174), her random color mixtures generated surprising results (Appendix A, Data number 182), and her playful experiments created new textural effects (Appendix A, Data number 186).

It is characteristic to serendipitous learning that students did not learn in the traditional sense. Their learning could not be easily quantified, assessed, tested, categorized, standardized or graded. Instead, they learned to be explorers, discoverers, and risk takers. They learned to look at materials in new and diverse ways and to critically analyze creative techniques and methodologies.

The essential principles described later in this chapter provided a context where serendipity played a role in the students’ creative learning. Each artifact produced (insect cemetery, worm habitat, fingerprint doodle guide, scribble drawing, mixed media
drawing, dyed tissue balls, chicken patty caricature, faux soup and chocolates, masking tape platypus, wallet, and pouch, abstract expressionist paintings) or object appropriated and its purpose reinvented (tree branch bouncy toy, wooden pallet as ladder, tree trunk as sculpture) was clever, innovative, imaginative, inventive, unique, and thought provoking.

**Attribute Two: The Characteristics and Pedagogical Implications of Process as Important as Product**

Students created compelling artworks because they were allowed to spend time in self-directed learning, explore the limits of materials and techniques, and engage in opened-ended creative processes (Appendix A, Data numbers 036, 041, 042, 044 & 054). Some of the resulting artifacts even resembled the work of contemporary adult artists (Appendix A, Data numbers 048, 058 & 207). Other open-ended processes led children to discover ancient tools such as a mortar and pestle (Appendix A, Data numbers 053, 055). Some processes provided opportunities for children to work together toward a common goal. A group of girls developed techniques to gather and transport large stones and precisely position them on the floor of their fort (Appendix A, Data numbers 086, 091, 092, 093). Ample time for students to experiment with common classroom materials such as tempera paint, markers, tape, string and glue led to new uses, applications, and visual expressions (Appendix A, Data numbers 053, 055, 137, 175, 176, 178, 180, 181, 209). Having access to materials and supplies and the autonomy to make choices and decisions allowed students to develop their own writing tools and techniques (Appendix A, Data numbers 220, 221). When Cooper and a classmate created their own fountain pens, they ended up engaging more closely in the math lesson because they used their own writing instruments to fulfill the task. The activity of taking notes in math class was made more
meaningful, relevant, and interesting because they had a role in how they went about their learning.

These processes gave the students the confidence to tackle problems on their own. Freely exploring deepened students’ learning because, as with much of adult learning, children learn from trial and error repeating processes and adjusting them as they progress.

Attribute Three: The Characteristics and Pedagogical Implications of Cross-Pollination

In order for cross-pollination to occur students need to work in contexts that encourage self-directed learning where they are free to openly communicate, share, and critique their creative ideas and artifacts with their peers. At the research site, the students readily mimicked, appropriated and copied the work of others to supplement and enhance their own creative visions. They moved about the learning space in ways that best suited their creative needs. They took advantage of moments of surprise and made use of unexpected results.

A burst of excitement and urgency flooded the classroom as the students created their amphibian and insect habitats (Appendix A, Data numbers 004-007 & 015). What began as a simple search for pill bugs turned into a flurry of activity as one thing led to another and students expressed their thoughts and ideas in rapid-fire progression. Students shared the best places to procure inchworms and salamanders and the most suitable containers to use for their habitats. Some students researched how to keep the amphibians and insects alive while others focused on the aesthetics of the habitats arranging the flowers and grasses in a visually pleasing way and writing the amphibian
and insect names in clear block letters around the outside of the plastic containers that housed the habitats.

Creative ideas also permeated the student fort community. The most heavily used pathways between forts became established trails and trade routes (Appendix A, Data number 114) along which markets sprang up (Appendix A, Data numbers 115 & 116).

Non-traditional creative materials became popular. Once one student started to use food coloring as a creative medium, others soon followed combining it with additional materials and creative methods (Appendix A, Data numbers 048 & 050). After a student brought in a rope to create a rope tow, many more ropes were brought in and used in a variety of ways during the fort building activities (Appendix A, Data numbers 069, 071, 099, 103, 107, 110, 111 & 112). There was a similar collective fascination with using the classroom mini-fridge as a freezer to make molds using latex gloves, water, and food coloring which developed into an assortment of frozen creative experiments (Appendix A, Data numbers 120, 121 & 122).

Glue was a popular creative commodity. Students observed each other’s artistic methods using glue as a laminate, sculptural material, and/or decorative element (Appendix A, Data numbers 123, 124, 125, 127 & 129).

The sudden way in which the children swarmed around a box of tinfoil to fashion the head and hand accoutrements was perhaps the most dramatic example of creative cross-pollination using a non-traditional creative material (Appendix A, Data numbers 135 & 136).

More common classroom materials such as string and tape were employed for uncommon creative uses as students shared and observed what they made (Appendix A,
Data numbers 138-142, 144, 146, 205, 206, 208, 211 & 212). Creative cross-pollination happened throughout the day as students shared ideas during class time (Appendix A, Data numbers 157-159, 218 & 219) and free time (Appendix A, Data numbers 161-164 & 168).

The six essential principles provided an ideal context for the ripple effect of creative learning brought about by cross-pollination. The students had time to engage in self-directed learning and the agency to self-navigate in outdoor as well as indoor learning spaces. This brought about learning possibilities otherwise unattainable when students are required to follow prescribed lesson plans or when their interactions within educational spaces are regulated and systematized. Having access to classroom materials and the autonomy to choose how to use these supplies opened up new possibilities to alternate and innovative uses and applications. Flexible scheduling provided time for students to explore unanticipated learning opportunities and deviate from preplanned curricular activities and lessons when opportune learning moments presented themselves.

Moments of cross-pollination led to new research, intrinsic motivation, cooperative group work, innovative use of classroom materials, heightened imagination, inspiration, inventiveness and a passion for learning.

**Attribute Four: The Characteristics and Pedagogical Implications of Autonomous Group Learning**

Time to engage in self-directed learning is perhaps the most important of the six essential principles when it comes to successful autonomous group learning. The data that showed evidence of the autonomous group learning fundamental attribute happened during times when the students had the greatest amount of agency and self-governance
such as when they arrived in the morning, during recess and while waiting to be dismissed at the end of the day.

During recess, students spent time working together inventing new creative methods and producing artifacts such as water-based colors from marker cores or dyes from plants (Appendix A, Data numbers 051, 053 & 055). The fort building activities provided many opportunities for the students to engage in autonomous group learning because the fort activities included a large social component. The students collectively figured out how to use natural and found items to construct flagpoles, gates, brooms, rope tows, ropes courses or design roof structures and insulation (Appendix A, Data numbers 065-074, 078, 081, 082, 089, 108, 109 & 112). Students formed self-governing communities, collected significant artifacts and created games and amusements (Appendix A, Data numbers 080, 084, 085, 087, 088, 094, 098, 116, 153, 170 & 171). Working and playing together, the students were able to solve problems (Appendix A, Data numbers 096, 102, 103, 110, 111 & 115). Inside, the students worked on ways to enhance store bought toys and classroom supplies (Appendix A, Data number 151, 184 &185). They played games and formed drum circles when they arrived to school in the morning or while waiting to be dismissed at the end of the day. (Appendix A, Data numbers 199, 203 & 229).

According to the data set, the one time the students engaged in autonomous group learning besides recess and transition times was during a math lesson when Cooper and a friend worked creatively with string (Appendix A, Data number 207).
Attribute Five: The Characteristics and Pedagogical Implications of Innovative Appropriation and Adaptation

The students innovatively appropriated and adapted objects to fit their creative needs because they had access to classroom materials and supplies and autonomy to make decisions on how they went about using the materials and supplies.

Outside students used items such as pebbles to make tombstones and sticks to make snack time more interesting. They gathered branches, grass, rocks, stones, trees and vines to create flag poles, gates, brooms, handrails, chairs, toys, tools and pieces of art (Appendix A, Data numbers 001, 002, 017, 018, 065, 066, 068 - 072, 082, 083, 087, 091, 098, 100, 110, 119).

Items found in the classroom were appropriated and adapted for creative purposes as well. Science containers were used for insect and amphibian habitats, Cheerios cereal as a decorative element, classroom furnishings to create workspaces, vials and test tubes as vitrines to hold creative artifacts. Elmer’s glue was used as a laminate, a casting material and an expressive medium (Appendix A, Data numbers 005, 006, 019 - 023, 025, 047- 052 & 123 - 129).

Some creative artifacts were formed using a combination of man-made and natural materials from inside and outside the classroom such as caution tape and sticks for a dance routine. Students formed other objects by integrating man-made objects into their forts. Branches were used to store and hold rolls of duct tape. Deflated kick balls, ropes and sleds became flags, towlines, architectural elements, transports, and boundary markers (Appendix A, Data numbers 027, 065, 069, 070, 071, 076, 099, 103, 107, 109, 111 & 112).
During these episodes of innovative appropriation and adaptation the students learned to think outside the box. They exercised their creative thinking skills because they were required to find solutions to their creative visions only using objects available to them.

**Attribute Six: The Characteristics and Pedagogical Implications of Creative Transcendence and Aesthetic Enhancements**

Perhaps the most unconventional creative artifacts in the data set were produced when the students made works that transcended the school’s visual vocabulary or when they choose to aesthetically enhance an object. When they combined materials or altered objects in unexpected ways, the students created strikingly new artifacts from mundane objects (Appendix A, Data numbers 020, 120, 121 & 135). They transgressed cultural norms (Appendix A, Data numbers 021, 119, 120, 121 & 135), made unexpected artistic choices (Appendix A, Data number 040), blended science with art (Appendix A, Data numbers 048 & 135), offered conceptual transformations (Appendix A, Data numbers 058 & 135), created new environments (Appendix A, Data numbers 090, 094, 117, 118) and suggested alternative ways of seeing (Appendix A, Data number 119).

These works were the most unconventional but also the most visually and conceptually stimulating. The students were free to choose materials, decide on techniques, take time to experiment with alternate artistic processes, and self-navigate spaces that resulted in creative artifacts that did not reflect the artistic practices of the other elementary classrooms or the school’s art department. The students deviated from the school’s artistic customs and transcended its aesthetic practices.
Attribute Seven: The Characteristics and Pedagogical Implications of Communication, Empowerment, and Self-Advocacy

Communication skills are practiced as early as Pre-K in the school where this study took place. However, public speaking engagements are highly ritualized performances where students read pre-scripted and rehearsed texts. Besides recess, the students rarely had opportunities to communicate with each other about things that were of interest to them. There were also few occasions for students to exhibit agency or become empowered through acts of self-advocacy.

In the data set the self-initiated creative artifacts show examples of students communicating, self-advocating, and becoming empowered in their learning. While creating the insect and amphibian habitats, the students had time to engage in self-directed learning (Appendix A, Data numbers 010 & 013). They had the agency to self-navigate though indoor and outdoor spaces which allowed them to find various insects and amphibians. They had access to classroom supplies and were able to choose the containers they felt provided the best housing for their habitats. They shared ideas and communicated research they found online.

Students empowered themselves by transgressing traditional power structures and hierarchies when they placed the Cheerios cereal on the teacher’s laptop computer keyboard (Appendix A, Data number 021). Students demonstrated agency, became empowered, and communicated with each other as they took ownership of the classroom space by setting up private and shared workspaces (Appendix A, Data numbers 023 & 025), painting a bookcase (Appendix A, Data number 024), having control over a portion of the classroom space (Appendix A, Data numbers 213-216), marking and decorating
the classroom furniture (Appendix A, Data numbers 217-219), and having full access to
the white board (Appendix A, Data number 026).

Time and ownership of the classroom space provided one student with the means
to discover and explore the graphic possibilities of a modeling compound as she set up
her own short term studio space (Appendix A, Data numbers 042, 044 & 045) and
another to curate the classroom by hanging her drawings on the ceiling (Appendix A,
Data number 038). Both of these students advocated for themselves as they requested
changing the function and appearance of our classroom.

The fort activities were replete with examples of students having time for self-
directed learning, navigating outdoor spaces, making decisions, and exploring
unanticipated learning opportunities. Students engaged in learning that was meaningful,
relevant and fun from the very first day that they began constructing forts (Appendix A,
Data numbers 066 & 067), integrating ropes into their architectures (Appendix A, Data
numbers 069 - 072), independently moving about the woods (Appendix A, Data number
080), helping one another with construction (Appendix A, Data number 081), creating
games (Appendix A, Data numbers 084 & 088), producing amusements (Appendix A,
Data numbers 090, 094 & 116), collectively finding solutions (Appendix A, Data
numbers 092, 096, 102, 103, 110, 111 & 115) and communicating affiliations (Appendix
A, Data number 095).

Being allowed to experiment with and tinker with the classroom refrigerator was
an empowering experience for many of the children (Appendix A, Data numbers 120-
122). They were given time to investigate how solutions and objects changed when
exposed to cold temperatures. The students exhibited ownership of the refrigerator by
adjusting the temperature dial to their liking and using it to store their frozen creations and self-initiated science and art investigations.

The students took ownership of their appearance when they decorated their hair with Cheerios cereal (Appendix A, Data number 131) and attached tin foil appendages to their faces (Appendix A, Data number 135).

At the beginning of the school year the students regarded the whiteboard as the sole domain of the teachers. Soon, however, they came to find that each member of our classroom community had equal access to the whiteboard. The students were allowed to write or draw anything the wanted on the whiteboard as long as it was not hurtful to others. They had the freedom to use the whiteboard as a communicative tool and message center (Appendix A, Data number 241, 242, 252) a place to tryout various graphic techniques (Appendix A, Data numbers 240, 244, 249 & 250), and a place to collaboratively interact via textual and graphic data (Appendix A, Data numbers 243, 245 - 248, 251 & 253).

Attribute Eight: The Characteristics and Pedagogical Implications of Conflict

Within the Status Quo

The methods the students used to produce the 253 pieces of data in the data set conflicted with the status quo established by the protocols, procedures, conventions, practices, expectations and traditions of the school at which the research site was based. Consequently, the school did not support the six essential principles required for the self-initiated creativity demonstrated in the data set. This discord was primarily due to a hierarchy that placed the administration at the top, followed by the faculty and staff, with the students at the bottom. Within the student body there also existed micro-hierarchies
based on a student’s race, cultural background, economic class, ability to perform well in traditional schooling activities, and the role of a student’s parents in the school community.

For our students to have time to engage in self-directed learning, agency to self-navigate through learning spaces, access to classroom supplies, autonomy to make decisions, freedom to explore unanticipated learning opportunities, and the ability to deviate from preplanned curricular activities, our classroom pushed against the hierarchies that existed in the school at large.

**Essential Principle One: Time to Engage in Self-Directed Learning**

As teachers, Eddie and I were required to follow a predetermined schedule and so we did our best to allow the students latitude in how they wanted to go about their learning when inside our classroom. When our students became deeply entrenched in a project or activity they were eventually pulled away and escorted to a special class such as music, art, French, Spanish, Physical Education or Performing Arts. Although our students had time to engage in self-initiated learning and creativity in our classroom, they were interrupted by a schedule that dictated where students were required to report throughout the day. When students decided to stay longer to finish up projects or activities they would be scolded for being late to their next class. If this behavior continued, they would be given a behavior modification plan.

Over the course of the school year we observed positive outcomes when students engaged in self-directed activities. During self-directed activities students became excited about their learning. They were willing to work cooperatively with others share thoughts and ideas, and were more apt to accept constructive criticism from their peers. Ample
time allowed students to try different approaches, learn from mistakes, and make modifications. A flexible schedule encouraged risk taking, open-ended explorations, discovery, and the potential for serendipitous learning outcomes.

However, at times the flexible schedule in our classroom disrupted the more rigid scheduling system practiced throughout the rest of the school. I recall back in 2011, having a discussion with the Head of Middle School who compared our classroom to an island. Our classroom was an island philosophically and in practice, but physically it was part of a larger construct. Offering our students agency and flexibility in how they scheduled their time with us generated exciting learning opportunities within our classroom but at the same time created conflicts in other portions of the school. Eddie and I believed it would be good for our school to offer a diversity of classroom experiences for the children. But in reality, this pedagogical diversity produced unrest by magnifying differences, provoking discord, and providing justification for negative perceptions of our classroom practices.

**Essential Principle Two: Agency to Self-Navigate through Indoor and Outdoor Spaces**

In most classrooms at our school, students were required to sit in prearranged seating and move about learning spaces in particular ways. Codes of conduct also regulated their movements in classrooms, hallways, and common areas such as the dining hall. Even in spaces that encouraged movement such as the gym, students were obliged to follow teacher-directed physical activities.

However, we found much of the self-initiated learning happened when our students were able to move about indoor and outdoor spaces according to their needs and
wishes. This freedom gave them opportunities to have ownership of their education by expanding their learning contexts. They became empowered agents demonstrating an increased confidence that bolstered their interpersonal and leadership skills with both peers and adults. Their freedom to move about their learning spaces made it possible for them to set up temporary studios and work areas where they could spread out organize the space based on their creative needs.

This approach worked very well within our classroom but empowerment of this sort was easily misinterpreted in other areas of the campus. Since the 19th century, cultural codes and modes of etiquette have been developed and adopted that dictate the ways children are expected to act and behave in school environments. Within each school, the environment is set up as a closed system that operates according agreed upon protocol and actions. There were groups of parents as well as some faculty and staff who admired our classroom practices and methodologies. There were also some who became concerned when they saw how our students acted and interacted outside of our classroom. Eddie and I did not require our students to adhere to traditional schooling practices such as walking in a straight line on the right side of the hall, remaining within the boundaries of the playground, and asking for permission before getting up from their table in the dining hall. We also did not punish our students by making them sit out during recess or stay after school to complete a project or missed homework assignment. Again, these practices worked very well within the confines of our classroom but when they were made apparent to those outside our classroom community, they were easily misinterpreted as threatening to the social order of the school. Eddie and I taught our students how to code-switch when they were in other areas of the school’s campus. We
held frequent class discussions on why it was important for them to be aware of the expectations of their other teachers. However, it takes time and practice for children to internalize these concepts and ideas.

**Essential Principle Three: Access to Classroom Materials and Supplies**

It was understood and accepted that teachers were in charge of managing and administering classroom materials and supplies at the school in which this study took place. At the beginning of the year, teachers organized and set up their classrooms. For the most part, desks were arranged in groups or rows with name labels affixed to the top edges. Sometimes plastic holders for common supplies such as pencils, scissors, crayons and rulers were included. Each room had a shelf containing lined paper, construction paper, glue, paper clips, and other items where children could access supplies after asking permission. The rest of the materials were stored in a closet or behind the teacher’s desk.

In our classroom the materials and supplies were kept on shelves or stored in cabinets. Our students were allowed free access to all of the supplies. At the beginning of the year students were given the opportunity to unpack the supplies and decide where in the room to store them. We believed that students took ownership of their learning when they had ownership of the classroom space, furniture and supplies. At the beginning of the school year our classroom community collectively decided how the classroom should be set up, where the supplies should be stored and how they should be used and managed. Free access to the classroom materials and supplies ensured our students uninterrupted potential in their creative learning as they experimented with various techniques, mixtures and combinations.
Conversely, free access to classroom materials and supplies also greatly impacted the classroom aesthetic. A rather specific image comes to mind when most of us envision a typical classroom space. At the front is a large whiteboard bookended by charmingly decorated bulletin boards showing off student work. Above the whiteboard is most likely the alphabet in upper and lowercase letters. Somewhere is a list of the student names neatly written on paper or cardstock apples, stars, or banners. Bright informative posters offer information on the writing process. Book sets are arranged in bookcases or on long shelving units. Desks or tables are arranged in rows of groups. The teacher’s desk is situated in a front or rear corner of the room with accompanying file cabinets and topped with personal mementos. This image lends an air of familiarity to parents as they reminisce about their own schooling experiences. For children, it is an order with which they soon become comfortable and in which they learn how to operate. For teachers, it becomes a standard practice. It is a safe backdrop on which teachers may imprint their own pedagogical aesthetic within the limitations of a basic template.

As seen in the data from this study, allowing children free access to classroom materials and supplies guarantees a radical visual departure from the familiar classroom archetype. The ways our students organized and utilized our classroom materials was far removed from the ways they are taught to in the vast majority of classrooms. Aside from a handful of colleagues, and liberal-minded parents who took the time to listen Eddie and I explain what they were looking at within the context of our pedagogical philosophies and practices, those who observed our classroom space considered it chaotic, messy, and unruly. None of this disarray appeared to hinder any learning in the classroom.
Essential Principle Four: Autonomy to Make Choices and Decisions

Student autonomy was discouraged in a number of ways at our school. Most of the students’ experiences were based on prescheduled, pre-scripted, and preplanned lessons and activities. Students were not allowed to deviate from preplanned curricula. Each grade level was expected to go through a curricular scope and sequence within a predetermined time frame. Our status as an independent school allowed a certain amount of flexibility such as being exempt from state and federal standardized testing requirements. Our class sizes were smaller than those found in public schools, which gave students greater personalized attention from teachers. A majority of the student body came from privileged backgrounds where education was a priority and so they were familiar with how to navigate, interact with and ultimately succeed in schooling situations and contexts. Other than these examples, our school was in many ways similar to public schooling. The students’ experience was highly regulated. Any decisions they were allowed to make were from a predetermined set of choices. For example, while preparing for the school’s annual Science Fair, all students were required to display certain pieces of information on a trifold board in a specific order, but were allowed to determine the color scheme. In the Middle School students could not choose their own science experiment but had to pick from a group of preselected topics. In art class, students were required to follow exemplars set forth by the teacher and could personalize their work only in superficial ways.

In our classroom, Eddie and I valued student autonomy because we felt it led to relevant and meaningful learning. When our students were faced with significant and substantial choices, they critically analyzed their decisions and contemplated various
outcomes. The students took a large role in their learning as they had the option to revisit, reassess, retry or abandon a lesson, project or activity. But this autonomy also meant that the activity in our classroom took on different characteristics than other classrooms in Lower School. These differences, complicated with the tensions and conflicts happening throughout the school, made it difficult for the administration to present a semblance of overall educational cohesiveness to the parent community.

During the years leading up to this study, our school hired an outside agency to help the school develop a solid brand identity to use in our advertising campaigns in order to raise enrollment. Cohesiveness amongst each of the three divisions, as well as a vertically aligned curriculum throughout all grades, became a guiding principle the administration conveyed as paramount to the faculty during meetings. Student autonomy undermined this endeavor. Nevertheless, to Eddie and I, our pedagogy of allowing our students autonomy to make choices and decisions also pushed us as faculty members not to get mired in our school’s branding, allowing ourselves the room to make the daily choices and decisions that would help our classroom community to grow in its learning capacity. As the administration attempted to marshal the faculty amongst existing conflicts and infighting throughout the divisions, Eddie and I exacerbated the lack of cohesiveness, creating additional rifts by our deepening departure from a traditional educational philosophy.

**Essential Principle Five: Freedom to Explore Unanticipated Learning Opportunities**

If students wanted to veer from a lesson or activity, we did our best to find ways to support their ideas and interests. In our experience, children made greater strides in their learning and took more responsibility as learners if they contributed to the
curriculum. When our students were free to explore unanticipated learning opportunities, they invariably worked harder, retained relevant information, made connections, and worked cooperatively with others. Eddie and I considered it fun and exciting to follow a student’s lead. Part of the excitement was that we never knew where the exploration would take the child, and at times, the whole class.

Throughout the course of the day we taught upwards of 54 students so that even when the children chose to work in groups based on a common interest, we had multiple activities and projects happening at once. As a teacher, Eddie encouraged and thrived in this type of environment. My organizational style is quite different, and at first I found it intimidating. But I was swept up in the energy and used Eddie as a mentor to help me navigate that type of teaching process and learning environment. I soon became a convert and marveled at how happy the children were, how fast the hours went by, and how satisfied I felt at the end of the day even when my body was exhausted. Learning adventures that followed the students’ lead were time-consuming endeavors. It was impossible to us to adhere entirely to the curricular programs the school was adopting and also allow adequate time for our students to explore unanticipated learning opportunities. We chose to make room for the latter.

Essential Principle Six: Ability to Deviate from Preplanned Curricular Activities and Lessons

Essential principle six is similar to essential principle five in that it is a time-consuming, open-ended process. As previously mentioned, schools are closed systems that operate according agreed upon protocol and actions. Traditional school systems are identified as successful if they effectively maneuver their students through the grade
levels according to a series of quantifiable metrics after which students go on to pursue acceptance into colleges and universities. Our school boasted of its high student matriculation into top prestigious colleges and universities after graduation. But when Eddie and I allowed our students to veer from preplanned curricular activities and lessons we interrupted the continuum of the vertically aligned curriculum. Without a longitudinal study, it is impossible to know how this practice might have affected our students as they continued on through the grade levels. Anecdotally, I have observed students becoming leaders in our school and this might be due in some part to our efforts to empower our students. Parents have thanked me for bringing about a positive change in their child’s life. Conversely, as mentioned earlier in this dissertation, there were those who felt our classroom experience was a waste of a school year for their child.
CHAPTER 7 – Conclusion

This Narrative

In this narrative I describe what happened when my fourth and fifth grade students were allowed creative agency. During the 2012-2013 school year I used an iPhone to gather photographic and video evidence of their self-initiated creative artifacts and processes. As one of their teachers, I had unrestricted access to their creative endeavors and many hours each day to engage in action research.

A study of my students’ self-initiated creativity provided insight into their learning styles and metacognitive processes. I found that student agency, self-governance, autonomy, empowerment, and ownership of the classroom space were necessary to promote intrinsic motivation and encourage creatively based, student-initiated learning.

For this type of learning to occur, my teaching partner and I embraced flexible schedules, adopted fluid curricular expectations, and resisted conventional hierarchical frameworks. Our classroom reflected the sensibilities and interests of the students. However, the move toward increasing standardization on the federal and state levels drastically affected the flexibility permitted in both public and private education. Even as an independent institution, our school began to increasingly adopt forms of standardization.

Our school came to a philosophical crossroads when the headmaster unexpectedly passed away in 2011, which resulted in a power struggle. The interim leadership eventually hired a traditionally situated administrative team. It was made it clear to my teaching partner and I that we would have to change our unorthodox methods and
practices if we were to retain our employment the following year, which made the completion of this study an urgent matter.

**A Summary of the Literature**

The research literature has shown that much of the creativity found in schools is product based and teacher directed, leaving little opportunity for student-initiated creative engagements. Furthermore, the artwork children produce under the auspices of school environments is very different from what they create when left to their own devices. The self-initiated creativity of children reflects a variety of visual repertories and interests while the artworks produced in schools adhere to narrowly defined visual genres. The literature indicated that children find more enjoyment in generating their own artworks than the projects and products they are compelled to complete in schooling situations. Some researchers suggest educators may gain insight by examining the self-initiated creativity of children and recommend more research needs to be done.

Most of the literature on children’s creativity examined the drawings of very young children and looked at children’s art through developmental or socio-cultural lenses. This study addresses the gap in the literature by analyzing a diverse assortment of self-initiated creative endeavors by a group of fourth and fifth grade students in a private day school.

**A Summary of Action Research**

My twenty years as a general classroom teacher and twenty-five years as a practicing artist provided sufficient background, experience, and context for engaging in a study of my students’ self-initiated creative activities using action research in the elementary classroom. During this study I employed my knowledge base and skill set as a
teacher to manage and balance my daily professional responsibilities with the rigors of data collection. My artistic training and practice afforded me the necessary conceptual insight and aesthetic discernment to organize, analyze, and interpret the data.

Action research permitted me to make first-hand observations in experiential contexts. Being with the children every day, for the duration of a school year, ensured extensive and abundant opportunities for data collection on their self-initiated creative processes and artifacts. In addition to providing a research framework for this dissertation, action research offered the means to collect, analyze, and respond to the data on a daily basis. Additionally, the journal entries taken from the email communiqués collected throughout this study supplied a method of self-reflection and frame of reference while examining the data and composing the chapters for this dissertation.

A Summary of the Procedure

The procedure for this study fit seamlessly into the professional habits I acquired during my teaching practice. Photographing student work and using journaling as a reflective tool were a daily routine. I started collecting photographic and video samples of my students’ self-initiated creativity to inform my teaching with the advent of digital technology in the late 1990s. Since that time I also kept journals and records of my email communiqués to assist in my undertaking as a reflective practitioner.

The iPhone provided a convenient way to record the creativity of my students. My iPhone was a ubiquitous presence in the classroom and therefore a minimal distraction. By the end of the first few weeks of school, the students were accustomed to my dual role of teacher/researcher. Each day I took dozens of photographs and video clips of the students’ creative engagements. Each night I chose the best representations to offload
onto an external hard drive where they were indexed according to date and creative category. I then reflected on the day’s events by conversing via email with my teaching partner Eddie. In the fall and spring we would continue our pedagogical discussions and reflections during early morning, late afternoon and weekend mountain bike rides.

**A Summary of the Findings, Analysis, and Discussion**

During the 2012-2013 school year, our fourth and fifth grade students produced a wide range of creative artifacts. Each day I observed them drawing, painting, constructing, producing, experimenting, and playing. Thousands of artifacts were created and over a thousand documented. Of these, 253 were classified as self-initiated according to the definition used in this study, thus comprising the final data set.

At the school in which the research took place, each grade level was governed by core curricular content and schedules set forth by the administration, but while in our classroom, students were afforded a level of agency that allowed their self-initiated creativity to flourish. The students engaged in self-initiated creativity indoors and outdoors during free times, class times, transition times, recess times, and lunch times. They used traditional and non-traditional materials. Their self-initiated creativity was not organized or directed by a teacher or part of a curriculum plan. Each piece of data in the data set was done according to the imaginations, interests, desires, and creative whims of the students.

Eight fundamental attributes emerged from the data set concerning the self-initiated creativity of children: Serendipitous Learning, Process as Important as Product, Cross-Pollination, Autonomous Group Learning, Innovative Appropriation and Adaptation, Creative Transcendence & Aesthetic Enhancements, Communication,
Empowerment & Self-Advocacy, and Conflict Within the Status Quo. Each theme highlighted a specific aspect of the self-initiated creativity of children observed at the research site. As demonstrated in the eighth theme, each of the first seven themes came into conflict with the status quo found at the research site.

For serendipity to play a role in learning, students need opportunities to engage in self-directed, explorative learning and engage in free play. We surreptitiously allowed student agency to take place in our classroom by creating flexible schedules and allowing our students the freedom to deviate from always being required to produce finished products.

Student agency was a fundamental aspect of our classroom that enabled cross-pollination to occur. Our students had the option to work in groups, pairs, or alone. Effective cross-pollination meant our students freely borrowed and shared ideas, which led to unexpected discoveries and a diverse assortment of emergent ideas.

When autonomous group learning took place in our classroom, the students self-organized into groups based on interest. They formed groups when it was convenient and beneficial to do so. Group members decided when it was the best time to gather together or disband. The groups remained intact as long as it took to complete a task or was advantageous to all involved.

Our students creatively innovated because they had unrestricted access to materials and supplies and could use them in ways they found most meaningful. They were given time to learn about the properties of the materials through experimentation. The same holds true for the creative transcendence and aesthetic enhancements our students produced. Imagination and visualization were important for our students to
conceptually and aesthetically bring their ideas to fruition. It was crucial that they felt confident following their creative passions, were supported by their teachers, and that their self-initiated work was valued in our classroom environment.

**Transgressing the Status Quo**

This study has shown that when our students were empowered, they advocated for themselves more readily and communicated with peers and adults more confidently and at times, critically. Allowing our students to engage in self-initiated creative practices disrupted ritualized learning and “schooling as scripted performance” (Chappell, Chappell, & Margolis, 2011, p. 59). As student empowerment increased, so did instances of conflict with the status quo. When our students engaged in self-initiated creative acts they modeled a learning paradigm that contradicted and clashed with the school’s customary practices and structures.

**Who Made the Artifacts?**

A majority of the students in the fourth and fifth grades had a role in making the creative artifacts represented in the data set. 49 out of the 54 students in the fourth and fifth grades produced the works discussed in this study (Appendix F). The students who were mentioned by name in this study were given pseudonyms. Of the 29 fifth grade students, 13 were given pseudonyms. Of the 25 fourth grade students, 7 were given pseudonyms. There were a variety of reasons for this decision. Some students were assigned pseudonyms because they produced numerous creative artifacts. Other students were the sole creator or author of their artifacts or creative processes. Many students worked in groups and for some of the grouping descriptions, I gave a pseudonym to the student or students who were more vocal or appeared to be the leaders of their group.
Finally, some students were given pseudonyms because it made sense within the context of the narrative.

The five students who did not have works represented in the data were four fifth grade boys and one fourth grade boy. No definitive data was collected to explain this phenomenon but my observations over the course of the school year suggest two possibilities. First, the five students who did not have artifacts represented in the data set usually chose to play sports during free time when other students were engaged in self-initiated creative activities. Second, they were not as forthcoming and expressive to me about their creative activities as other students making it difficult to document potential episodes of self-initiated creativity. As will be discussed later in this chapter, the five boys took part in creative activities, but the creativity that I observed them engage in did not fall within the criteria for self-initiated creativity set forth in this dissertation.

**Artifact creation by grade level.** The fourth graders made up 46.3% of the students in the fourth and fifth grade class and created 44.9% of the artifacts represented in the data set. The fifth graders made up 53.7% of the students in the fourth and fifth grade class and had a role in creating 55.1% of the artifacts represented in the data set. The amount of creative artifacts each student made that were represented in the data set ranged from 0 to 32. The average number of creative artifacts (rounded to the nearest whole number) each student had a role in making was 7 (6.8 for fourth graders and 7.2 for fifth graders). In the fourth grade group, a little less than half the students (44%) created seven or more artifacts that were represented in the data set. In the fifth grade group, slightly less than half the students (48.2%) created seven or more artifacts that were represented in the data set. Therefore, each grade level produced a relatively similar
proportion and range of artifacts in the data set. It is not surprising that the fifth grade students made a slightly greater number of the creative artifacts since most experienced our classroom the previous year when they were in the fourth grade. Whereas the level of creative agency allowed in our classroom was a new experience for the fourth graders. I found that it typically took students who were new to our classroom a few weeks to become acclimated to our teaching styles and this might explain why the fifth graders made a slightly higher percentage of the creative artifacts.

**Artifact creation by gender.** In both grade levels the girls produced a majority of the artifacts. In the fourth and fifth grades, the girls made 76.3% and the boys 23.7% of the creative artifacts. The girls made approximately three times more of the creative artifacts represented in the data set than the boys. This disparity might be due to gender role expectations of children in the intermediate elementary grades at the research site. However, a comprehensive study would have to be undertaken before drawing any conclusions concerning gender and creativity in the elementary grades at the research site.

**Artifact creation by race.** According to the data, the percentage of artifacts created by the students in the fourth and fifth grades who identified as Asian was proportionate to the number of students they represented in the fourth and fifth grade classes. The students who identified as Asian made up 3.7% of the fourth and fifth grade classes and created 3.6% of the artifacts represented in the data set.

There was a slight discrepancy for the children who identified as Middle Eastern. The students who identified as Middle Eastern made up 3.7% of the fourth and fifth grade classes and created 5.1% of the artifacts represented in the data set. A slightly higher
discrepancy occurred with the students who identified as African American. The students who identified as African American made up 3.7% of the fourth and fifth grade classes and created 8.3% of the artifacts represented in the data set.

The discrepancy within the Middle Eastern racial group, and the slightly higher discrepancy within the African American racial group, can be explained by anecdotal evidence. Both Hannah (one of the two Middle Eastern identifying students) and Stella (one of the two African American identifying students) engaged in creative activities throughout the day. Hannah had 10 creative artifacts represented in the final data set and Stella 14. Therefore, I would hypothesize that this increase had little to do with race and was more likely due to the fact that both students often engaged in creative activities throughout the day.

The students who identified as Native American made up 14.8% of the fourth and fifth grade classes and created 19.8% of the artifacts represented in the data set. This higher proportion of creative activity seems to be a reflection of students who were more apt to take advantage of the agency afforded to them in our classroom. After having a discussion with Eddie, we both agreed that out of the group of 54 total students in the fourth and fifth grade classes, 20 could be classified as students who exhibited self-confidence and were therefore inclined to avail themselves of opportunities to engage in self-initiated creativity. Out of those 20 students, almost half were Native American.

The students in this group acted more autonomously than their peers and were less likely to be influenced by the school’s customs and traditions. From classroom observations, it was apparent that these children were less concerned with pleasing their teachers or complying with schooling expectations than engaging in their own interests. I
did not interpret these behaviors as defiant or insubordinate; rather, they seemed to come from children comfortable with degrees of independence. However, no extensive research was made to stake this claim, as no research was done outside the site.

The students who identified as White made up 74.1% of the fourth and fifth grade classes and created 63.2% of the artifacts represented in the data set. This was the only racial group who had a significantly less number of the artifacts represented in the data set proportionate to the number of children in the class. As with the other racial groups, it does not appear that this was due to the fact that the white identifying children were less likely to engage in self-initiated creativity than their Asian, African American, Middle Eastern, or Native American identifying counterparts. This proportionally smaller amount of creative engagement is most likely due to the fact that the white students made up a much larger sampling than all the other racial groups combined (40 white children out of 54 total students) which led to a greater range of creative activity within the group. For example, the five students who did not create any of the artifacts represented in the data set were white boys. At the same time, the two students who created a large portion of the artifacts represented in the data set (24.5%) were white girls.

Summary. It may be concluded that when allowed agency in the elementary classroom, most children in the intermediate elementary grades will engage in self-initiated creativity. Furthermore, an examination of the data only reveals slight differences between the genders with regards to the type of artifacts created. For example, the artifacts created by girls were represented in a wider range of mediums and creative categories than the artifacts created by boys. The girls created artifacts that were represented in all 27 of the 27 creative categories and the boys created artifacts that were
represented in 23 of the 27 creative categories. Other than that, the data reveals no differences between the grade levels, genders, or races with regards to the time of day the artifacts were created or the processes used to create them.

However, the data shows a significant level of discrepancy in the amount of self-initiated creative productivity according to gender. Although all the students engaged in some form of creativity throughout the school year, and a majority of the children took part in self-initiated creative actions, the girls produced 76.3% of the creative artifacts represented in the data set compared to the boys who made 23.7% of the creative artifacts represented in the data set. Neither the data nor my classroom observations shed any light on this discrepancy. As previously mentioned, further research will have to be conducted to determine why the level of creative production was significantly higher for the girls than the boys.

**Artist – Teacher – Researcher**

As a practicing artist with a degree in fine arts I have a heightened critical perspective on creativity, especially the visual arts. As a teacher, I am interested in how children learn. During this study the combination of avocation and vocation was useful, but created challenges as well.

Although I was at the research site all day, everyday for the whole school year, my dual role as teacher and researcher prohibited me engaging fully in either capacity. It is likely I missed documenting episodes of self-initiated creativity while engaging in my teaching role. Additionally, since I was the only researcher, I could only document one episode at a time even if there were multiple events of student self-initiated creativity happening simultaneously. This was especially true while students worked on their forts
during recess. However, during recess I continually moved throughout the entire fort area recording all instances of self-initiated creativity to the best of my ability.

I also did my best to be vigilant and attentive during those moments of increased self-initiated creative activities such as snack time, transition times, when students arrived in the morning or while waiting to be dismissed at the end of the day.

During instructional times there were visual cues that alerted me to impending moments of self-initiated creativity such as when students gathered art supplies to bring back to their seats before the start of a lesson, quietly huddled in small groups or pairs during a lesson, or when they separated themselves from the main group and set up alternative seating in the corner of the classroom.

Finally, as the sole researcher, I had to make dozens of split second decisions each day to determine if a creative artifact or process was of value to this study and worth taking the time to document. There were occasions when I documented a creative activity only to later realize that it did not fit the definition of self-initiated creativity used for this study. Conversely, there were times I assumed a student was involved in a creative activity that did not reflect the definition of self-initiated in this study and failed to document the work.

My artistic practice gave me the tools to organize, categorize, and analyze large amounts of visual information. My familiarity with artistic methods, techniques, and mediums helped me determine a working definition of self-initiated creativity for this study and the placement of each piece of data within the 27 creative categories. At the same time, I have personal aesthetic preferences based on the influences of the contemporary art world and the development of my own body of work. These preferences
might have influenced the amount of attention I gave to the work of one student over another as they engaged in self-initiated creative activities.

My teaching experience helped me identify the eight fundamental attributes that characterized creative learning and the six essential pedagogical principles that were in place allowing these attributes of self-initiated learning to occur in our elementary classroom. At the same time my familiarity with the students led to preconceived notions of their creative potentials influencing how I regarded, interpreted, documented, and ultimately analyzed their creative artifacts.

**My Own Positionality in the Study**

I experienced this research process from a position of privilege as I identify as a white, able-bodied, cis-gendered, heterosexual, middle class, man working in a private school with a largely affluent student body. The majority of the school’s racial demographic, including administration, faculty, staff, and students was white and therefore I had little difficulty navigating spaces and engaging in social-specific codes of behavior. The Lower School did not have students with physical disabilities and so I did not have to take this into account as our students used our classroom stage, climbing wall, or outside fort areas. There were not any students in my classroom during the time of this study who I was aware of that identified as anything other than cis-gendered and heterosexual. Furthermore, the dynamic of two men teaching in a predominantly female-identifying elementary environment most likely led Eddie and I to feel we had more leeway to try new things because of our male privilege.

My positioning in this study meant that I had a limited lens through which I regarded all aspects of my teaching practice as well as my relationships with students and
colleagues. Although I had an insider perspective as a teacher whose research site was his own classroom, my perceptions of what transpired were shaped by my own viewpoints, biases, and constructed reality. Additionally, there were times when the defensive stance I took on my own pedagogical beliefs and methodologies obscured my ability to discern the ways in which others might have interpreted the causality of my actions. Elizabeth Chiseri-Strater (1996) contends that a researcher’s positioning always affects their study. In retrospect, it is now evident that many of the conflicts Eddie and I faced were a direct result of the decisions we made about our pedagogical practices. With this in mind, I would like to examine my own positionality in the school, the assumptions with which I worked, and how others might have viewed the classroom culture I developed along with my teaching partner and our students.

**Attitude and demeanor.** My attitude and personal demeanor certainly played a role in how I was perceived by others. For example, our Lower School faculty meetings were held after school each Wednesday and occasionally our discussions would become heated as we debated curricular issues or formulated student rules of conduct. After such meetings small groups of like-minded faculty would gather in the parking lot to revisit and reassess what transpired during the meeting. At some of these sessions I was surprised to learn that a few individuals interpreted my demeanor as intimidating due to my loud voice. From my perspective, I was an impassioned educator who, owing to his Italian American heritage, openly displayed his feelings. I became frustrated when I thought others misunderstood my actions and as a defense mechanism, simply dismissed any such criticisms.
However, my reaction to criticism negated any possibility of mediation between me and the other faculty. Not only did my attitude prevent me from benefiting from the perspectives and understandings of others, it also widened the chasm that was growing between various factions within the Lower School resulting in polarity rather than reconciliation. There were residual consequences as well. By the time of this study, the administration had difficulty forming a semblance of cohesiveness among the Lower School faculty. Parents, and even some of the students, started to become aware of the growing rifts between teachers.

This growing divisiveness among the faculty was unfortunate, especially since in our school the faculty enjoyed many privileges that many public school teachers do not. I recall from my experience working in public schools that the faculty meetings were mainly standardized and routine affairs. Whereas, at the school where this study took place, teachers were often asked to voice their concerns, offer suggestions, or share ideas during meetings. The administration always had the final say and made many unilateral decisions, but as a faculty member, I had many liberties that I did not enjoy while working in public school settings.

**Materials and supplies.** Each year the Lower School teachers were allotted a generous budget with which to purchase classroom supplies. Additionally, shared resources such as copiers, printers, and projectors were conveniently located throughout the campus. This contrasted sharply with my experience working in an inner city school where I made Sunday afternoon treks to a local Target when I needed to replenish items such as paper, pencils, markers, and crayons. Conversely, at the research site, some of the students came from considerable wealth. Because of this, the Lower School faculty felt it
was important to teach the students an appreciation for what they had and not to squander, misuse, or waste food, materials, and supplies. Eddie and I felt the same way, however, rather than have pre-established rules concerning the usage of supplies, we invited the students to co-construct such protocol during the course of the school year. The benefits of this type of teaching approach emerged slowly over time and included many stops and starts as part of the learning process. Therefore, it appeared to some that Eddie and I were not teaching our students how to properly respect and appreciate their classroom environment.

One example of the students being perceived as disrespectful was precipitated by our practice of allowing the students to mark the tabletops. The act of marking the tabletops had its origin back in 2009 when a student asked if he could draw a design on our classroom wall. Over the next few years a visual culture emerged in our classroom that privileged student generated visual markings over those generated by a teacher or purchased through a school supply business. The table markings themselves began when a student informed me that a classmate drew a picture on one of our tables. After speaking with the student a conversation ensued about students at all grade levels doodling on desks and tables throughout the school, which led to a debate on the pros and cons of the practice. Eventually, it was decided by vote that students would be permitted to mark the tabletops in our classroom as long as it did not cause a distraction to their learning or the learning of others. Subsequent debates and votes took place as the practice gradually evolved. The first markings were relatively tentative with cartoon figures and student names sporadically emerging in different areas of the tabletops. But as the year wore on and the practice grew, the markings began to spread over the tabletops and
children began to complain that others were drawing over their designs. The markings also started to appear on the table edges, legs, and undersides. Eventually, every square inch of the tabletops had some sort of marking covering it. Each time an issue arose, Eddie and I viewed it as a learning opportunity where students could experience democracy in action, learn to critically analyze, hone their debating skills, and feel a sense of pride in that they had a role in determining classroom protocol. But to outside observers, they saw classroom tables that were covered with scribbles, smears, blotches, and graffiti. To some, the table markings most likely symbolized a pedagogical approach that allowed (and perhaps even encouraged) its students to disrespect school property and waste school supplies.

Although Eddie and I welcomed any opportunity to explain how the tabletop markings became part of our classroom’s curricular experience, in reality, these types of conversations only happened with a few of the faculty. Teachers at the research site were extremely busy and seldom had time to engage in protracted discussions comparing and contrasting classroom practices during the school day. Therefore, it is reasonable to think that most teachers formed an opinion of our classroom based on their initial impressions of an environment where they felt the students had an extreme amount of agency and were allowed to use supplies in unorthodox and wasteful ways.

**Curricular Scope and Sequence.** Our unconventional teaching practices made it difficult for many faculty members and administrators to feel confident that Eddie and I were ensuring our students received the skills and content necessary for the following grade level. During the year of this study, the administration was looking into math and science programs to use throughout the Lower School classrooms but had not yet made a
final choice on which ones they would purchase. In the meantime, I met with the sixth grade math and science teachers and asked for a comprehensive listing of the skills and content they wanted our students to know once they left the fourth and fifth grade Bridge program and entered sixth grade. Eddie and I then used these lists to determine the math and science proficiencies we wanted our students to have in place by the end of their fifth grade year.

I mistakenly believed that incorporating the lists of math and science proficiencies in our curriculum would quell any concerns about our students being properly prepared for the next grade level. Although we kept meticulous listings of the content we covered and the skills we taught, the ways in which we enacted our pedagogy made it very difficult for outside observers to discern when and how skills and content were incorporated throughout the school year. Therefore, instead of this technique leading to an increased confidence in our methodologies, for many, it added to the perception of Eddie and I as radical teachers in an unruly classroom.

**Being shaped by the process.** During this brief analysis, I considered how Eddie and I made it hard for those outside our classroom to understand or have confidence in our teaching methods and classroom practices. In *Positionality: Reflecting on the Research Process* educator Brian Bourke writes, “The research in which I engage is shaped by who I am, and as long as I remain reflective throughout the process, I will be shaped by it, and by those with whom I interact” (2014, p. 7). Action research is a process that requires self-reflection. The process of examining my own positionality in this study has helped me scrutinize my frames of reference to see how the things that transpired in my classroom during the 2012-2013 school year, might have been viewed
by others in a much different light. Fortunately, the steps contained within the action research methodology require the researcher to reflect on the outcomes in order to make adjustments and refine the process for future investigations. In this respect, action research provided a way for me to improve my own future practice by having the opportunity to be shaped by the experience.

**Implications**

This study found that a majority of the fourth and fifth grade children at the research site voluntarily engaged in self-initiated creativity when given agency to do so. This study also found that the ways the children went about their creative learning processes and interacted with the classroom space was in contrast to the practices and expectations embedded within our school’s structure. Furthermore, the skill and knowledge acquisition that resulted from the students’ self-initiated creative learning was different from the competencies and proficiencies the students obtained from standard teaching practices. The learning that emerged from their self-initiated activities was in the form of big ideas, broad concepts, and play-based inventive problem solving as opposed to the hierarchical sequence of skills and content acquisition that children were expected to acquire from the portions of the curriculum that followed linear scope and sequences.

This study shows that creative, self-directed learning led our students to become empowered, confident, and critical agents. However, aside from the creativity they integrated into their math and STEAM lessons, most of what they learned focused on the arts and design with periodic connections to the standardized content we were required to teach in language arts, mathematics, science, and social studies. For example, the children practiced the scientific skills of observation, testing, and research as they created
their salamander and inchworm habitats. They incorporated elements of the scientific process by experimenting with various solutions and mixtures. Our students explored aspects of the natural and physical world when they created fort structures, formulated plans, and invented tools. The forts also helped them understand and navigate various social interactions as they established and developed imaginary settlements and communities. The children practiced language arts skills by writing dialogue and developing characters and storylines for their movies. But the majority of the students’ self-initiated creativity centered on art making concepts, creative processes, materials, and techniques.

The learning that took place during the students’ self-initiated creative explorations was different from of the type of learning that happened in the core subject areas. Even so, this research provided insight into how children go about self-directed learning in ways that are relevant and meaningful to them. This study illustrated how a group of fourth and fifth graders in a private day school in upstate New York designed, curated, and interacted with their learning space. These insights along with future studies can inform the ways schools are designed and instruction is delivered in deference to the ways children go about their learning and the choices they make when allowed creative agency in their learning.

I enjoyed watching the self-initiated creativity of my students unfold and listening to them describe their work and explain their creative processes. I learned a good deal during my tenure at the private day school, which prompted me to alter and refine my own teaching practices. It began in earnest when Eddie helped me recognize how the prominence of my teacher desk impacted the way children navigated through the
classroom space and subsequently, how they learned within that space. I gradually
developed and awareness of, and sensitivity to, the perspectives of the children by taking
time to listen, observe and invite them to co-construct the curriculum. I learned how to
simultaneously deliver the specified math and science content Eddie and I were required
to teach, while providing space and time for student-initiated, creative investigations.

**Additional Considerations**

Given that the self-initiated creative activities of young learners are seldom
acknowledged in elementary school classrooms, there is a need for more research on the
self-initiated creativity of children to determine the pedagogical significance of artistic
agency in the elementary classroom. Most studies examining the self-initiated creativity
of children focus on the primary years of education and often take place in an art room
setting. Additional longitudinal studies need to be conducted on the self-initiated
creativity of children in intermediate, elementary, general classroom settings.

This study focused on the self-initiated creative products and processes of
students afforded agency in a general elementary classroom setting. Through the design
of this investigation, I gathered photographic data of the creative activities my students
engaged in when allowed agency in their classroom environment. A qualitative analysis
of the data revealed eight fundamental attributes that characterized the self-initiated
creative learning of children in an elementary classroom. A closer inspection of the data
revealed six essential principles in place that allowed for the eight fundamental attributes
of self-initiated creativity to become evident in our classroom. From this study, I
discovered what my students would produce when given creative agency, the attributes
that characterized their self-initiated creative learning, and the pedagogical principles that
supported a democratic, creative learning environment. Yet there remain aspects of this study beyond the self-initiated creativity of children that still need to be examined. These aspects include the effectiveness of our democratic, creatively based, student-centered pedagogy on student learning, and recommendations to educators who might be interested in implementing this type of pedagogical approach in their classrooms.

**The effectiveness of our democratic, creatively based, student-centered learning environment on student learning.** It is important to determine how effective our pedagogical approach was for our students. However, this study cannot be analyzed using direct measures because quantitative metrics such as graded report cards or regularly scheduled, school wide, standardized tests were not in place at the research site.

Previous to the 2012-2013 school year, our Lower School students received a narrative-based progress report each trimester. The classroom teachers were allowed to determine how they would access their students’ learning. A few teachers used test and quizzes, others used portfolios, and some assigned projects that followed detailed rubrics. Each year Eddie and I invited the students to take part in deciding how they would be assessed and to have a role in reporting what they learned by writing a portion of the narrative in their progress report. Every two weeks we set aside time for our students to go through their papers, notes, and projects and to select the times they felt best represented and showed evidence of their learning. The items usually consisted of math packets, homework assignments, science lab reports, and photo or video documentation of presentations, experiments, and independent study projects. These documents, along with teacher-student dialogues, informed the teacher and student narratives that appeared in the progress reports.
During the 2012-2013 school year we continued to give our students a role in the assessment process, but the administration decided to institute quarterly reports cards that replaced the detailed narratives with condensed bulleted comments. These new report cards also contained various headings such as Reading and Math, with a series of descriptors under each heading that the teachers would rate using a 1, 2, 3, or 4. A rating of one signified *Excellent*, a rating of two signified *Making satisfactory progress*, a rating of three signified *Needs additional practice*, and a rating of four signified *Area of concern*. However, the rating system was not designed to correlate to a grading system in the conventional sense. A rating of 1 was not considered an A, a rating of 2 was not considered a B and so on. Instead, the ratings were intended to be used as general guideposts for parents to get a sense of how much effort their child was putting into their schoolwork or if they were struggling in a particular subject area. For example, when a child received a 3 rating (Needs additional practice) on the descriptor *Demonstrates automaticity of multiplication facts* under the Math heading, it meant that student needed to spend more time committing multiplication facts to memory rather than implying the student was doing C level work compared to the rest of the class.

The report card ratings generally stayed the same or gradually increased from one quarter to the next. Lower School teachers only decreased a student’s rating if there was a considerable concern. Teachers would also notify parents beforehand if they could expect a drop in the rating. However, it was rare for a child to receive a 1 rating the first quarter, and then a 2 rating on the same descriptor the second quarter. In fact, the practice among the Lower School faculty was to award the least possible number of 1 ratings during the first quarter so that they could increase the ratings during subsequent quarters.
As previously stated, we did not give our students a battery of baseline assessments at the beginning of the school year and then compare the results to similar tests given at the end of the year. This was partially due to the fact that during the 2012-2013 school year the Lower School did not have science and math programs in place across all grade levels with regularly scheduled unit tests or assessments. As the research site was a private school, our students were exempt from standardized state testing. Therefore, this study did not produce data from which one could quantifiably measure the academic outcomes of our students over the course of the 2012-2013 school year.

However, there was anecdotal evidence that shed light on the effectiveness of our pedagogical approach. I recently asked a colleague who worked as a teacher in the Lower School to provide me with a listing of the positive and negative aspects of our classroom practices she recalled hearing from parents, teachers, and the administration. The positive feedback she heard about our classroom was the importance placed on student agency, the way creativity was encouraged, the emphasis on the learning processes over learning products, and the careful consideration of each student’s academic, social and emotional needs within a learning environment that celebrated inquiry, exploration, risk taking, questioning, and problem solving.

The negative feedback she recalled hearing about our classroom was that it appeared disorganized, chaotic, and loud. There was a perception that our classroom lacked structure, proper supervision, and academic rigor. Our students seemed to play too much and exhibited an exorbitant amount of creative license. She went on to say that our classroom practices elicited strong reactions from many people, and the opinions were fairly evenly split: “Those who loved you and Eddie were really huge fans. Those who
didn’t feel frustrated, confused and angry about what they observed” (personal
communication, July 3, 2016).

Besides these general perceptions, additional positive and negative effects of our
learning environment can be gleaned from the information found in this study.

The positive effects of our democratic, creatively based, student-centered
learning environment. As mentioned earlier, the majority of the children took part in the
self-initiated creative activities that led to artifacts included in the final data set with the
exception of five students. All five were white, male-identifying boys, one in fourth grade
and four in fifth grade. There is no definitive data that reveals why these five students did
not create artifacts in that ended up in the final data set. If they did make self-initiated
artifacts, their creative activities were not relayed or readily apparent to the researcher
and therefore were not part of the documentation of data in this study.

Nevertheless, as with the majority of the students, these five students took
advantage of the creative agency offered in our classroom during the 2012-2013 school
year. Although they did not produce any creative artifacts or actions noticed by the
researcher that fell under the definition of self-initiated creativity for this study, they
often engaged in creative activities that were extensions of math or science lessons.
Examples of their creative learning included the use of the VidRhythm digital application
in an experiment to explore the effects of video and sound on human memory, the
production of a movie theater style preview to advertise an experiment that compared the
velocity of metal versus plastic sleds, the creation of PowerPoint presentations to
illustrate mathematical concepts, and the use of video cameras to record various
demonstrations given by fellow students. The five boys also enjoyed using our classroom
stage to hold debates or present skits on a variety of topics studied in the fourth and fifth grade curriculum. Additionally, all five boys used the agency afforded to them to do independent projects at various times throughout the school year. For example, to practice for our upcoming field and track day, one of the boys designed and constructed an adjustable hurdle out of items he found around the classroom. The others enjoyed taking periodic breaks from their schoolwork to practice their band instruments at a picnic table set up outside the backdoor of our classroom.

During the 2012-2013 school year, all of the fourth and fifth grade students at one time or another mentioned to the class during one of our weekly meetings or to Eddie and I, that they liked being part of our classroom environment because of the level of self-governance and the freedoms it allotted to them. It was found that our classroom practices appealed to what is referred to as the Affective Domain in Bloom’s Taxonomy of learning domains (Krathwohl, Bloom, & Masia, 1973). The affective domain relates to students’ attitudes, feelings, motivations, emotions, and values (Nahl, 1997). Appealing to a student’s affective domain gets students excited about learning. When students are enthusiastic about their schoolwork they participate more, acquire deeper understandings, and have higher self-esteem (Thomas & Arnold, 2011). There is also a reciprocal relationship between attitudes and learning where positive attitudes lead to “greater learning and increased understanding leads to more positive attitudes” (McLeod & Adams, 1989, p. 38). Although this study could not quantitatively measure academic outcomes via test scores or grades, it may be concluded from this anecdotal evidence that the students at the research site benefited academically, creatively, emotionally, and
socially by learning within a classroom devoted to a student agency and creative exploration.

_The negative effects of our democratic, creatively based, student-centered learning environment._ It was determined in this study that all of our students’ self-initiated creative processes and creative artifacts documented in the final data set came into conflict to some extent with the status-quo at the school. There was a range of degrees with which this happened. At times the conflicts were fairly innocuous, as when Walter chose to gather stones in the same area where teachers were talking privately, to larger challenges as when Libby decided to do a dance routine in the middle of the classroom during a transition time. Although some of the conflicts caused by the students’ self-initiated creative activities were relatively benign, the overall effect from the aggregate of these conflicts caused a significant contrast between our classroom and the rest of the school. Additionally, the six essential principles that were in place which allowed self-initiated creativity to occur in our classroom led to a host of repercussions and ramifications that affected our students, their families, the administration, and other faculty.

As with any classroom, we experienced our share of difficulties and challenges due to personality clashes. The main issue that emerged amongst our students happened when they wanted a private working space. Occasionally a few children would express their desire for a quiet area to work away from the bustle of the classroom. Conversely, there were times when the majority of our students were working quietly and a group needed a space where they could engage in more active, noisy learning. There were also instances when a few children simply wanted a space where they could work undisturbed
from the rest of the class for a period of time. These issues were resolved by taking advantage of a small, unoccupied office at the front of our building. The office was located two doors down from our classroom and was used as a storage space. Eddie and I would allow small groups of students to take turns working in the office. Before being allowed to work in the office, the students were required to explain why they needed a separate space to work, what they were going to be working on, and how long they estimated they would need the space. Eddie and I would then check on the students periodically to see if they had any questions or needed our assistance.

This practice worked well amongst the members of our classroom community, but conflicts arose when such practices did not coincide with the ways other Lower School classrooms functioned and our students would be scolded for things Eddie and I gave them license to do. For example, Eddie and I told our students they were allowed to move and adjust the furnishings in the office space as long as they put it back the way they found it once finished. The office had a front facing window that looked out onto a courtyard as well as a window in the door. On one occasion, a teacher observed our students moving the furniture around and pulling down the shade over the front facing window. After being scolded and sent back to the classroom, our students had difficulty understanding why they had gotten in trouble for using the office as a scene for one of their movies.

When these types of situations occurred, Eddie and I would have a conversation with the students and do our best to explain how they might respectfully navigate the different expectations of various teachers. Even so, our teaching practices sometimes placed the students in the center of a contentious pedagogical disagreement among adult
educators, which led to unintended consequences. Some of our students understood how
to code switch in various areas throughout the school, while others simply thought of
Eddie and I as the fun teachers and other faculty as the mean teachers. As time went on,
these perceptions began to erode relationships that Eddie and I had with some members
of the faculty. Moreover, anything that impacted our students had an effect on their
families as well.

Our school was a small private institution with a tight-knit community. Most
families attended the numerous functions, activities, and events scheduled throughout the
school year. Parents were encouraged to participate in their children’s schooling
experiences and many volunteered their time fundraising, working on campus, helping
out in classrooms, and promoting special events. This level of involvement created a
culture where there was a great deal of conversations amongst parents about teachers and
their classroom practices. As previously stated by one of my colleagues, the parent
community had strong feelings concerning our pedagogical approach and created
challenges for those who did not agree with our methodologies. Even when the children
expressed that they enjoyed being part of our classroom, if their parents expected a
different type of education, difficulties arose.

For example, some of students took the bus home, while others drove home with
their parents. During one of these rides a student of ours told her father how much fun she
was having in our classroom. He became upset when she shared the creative aspects of
her experience in our classroom but did not share what she learned academically. During
a parent-teacher conference he vehemently stated that he wanted his daughter to attend a
school, not a summer camp. These types of situations had the potential of causing rifts
between family members. This girl loved being a part of our classroom, but was also concerned about her father’s feelings. Further stress was added, when in the same family, one parent was critical of our teaching methods while the other championed our approach.

Our classroom practices and pedagogical approaches also presented difficulties for other faculty members and the administration. Perhaps the most challenging was our classroom culture of critiquing established hierarchies and questioning established customs and routines. Again, within the confines of our own classroom, any problem that presented itself because of this type of agency was easily managed, and used as a learning opportunity through classroom meetings, discussions, and debates. But once brought outside our classroom into shared school spaces, difficulties often arose.

During one of our class meetings, it was decided by vote that our students were allowed to express themselves through the application of bodily accoutrements such as masking and duct tape armbands as long as they complied with the school’s dress code. For our students, this exercise provided a dynamic learning opportunity as they were required to wrestle with portions of the dress code that were open to interpretation. Part of the dress code stated that attire deemed a distraction to the learning environment was not allowed. Some of the children with older siblings argued that this was put into place to discourage students from wearing suggestive or revealing clothing in the Middle and Upper School. Other students argued that such accoutrements were not a distraction to student learning in our classroom and in some cases, helped children concentrate better because they felt comfortable when they were able to wear their own creations. However, many of the other faculty and our head of Lower School viewed the foil accoutrements
(data number 135) as a distraction when our students wore these creations to the dining hall. Some of the faculty thought our students’ foil accoutrements indicated a disrespectful attitude and might encourage some of the younger children to engage in negative behaviors. These types of situations also put added strain onto the head of Lower School as she was trying to bring cohesiveness to the Lower School faculty.

Within our classroom, our students were provided with many opportunities to engage in meaningful, self-directed learning. However, the benefits of our approach were limited because we did not fully consider, or seek a way to successfully enact our pedagogy within the framework of the larger institution.

Recommendations to educators interested in implementing a democratic, creatively based, student-centered pedagogical approach. This study has demonstrated the ways children in a general elementary classroom at an independent school went about their learning when afforded creative agency. It was found that the children approached their learning with confidence and enthusiasm when they brought their self-initiated creativity into their daily schooling experience. It was also found that the methodologies that were effective within our single classroom environment became problematic when practiced in other areas around the campus.

However, the six essential principles in place that allowed the attributes of self-initiated creative learning to occur in our elementary classroom - time to engage in self-directed learning, agency to self-navigate through indoor and outdoor spaces, access to classroom materials and supplies, autonomy to make choices and decisions, freedom to explore unanticipated learning opportunities, ability to deviate from preplanned curricular activities and lessons - are important to consider because they help children become
independent, self-assured learners who enjoy working cooperatively, and find their educational experiences meaningful. Examples of ways in which the six essential principles may be enacted into other types of learning contexts will be discussed later in this chapter. But first, I want to offer some advice to educators who might be interested in adopting this type of pedagogical approach for their own teaching practice.

Create a proposal. Before attempting to enact a pedagogy that incorporates the six essential principles, it is recommended that teachers first create a proposal comprised of three main parts: a rationale, vision, and implementation strategy. A proposal serves a number of purposes and gives teachers the opportunity to think through the details of why they would implement such a methodology and how they might modify it to fit their classrooms.

The plan should have a rationale stating why a democratic, creatively based, student-centered pedagogical approach would be an advantageous to their particular classroom and in their particular school system. It would also be helpful to include research relevant to their school’s demographic. Teachers should take into consideration the individual as well as group dynamic of their student body and clearly delineate why this type of approach would be beneficial to the children in their classroom.

Next, teachers need to share their vision of how they would enact each of the six essential principles. The degree to which teachers may do this is contingent on a variety of factors that must be taken into consideration. Depending on the school in which the classroom is located, these factors will most likely include considerations such as social dynamics, classroom schedules, school budgets, established rules and protocols, and curricular expectations.
Finally, the teacher needs to outline an implementation strategy that provides an overview and a general agenda to follow. The outline should describe when, how, and to what extent; each of the six essential principles will be enacted. The rollout of the plan should be tailored according to the specific features of each teacher’s classroom environment with the expectation that periodic modifications will be necessary as the plan is implemented and assessed on a regular basis.

*Have conversations with relevant parties.* It is important that extensive conversations take place between the teacher and all the relevant parties who might be involved with their students or classroom. Depending on the school, these groups might include administrators, faculty, staff, parents, and students.

I refer to this first step as a conversation to avoid any action that might be interpreted by the relevant parties as confrontational in any way, such as a critique of the schools existing customs and practices. A conversation allows both parties to exchange ideas and offer opinions without the pressure of having to quickly come to a decision or the teacher being perceived as delivering an ultimatum.

The teacher should first set up a meeting with the principal to share the proposal. The purpose of this is twofold: to not give the appearance that the teacher is trying to usurp the principal’s authority, and so the principal can help determine the feasibility of the implementation plan from an administrative perspective. If the principal is on board, then the teacher should ask the principal to suggest who else should be brought into the conversation, to what extent, and the ways in which these conversations should take place.
The tone of the subsequent conversations will shift depending on whether the teacher is speaking with other faculty, school staff, parents, or students. When speaking with other faculty or school staff, the teacher will have to proceed diplomatically being sensitive to the school’s political climate, social interactions, and internal history. When speaking with parents, the teacher will have to keep in mind that some parents are inclined to be more vocal and the teacher will want to make sure everyone has a chance to have their ideas and opinions heard. The teacher will also have to be ready to clearly explain certain pedagogical concepts and terminology with which the parent community might not be familiar. There should also be ample time for a question and answer session because oftentimes, individual parents have specific questions or concerns they need addressed. Finally, before speaking with the students, the teacher should review the main talking points with parents and fellow faculty so that everyone involved hears the same message.

**Start slowly and build gradually.** If the relevant parties agree that the teacher should move ahead with the implementation plan, it is recommended that the teacher start slowly and build the pedagogy gradually. Schools and classrooms have long-established practices and procedures. Introducing a new type of pedagogy takes time and patience as members of the classroom community become accustomed and acclimated to a new paradigm shift, even if the shift happens incrementally. A gradual implementation also provides time and opportunities for the teacher to make any necessary adjustments along the way. This implementation plan should not be thought of as a fixed approach; rather, the plan should be regularly modified to the needs of the students and the classroom context.
Provide periodic updates and solicit feedback. Finally, it is important to provide periodic updates to all parties involved. From my experience, this can easily be done via email with the principal, and during division meetings with the faculty and school staff. In the past, I found that parents respond well to regularly scheduled emails that include images: in this way, parents can see their children go through various portions of their school day. I have also, with my principal’s permission, hosted educational forums on the first Saturday of each month where parents were invited into the classroom to learn more about the educational theories and philosophies behind the classroom practices. For students, class meetings provide the best opportunities to offer feedback and share their thoughts and ideas. Class meetings also enhance the curriculum, as children are encouraged to practice their public speaking, debating, conversational, and interpersonal skills.

The above recommendations present a basic template for how a teacher interested in implementing a democratic, creatively based, student-centered pedagogical approach might begin undertaking this type of endeavor. As with all educational ventures, the success of instituting a creatively based, student-centered pedagogy to any degree is highly dependent on the circumstances and members existent within the school setting.

Further Research

Teaching and learning are contextually dependent. However, I think the self-initiated creativity of children might be able to shed some light on the complex ways students think and learn. Additional studies need to be conducted to find out how creative agency might fit within other types of schooling environments, especially those that are
more restrictive than the private day school where this study took place. As a researcher I want to know more and consequently, this study has prompted further questions:

1. Is it possible to incorporate aspects of self-initiated creative learning and student agency in traditional learning structures? Is there a way to make this type of pedagogy palatable to traditionally minded educators?

2. What does learning look like in a school solely devoted to a pedagogy based on student agency? What is gained? What is lost?

3. Will children be unprepared for subsequent grade levels if they do not learn according to a standardized, vertically aligned curriculum?

4. Can a student-directed pedagogy properly prepare children for the current educational system in the United States?

5. Can a classroom pedagogy devoted to self-initiated creative learning successfully exist within an educational environment where the other grade levels follow a standardized system?

I would like to provide a brief response to each of the five questions. Of course, these are my initial responses in light of my study. Further studies would be necessary to appropriately address these questions.

To respond to my first question, I believe it is possible to incorporate aspects of self-initiated creative learning and student agency in traditional learning structures. I also feel there is a way to make this type of pedagogy palatable to traditionally minded educators.
As illustrated in this study, there are many aspects and layers to self-initiated creative learning bolstered by student agency. The self-initiated creative learning and student agency that took place in my classroom was made manifest in ways that were particular to our classroom dynamic and the context of our school’s political climate. In the years previous to this study and during the school year that followed, the self-initiated creative learning and student agency in my classroom played out differently. For example, during the 2010-2011 school year the students enjoyed drawing and painting directly on the classroom walls. These variations were mainly due to the changing make-up of the teaching team and the personalities of the students.

Every classroom in each school across the country offers ways in which self-initiated creative learning may play a role. Of course, the degree to which it happens depends on a variety of factors. But as long as the teacher recognizes the value of self-initiated creative learning and is willing to allow a degree of student agency, there arise many opportunities, large and small, to engage in this type of pedagogy.

Csikszentmihalyi (1990) reminds us that people become intrinsically motivated as they engage in self-initiated activities. Children are especially drawn to creative activities, becoming so immersed that their learning no longer appears as a response to a teacher directive but as a wellspring of ideas emanating from within. At this point, children become learners who want to learn “for the sheer sake of doing it” (Csikszentmihalyi, 1990, p. 4). This notion has powerful ramifications in all types of classrooms. Children who are intrinsically motivated to learn encourage their peers to do likewise. When children are engrossed in their learning, their enthusiasm is contagious becoming a palpable force drawing others into its orbit. Integrating aspects of self-
initiated creativity into traditional educational contexts changes the way children view and respond to all kinds of learning tasks. The same students who were resistant and full of complaints about doing what they perceived as mundane coursework, suddenly are the ones who do not want to leave the classroom because they are so engrossed in their learning.

In response to my second question and based on my observations, I believe learning in a school solely devoted to a pedagogy based on student agency will depend on the student body since the interest of the students drives the curriculum. It also depends on how the teachers define and foster student agency. Certainly, the instructors at the Summerhill School, with its extreme form of democratic learning, provide a substantial amount of agency to their students. But it plays out in ways that I consider less than beneficial. I would not be comfortable with offering my students the same amount of freedom afforded to the children at Summerhill. I believe in following the students’ lead, but I would also find it difficult to allow a student to sit out under a tree all day. I would try to do my best to inspire and generate a more active learning atmosphere.

If I had the opportunity to create a school devoted to student agency, I would have the students involved in the design of the curriculum. Student agency does not mean that children are allowed to do whatever they want. Rather, it means that children are empowered to have a significant stake in their educational development. Children would not be given a full year’s curricular scope and sequence to follow; instead they would actively research and stake out a curriculum they feel best works for them under the guidance of a professional teacher. Once they settled on a program of study from unit to unit, they would be responsible to share their rationale with their peers so that the
classroom community could offer feedback and agree on a curriculum trajectory that benefits all. Children would be invested in their education because they had a role in its development, ownership of the process, and shared the responsibility to see it through.

That said, this approach lacks the safeguards put in place in traditional schooling environments where a preset curriculum is mapped out to assure parents and stakeholders that certain skills and content will be covered. A great deal of trust must already be cultivated between all stakeholders in order for this model to work. The teachers would have to take great care to guide the students at every step along the process to make sure the students acquire the necessary skills that would allow them to seamlessly segue into a public school classroom.

My third question considers the preparedness of children for subsequent grade levels who do not learn according to a standardized, vertically aligned curriculum. Once again, preparedness for subsequent grade levels is highly dependent on each particular student. I have taught students according to a standardized, vertically aligned curriculum who ended up being very successful in the following grade level, and within the same class I have had students for whom the following grade level was challenging. In fact, I had students who were part of my class at the time of this study who went on to excel in Middle School while others struggled. Furthermore, students develop at different rates. I have known students who experienced academic difficulties throughout their time in elementary school but hit their stride in Upper School, receiving academic awards at the baccalaureate ceremony. I have also seen students academically excel year after year only to suddenly burn out their senior year.
I believe the way to prepare students for subsequent grade levels is to design a configurable, vertically aligned scope and sequence that teachers can help students modulate as they move from grade to grade. Instead of a rigidly sequenced curriculum where all students move through en masse, my observations during the 2012-2013 school year suggest a basic framework that allows students to adapt and adjust according to their learning needs and interests. Some students excel at literature but need additional time working with specific math concepts. Other students are interested in putting most of their time into exploring scientific investigations but find creative writing a challenge. Instead of a classroom setting where all students learn the same subject at the same time, they would be able to independently engage in the subject areas at which they excel, and then spend focused time with the help of a teacher on those areas they find challenging.

My answer to my fourth question speculating whether or not a student-directed pedagogy can properly prepare children for the current educational system in the United States is similar to my response to my third proposed question in that it is largely dependent on each individual student. I do believe that if a student-directed pedagogy is to work in preparing children for the current educational system in the United States, great care would have to be taken to ensure that the teachers guiding the process are fully aware of the academic and social expectations of the next grade level or local learning institution a child might attend after leaving the student-directed environment. Teaching a student-directed pedagogy is often misconstrued as simply leaving children to their own devices. Nothing could be further from the truth. In reality, orchestrating a successful student-directed pedagogy involves skillful teachers who are invested in preparing each child to take the next step in their personal educational journey.
My final question most closely reflects the narrative of this study. I do believe a classroom pedagogy devoted to self-initiated creative learning can successfully exist within an educational environment where the other grade levels follow a standardized system. However, as I learned from this study, a teacher who attempts to enact a comprehensive pedagogy devoted to self-initiated creative learning needs to do more than Eddie and I did during our experience during the 2012-2013 school year. While we were fully invested in our classroom mission, we were not fully invested in our relationship to our colleagues and school leadership team. By adopting a classroom pedagogy devoted to student agency and self-initiated creative learning, we created an expansive gap between us and many other members of the faculty and administration. Still, I believe there was, and is, a way to bridge that gap.

Leah is the only member of the Bridge Team who still teaches at the research site. Eddie and I speak with her periodically via group texts. She often writes that she misses working with us and feels isolated that most of her Lower School colleagues are no longer there. We discuss education and current pedagogical trends. We always end with a reference to starting our own school one day. Leah clearly believes in student agency. Leah appreciates the creativity of children. Leah was able to bridge the gap. Based on my experiences and learning from Leah’s example, a better way to enact a school-wide culture devoted to self-initiated creative learning that can successfully exist within a traditional educational environment is to give my colleagues the same thing I give my students – time.

As with young learners, adults also need time to process new information, concepts, and ideas. Time is especially needed if great change is involved. It took me
years to learn how to construct a classroom devoted to student agency and self-initiated creative learning. Eddie and I needed to afford others the same grace as well. Any educator committed to these principles must also recognize that shifting a local or national educational paradigm is not a finite procedural adjustment, but rather a hugely dynamic and ever-evolving process. This type of challenge is why I became a teacher. Over time I came to understand education as a profession with a rich, complex history and unlimited possibilities. Eddie and I wanted to rush our pedagogy through the gullet of the status quo in hopes that it would be established once the new administration was put in place. But that was a mistake. As a result, it was simply voided. Our efforts might have been more enduring at the research site if we exhibited the same patience with our colleagues as we did with our students. With our students we took time to observe in order to better understand their thoughts, ideas, and perspectives. We did not do this with our colleagues or the school leadership team and therefore we missed out on how our pedagogy could have been enriched by what their experiences and expertise had to offer.

**Enacting the Six Essential Principles into Traditional Learning Structures**

Through my analysis of the data from this study, I identified six essential principles that were in place to allow self-initiated creative learning to occur in our elementary classroom. During the 2012-2013 school year, Eddie and I found ourselves in a situation where we could fully enact the six essential principles in our classroom. But it was a rare set of circumstances that does not exist in most forms of schooling. This research has led me to consider additional questions, some of which pertain to the idea of how these principles might be enacted in traditional, public school classrooms. The following commentary provides a few examples based on my experiences working with
children in both public and private school environments.

**Time to engage in self-directed learning.** Schools have systems in place where the teachers have the responsibility to successfully guide their students through curricular structures intended to promote learning. Usually, teachers follow curricular programs adopted by the schools at which they work. Many general elementary school teachers are required to follow a program for each of the four main subject areas (language arts, math, social studies, and science), often with additional supplementary programs (health, character education, spelling, geography).

Curricular programs adopted by schools years ago that used to rely on a single textbook now include multiple workbooks, teacher guides, and supplementary materials. These comprehensive programs provide a lesson plans, scope and sequence charts, suggestions for differentiated learning, assessment tools, and extended learning activities. It takes a lot of time for teachers to execute these programs according to guidelines. Schools are also required to provide character education as well as prepare their students to take standardized exams. The workday for most teachers extends well beyond the school day as they prepare the next day’s lessons. Therefore, time is a precious commodity for teachers, which makes providing time for students to engage in self-directed learning a challenge.

One way to include self-directed learning opportunities in a general elementary classroom is to invite the students to form after-school clubs. Many schools offer a host of extracurricular activities designed by teachers or volunteers. Students can also be solicited for ideas. After-school clubs hosted by students that are supervised by teacher-mentors can provide opportunities for students to design a club based on their interests.
and such clubs can run for as long or short a time as is needed according to the interests and wishes of participating students.

**Agency to self-navigate through indoor and outdoor spaces.** Children have little experience with self-navigation in schools and therefore allowing this type of movement requires constant guidance and practice. First and foremost, students need to be shown how to safely interact in groups and within spaces. It is best to begin in the classroom environment where children spend most of their time and are most familiar. Class meetings provide a good setting for beginning a discussion on the concept of self-navigation. Depending on their past experiences, children will come to the meeting with different understandings of self-navigation and what it entails. It is important that children are first invited to express their concepts and ideas so that the teacher has a good idea of how the class, as well as each individual child, perceives what it means to self-navigate effectively. The next step is for the teacher to model various safe and unsafe examples of self-navigation for the class to discuss, critique, and ultimately construct a classroom consensus on what it means to safely navigate a space. Children also enjoy having opportunities to model safe self-navigation and which will help them better internalize what they have learned. Finally, it is important to see if the children are interested in having the school principal become part of the conversation. If so, see who would want to act as classroom representative (or which children would want to be part of a representative group) to contact the principal, relate what was discussed, and invite the principal in to become part of the conversation. There are always children who will jump at the chance to take on such a leadership role. Having an administrator as part of the discussion could lead to further discussions on self-navigation beyond the classroom.
What started as a simple class meeting could become the impetus for a school-wide discussion.

**Access to classroom materials and supplies.** Allowing children access to classroom materials and supplies is wholly dependent on the classroom context. Each individual teacher has a different comfort level when it comes to children being given the agency to take and use classroom supplies. First, the teacher must be willing to allow this practice and have ample time to invest in the undertaking. As with the first two principles, it also works best when the students have a leadership role in the decision-making and design processes to ensure that they are invested participants. Next, have a discussion about the classroom space. Invite children to comment on what they see. Lead them into a talk about consumable classroom materials such as tape and paper and non-consumable materials such as chairs and tables. Once they understand this concept, enter into a discussion on the cost of each item and the limitations of school and classroom budgets. Ask the class if they would like to create an action plan to determine how the materials and supplies will be used. I have found that children will take a discussion very seriously if the teacher is candid and willing to allow the children to be part of an action plan. Once children have ownership of the process, they tend to rise to the occasion and are more willing to enter into meaningful debates to establish agreed upon goals and procedures for the equitable and economical usage of classroom resources. It is not necessary for the children to be allowed access to all the supplies as in the case of my classroom. That practice was something that evolved over the course of many years. Giving children who are new to the concepts of self-governance a small amount of agency can have a big effect.
**Autonomy to make choices and decisions.** Children love feeling empowered when given choices and being able to make their own decisions. Although schools are places of complex sets of rules and regulations, classroom spaces are microcosms that offer a range of opportunities where children can make personal choices and take part in community decisions. It has been said that each day teachers make thousands of decisions. Of course the teacher cannot stop the class to invite the class to take part in each decision or there would not be time for anything else. However, lesson plans provide a convenient tool where teachers can include opportunities for student choice and decision-making. As they construct their lesson plans, teachers include activities and procedures not only based on their curricular goals and standards but on the make-up of their class. Teachers know their students and can tweak and make adjustments to their lesson plans based on how they envision the lesson will play out. This process can begin in small ways by embedding one opportunity for student choice per week and gradually adding more as the students become accustomed to making their own choices and decisions.

**Freedom to explore unanticipated learning opportunities.** At the research site, Eddie and I were able to allow our students to explore many of the unanticipated learning opportunities that arose throughout the day. However, many educators teach in environments where this type of flexibility is not possible. Yet, the typical school day is full of instances where students come to the classroom brimming with personal stories of interesting things they saw while on vacation, read in a book, watched on television, or viewed online. Many times after sharing a topic a student will ask if they can research it further in class. An easy way to encourage children to take personal advantage of
learning opportunities as they arise without having to interrupt the classroom proceedings is to create some type of space within the classroom where they can record their learning ideas. A simple bulletin board or white board hung near the door can serve as a place where children jot down their project idea or topic of interest. Then at the end of the day, while waiting for dismissal, a few minutes can be set aside where these ideas and topics are shared by the students who posted them.

**Ability to deviate from preplanned curricular activities.** This is perhaps the most challenging of all the principles to enact in a traditional public school setting since public school teachers are required to cover a certain amount of material over the course of the school year. That being said, teachers can turn this into an opportunity to encourage their students to attend more closely to the weekly lessons. At the beginning of each week, the teacher can take a few minutes to review the week’s upcoming lessons with the class. Once the students see a schedule of how the material will be covered, the teacher can inform the class that the rate of how quickly the material is covered is dependent on how well they attend to each lesson and activity. If the class is able to successfully get through the material ahead of schedule, then they will have time to engage in activities of their choice. Technically, this is not the same thing as allowing children to deviate from preplanned curricular activities, but it is a way to empower children to create a block of time where they may engage in their own self-initiated endeavors.
EPILOGUE

At the end of the 2012-2013 school year Eddie decided to take the following year off to care for his three-year old daughter and home school his two older sons. A new teacher was hired for the fourth and fifth grade Bridge team. It was decided the following year I would teach math, the new hire would teach science, Leah would concentrate on language arts, while Rachel was in charge of social studies. However, the school was also struggling financially, which became exacerbated due to a steep drop in student enrollment and rumors of layoffs began circulating amongst the faculty. I left after the end of the 2013-2014 school year and Eddie returned to take my place as the fourth and fifth grade math teacher.

The following December, as the school’s financial situation became increasingly tenuous, it was reported in local papers that the school planned to cut staff, reduce student financial aid, and raise tuition. In January the headmaster announced his resignation and an Upper School faculty member became the interim head. By the end of the school year, Leeann announced that she had accepted an administrative position in a private school located in another part of the state. Out of the 14 elementary classroom teachers who were at the school during this study, two are still employed at the school, five left of their own volition, and seven, including Eddie, were laid off.

The Creative Resiliency of Children

After leaving the private day school, I accepted a fourth grade teaching position at a local inner city school. The school was deemed “failing” according to a governor’s report and I thought introducing a child-centered, creativity pedagogy would provide a positive alternative. However, I was woefully unprepared and did not have the skills to
deal with the profuse needs and complex set of variables that came with teaching an
derprivileged population of children. There were sudden violent outbursts and other
disruptive behaviors initiated by some of the more troubled students that occurred
throughout the school on a daily basis. The administration reacted by instituting
increasingly stricter policies that impacted all of the children. After five weeks, I felt I
was not having a positive enough effect and resigned my position.

At the beginning of this dissertation I mentioned my fascination with the creative
resiliency of children. I saw this play out in the inner city school as well. Although I was
not allowed to give the children the agency my students at the private day school enjoyed,
the children still found ways to surreptitiously engage in self-initiated creativity.

A few of these activities expressed negative messages. I believe they were an
expression of the frustration brought by an oppressively strict environment that sought to
control every aspect of the children’s schooling experience. Some students would mark
the floors by first crushing a crayon or pencil under the leg of a chair. Then while sitting
on the chair, they would scooch side to side to produce a series of zigzagged scuffmarks
on the floor. The students also communicated their anger and frustration with each other
by creating notes that included hurtful messages and illustrations.

However, the vast majority of the self-initiated creative artifacts were positive
expressions that incorporated creative categories similar to the ones produced by my
students at the private day school. These creative artifacts included illustrated notes,
drawings on paper, vibrantly colored abstract designs, mini-posters, objects made from
the detritus collected from the hallways and along the corridors, paper airplanes, folded
paper constructions, toy weapons, doodles, miniature desktop studios, and tiny
installations. But since any type of self-initiated activity was strictly prohibited by the administration, the children secreted away their creations in pencil boxes, cubbies, and in the back corners of bookcases.

At the beginning of the year I pretended not to notice so that I did not interrupt or impede their creative processes. Then, after the students left for the day I gathered whatever creative artifacts I could find and photographed them. As I got to know the students, I began to talk with them about their creations and asked permission to photograph their work. Soon thereafter, the students brought their creativity out into the open and during class many of the children kept their small creations on top of their desks while they worked.

I found one mode of creative production particularly interesting. The staff used a bright blue adhesive putty to hang posters throughout the hallways to promote a variety of positive messages. At the same time, there was a common behavioral problem called “running the halls.” Each grade level, from Kindergarten to the fifth grade, had one or two students who would routinely exit the classroom during a lesson, and begin to run through the hallways. Some students did this as a lark, laughing and peering into doorways as they made their way down the corridors. Others would run through the halls when they got upset ripping down the posters as they ran by. After one of these episodes, while I was escorting the children to lunch, I noticed a student of mine peel off tiny pieces of adhesive putty that were still attached to the wall and place them in his pocket. I wondered what he planned on doing with the putty.

Later that week, when I returned to the classroom after bringing the children to music class, I noticed a tiny blue figure on his desk balanced between his notebook and
folder. Upon closer inspection, I could see that it was a charming six-legged creature with a serpentine tail standing erect on its hind legs.

Figure 136. *Creature made from adhesive putty* (2014).
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VITAE

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