Imagination: Active in Teaching and Learning

Christopher Cunningham

University of Nebraska-Lincoln, chrisart63@hotmail.com

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IMAGINATION: ACTIVE IN TEACHING AND LEARNING

by

Christopher Cunningham

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IMAGINATION: ACTIVE IN TEACHING AND LEARNING

Christopher Cunningham, M.A.

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This autoethnography tells the story of the author’s endeavor to examine my teaching during a sculpture lesson in three 2nd grade art classes in a mid-western suburban Title I elementary school. I analyze my planning, teaching, reflecting through the lens of Stuart Richmond’s *Characteristics of Imaginative Teaching* as well as noted educational theorists’ conceptions of imagination and imaginative teaching and learning. These theorists include but are not limited to Maxine Greene, Kieran Egan, John Dewey, and The Lincoln Center Institute’s *Capacities for Imaginative Learning*. I conclude that imaginative teaching is an intentional act and that there is no formula for teaching imaginatively. I also find that imaginative teaching can involve 1) respect for students’ subjectivity and inherent nature to explore; 2) allowance of space for students to use their senses and interpretative ability; 3) thoughtfully imposed limits for students to push up against and break from conventional thought and action; and 4) collaborative learning that develops empathic appreciation for different perspectives. Additionally, I give insights on the teacher’s role in creating an environment that includes these ideas.
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Introduction

When I walk into many elementary schools, I see children’s artwork proudly displayed on the hallway walls; art work that was facilitated by a teacher, and executed by the students. I say “proudly” in reference to the teacher’s pride. I say “executed” because the artworks lack individuality and appear to be a product of a parochial approach. It is evident that the students were given direction from an authority and a sequence of steps to follow. The art pieces indicate lock-step conformity to method, an imposition to depict a specific view or subject in a specific way. A rigid lesson treatment with precise steps had been “taught”. The students had little or no openings for variation in content, personal perspective, stories, imagination or expression.

Only because each student is a unique individual, inherent with creative impulses, and with her own life experience and personality, and despite the narrowness of the instruction, the student’s own character is still miraculously evidenced in the piece. Though a teacher by the nature of his/her instruction may inhibit divergent thinking and limit what a student learns, a student’s near irrepressible identity, character, and imaginative desire will consciously or unconsciously attempt to get around the impediments, to leave marked evidence of their own unique expression. Dyson (1993) might call this the “unofficial work” of children (Gallas, 2003, p.7). Dyson talks about the official and unofficial work of children’s experience in schools. Official work would be scripts, learning, and activities initiated and directed by the teacher. Unofficial work would be those activities amongst children occurring outside the purposes or endorsement of the teacher. Gallas (2003) contends that the imagination is present individually and collectively in a classroom whether it is a purpose of the teacher or not;
that it permeates and “influences a student’s and a classroom community’s actions as learners” (p. 56). How can an art teacher welcome the inherent imaginative actions of students and yet meet all the standards in the little time allotted for art?

When there is one elementary art teacher, teaching 400 or more students once per week, in 6 classes per day, there is a kind of factory pace in the activity and at times the teaching disposition is about survival. To survive and to keep up with external standards and expectations, many art teachers choose to teach in a way that provides less questions, more order, little chaos, more predictability, a doable amount of set-up, and outcomes that are measureable to the degree they can be. Naturally one solution for an art teacher is to resort to a formulaic approach that virtually guarantees results that will be admired by some, bypassed by many, and exhibit flattened expression and narrowed learning.

There are educators and others who are not artists, who marvel at how the art teacher got so many students to perform “successfully” in this standardized way. There are others who do not look very closely at the art on the walls for very long or perhaps at all, for precisely this reason: it all looks basically the same. Because there was no imaginative thinking involved with “doing” the art, there is little imagination needed in “seeing” the art. The collection of art is in essence decorative and patterned wallpaper. Wallpaper is made by machines and intended to be background, not for close looking.

Certainly the students are learning something? Sure: fine motor skills, a proven technique or method, how to follow directions, red and blue make purple, how to draw a particular giraffe. Some are learning that art is following formulas, and that the teacher is an expert who will tell you what, how, and when. If you do this plus this plus this it will equal this - good art. Some learn that the world is black and white.
To be fair, reproductive, memory, and informational learning and its results are not superfluous if it is then employed and connected to other actions and inquiries; if it is in the service of understanding or creating future conceptions. Dewey (1934) says this is when imagination comes into play, “the conscious adjustment of the new and the old is imagination”…“Imagination is the only gateway through which these [prior] meanings can find their way into present interactions” (p. 272). Memory is needed to recall previous experiences, learning, and information. Memory and imagination have a symbiotic relationship. To imagine requires one to call up, in the mind’s eye, past experience, knowledge, and imagery; memory gives a student the materials necessary for his “imagination to combine, alter, and create something new” (Vygotsky, 2004, p.9). Without memory there would be no possibility to imagine. To project the possible, the future, is to imagine combinations of old and new knowledge.

Dewey (1938) claimed that experience is educative if it is utilized to affect later experience in a meaningful thrust forward. If this is true, it means that education is imagination in action. Imagination allows a person to recall meaningful past experience to understand and influence present experience. Vygotsky talks of how there needs to be established knowledge and previous experience for imagination to work with. He states that all inventions are built on many seemingly minute but still imaginative evolutions, by unknown people. The famous creative geniuses all employed materials from others’ discoveries and inventions as they made their own unique combinations and inventions (Vygotsky, 2002).

Asking ‘what if’ questions, is a function of imaginative thinking. It is a way to deliberate about things being other than they are. (Holzer, 2008) What if there were fewer
impediments? That is, less formula, less teacher, and more student materials: their questions, their inquiry, and their interests – materials developed from their past experience. What if teachers and students were encouraged to imagine their own possibilities, to draw on the past to forward think in combination? What if there was adequate space for teachers’ and students’ inherent capacity to imagine and for individual character to be expressed in the art classroom? Is it possible learning would be broader, richer, diverse, and meaningful to students? Is it possible students would not accept things automatically at face value; be able to think critically when confronted with unfamiliar problems and situations, Is it possible students would make discoveries, inventions and innovations? Would red and blue make infinite different purples? Would the walls of the school invite ones imagination to look deeply and appreciate?

Dewey (1991) states that “if germinating powers are not used and cultivated at the right moment, they tend to be transitory, to die out or wane in intensity” (p. 33). He says that if children’s curiosity is not attended to it is “easily dulled and blunted”; that children’s natural “open mindedness and sense of wonder can be lost” (1991, p.32). Children’s imagination can become dormant in school under the duress of imposed knowledge and routines if it is not released and given opportunities to breath.

As stated previously there are many reasons for an unimaginative methodized process of learning about and making art in elementary schools. And there are imaginative art teachers who manage to not fall into this rut, and find ways to subversively create opportunities that allow students’ freedom to use their own sense materials, to use their powers of imagination to solve art problems, to express their unique points of view and feelings, and to invent instead of mimic. It is in this way a
teacher can truly see and understand how and why a student thinks as they do. Student thinking, and learning to think, is an aim of education. Letting students out of the box to verbally, visually, and by their actions tell you what and how they think is essential. Misconceptions can be brought to light and questioned and discussed; students’ unique perspectives, conceptions, and interests can come into the light and be nurtured and provided for. Students will have opportunity and space to become the authors and artists of their being. In today’s schools’ academic climate, students are often conditioned to not desire, to not imagine possibilities, to not feel the freedom to think, to not make their own meaning.

Maxine Greene (1988) talks about what it means to learn. “To learn is to become different, to see more, to gain a new perspective. It is to choose against things as they are” (p. 49). This is learning that respects student imaginations to grow towards light that interests them and light that is partially generated by them. To grow this way, in which a teacher guides but does not tether the student to external motivations allows a student to be rooted in their own experience. This conception of learning and imagination is one I am interested in, one in which the student’s unique materials gleaned from past experience are invited to fuel their imagination and influence the cultivation of new possibilities.

Imagination is a capacity that requires fodder for serious play, re-digestion, and combination to make possibilities in the mind’s eye. In other words, you can’t imagine something from nothing. It is necessary to introduce students to materials, techniques, and processes through art experiences. But, these elements are not art itself; they are not expression, and they are not imagination. They are the raw material. Schools lean
heavily on giving and telling, on the craft and “how-to” of art, neglecting the process - the “art” of art: the imagination.

**The Context: Artist, Teacher, Researcher**

A fledgling artist. As a child I was a maker, a drawer, and an explorer. I would observe things around me and try to draw what I saw. The idea of being able to represent the world around me was exciting. I practiced drawing in my free time and began to use this skill to make up and imagine my own “things”…to invent and build tree houses, furniture, toys, go-carts, and bridges over rivers. More often than not I would construct things from found junk, salvaged wood, and other discarded materials I could find in the neighborhood. I would look at these found objects and imagine how I could use them to make something else. Creating new things energized me and gave me great pleasure. I never drew or built the exact same thing twice or with the same method - it was always “onwards, what can I do next?” In elementary school I had art once per week, and my mother recognized my interest as I would talk about it at home so she enrolled me in an art class out of school in this beautiful old architectural gem of building in town. I interacted with other kids who had similar interests in art and making. As I moved through middle school and into high school my parents allowed my creative endeavors at home; but school to them was serious business, so homework took priority. Success at traditional academic subjects not art and making things would get me into college.

In high school I was on a college prep track and was discouraged from taking art classes by my parents in order to beef-up my average academic achievement. My math skills were adequate enough that my parents, who wanted me to be employable, thought engineering or architecture would be a good major in college. In the end my drawing skill
would have practical applications to either of those vocations though I wanted to major in Art, but that was not happening.

I majored in architecture and eventually got my BS Arch. It was a struggle at times because my imaginative and creative impulses often distracted me from the academics and architecture projects in front of me. I was also intimidated by the external expectations to perform. Though, from sheer will and fear of failure I managed to graduate and get a job. I worked for a few architecture firms in Washington, D.C. where I had attended college, doing residential and restoration design work. After a few years I got a job as an architect and an instructor at a firm in Vermont, called Yestermorrow. I loved the firm’s philosophical approach. Yestermorrow was a design/build firm that designed mostly residential structures for clients; and in the summer it was also a school and offered a variety of classes mainly to teach lay-people how to design and build their own homes.

The philosophy of design/build is that the architect and the builder should be the same person. The two professions though naturally connected, did not have a very harmonious relationship at times. This combined role, architect/builder, was frowned upon by traditionalists in both professions. In the Design/Build world an architect has a preconceived idea of the building, but the architect/builder can change the conception of the building as he is building. The architect/builder can adjust, evolve or change the direction or specific components of the building because through his close work and relationship to the developing building, and continuous reflection, he can imagine better, more effective, or visually appealing possibilities. As my mentor and principal architect of the firm told me, “Design/Build is like sculpting, it is a conversation. You have an idea,
you imagine it and make a mark and step back and see it, sense what it needs, and respond” (conversation with John Connell, 1986). In this way, the architect/builder is very sensitive to what he is doing and its effects on the building. He is willing to re-imagine as ideas emerge from the work. The willingness to be flexible and re-imagine as one is building usually makes for a more harmonious, effective, and satisfying building in the end.

After three years at Yestermorrow, I decided I wanted to work with people in a service oriented way and thought young people could benefit from my own impulse to create and make art. I felt I would enjoy and be good at creating learning experiences for and with young artists. After much reflection I decided to leave architecture behind and pursue a career working with kids, though how I would do this was yet to be determined.

A developing teacher. I was fortunate to get a teaching position at a high school immediately after I earned my teaching certificate and taught there for 9 years. While teaching at this rural high school I explored, experimented, and honed my skills in imagining lessons and projects that engaged my students in learning. When I witnessed the excitement and buzz of the students creating and learning - making something that wasn’t there before, I felt successful. This aspect - the challenge to engage student interests and imaginations, to prod them to risk in an artistic process was enjoyable. Eventually, following a move to Lincoln, Nebraska, I found a position teaching art at a k-5, Title I. elementary school.

An interested researcher. Presently I am in my third year teaching elementary school. I have found it to be enlightening, with different challenges than high school. One challenge is that I only see students for 50 minutes once per week and I have to
make these intermittent art experiences be meaningful, have continuity, and provide space for the students’ imaginations to be released. Because elementary art teachers work in rotations with 4 or 5 other specialists, an art teacher may only see a student every 5 to 7 days and in occasional circumstances it can be 2 or 3 weeks between classes. I frequently ask myself, how can I provide for art experiences that allow students’ imaginations to surface, are meaningful and educative, but in the limited time allotted for aesthetic learning and imaginative inquiries.

In high schools, students have art frequently, usually three days per week and it is not uncommon to have it every day for a semester or more. Teachers can allow for the process to unfold naturally, for students to experience in a natural rhythm, and not be interrupted by a week or weeks that disrupt the continuity of their experience. Aesthetic problems take imagination, time to interact with, to reflect and deliberate on, and time to respond again and again until there is a satisfying “consummation” (Dewey, 1932). In the next section I will describe a high school art project that I feel is indicative of an imaginative and educative experience for both the students and the teacher. Because of the limited time students have art in elementary school this kind of extended imaginative experience described is not easily possible, though it is more and more my wish to teach to elicit this type of interest and imaginative response of the elementary students.

**Space for an Imaginative Aesthetic Experience in High School**

**The students.** Years ago in the high school sculpture class I taught, I had some reluctant and at times apathetic students which concerned me. I knew as we proceeded forward in the objectives and content of this course that I would need to find some connection to their lives that would pry them from their apathy. I had originally planned
to begin a certain sculpture project as a catalyst for them to learn certain three
dimensional art concepts, but from knowing the students, their traditions and community
values I decided to change our direction to something I felt would stimulate their
engagement and interaction with each other and the content. Three of the students were
obsessive with hunting white tailed deer in the fall. All but one of the twelve students
was a hunter or had been hunting before with their father, mother, or extended family.

**Combining interests.** One student had remembered, from earlier in the semester, an
image of a sculpture of a horse by artist Deborah Butterfield and how beautiful it was.
The sculpture had been constructed from found sticks and wood. In consultation with the
class we decided to co-create a lesson on sculpture-in-the-round through building life size
deer sculptures out of sticks, branches, and vines found in the woods on school grounds.
We decided to work on the edge of a field near the woods. There was matter in this
endeavor that was familiar to me - sculpture - and there was other matter that was
familiar to most of them - white tailed deer - and together we would bring our materials
to work, to learn, and to create. The reality of the students and I interacting to create a
meaningful learning experience (creating deer sculpture) helped to begin to develop a
notable bond or relationship between the students, myself, each other and the subject.
The students were much more receptive to engaging with the unknown (the sculpture
concepts) because they were being presented in relation to this deep cultural and personal
interest that many of them had a degree of expertise in. The new language they learned to
describe aspects of sculpture gave them words to communicate about aesthetic aspects of
deer. Their anecdotes and experience gave me a more intimate view of their personal
lives as well as new language to describe a part of nature.
**Imagination activated.** Problems and challenges manifested naturally as students tried to imagine and negotiate the making of the deer. Questions and observations arose such as:

- What are the proportions and size of does, bucks, and fawn?
- What pose shall our group put our deer sculpture in?
- What do deer’s bodies look like when they are eating, moving, or listening for predators?
- I think the way this branch curves is good for the curve of our deer’s neck.
- How shall we securely attach the material (branches, vines, twigs) to other material?
- How can we make the sculpture stable structurally but still look natural?
- I like the texture of this bark.
- Shall we leave the bark on all the branches or just some of the branches?

The students experienced and negotiated how to collaborate with one or two other artists and began to understand how they each saw differently. They had to talk about how they saw “it” and resolve their discrepancies in perception and vision.

This project really excited them; they discussed amongst their co-creators and me about deer anatomy, proportions, movement and behaviors. Some students brought from home resource materials such as their own photographs of deer and nature or hunting magazines. Some students had knowledge from past hunting experiences that informed their sculptures. The students spent nearly three weeks collaborating, stepping back - looking, discussing, responding and searching for the ‘right’ branch or vine as they sculpted. They talked about weight, body language, balance, space, shape, and form. This experience was truly a process in the making. Mostly students were not trying to give me what they thought I wanted - often they were so involved and interested with their work they forgot I was there. During the process of making the deer there were numerous natural spaces where I could ask questions to open up further considerations, as well as
talk about sculpture concepts, for example: the idea of stillness and motion came up – in which we discussed the words ‘static’ and ‘dynamic’ and why and how artists could and do show these in their art/sculpture. The materials being used to sculpt the deer forced the students to constantly search for, discover, and change their idea as they were building – because the material was organic matter, it was not uniform or standardized – it forced the students to look at deer, look at their sculpture sensitively, and look in the woods attuned to nuance and subtlety of the organic materials. Because of the variable nature of the material the students were metaphorically weighing and measuring the qualities of each stick and vine. They had to think how or if each piece would work as a part of the sculpture. There developed a rhythm to their work; a rhythm with each other and a rhythm to their seeing and ideas, constructing, deconstructing and re-constructing.

Dewey (1934) discusses this organization of energies as such:

For whenever each step forward is at the same time a summing up and a fulfillment of what precedes, and every consummation carries expectation tensely forward, there is a rhythm. (p.172)

When it was time to exhibit the family of deer the students decided that the front of the school was a good place so when people came to the school the deer would be seen. When we lugged the deer to the front of the school the students discussed what would be a good setting. They realized that deer love eating apples from branches and the ground and proceeded to arrange and compose the deer under and around an apple tree. There was much moving and discussing and re-moving the deer until they found a composition that appealed to the group.

**Working in groups – the social imagination.** Through this experience of imagination students worked in small and large groups as well as with me, the teacher.
We communicated; sometimes students disagreed, causing them to discuss and this led to new understandings. Students became more aware that there are countless possible perceptions, perspectives, and aesthetic sensibilities when working in a group and a community. In his article, “Mind the Gap!” Communication and the Educational Relation, Gert Biesta (2004) said, “Communication is the making of something in common” (p. 16). Biesta relates Dewey’s view on communication as “the establishment of cooperation in an activity in which there are partners, and in which the activity of each is modified and regulated by partnership” (p. 16). When students interact and are aesthetically open to the ‘other’ as object in an experience, he too is modified as well as the object – the object and the student are transformed and will never be the same after the experience. School is not a place in which everybody becomes the same, but where a student should be able to become “who they are not yet” (Greene, 2002) Sometimes ‘who you are not yet’ emerges from experience with another.

**Why not in elementary school?** Now that I am working in an elementary school, where time and space is limited, I realize how these naturally imaginative students’ art experiences are often stunted and shallow. The limited time, the external pressure on teachers to meet standards at unreasonable paces often lead to superficial, unimaginative and unexpressive teaching, learning, and art. Elementary students are at an age when they are more open to new experiences, emotionally energized and ready to explore and see what is there. They are naturally creative in their interactions with the world, and yet it is a time when they have less opportunity to exercise these capacities than their high school counterparts. Because of this, when they do become middle and high school students, they will have come from this place where opportunities for using their
imagination and aesthetic sense was sparse and even superficial, but now they are
suddenly expected to perform imaginatively, freely and with rhythmic continuity. How
can I, with the resources I have, provide for imaginative art experiences for my students?

Imagination for Future Success

Imagination and creativity are in-demand workforce skills. The curriculum in
elementary schools offers fewer and fewer opportunities for developing these capacities.
A study of Colorado public schools found that schools that offer more arts education have
higher academic achievement and lower dropout rates (Colorado Department of
Education & The Colorado Council on the Arts Study, 2008). The capacity to imagine is
an important cognitive tool for learning. Some theorists have argued that endeavors of
learning involve imagination (Dewey, 1932; Eisner, 2002; Greene, 1995; Warnock, 1976).
The Colorado study suggests that in a global economy, graduates with skills in
imagination, creativity and innovation will be heavily sought after by employers
Though job readiness is important for students, a life-long capacity to imagine the
possible, to discern and make judgments, to engage with and make sense of a strange and
changing world, to appreciate nature and art, and to make meaning and form new ideas, is
integral to the art of living. Over-directive teaching (‘do this, then this, and it will equal
this’) does not foster these capacities in students. It does not provide the tension to
challenge students to go beyond.

When there is tension between the old and the new, it can act as a catalyst for the
imagination, for a renewed way of seeing, doing, cultivating and representing possible
meaning(s). Reconciling and synthesizing what is at first an apparent conflict or tension
is the process by which Dewey (1932) says, “perception replaces bare recognition” (p. 53). One may be blocked and hence resigned to the old and known, or they may be compelled to look deeper, and sensitively at the tensions and qualities of the object or situation, to see where they might meld, and allow objects and ideas to mingle and juxtapose; essentially experimenting in the imagination.

Some behavioral elements of imagination include: looking deeply or beyond the iconic, seeing sensitively and qualitatively, being receptive to suggestions other than the knee jerk, being discerning and deliberative and considering many different combinations (Dewey, 1932; Egan, 2003; Greene 1995). When imagination is educative it involves the generation of possibilities that are both “unusual and effective” (Egan, 2003). It also involves the ability to both analyze and synthesize objects and ideas, and be “flexible” (Dewey, 1934; Eisner, 2002; Holzer, 2007) including in one’s purpose. “Imagination is the improvisational side of intelligence – the ability to shift direction, even to redefine ones aims when better options emerge in the course of work” (Eisner, p. 77).

Imagination is an inherently human capacity for seeing, learning, and advancing ones experience, conceptions, and possibilities in the world. Imagination according to many theorists is a fertile and essential means to think beyond what is given and project into the future (Egan, 1992; Greene, 1995). It is an important human capacity teachers can cultivate, provide opportunity and space for, and support in the way they plan, teach, and reflect. (Egan, 1992; Richmond, 1993)

**Purpose of this Autoethnography**

The purpose of this autoethnography is to examine my attempts as art teacher to elicit student imaginations as they learn in the allotted time allowed for art. It is an
analysis of my own attempt at cultivating imagination in an elementary school art room. In order to do this, I will examine my own teaching; I will use the insights and studies on imagination from the theorists in my literature review to compare to my beliefs, reflections, and actions as I plan and teach a three-week long sculpture lesson to three 2nd grade art classes.

In Chapter II, I review research that defines the concept of imagination in the context of education and describe how imagination is a human capacity that helps humans to learn, to adapt to a rapidly changing world, and to intentionally change the world. In addition, I draw on literature that describes the importance and value of imagination to learning and how it is often neglected in favor of other capacities in elementary schools. I then describe qualitative methodology I used for this study in Chapter III, providing a definition and description of autoethography and my thinking behind this choice. Additionally, I describe my data collection and analysis process, explaining my lesson plan and how I used a reflexive journal as my main vehicle for data collection. In Chapter IV, I discuss my findings regarding my teaching and how it evolved or adjusted through the study and insights into how it compared to the existing literature on imagination and education. Finally, Chapter V describes the possible implications of my study’s findings, limitations, and possible directions for extended study.
Literature Review: Imagination in Education

The intention of this autoethnography is to examine a first-hand account of “imaginative teaching” in action. Teaching that hopefully elicits and cultivates the imagination of students. I have chosen to review the literature in three sections that frame my study. In the first section, I explore conceptions of imagination, how it has been defined by theorists, how it means different things to different people, and how the present emphasis in education is missing a conception of imagination both in its pedagogical methods and as a student capacity to be invoked in learning. In the second section I review literature that discusses the value of imagination to learning and in education. The third section discusses findings in the literature regarding teaching practices that have the purpose of stimulating and cultivating imaginative responses and learning in students and how imaginative teaching begets imaginative learning.

Conceptions of Imagination and its Absence at School

What exactly is imagination? How do theorists define it? My intention is to construct an amalgamation of “imagination” derived from the literature that explores and describes imagination, to use as a base line conception for my research study.

Dewey (1934) said “all conscious experience has of necessity some degree of imagination” (p. 272). He describes experience as a matter of perception that becomes conscious when meaning derived from prior experience is used to make meaning of present circumstances. “Imagination is the only gateway through which these meanings can find their way into a present interaction; or rather, the conscious adjustment of the new and the old is imagination” (Dewey, 1934, p.272). In this conception imagination is an intentional conscious act of the mind to use meaning derived from past experience to
make sense of the present. The new construction of meaning in the present transforms or reconstructs the past meanings.

Dewey’s (1934) conception of imagination sounds like the meaning of learning; “a conscious adjustment of the new and the old” (p. 272). He contends that when meanings derived from prior experiences enter into present interactions there is imagination (Ibid.). If this is so, it would be imperative for a teacher to invite the students’ subjective materials – meaning and knowledge gleaned from their past experience - when attempting to elicit their students’ imaginations in the process of learning.

The consensus in the literature is that the imagination is complex and defies a concise definition. It is of the mind and so it is unobservable. Sutton-Smith (1988) claims “The imagination is relative, multiple, differentiated, contrary and power oriented…there is no single function that can be called the faculty of imagination” (p.18). Imagination has been seen as fanciful and irrational, not rooted in reality. This impression of imagination is still held by people today. Being “imaginative” is used to describe children who are different, as a complimentary quality – “She is imaginative.” The meaning being that the child possesses a special capacity or ability that is not common to all humans. Imagination is not commonly thought of as something that can be cultivated in students, that they have it or not. In the minds of some “being imaginative” is not a desirable quality – but a useless fanciful kind of play. Maxine Greene (1988) advocated for the educational value of imagination saying, “To learn is to become different, to see more, to gain a new perspective. Imagination is to choose against things as they are” (p.49). Sutton-Smith (1988) describes the subversiveness of imagination: “it is after all the
playground of the subjective, the domain where the opposites and the alternatives can be faced or feted” (p.27).

A common understanding of imagination involves the capacity to see things vividly in the mind – to picture things, places, people, paintings etc. For example, though an object is not present, one’s memory can conjure up an image of something previously perceived or sensed. In another case, imagination means to visualize things that don’t exist in reality, at least yet. Though in this conception these imagined new things are formed with prior knowledge and memories of objects of past encounters (Dewey, 1930; Eisner, 2002; Vygotsky, 2004; Warnock, 1976).

Imagination’s recent reputation is first associated with fancy, other worlds, being separate from reality. This conception does not garner much support for being important in schools. Robin Barrow (1988) does not think of imagination in this way. He considers imagination to have two pivotal criteria, “effectiveness and unusualness.” Barrows says if one’s thinking or product of one’s thinking is unusual, but is useless in the context, it is not imaginative, but perhaps “fanciful,” “bizarre,” or “prolific.” If an idea is effective, but not unusual, then it is perhaps, “good,” “competent,” or “sound.” To be considered imaginative an idea, conception, or created object must meet both criteria. He argues that fostering student imagination to be an important aspect of a satisfactory education. And claims that imagination is a quality of thinking that can be purposely developed in students, not by direct teaching, but in the particular way a teacher teaches particular curriculum subjects.

Maxine Greene (1995) talks about schooling [being] “preoccupied with test scores, time on task, management procedures, ethnic and racial percentages, and accountability
measures” (p. 11). This notion is not uncommon amongst theorists today and is supported by numerous research studies that contend that the arts and imaginative learning is pushed aside by core standards and the expectations of No Child Left Behind’s (NCLB, Bush, 2001) Annual Yearly Progress in two content areas: math and reading. Traditions of teaching and learning in the Arts which includes, using ones imaginative capacities to express, represent, learn, and create is contrary to the national imperative. “I would argue that today recognition (giving a percept a label) is an emphasis in education and actual perception is secondary” (Eisner, 2002, p. 5).

Perception requires exploration and imagination. Its aim is to further experience, it is multi-dimensional not flat, it is detailed and nuanced, not superficial and iconic, it is alive and rich, it is not opaque but instead made of multiple layers of juxtaposed transparencies. Perception is active as one imagines, it is a reaching out with ones senses to engage and make meaning of the world, and it is antithetical to inertia. Imagination defies inertia. True education is not and cannot be inert because to learn is to become other than you were before. True education involves imagination, which in turn involves interacting with, perceiving, and transforming the environment and the self. Education and imagination are conscious movements forward to change for the sake of improvement.

The Value of Imagination to Learning

In this section I review relevant literature that addresses the necessity of imagination in education. Vygotsky theorized the relationship between creativity and imagination. He denoted that the imagination serves as an imperative impetus of all human creative activity. The fact that this human creative behavior “makes the human
being a creature oriented toward the future, creating the future and thus altering his own present” (1930/2004, p. 9). Ideally, education is valued for these same reasons, to transform ones environment and self, to evolve and grow, to change the self in response to present encounters with new conceptions, and to effect ones future possibilities and the future of society.

Eisner (2002) says, “inventive scholarship depends on imagination. In schools we tend to emphasize facticity, correctness, and concreteness” (p. 198). Too often imagination is a secondary consideration to the agency of education. Activity that employs imaginative thinking is usually considered something special, an extra, to be left up to music, theater and visual arts. Imaginative endeavors are an afterthought and space holders used in the service of classroom teachers who need plan time. This is necessary time for classroom teachers and I am glad they have it because if they did not, many “specials” in many schools would be eliminated. The 50 minutes per week per student is an art teacher’s to plan and effect each students’ imaginative capacities.

Imagination and the arts allow aspects of human agency that are marginalized or ignored in “core” education today. Maxine Greene suggests the arts and imagination “release students, allowing them room for feelings and intuitions that are repressed in every other quarter of life—crowed out” (Fowler, 1996). Vygotsky argued that if human activity were limited to reproduction of the old, then the human being would be a creature oriented only to the past and would only be able to adapt to the future to the extent that it reproduced the past.

Egan (1992) says the conception of imagination as being the capacity to think of things as possibly being so (Greene, 1996) does not conflict with rational thought, that it
enhances rational thought, “The ability to hold alternative conceptions in the mind and assess their adequacy or appropriateness would seem a necessary component of any sophisticated rational activity” (p. 42). This thinking is supported by Dewey’s (1930) conception of deliberation being a “dramatic rehearsal of the (the imagination) of various competing lines of action” (p.190). If a desired effect of education is efficiency, the imaginations capacity to test ideas out in the imagination first is a powerful tool to deter waste of energy and time. It exercises one’s ability to analyze, synthesize, and make judgment before acting. Dewey (1934) believed, “conscious perception involves a risk; a venture into the unknown, for as it assimilates the present with the past it also brings about a reconstruction of that past” (p. 272). He said that consciousness has an imaginative phase, and imagination more than any other capacity, breaks through the inertia of habit” (Ibid).

There are many aspects, behaviors and principles thought to exist in imaginative work. Some of these are:

- a richness of knowledge and experience in subject matter (Takaya, 2007) – richness of knowledge provides more entry points to solve problems, and increases possible combinations;
- the generation of unusual and effective ideas (Barrow, 1993) – the production of ideas that are not just practical and not just unique but both;
- flexibility and responsiveness to what is present (Holzer, 2008) – willingness to change direction when old habits or methods are not working on present circumstances;
- looking (more) closely at the familiar (Greene, 2002; Holzer, 2008) – being able to find new meaning and nuance in things formerly taken for granted;
- asking questions including “What if?” (Holzer 2008; Sutton-Smith, 1988) – forming and responding to hypothetical questions;
- discernment and appreciation of aesthetic qualities in situations or objects (Eisner, 2002) – seeing details and nuance/comparing and contrasting qualities of objects;
freedom to think and act (Holzer, 2008) – breaking free of rigid thinking patterns and taking risks in thought and action;

combining apparent disparate objects (Nachmanovitch, 1990) – ability to suspend disbelief in order to combine and test the unfathomable;

inspiration coming from the limits of the circumstances (Nachmanovitch, 1990) seeing limits in circumstances as opportunities to think differently and find new ways;

empathic realization of other perspectives and points of view (Greene, 1996) – being able to see from other perspectives than your own familiar perspective;

connecting prior knowledge to new knowledge or present circumstances (Dewey, 1922);

breaking with convention (Greene, 1996) – an intentional shift from ones habitual thinking; and

playing (experimenting, exploring) with no preconceived ends (Egan, 2002; Nachmanovitch, 1990) – allows one to be present with materials, objects, and a naturally evolving process moment to moment in which one responds to the sensed qualities in circumstances and objects.

If teaching is an imaginative act then some of these aspects would be played out in the process.

Imaginative Teaching: Cultivating the Imagination in Learning

In this section I review literature that addresses the practice of teaching to elicit the imaginative capacities of students as opposed to inhibiting or stifling the imagination. What does it look like and sound like when teachers allow space for imagination? What pedagogical dispositions and types of actions cultivate students’ imaginative capacities? Egan (2005) says “engaging students’ imaginations is crucial to learning (p. xi). What and how does a teacher think, plan and teach to catalyze students’ imaginations?

Though I was not able to find substantial empirical research on the qualities of ‘imaginative teaching’ in elementary school art, I did find one extensive research study on imaginative teaching in high school art, by Stuart Richmond (1993). His study identified six characteristics of imaginative teaching. He says this conception for imaginative teaching is an ideal intended to provide guidelines for future researchers. In
this study Richmond frames the research around the fact that other notable studies that explored qualities of effective teaching ignore “imagination” as an important teacher disposition or even an important capacity to foster in students. This, even though many respected educational theorists such as Eisner, Egan, and Nadamer regard effective teaching to involve the imagination. His six capacities of imaginative teaching are reflective of the literature regarding the imagination and imaginative learning. The characteristics are:

1. generates unusual (unconventional, original) ideas and activities;
2. constructs learning opportunities that lead effectively to worthwhile artistic understanding for particular students;
3. utilizes the teacher’s knowledge and judgment;
4. is flexible and adaptive in response to the unique demands of practice;
5. respects the exploratory, open-ended, and insightful nature of art; and
6. is vital and motivating, and is a model for pupils’ own imaginative efforts in art.

Teaching for imagination gives space for ‘education’ as opposed to ‘training’.

Direct teaching and repetition is training. Open ended questioning to stimulate imagination is educative activity, because its aim is not a right answer, its aim is deeper thinking, breaking from convention, exploring ideas actively making meaning. It is not recognizing and regurgitating the known. It is a kind of teaching that encourages divergence, expression of one’s subjectivity, and practice at considering alternative possibilities, as opposed to just the known effective solutions. “Imagination has the power to contrive new meanings, renew and refine disposition(s) and reorganize

“To call for imaginative capacity is to work for the ability to look at things as if they could be otherwise” (Greene, 1995, p.19).

Greene (1995) said, “education should not be an endless ‘cul-de-sac’” (p.17). To me, cul-de-sacs are comfortable, recursive, and not expansive; they are cloisters of sheltered ‘truths’ and friendly knowledge - unquestioned and unchallenged. Mastery of the basics will only give you basic understanding and basic dispositions, a foundation only meant to be built on. The value of the basics is they give a child the requisite fluency and familiarity of material to build with, and on, in their imaginations as they encounter new things, problems in the environment. One has to be allowed and perhaps encouraged to leave the comfort and certainty of the known, to see what is out there, to give perspective to the known, and to continually transform the self moving forward in an always changing world. The more one experiences, reflects and knows the more choice they have. “The mode of interpretation a person/child has is dependent on the “number of vantage points a person is able or enabled to take - the number of perspectives that will disclose multiple aspects of a contingent world” (Greene, 1995, p.19). If an aim of education is to exercise and foster students’ capacities to solve problems, to adapt to and change the world, and to transform past and present knowledge into new, useful, and meaningful conceptions, then student imaginations must be encouraged to engage.
Methodology

The methodology of this qualitative research study is autoethnography. A qualitative research approach in which the inquirer often makes knowledge claims based primarily on constructivism, post positivism, pragmatism or advocacy/participatory perspectives or a combination of these (Creswell, 2003). This involves an interpretive, naturalistic approach to the world, which indicates that qualitative researchers study things in their natural settings (Denzin & Lincoln, 2000). In autoethnography, the researcher is the subject, and the researcher’s interpretation of the experience is the data (Ellis & Bochner, 2000). The purpose of this autoethnography is to detail, explain, and make sense of meaning of my attempts at imaginative teaching. In addition to reflecting about and analyzing present experience, in an autoethnography a researcher may choose to analyze recalled past experience to establish a sense of the continuum of his development. I chose autoethnography because I wanted to examine the imaginative qualities of my own teaching in the context of a real time art lesson in my classroom. In this way, I would be both researcher and subject.

Initially, I worked through much confusion about whom I was studying. For instance, at first, I got stuck on the fact that it was my students’ imaginations I was trying to cultivate as a teacher and so my natural impulse was to look at their imaginative behaviors as they worked and learned; this seemed to make their behaviors the subject. The reality is that teaching cannot be studied completely in a vacuum, without consideration of the object of the teaching. I came to realize that if I were to elicit and cultivate my students’ imaginations, my teaching would need to exhibit the same imaginative behaviors I was trying to activate in them. My learning to teach
imaginatively needed to be an imaginative action itself, and needed to be the primary subject of my study. My study of my teaching would necessitate reflection on my intentions, beliefs, and actions and on my own experience both as an artist/learner and as a teacher/learner. I intentionally planned actions, considered the materials I had to work with, and considered the students and their subjective and developmental materials. I deliberated about what kinds of activities would help activate and motivate the students’ collaboration and willingness to dive into the uncertainty of a Mr. Cunningham facilitated lesson, and their uncertainty of creating a sculpture that is not yet there.

My hope was that this research process will help me and the readers gain insight into the behavior and thinking behind imaginative teaching for imaginative learning. This study tells my story of planning and teaching a 2nd grade sculpture lesson which entails an introspective look at my actions as an art teacher and how those actions reflect the characteristics of imaginative teaching represented in Stuart Richmond’s (1993) study on imaginative teaching in high school. In my analysis I also looked through the lens of the aspects of imagination described by educational theorists (Egan, Eisner, Dewey, Greene, et al.) in the literature.

Reflecting on one’s self and teaching practice as a means of self-development is highly valued and considered necessary in education. In teacher preparation programs it is a common requirement for prospective teachers to keep an educative journal to reflect on their practice. This habit can be attributed to John Dewey (felt need) and Donald Schon (reflective practice); each advocated the notion that reflection is critical to growth and learning. Dewey is most commonly associated with the idea of learning from experience; but more precisely, he believed that learning happens when one reflects on
their experience. Reflexivity is the act of self-conscious consideration. The principle of reflexivity questions past activities and the circumstances of those activities (Alvesson & Skoldberg, 2000). Reflexivity is also a dialectical process because there is an ongoing review of self in concert with taking into consideration the other. The other in my case is the quality of my students’ learning and imaginative responses. Reflexivity is part and parcel to autoethnography because it involves active analysis of present and past situations, events and products with the explicit purpose of achieving understanding that can lead to change in thought or behavior. In essence, reflexivity is deep introspection as one is taking action. The forward-looking part of reflection is deliberation (Dewey, 1934).

The account of my deliberations in my journal was a natural data source, analyzed for insights into my thinking about imaginative teaching and learning. According to Dewey (1930), deliberation is a “dramatic rehearsal (in imagination) of various competing possible lines of action” (p. 190). It is experimentation with possibilities in the mind to filter out potentially superfluous and ineffectual ideas, and visualize an idea that might have the desired effect. When the teacher deliberates he drives the thought process regarding his potential actions that then activate the curriculum into meaningful learning. The actions that I examined were planning, giving instruction, assisting and questioning students as they worked. My journal entries include the recollection of my reflexive (in-the-moment) responses during teaching, my reflections about the past acts, and my deliberations as I planned or adjusted for future actions. Data also includes artifacts and materials created or collected for the lesson. These include instructive signs for students that were created for the lesson, and the raw materials students used to construct their sculptures. Table 1, details the data collection.
Table 1. Data sources and timeline.

<table>
<thead>
<tr>
<th>Type of Data</th>
<th>Source</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal reflections on past experience</td>
<td>Excerpted from a paper: an inquiry on my search for aesthetic experience in the classroom</td>
<td>March 6 – April 2, 2015</td>
</tr>
<tr>
<td>Planning lesson</td>
<td>Plan Document and re-plans for Sculpture Lesson</td>
<td>March 9 – April 1, 2015</td>
</tr>
<tr>
<td>Self-reflective writing on my thinking and teaching, and deliberations</td>
<td>Reflexive Journal</td>
<td>March 6 – April 2, 2015</td>
</tr>
<tr>
<td>Instructions for students</td>
<td>Signs/handouts prompting students on “what to do” and setting limits on materials</td>
<td>March 9, 17, 18, 2015</td>
</tr>
<tr>
<td>Photos of sculpture materials</td>
<td>Materials provided to students to work with in creating their sculpture</td>
<td>March 16 - 18, 23 -25, and 30, 2015</td>
</tr>
</tbody>
</table>

I have yet to explain the importance to my study of the last two types of information listed: Instructions for students and Photos of sculpture materials.

Instructions for students include instructions written by me with the intention of jump-starting the process in which students explore the materials they would later use in their future sculptures. Instructions are part of the planning process and give something students can refer to for direction if they get stuck.

The importance of the photos of sculpture materials is to give readers a visual of an integral part of any artwork: the media in which the sculptors interact with and use to express. Materials alone cannot be counted on to stimulate imagination, but materials are another object for students to look closely at, interact with by exploring and playing, and to respond to, all so they can make discoveries about what is possible with the particular materials. They learn how the materials behave, and can begin to imagine their potential for use in the making of their artwork.
Participants

As researcher, teacher and artist, I was the primary participant in this study, focusing on the thinking behind imaginative teaching for imaginative learning. Certainly students are whom I teach, but they are not the focus of my inquiry. Students in the classes that I taught my sculpture lesson to were second graders, unlike the high school students I had mostly taught in the past¹. I chose this age and grade for this project because developmentally many second graders imaginative capacity is evolving from being spontaneous and playful to more deliberate (Egan, 2005). Imaginative acts become more purposeful around this age; a child will imagine possibilities before they take action; the imagination becomes conscious of an act and its possible consequences before attempting the act. Earlier than age 7, the ‘imagining’ and ‘acting’ occur simultaneously – children, while interacting with the environment or in this case art materials might make a mark, or combine two objects and then imagine what the mark or new object is or suggests after the act (Lownefeld, 1982; Vygotsky, 2004). Teaching children around 7 years or older begins to be a different matter with more potential complexity than earlier ages due to the more expansive fund of experience the child has to draw on, and because of their developing capacity to imagine with intention. Teaching that fosters intentional imaginative thought and action to learn, to solve problems and to make art, interests me.

¹ Although I note here about the students in the study, the study did not focus on the students but on my own teaching. Therefore, since student observations are not part of the research, I did not obtain approval from the Institutional Review Board as all descriptions of the activities and any students involved have been made anonymous and focus more on the teaching than the student response. However, in some places it is necessary to comment on student work in order to explain the use of imagination. In these cases, I have combined different student reactions and descriptions of work into one and therefore avoided describing any students in a way that could identify them. Thus, although there were students participating in the activities, they are not the focus of this study.
How to facilitate this natural behavior in students interests me as a teacher.

**Data Analysis**

Autoethnographic research is more web-like than a sequential methodology. Chang (2008) states “the interweaving of data collection, analysis, and interpretation ultimately leads to the production of autoethnography” (p. 9). He says these activities happen “concurrently” – that an autoethnographer goes in and out of analysis and interpretation “they submerge in and emerge out of data” throughout the research (Chang, 2008 p.9). This happens because the researcher and his thoughts and actions are also the subject of the research, and so he is never completely detached from the data, the analysis of the data, and the actions taken in response to the data. The researcher is invested as both an inquiring researcher and as a concerned working teacher who is working per usual to positively impact his students’ learning and the environment in which he teaches.

I used two main sources of criteria for imaginative teaching and learning to analyze my data. The first is Richmond’s six *characteristics of imaginative teaching*: The second criteria was Lincoln Center Institute’s *Capacities for Imaginative Learning* (see Appendix B). These capacities refer to imaginative learning and if a teacher is a learner these capacities would be employed by a teacher as they deliberate and take actions, analyze and reflect again and again to learn and understand how to teach particular students and groups of students. Imaginative teaching in this cycle could also be considered imaginative learning.

Other aspects of imagination (not necessarily imaginative teaching) that are discussed in my literature review of theoretical and philosophical literature were also considered when other noteworthy issues arose in further readings of my journals and
artifacts. As Chang (2008) described, the activities of an autoethnography are ongoing, overlapping and connected: for instance as I taught, I saw things, heard things and realized things that gave me cause to analyze, interpret, and plan a next action on-the-go with the intention to progress and extend student thinking and possibilities. In my journal, I recount when and how this happened during the lesson.

In addition, during my multiple readings of my journal and artifacts, I looked for and found other themes not described in Richmond’s six characteristics of imaginative teaching. These I analyzed through consideration of the literature to understand if and how they play a role in imaginative teaching and learning.

Through my analysis I illuminate my thinking to bring to the surface patterns and deeper insights about my efforts for imaginative teaching. In doing so I wish to inform and further develop my disposition for imaginative teaching.
Unraveling the Yarn: Analysis

To begin my analysis I read my journal and reviewed the artifacts multiple times, with the purpose of identifying any patterns and recurring themes of actions, decisions, behaviors and intentions that compared in some way to Richmond’s six characteristics of imaginative teaching. I did this first because the characteristics of imaginative teaching he identified are based on his comprehensive research study on imaginative teaching in a high school and as such I made them my primary comparison. In my analysis I noticed one recurring theme that I argue can have both expansive and inhibiting or arresting effects on individual and group imagination. This theme involves what happens to imagination(s) when working in groups – a social aspect of imaginative thinking. I will analyze this in addition to other themes, though I recognize it would require a much more in-depth inquiry in the future.

In this chapter I will analyze the research project chronologically from the beginning when it was a neat rolled up ball – a plan with potential through to the final consummative action in which I instruct the students to interpret their sculptures. The chronology is broken into three distinct sections and what I contend to be three imaginative acts. The first section is The Prequel: Planning in which I analyze my thoughts and planning before putting the plan into action with students. The second section is The Unfurling: Enacting, which involves analyzing the plan as it lives and breathes as I teach and the students respond; and the third and last section is The Titling: Interpretation – which involves my analysis of the last imaginative and consummative action I planned and facilitated. This last activity was intended to engage students in
making a final interpretation of their sculpture as they went through a process to title their sculpture as well as title the 5 other groups’ sculptures.

The Planning: Prequel

In any new experience we carry with us so much of our past in the form of our beliefs, habits, and mental and emotional materials. It is clear to me that my planning this lesson has been influenced by the experiences, knowledge, and ideas I integrated into my habits, dispositions and beliefs over thirty or more years of work and living. I can clearly connect some of what I think and do to my experience during 5 years of architecture school. I was influenced by particular professors, other students, colleagues and bosses - their aesthetic sense, their habits of thinking about and solving problems, and the model they provided for teaching a subject in the creative arts. My ideas about how to design structures, ways the mind and human body respond to different space and visual representations, and what makes an engaging and creative problem or lesson when teaching art and design. As a teacher, my past influences how I teach and consequently, to at least a small degree, how students learn or are allowed to learn in my class. Students are influenced by my dispositions in any number of ways, my intention and hope is my actions and teaching disposition cultivate my students imaginative capacities and compel them to grow in positive and new directions.

Planning. When I planned this 2nd grade sculpture lesson, I unavoidably had in mind that it was part of my autoethnography, and whatever surfaces would be a reflection on me as a learner and a teacher. I believe at times I am an imaginative teacher, though I have never closely studied myself in this respect, nor had anybody else. I know I am reflective as things unfold in the classroom, as my aim is to keep students engaged, to
question and help them make connections. It is difficult when teaching day after day to get perspective on one’s teaching - to get an honest picture of oneself as an educator. This is where reflection after the fact has its value. As part of my daily routine I keep a binder for each grade and class and I recount and record my day. I include what I and my students “actually” did, and note student breakthroughs and blocks, and my own teaching revelations.

When I planned this sculpture lesson I brought with me ideas and meaning gleaned from my prior experiences. Bringing ones experience to the table and utilizing ones knowledge and judgment is a characteristic of “imaginative teaching” according to the Richmond study. That alone of course does not make it imaginative. Imaginative learning is connecting past with present into a synthesis of new learning and ideas (Egan 2002, Greene 1996, Lincoln Institute, 2004). Dewey’s contention is “when old and familiar things are made new in experience, there is imagination”(1934, p.267) This is what I was attempting to do:

combine and connect knowledge I derived from my past experiences of teaching sculpture to older students with particular backgrounds and circumstances - with these new and different circumstances of teaching sculpture to these three particular 2nd grade classes who would use completely different materials. (field notes, March 9, 2015)

The act of building things excites most children’s imaginations. In the high school lesson I describe in my introduction, I had witnessed the positive effect of giving students freedom to explore, to find and invent their own way. I had let them discover things through their own experience, I did not tell them what to discover. Simply keeping out of the students’ way as they work allows their imaginations to fill the space and problem solve in their rhythm of activity. A teacher’s role in this case is to watch and
listen closely to the students, to give direction along the lines of their aims, to give organization to their activity (Dewey, 1990) instead of cluttering their mind and interrupting the dynamic of their work. If you give students space in an activity that interests them they bring their very singular inherently imaginative selves and a teacher offers organization of materials physical and mental. Richmond (1993) characterizes this allowance by an art teacher: “respect for the exploratory, open ended, and insightful nature of art” (p. 376). Dewey (1990) said this is respecting a “child’s inherent exploratory nature” (p.36). It is the role of teacher to correct misconceptions if they form.

**Learning from prior experience.** When I planned the high school sculpture lesson described in the introduction, I wanted students to have an authentic sculpture experience in relation to their interest. The students’ interest would provide a relevant association to help them make meaning of sculpture terms and qualities. The learning opportunity I planned - sculpting a family of white tail deer out of found sticks - stimulated their imaginations and respected their prior knowledge. My process to create this lesson exhibited characteristics of Richmond’s imaginative teaching. The lesson I planned in the particular context and with the particular students was “unusual”. Barrows (1988) contends that for ideas to be imaginative they need to be both “unusual and effective” (p.84). Creating deer sculpture was a learning opportunity which I thought could effectively lead to the students’ understanding of an artistic process and of a subject relatively foreign to them – sculpture and sculpting. The circumstances were unique - students who had little to no experience or interest in art (a graduation requirement) combined with their particular interest in white tail deer. I made a deliberate choice to adapt to them. I did not attempt to plow through the student apathy with an abstract
sculpture project that had little to no relevance to them. I had done that before in frustrating Sisyphean fashion, which led to students’ dispassionate and unremarkable effort and most likely resulting in some unintended and regrettable learning.

For this lesson, I listened to who they were and harnessed their knowledge and experience in combination with my knowledge and experience, to make something new. Making combinations in thought and action is an aspect of imagination (Egan, 2002) and I contend an important and effective imaginative teaching characteristic if it leads to eliciting student imaginations and learning.

These ideas I employed in planning and teaching the high school sculpture lesson:

- involving student interests;
- connecting familiar and prior knowledge to new and foreign knowledge and experience; and
- changing and adapting to circumstances that ask for it;

are important ideas that I tried to employ in planning the 2\textsuperscript{nd} grade sculpture lesson (field notes, March 7, 2015). They are also characteristics of imaginative teaching documented by Richmond’s research (1993).

\textit{Planning the 2\textsuperscript{nd} grade sculpture lesson.} When I began to plan the 2\textsuperscript{nd} grade sculpture lesson, I remembered “things I had noticed in regards to what interested them from an experience earlier in the school year (field notes, March 6, 2015). Coming into this school year I had designed and created a couple hundred notched, 4” x 4” square, compressed wood pieces that could be used to construct with. I thought students would enjoy playing with them. In my art classes when students are finished with art projects and there is time left in class, I allow them to do other constructive or art related things of their choosing. Their interest in the notched wood squares was beyond my expectations. They became a popular manipulative and construction medium students used whenever
they had the chance. What interested me was that I had imagined how they would be used as I made them, and I played around with them a bit myself, and yet, over and over again students would do things with them that I had not imagined (field notes, March 7, 2015). This was a clear illustration of the value of play – that it leads to discovery and exhibits the uniqueness and diversity of students. It also says something about the precarious nature of ‘knowledge’. I invented these with a purpose, and students then took them and created more meaning with them than I intended.

As I planned the sculpture lesson, I recounted the students’ great pride when they showed me their original notched wood creations. I had appreciated many qualities their creations exhibited that are elements of fine architecture and sculpture – positive and negative space, balance, symmetry and asymmetry, variety and unity in forms, and repetition. My habit when responding to students’ art and I see these or other interesting elements, I specifically remark about them and the visual enjoyment I get from them. I reinforce what students are doing and make attempts to stimulate further exploration. Dewey (1990) says children’s spirits are inherently active and imaginative and that “the question of education is the question of taking hold of [the child’s] activities, of giving them direction” (p. 38).

For this 2nd grade sculpture lesson, I considered the limited time allotted for art class, and decided I did not want students to wallow in negotiating limitless possibilities. I decided to make signs with short open ended instructions at each table, to give them a starting point, a minimal structure that would offer just a little direction and also allow wide space for their ideas, choice making, and explorations. I hoped the little direction would fork into countless other directions as it interacted with their imaginations.
The intention of my plan was for students to explore materials – see, feel, and work with; which in turn I hoped they would become more familiar with the materials’ qualities, integrity, and potential – to learn a little bit about what they could do with them, give new meaning to the common material. Elliot Eisner (2002) says “thinking within the parameters that any material or process imposes” (p. 236) is an essential cognitive skill. All materials have affordances to discover and know if one is to use them effectively in a particular expression of art. My intention was students would discover some of the affordances during this exploration before we work with them in the sculpture lesson. I also wanted this activity to be active, motivating and fun - for them to have positive associations with the materials.

A round-robin to explore materials. The activity I generated in my journal was to be a type of ‘round robin’ of exploration. Each of the six small groups would visit three of the tables for 12 minutes each time. At each table would be a different kind of material that they would be instructed by a sign to make an art piece in collaboration with their group (see Appendix C). After the 12 minutes were up they would leave their creation and go to the next table in which they would encounter the last group’s creation made from the particular materials on that table. They would look at that group’s creation and briefly discuss what they see and then dismantle. Then they would read the short direction at that table and spend 12 minutes or so creating their own art piece using the given material. I figured the time would permit students to do this 3 times before the end of class (field notes, March 7, 2015).

Deliberating about limits of time and materials. The theme of ‘the social effects on imagination’ was prevalent in my journals because students worked in small groups.
The reasoning behind the small groups was that I realized the “limits of space and materials I had to work with” (field notes, March 8, 2015) in my circumstances. I wanted all second graders - approximately 70 in all - to have the experience of creating a sculpture; but storing 70 odd sculptures (which I miraculously had done last year with 4th grade) was a nightmare I did not want. Another reason for the small groups: I had lots of salvaged, collected, and otherwise horded raw materials, but making sure the distribution was relatively equitable student to student, and that I would not run out during the three 2nd grade classes, was not guaranteed. Taking into account these parameters and being “flexible and adaptive” (Richmond, 1993) was important.

“These limits caused me to consider how the whole second grade could work on sculpture with every student engaged and nobody shortchanged of material” (field notes, March 8, 2015). My response was: there are 6 tables in my room, each table sits up to 4 students, the students at each table could work together on one sculpture. So, between 3-second grade classes and 6 tables that would multiply to 18 sculptures! There was too little space to safely store 18 relatively large sculptures - especially because the art-room is aflutter with activity for six class periods per day. Sculptures hanging out, waiting for the student sculptors to return in a week, would be in grave danger of being over-run by the masses. I asked myself,

How can I make the number of sculptures less? What-if each of the six tables worked on a single sculpture, and each of the three 2nd grade classes worked on the same sculpture as the students who sat at their table in the other two classes? This idea seemed like an effective solution for many reasons. It would add a mysterious layer of “social” interaction and anticipation for the students. Students would come back to class after a week, to find their sculpture that their group worked on last week had changed, and changed not necessarily in the direction they had first imagined. (field notes, March 8, 2015)
I believed I could use this inevitable discrepancy to the advantage of the students; as they would be put in a situation where they might need to use their imaginative learning capacities described by the Lincoln Institute in order to carry the creation of the sculpture forward.

One such capacity is to “notice deeply” (Ibid). Because students would need to look closely and discuss how their sculpture had transformed, how it had changed, and perhaps the shifted direction it seemed to be going. The direction they would take the sculpture would be unknown at first, and they would likely need to sift through many possibilities. “Living with ambiguity” is one of the Lincoln Institute’s imaginative learning capacities which students would be confronted with in this situation. They would come to understand that the previous day’s group had a different interpretation of the sculpture and would likely need to adjust their previous thinking and vision to harmoniously continue the evolving form. This action of interpretation would involve “creating [new] meaning” (Ibid.) and would then allow them to continue its creation. In essence they would create a synthesis between what is present in front of them and what it might turn into - the new interpretation.

This collaborative structure had potential to facilitate learning about working as a group, increase the generation of different ideas, and necessitate students to re-imagine possibilities to what was newly given (or given back) to them. It was settled: 6-groups in each of the three 2nd grade classes working on a total of 6 sculptures (one sculpture per table) and 9 to 12 sculptors per sculpture. (field notes, March 8, 2015)

**Planning the interpretation activity.** The last part of the lesson plan involved the students interpreting their own sculpture as well as those of the other groups. My thinking was that “having each group finally title their own sculpture as well as each of the 5 other
group sculptures would involve capacities of imagination. Titling their own sculpture would require reflection and assessment of their process and end product. To title the other groups’ sculptures would involve numerous capacities for imaginative learning advocated by the Lincoln Institute.

The groups would need to “notice deeply” to identify layers of detail, “embody” the sculpture using their senses to experience it, “make connections” and “find relationships between the details and patterns” they see, and synthesize their thoughts to “create meaning” in order to create a suitable title. (field notes, March 8, 2015)

Interpreting, like creating, is an imaginative and generative process, in that one has to notice deeply, identify patterns, make connections, and create meaning by synthesizing the material of their observations and thoughts. Each of these mindful acts of understanding are noted in the Lincoln Center Institute’s capacities of imaginative learning (Holzer, 2007).

**The Unfurling: Enactment**

At the end of the first day in which each class explored and made something with different kinds of materials I wrote in my journal,

The students loved playing with the materials, creating something original, working with others, and encountering new materials with each visit to a new table. There was lots of excited conversation, back and forth, some conflict, and a general buzz of activity. (fieldnote, March 16, 2015)

This buzz of dialogue and activity in working with others, and seeing other groups’ creations, increased the volume and diversity of ideas and interpretations they were exposed to. Greene (1996) says, “reality can be understood as interpreted experience” (p. 58). It is good when students experience, in a context and within a group, that there are multiple perspectives and multiple interpretations. My hope was that the students
working in small groups would expose them to others thinking and ideas and widen their sense of the possible. To synthesize aspects of many ideas is an imaginative act. These attempts at working with many ideas and perspectives would be the beginnings of a fledgling disposition they might bring into the next week when they would start to create a whole sculpture with others. It is imagination that allows us to see from other’s perspective (Greene, 1996).

**Three days of exploring materials.** On the first three days of exploring materials I asked questions to different groups depending on what I saw or heard. One such example:

a group was working with cardboard boxes and other items and had an interesting structure in progress, I asked them how as a group they decided on what they were creating? Their response: “We thought of a bunch of ideas and got inspired by someone’s and built on it until we got this” (field notes, March 16, 2015).

Greene (1995) said, “The mode of interpretation a person/child has is dependent on the number of vantage points a person is able or enabled to take - the number of perspectives that will disclose multiple aspects of a contingent world” (p. 19).

Another group it appeared was making a butterfly with the patterned fabric, I asked one student to tell me about their art piece so far, she claimed the triangle shapes and designs on the fabric made her think of a butterfly and another girl said “me and butterflies love flowers.” They pieced material together to create a butterfly in some flowers. (field notes, March 17, 2015)

There was one group I had heard arguing but had stopped before I could get to their table. They too were working with fabric shapes. I asked them if they had worked out a problem? A boy said yeah, I wanted to make a house and she wanted to make a bird, so we voted and it came out to 2 to 2. He said it finally occurred to one of the girls they
could combine ideas and make a birdhouse with a bird on top - a combinatorial leap (field notes, March 18, 2015).

I saw one group struggling with what to do after reading a sign that said ‘build a structure with these materials’:

**Me:** What is a ‘structure’?
**Student:** A house.
**Me:** Why is a house a structure?
**Student:** Because it is built?
**Me:** How is it built?
**Student:** With wood and banging nails, making walls that hold up a roof.
**Me:** Great! and So what other kinds of structures can you think of?
**Students:** Skyscrapers, bridges, castles…
**Me:** Could you invent your own kind of structure?
**Students:** Yes.

(field notes, March 17, 2015)

I was questioning to get them to define ‘structure’ and to consider the broad possibilities it encompasses. We built on their familiarity of a house as structure and then expanded from there.

In regards to these first three days of rapid exploration I wrote “it is intense; three rotations of 12 minutes of activity, ideas, negotiations, exclamations (field notes, March, 19, 2015). The next class periods for each or the three 2nd grade classes was the start of the small group sculpture project in which each group began to imagine and create a sculpture together.

**First days of sculpting.** The first day of sculpting in small groups was on March 16, 2015, a Monday. The six groups on this day began their sculpture, both in
imagination and physically. Imagination cannot develop without matter and material to think about. As an artist and teacher when I first make a mark (or take an action), it gives me something to look at, discern, think about and respond to. That mark is an ‘other’ I am in conversation with. Contributing to this conversation is my imagination which draws from my prior experience and knowledge. As the art takes form, with each added piece or mark it develops depth and meaning; sometimes it changes direction as it increases in complexity. This was the dynamic my 2nd graders entered into, though they were conversing with the ideas of their group members as well as their own.

The first 2nd grade class entered the art room with great anticipation, knowing generally what they would be doing. I quickly told them how the activity of sculpting would be organized and that there were some rules and limits. Each group was given a 16” x 16” piece of corrugated cardboard that their sculpture had to be built on. The Limits imposed:

- **Limit (1)** pieces attached to the cardboard base cannot extend beyond the edges. Once a sculpture grows above the base it can extend out as much as they wanted;
- **Limit (2)** each group is allowed to choose 10 items from the material table to start their additive sculpture; and
- **Limit (3)** each group is allowed only one roll of masking tape to attach pieces to their sculpture.

The value of ‘limits’ to imaginative learning interests me, because their effect can be the antithesis of what one might think. What a student does possess in their fund of accrued skill, materials and ideas, if not challenged, often produces a predictable process and a predictable outcome when solving a problem or creating an art piece. Limits can provide that challenge. Nachmanovitch (1990), says
when an artist has to match the patterning outside him with the patterning within his own organism, the crossing or marriage of the two patterns results in something never before seen, which is nevertheless a natural outgrowth of the artist’s original nature. (p. 79)

This does not surprise me; it was a strategy that my professors used often when presenting a design problem. To solve the design problem we had to shift our thinking away from routinized patterns. Our imaginations were challenged to invent. The limits made designing enjoyable and resulted in many varied and unique solutions. Necessity can direct one to improvise, experiment, and break from conventional methods. It draws out the imagination as a resource. In the 2nd grade classes, the fact I had students work in groups was a limit in its own right. It challenged the students to go outside themselves and their habitual thinking and actions and reconcile their perception with others’ perceptions.

**Upon observation, adjusting the limits.** On this first day of sculpting I noticed students were indiscriminately gathering their materials – “whatever looked shiniest, unusually textured or shaped, they wanted. There was little consideration for their big idea -which I had them brainstorm at the beginning before I allowed them to choose materials. They wanted to fit anything that caught their eye into the artwork no matter what! ‘I felt I could hear them thinking, ‘If we attach this cool material it will make our sculpture be awesome!’

Some students in groups were impulsive and not consulting with the group before adding to the sculpture. One example of this:

I found myself restating a limit to a group I noticed had about 25 materials horded in a pile on their table. I also observed multiple individuals in this group simultaneously and hastily attaching pieces with no conversation about what they
were doing. The sculpture was beginning to look like a pile of unrelated pieces made by un-relating individuals (field notes, March 17, 2015).

I asked them “what is your idea for your sculpture?” and got back from one student: “something to do with a machine,” almost like he was asking me if that was their idea.

Midway through this class I made a new Limit (4) a group can only add a new piece to their sculpture after they have secured the last one. This was in response to what I judged to be “slovenly and not thought-out additions to sculptures” (field notes, March 16, 2015). I thought the new limit would cause them to communicate more about what they were doing; discriminate about the qualities of materials, and deliberate about the potential consequence of each added piece in their quest to create their sculpture.

After the first day of sculpting many of my thoughts and queries were in reference to the dynamics in the small groups and the effect on individual as well as group imagination. The concept of creative ‘team’ work I addressed in each of the first day’s lesson. I asked “What are the good things about working in small groups when creating a piece of art?” This lead to some expected answers:

- There are more ideas.
- We can make ideas even better.
- It is more fun than doing art alone.
- One person doesn’t have to do all the work.
- It will be faster.
- We can help each other. (field notes, March 18, 2015).

On an intellectual level the students’ answers indicated they understood group work could be a good thing. On an emotional level, when it came to actually working as a team, and students had what appeared to be conflicting ideas, there was a degree of shock for some students when the rest of the group did not readily accept their idea. Negotiations
took place, and it was not always pretty. In my journal I describe a situation that came up:

A boy was upset today because he wanted to build an army tank but no one in his group liked his idea. He tried to build it anyway as part of the sculpture and a girl took off a piece he had attached saying ‘that doesn’t fit!’ He started crying saying he liked working alone. He said ‘at home I’m always making my own stuff!’” Then a different girl talked to him saying ‘we have to make one idea and no one else likes the army’. He finally relented when the group shifted their idea because group thought it was beginning to look like a tall castle with a bridge” He said “I like knights!” And he offered an idea about how to build the bridge.

(field notes, March 16, 2015)

I reminded them that whatever they do, another group tomorrow will look at their sculpture and may or may not see “a castle” and may continue building it in their own vision.

When a group struggled, showing little movement (and having limited time), I asked:

- How can you decide what to do if you have different ideas?
- Is there a fair way that you can think of?
- Can your differences be a good thing?

There were a few solutions – one in which the students decided to combine ideas which in their eyes lead to an even more exciting idea (field notes, March 16, 2015). Combining disparate ideas is an aspect of imaginative thinking (Egan, 2002). In other groups I noticed students display empathic thinking when they tried to see and understand ideas that differed from their own. Maxine Greene (1995) describes this as a social function of imagination; imagination helps to understand the other’s perspective. Sometimes this worked for a group or individual, and ideas evolved and grew because of the differing
inputs and because some were able to use their imaginations to appreciate the qualities of the other’s idea.

Group work, good for the imagination? In my journal after that first day I queried about “group imagination, is it fertile or is it inhibiting and stifling?” (field notes, March 16, 2015). In the end my answer is both, it is dependent on the individuals and group mixture of personalities. For instance,

one group of four, I noticed, had two very industrious students who appeared to be doing most everything. The two other members, whom saw as engaged and imaginative in their individual art work, were very quiet, almost standing aside, as if to avoid being steamrolled” (field notes March 16, 2015).

Naturally this was a concern to me as a teacher – the inequity of creative input and participation. These two students were not getting what they needed. I did not want to give groups a list of protocols for working together and making decisions but I also knew we had little time and wanted to as indirectly as possible help involve the members standing on the sidelines.

For the next class the next day I added a new limit (5): everybody in a group has to agree on new additions to their sculpture, and everybody has to attach at least one piece. The risk was this could bog down the process in endless negotiations. This was not a perfect solution though it was an improvement in making students aware of themselves and others in the process. Mostly it appeared to be effective. One exception was in one group there was clearly a de facto leader, and the rest of the group, by their actions, deferred to him the final word. The other two members offered ideas that were either accepted as worthy or not by this leader. I thought on this day this limit had the desired effect in 5 of the 6 groups. Tomorrow, with the next class, we would start from the
beginning with this new limit. This would be the second 2\textsuperscript{nd} grade class to work on the sculptures.

Before the next 2\textsuperscript{nd} grade class the next day I again was concerned for the impulsive way numerous groups were choosing materials still. Before the students came in I decided to make some adjustments to the plan. After some deliberation I added another limit, Limit (6) \textit{each group will be allowed to have only five unattached material items on their table at a time. You can exchange a piece for another or, if you have four or less pieces you can choose enough to bring your supply back up to five.} “This limit made students moan when hearing it at first; but soon after, as I had hoped, there was more conversation including:

- What are we trying to do?
- What do we need to do this?
- Do you think a cone or a tube would work better?

As students tried to stay within the limits, they were imagining more of what they were trying to do, discussing differences in materials, and deliberating how they could do things with what was available. The limits caused students to discerning and critical in their decision making. There was closer looking and analyzing of both sculpture and materials. This was a form of “looking deeply”, a behavior the Lincoln Center Institute promotes as a capacity of imaginative learning. Students can see familiar objects differently than they had before. The familiar becomes strange and then useful again, but in a different way.

In the above instance I used my judgment based on what I had noticed the day before with the first class (field notes, March 16, 2015) and what I imagined might help students feel a need to discriminate and deliberate qualitatively and imaginatively. My
teacher judgment and action illustrates a few qualities of imaginative teaching in Richmond’s research: generation of unusual activities, constructs learning opportunities that lead to worthwhile learning, and being flexible and adaptive, in response to particular circumstances (1993) Barrow (1988) might agree with this being an imaginative step in that my students indiscriminate behavior was effectively changed by my unusual solution.

When the second 2nd grade class came into the art room today they immediately saw the sculptures that the other class had started the day before, and that they would be working on today. There was much excitement and ‘oohing!’ and ‘ahhing!’ in response to what they were seeing. The anticipation seemed nearly unbearable for some students (field notes, March 17, 2015). I saw lots off looking and staring longingly. I heard a rapid fire cacophony of comments and questions: “Wow! Who made that?”, “How did they make that?”, “When can we start?”, “Are you going to talk a lot?”, as well as “I know what I want to make!” I myself anticipated how they would react, having never done anything like this before. The day before I had written in my journal as I thought about this very moment transpiring,

will this be interesting, enjoyable, mysterious, an unwanted imposition for the students tomorrow?... having to work on a sculpture with six or more other students who you never see or talk to with words? Will the sculptures in progress stimulate the new sculptors imaginations? Will they resent what they might perceive as ‘working on somebody else’s sculpture’?

(field notes, March 16, 2015).

One at a time I took the partially made sculptures and placed them on the tables they were on the day before. I instructed each group to ponder and discuss the following questions:
• What does the sculpture look like so far.
• What kinds of things could it be?
• What ideas can you think of to continue this sculpture?

This was to be done as quickly and thoughtfully as possible. Their discussion was intended to get them motivated and to imagine the possibilities for the sculpture-in-progress they were responsible with continuing.

Each day at the beginning of class as students studied the new evolutions of the sculptures my questions were:

• Describe what you see
• What do you see that makes you say that?
• What is going on here?
• How do you think you could continue or change the sculpture to improve it?

As a teacher I had put my students in a unique situation that I thought they could respond to imaginatively. I hoped students would be stimulated by the started sculptures and use their powers of interpretation in order to see suggestions in what was there. Each day this appeared to happen with each new group of sculptors. I heard such comments as:

• It looks like a city.
• It looks like a skyscraper.
• I see a robot, Let’s make him walk a robot dog!
• Wow! That’s a rocket!
• It reminds me of the moon.
• How did they do that?
• It’s not balanced; let’s use yarn like guide wires.

I loved hearing their comments as they tried to interpret what they were seeing, considering the details and the questions I posed.
The students truly appeared to enjoy working together, negotiating, deliberating and imagining what to do next. Each day there was tremendous purposeful activity and delightful exclamations. The sculptures were deemed finished after two cycles of each class (and group) sculpting.

**The Titling: Interpretation**

For each class’s final class period of the sculpture lesson, I created an activity that I felt would help to bring the sculpture experience to a consummation. Each group was instructed to rotate from table to table and spend 3 minutes titling the other groups’ sculptures and to write the title on a piece of paper for that group to read later. When each group eventually rotated back to their own table they would spend 5 minutes with their members discussing and titling their own sculpture. Only after the groups were done titling their own sculpture were they allowed to then look at the 5 other titles given to their sculpture by the five other groups (see Appendix D).

This was an informal exercise in interpretation that I believe led to imaginative learning and appreciation (or at least an awareness) of different perspectives. I heard comments such as:

- it looks like a robot, person, bridge, castle, church
- it is really tall
- it is taller than me
- is this green yarn holding it straight?
- it has lots of pointy pieces
- I can see through it
- it looks like it can fly
- I wish we thought of that
- it looks like it might tip over but it doesn’t'. (field notes, March 24-26 2015)

I could hear students use their imaginations to see what was there, to see these materials in combination as something other than they were as single pieces.
When groups were able to read the titles other groups gave their sculptures I heard comments like these:

- Why would they call it that? (which caused students to look again at their own sculpture)
- I can see why they called it that.
- That’s funny!
- Two of these titles are almost the same as our own title.
- I don’t think they looked at it all the way around.
- I would never call it that.

(field notes, March 24-26, 2015)

The students enjoyed this activity and were genuinely interested in reading the titles others gave their sculpture and what other’s perceptions were in regard to their sculptures. There was surprise that some interpretations were so different from how they saw it, and delight in that some perceived their sculpture similar to what the sculptors intended (field notes, March 25, 2015).
Conclusions and Implications

Findings from my analysis point to the presence of these behaviors and actions in my own teaching and essential to imaginative teaching for imaginative learning:

- Generating unique learning opportunities for students to activate their imaginations must be intentional.
- Developing flexibility in one’s purposes when planning and teaching is necessary in imaginative teaching, it requires noticing and respecting what is present in circumstances.
- Giving space for student freedom to explore with their own sense(s) allows them to accrue their own mental materials for their imagination to operate.
- Giving students limits can activate their imagination to break from convention and inert knowledge in order to imagine other possibilities.
- Having students work in groups provides opportunity for students to empathize with differing perspectives and perceptions and to transform those perceptions.

A teacher has to believe imagination is important to teaching and learning if they are to create and facilitate learning opportunities that will entice, invite, encourage, reveal, exercise and cultivate student imagination in their learning. Imaginative teaching is intentional. The teacher’s disposition needs to be mindful that students’ subjective imagination is a powerful element of their capacity to learn. They possess essential experience and material from prior experiences that should be integral to their present learning endeavors. Student subjectivity must not be dismissed but activated and brought into the light if learning is going to be relevant and something they can bring forward to transform their selves, situations, community, and the world. A teacher cannot correct misconceptions if he/she cannot see them.

My analysis of my lesson planning, execution and reflection on these elements, suggests to me that there is no single account that can be called the faculty of imagination.
This is supported by the literature; that the imagination is so complex, contextual, and subjective. Cultivating students’ imaginations cannot be distilled down to a pedagogical formula or to “this number of capacities”. Ironically, if there is a modus operandi of imagination it is that it can never be absolutely definable. People, students, teachers, recognize evidence of imagination when they see, hear, taste, and feel it being present, but how exactly the “new” idea came to be cannot be laid out in clear steps. It is mysterious and wonderful but it is not a magic trick. It is clearly contextual in all cases of its exhibition – so it looks different in different situations and contents. Context and situation provide some of the material that imagination employs as it conceives. It is often an ineffable intuitive action of mind that makes new objects and ideas from a teachers or students uncountable and nuanced past and present situations or experiences. Theorists and educators see patterns of behavior and capacities (Egan, Barrows, Richmond, Greene) that can be defined to a certain extent and that are often present in degrees, but there is no panacea or recipe. One can never take into account the unknown (to the outside observer) the subjectivity of each individual.

To invite imagination to student learning, an educator can develop a teaching disposition that is flexible, present and awake, open to receive, and sensitive to the peculiarities of students and situations. Richmond’s six characteristics of imaginative teaching is a start - to be conscious of when planning and teaching. I also believe a teacher can plan and teach with intention, but must know that the single most important variable of imaginative learning is the presence of each individuals’ unique layers of material garnered from their life long experience. In my high school deer sculpture lesson, the students’ interest was integral (even central) to their ability to learn and
imagine in the context of school. There was a strong connection of past experience, self, and strange new knowledge. This led to their excitement, proudly calling-up the known to connect to this new experience – which elicited their imaginations. In my elementary sculpture lesson and teaching, there existed rich and interesting materials, my knowledge of students’ interest in building and making, and space was given for student ideas to propel the imagination forward with little imposition. There was freedom within questions and limits to help push students’ imaginative thinking. Freedom can be a generative circumstance but in second grade complete and limitless freedom can leave students wallowing in lots of rich materials and impulse with little to no sustained direction of energies. I had seen this in the past, so I imagined what limits or questions my help them learn to discern and discriminate about the qualities of materials and the qualities they wanted in their sculptures.

The guise of efficiency in education can leave dormant the child’s imaginative capacity. Always staying on the straight and narrow path in teaching and learning, leads to repetition of convention, to inflexible formula, to ‘an’ answer. If we are all on parallel paths, we never encounter or cross paths with the other and so we never have the opportunity to encounter and understand different perspectives, we never are challenged to think and imagine beyond the edges. Straight paths have no corners to go around and discover; there is no anticipation of what could be. A ‘long and winding road’ has potential to lead to new, unexpected, and educative experiences, to experience empathy as one has opportunities for strange new points of view, to invention and innovation because of the infinite variety and richness of experience, to a transformative self and a future that is unique, meaningful and continually generative.
Time for patience. During my autoethnography I found in myself at times a selfish need to ‘see’ student results, now! I imagine this is not unlike many teachers. I am always aware of my own ideas, imaginings, and creative impulses, which I have developed in the past. If I express them, it disrupts students own learning and imagined possibilities. I saw this when I asked leading questions. I felt an impatience to see something happen. The patience to let things happen is important because it gives space to students to find their way from where they are presently, to imagine their future actions and directions, instead of me directing them to take untimely or developmentally irrational and abstract leaps. There are times when it is necessary to bracket out ‘your’ self as a teacher. It must be done in balance with lending the self when it is truly helpful to student thinking.

Intellectually I understand that student imagination can be activated and play if my disposition and the environment provided is as open and free as possible. A teacher cannot give a student their experience, knowledge or imagination. And a student’s imagination always requires some of their own material from their own lives even in the service of making something new. What a teacher can do is, listen and observe the student closely, understand the nature of the student, see the student where they are and gently encourage their explorations, inquiries, and fascinations. It is the teacher’s job to discern (imagine) what the student might need to perpetuate their imaginations and expand their learning to go beyond where they have been. It is important to guide their process and not try to give them mine. Whose education and imagination is it?

A teacher needs to exercise his/her own imagination to have a chance at understanding how to foster a student’s. Dewey (1991) stated that it is not uncommon for
teachers as well as students to stick to wooden and rigid methods of response, and display more or less intellectual curiosity about matters that come up (p. 48). He says these traits are often matters of the teacher’s method of teaching. “Merely to accept without notice slipshod habits of speech, slovenly inferences, unimaginative and literal responses, is to indorse these tendencies, and to ratify them into habits” (Dewey, 1991, p. 48). If this is true - not modeling the use of imagination in learning and teaching, is leaving students without opportunities to develop, exercise and practice habits of imagination, ones that will be flexible and responsive to a rapidly changing world.

If what I ask students to do or think about is not in rhythm and harmonious to who and where they are, it risks being coercive, abstract, and irrelevant to them. If what I ask is recursive with no space for them to combine themselves with it, to embody it, it risks irrelevance because there is no interest, so no promise of transforming them. If it is discursive with no direction it risks being disconnected, ephemeral, or fanciful. In education there needs to be a shift to a middle-ground, in which there is a balance or integration between certain knowledge and the knowledge generated by imaginative activity – invention and innovation. School can be a place that allows students to look backward and forward to imagine and profoundly affect their present and future.

**Limitations of this study.** The limitations of my study include the inability to include photographs of the actual student work as it progressed and in a finished state due to the fact that this project did not go through the IRB process. Photographs could have provided a sense of the imaginative changes sculptures took. They could also have provided a visual of the great variety that occurred in both the short exploratory art pieces in which students got to know the materials, and in the main sculpture projects.
**Future research.** There is potential for exploration of teaching and imagination in the classroom. I can envision several potential areas of study such as; 1) How teachers develop classroom cultures that intentionally invite risk taking, openness, collaboration and imagination? and 2) How can collaborative groups be used effectively to exercise all student participants’ imaginations in learning?
References


K.Egan, M. Stout, & K. Takaya (Eds.) *Teaching and Learning Outside the Box: Inspiring Imagination Across the Curriculum.* (pp 21-41), New York, NY Teachers College Press


Appendix A

Second Grade Sculpture Lesson – Imagining Sculpture with Others

ART STANDARDS ADDRESSED:

Create 1: Students will use the creative process to make works of art with a variety of materials:

Cr 1.1 Explore the creative process to discover ideas and experiment with materials

- Participate in individual and group brainstorming for exploration of new ideas
- Develop observation skills
- Recognize risk-taking and perseverance

Create 3: Students will use the creative process to make works of art exploring subjects and themes with a variety of materials:

Cr 3.1 Use the creative process to experiment with ideas and materials providing opportunities for many solutions to a problem

- Brainstorm solutions, then select and explain their best solution
- Employ observation skills
- Develop risk-taking and perseverance

WEEK 1

PLAN_______________________________________________________________

Days 1- 3:

Students, of a different 2nd grade class each day, will explore materials in groups of 3. Rotating to a new table every 15 minutes; in the end visiting a total of 3 tables each
with a different material. At each table students will discuss the material and work with their group to explore and use the material to create an original art work. Every fifteen minutes students will rotate to a new table and again explore different materials with their group for 15 minutes. After fifteen minutes students will move to a third table and explore working with more different materials. The objective is for students to explore the qualities of common materials in their process of creating an art work - to think about how this material can be used to build with, make patterns with, and to make artful constructions.

WEEK 2

PLAN_______________________________________________________________

Day 4:

Students of 2\textsuperscript{nd} Grade Class \#1 will be asked to note sculpture in the art-room, recall sculptures they have worked on during the past three years, and use their memories to describe sculptures they have seen before. Some of the sculpture vocabulary and conceptions that will arise and be emphasized in this lesson will be: \textit{sculpture-in-the-round}, \textit{positive} and \textit{negative forms}, \textit{additive process}, \textit{assemblage}, \textit{stability}, \textit{variety}, \textit{brainstorming}. The class will be divided into 6 small groups and will collaborate to imagine and begin to create a sculpture in-progress by using the materials explored the week before. Each group will get a thick 16” x 16” cardboard base to build their sculpture on. Each group will be allowed 10 items from the materials table to start their sculpture and a roll of masking tape. Students will have to negotiate working with their group partners to manifest ideas and to build their sculptures together. We will review prior knowledge of the concept of sculpture.
Day 5:

Students of 2nd Grade Class #2 will collaborate in 6 small groups and use the materials explored the week before to continue the sculpture in-progress that Class #1 group started the day before on their table. Their objective is to look at the sculpture, discuss, and collaborate on continuing its formation.

Day 6:

Students of 2nd Grade Class #3 will collaborate in 6 small groups and use materials explored the week before to continue the sculpture in-progress the Class #1 and Class #2 groups started.

WEEK 3

PLAN

Day 7:

Class #1, each group will be allowed to make final additions on their table’s sculpture using 0 to 3 new pieces. Each group will be asked to discuss and title their sculpture.

Day 8:

Class #2 After each group briefly sees their evolved and finished sculpture for the first time since they last worked on it, they will rotate to the other 5 tables one at a time and, with their own group discuss that table’s sculpture and write down a agreed upon title.

After rotating and titling all the other sculptures each group will discuss their own sculpture - how it has changed, how it is different and/or a continuation of their idea for
the sculpture. Each group will deliberate and decide on a title for their finished sculpture. Only after they title their sculpture can they read the titles the other five groups gave their sculpture.

Day 9:

**Class#3** The process is the same as Day 8: **Class#2**.

**Diagram of tables and rotation for Week 2 Sculpting:** 6 sculptures: each worked on at different times by 3 different groups of students from the 3 second grade classes, for a total of 9 to 12 students contributing to the creation of each of the 6 sculptures.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 groups from 3 different</td>
<td>3 groups from 3 different</td>
<td>3 groups from 3 different</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Table 5</th>
<th>Table 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 groups from 3 different</td>
<td>3 groups from 3 different</td>
<td>3 groups from 3 different</td>
</tr>
</tbody>
</table>
Appendix B

Capacities for Imaginative Learning

- **Noticing Deeply:** To identify and articulate layers of detail in a work of art through continuous interaction with it over time.
- **Embodying:** To experience a work of art through your senses, as well as emotionally, and also to physically represent that experience.
- **Questioning:** To ask questions throughout your explorations that further your own learning; to ask the question, “What if?”
- **Making Connections:** To connect what you notice and the patterns you see to your prior knowledge and experiences, as well as to others’ knowledge and experiences.
- **Identifying Patterns:** To find relationships among the details you notice, group them, and recognize patterns.
- **Exhibiting Empathy:** To respect the diverse perspectives of others in our community, to understand the experiences of others emotionally as well as in thought.
- **Creating Meaning:** To create your own interpretations based on the previous capacities, see these in the light of others in the community, create a synthesis, and express it in your own voice.
- **Taking Action:** To act on the synthesis of what you have learned in your explorations through a specific project. This includes projects in the arts, as well as in other realms….
- **Reflecting/Assessing:** To look back on your learning, continually assess what you have learned, assess/identify what challenges remain, and assess/identify what further learning needs to happen. This occurs not only at the end of a learning experience, but is part of what happens throughout that experience. It is also not the end of your learning; it is part of beginning to learn something else.

Developed by the Lincoln Center Institute, 2007.
Appendix C

These pictures are examples of sculptures completed by child age 6- to 10-years-old.

Picture 1.

Picture 2.

Picture 3.

Picture 4.
<p>| Picture 1. Samples of cardboard rings and cones. | Picture 2. Samples of empty ribbon spools. |
| Picture 5. Samples of cardboard tubes. | Picture 6. Other samples of cardboard tubes. |</p>
<table>
<thead>
<tr>
<th>Picture 7. Samples of medium boxes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture 8. Samples of wedged shaped boxes.</td>
</tr>
<tr>
<td>Picture 9. Samples of string and yarn.</td>
</tr>
<tr>
<td>Picture 10. Samples of adhesive materials, masking tape.</td>
</tr>
</tbody>
</table>
Appendix E

Material exploration instructions for each table.

**Picture 1.**

**Table 1**

*USE THE FABRIC SHAPES TO MAKE AN INTERESTING DESIGN*

**Picture 2.**

**Table 2**

*USING THE CAPS, LIDS AND COVERS MAKE A FLAT DESIGN, PICTURE OR PATTERN*

**Picture 3.**

**Table 3**

*MAKE AN INTERESTING STRUCTURE WITH THESE BOXES AND TUBES TRY TO USE ALL OF THE MATERIALS*

**Picture 4.**

**Table 4**

*MAKE A ROUND ART WORK WITH THESE ASSORTED FABRIC SQUARES.*

**Picture 5.**

**Table 5**

*BUILD IN AN UPWARD DIRECTION WITH THESE BOXES AND TUBES TRY TO USE ALL THE MATERIALS*

**Picture 6.**

**Table 6**

*USING THE CAPS, LIDS, AND COVERS, CREATE AN ARTWORK.*
Appendix F

Signs that were revised after use with first exploration class. The signs were revised because they were too directive.

Picture 1.

Picture 2.

Picture 3.
Appendix G

Picture 1. The interpretive titles given to each sculpture by each group.