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The Nature of Imagination in Pedagogy:

A qualitative study of an elementary school setting

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Presented to

the Faculty of the Morgridge College of Education

University of Denver

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

by

Perry S. Shank

November 2015

Advisor: P. Bruce Uhrmacher

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The Researcher

I was a highly active child. In the summer, my days were filled fighting imaginary foes in the wooden acreage behind our house, riding my bike as fast as I could down the dirt lane pretending to be in a race, and playing make-believe with the blocks and cars in my basement. During the school year, I could be found next to the teachers desk trying to balance on only two legs of my chair, staring out of the window at the fields of the playground, and drawing pictures of my classmates.

Needless to say, I wasn't the model student in the eyes of some of my classroom teachers. I often found myself in time-out, or even the office, for my escapades. I remember my fourth grade year as being particularly difficult with a teacher who believed in a very restrictive environment for her students. For me, my imagination was a place to escape, making my hum-drum existence in Mrs. Shoemaker's class at least a bit more tolerable. My mind would often wander into my drawings or thoughts of what I would be doing during recess or afterschool instead of filling out the spaces on my worksheets.

Despite my hyperactive disposition, there were a few teachers who embraced my imaginative and distractible persona. They integrated creative projects into their curriculum, sometimes just for me, but most of the time because they were great teachers. These aesthetic experiences are the moments I remember most: a project map about the

state of Arkansas, a summary poster about the story of *The Boxcar Children*, being a hairdresser for career day, etc. My favorite time of the day in third grade was when my teacher would gather us around her rocking chair and read us stories. Her expressive voice and the descriptive words of the text would send me into a trance-like state where I could make the stories alive in my mind. At the end of the chapter, I felt like I was just waking up, once again familiar with my own senses.

Working on a project over a long period of time would leave me with a similar feeling. Being immersed in my own thoughts and engaging imaginatively with a process would cause me to lose track of time, ignoring my surroundings, so that when I snapped back to the present, I would often feel as though I had been physically removed from my reality. The types of activities that elicited this cognitive mode could range from drawing pictures to mowing the lawn, writing short stories to practicing the violin. While all of these instances are widely variant in activity, they all engage imaginative states of being.

After my first few years of teaching, I began to notice similar behaviors in some of my students. I began to explore different modes of teaching that would give individuals ways of connecting with the curriculum that would be deeply personal and transformative. The style of learning that was occurring in most of my instruction was focused on project-based learning where students created music using technology that mimicked various genres and forms, made videos of important concepts of music, and created their own dances to popular music. It was through the lens of project-based and problem-based learning that I began to think of the role of student's imagination as they worked to create original material. With the ultimate goal of creating self-thinking

elementary music students who could handle more complex projects, I began to wrestle with the understanding of the imagination as the first step towards artistic innovation.

This dissertation is part of my journey towards understanding the imagination and its uses as a teaching tool in an elementary classroom. I believe that through highly imaginative modes of learning instigated by the teacher, students will be led to develop their own imaginations both inside and outside of the classroom. Although, I am hoping that the information gathered during this process will ultimately be beneficial to my own teaching practice, I hope that the information I have been able to illuminate through this research is useful for other people as well.

Introduction

This dissertation presents a qualitative study into the nature of imagination as a pedagogical tool, its perceived value by teachers, and its uses in an elementary educational environment. While the imagination is a largely unused and misinterpreted cognitive process in the current educational discourse, it is a veridical and ever present source of information for students of all ages. It provides the means for interpreting the relationship between our ideas and the knowledge we gain. Drawing on the existing works in the theoretical and philosophical history of the imagination, observation of elementary classroom settings, and in-depth interviews with teachers, this dissertation explores the uses of the imagination by teachers and presents its unacknowledged capacities in an elementary educational setting.

The task of this dissertation is to assess the popular thought of teachers on the topic of imagination and uncover how they incorporate imaginative methods into their

current teaching practices. I attempt to ascertain the origination of these current perspectives through an analysis of the imagination from a historical perspective found in the literature review of this document. Through portraiture, a qualitative research tool, I examine how the imagination is currently engaged in an elementary classroom setting. The research questions that guided this inquiry were as follows: 1) What is the intention of teachers who utilize imaginative teaching methods/strategies, 2) what types of instructional practices, activities, and learning environments support the use of student's imagination, and 3) how might teachers in K-12th grade make use of imaginative practices to engage students in learning? In order to answer these questions I investigated the use of imagination by teachers with classroom observations, in-depth interviews of three teachers, and developed themes and stories brought to voice through two focus group interviews.

Hopefully, this document will help to create awareness of the ways many teachers already use imagination in their classrooms and will clarify how these pedagogical methods can be isolated and purposefully used to impact the development and cultivation of student's imaginations.

Chapter One: Introduction - The imagination in educational settings

Overview of the Imagination

The human imagination is the unrecognized workhorse of conscious thought. It allows individuals to transport their minds to far-off geographic locations, microscopic ecosystems, and civilizations lost to a different era; it grants access to spurious realities where one can imagine having more money, more popularity, and even superhuman powers; it is a cognitive act that is ingrained in the brain's very nature, equipping it to explore the possibilities that lie beyond immediate means. The imagination allows a person to examine, through their thoughts, a dimension of existence that includes a variety of different intentions to mediate an optimum choice. It enables a person to reflect on their experiences and entertain a different future, and gives the capacity to create and interpret works of art. But, even though the imagination is found at the very crux of what we think, say, and do as sentient beings, it is a term that has very disparate meanings as a result of its elaborate and continued history. Overall, the lack of a comprehensive definition has given the imagination short shrift when compared to other facilities of the mind. Its nebulous understanding has unintentionally marginalized the imagination's use beyond immediate applications in classroom settings in areas other than the arts.

Imagination's convoluted past suffers from a dichotomous relationship with rational thought, excoriating it of any valid claim to anything but fancy and nonsense.

Moments in history where the imagination was in direct conflict with the desires of religion and/or politics, contaminated its perceived nature in society to this day.

Conversely, there are those who venerate the process of imagination as a sine qua non of mental functioning (Croft, 2000; O'Shaughnessy, 2000; McGinn, 2004; Vygotsky, 2004). Unmistakably, the antipodal assertions of both groups, and every claim in-between, do not bode well for a unified account of this mental process. In fact, when historical passages of the theoretical claims to the structure of the imagination are studied in their contexts, the reader is often left with more questions than answers (Brann, 1993). The diversity of theoretical meanings created from the ambiguity of early historic texts and imagination's etymological heterogeneity create the beginnings of this unresolved disparity. In essence, placing imagination at its correct ontological status seems to be an almost impossible feat at this point. This residual pejorative ideology still exists in discourse today through partial meanings and self-serving uses of the term, even in the arena of education.

It is my opinion that educational environments are rife with subtle uses of imagination. Its uses give excellent opportunities to engage young thinkers' minds in creative cognitive practice. Imaginative education proponent, Kieran Egan (1992), states that even though it is widely agreed upon that imaginative qualities are desired in students and teachers, the inability to define the subject and reduce its practice to a technique keeps it from being an employable tool in the practice of teaching. Because of this, assessment and evaluation tools used in determining the effectiveness of schools and their settings maneuver around the topic (Hattie, 2012; Dean & Hubbell, 2012; Marzano,

2012, Strong 2011). Government policy and top-down administrative practices use words like innovation and creativity, but leave out the ambiguous colloquy of imagination ('Race to the Top' Executive Summary, 2009; Arne Duncan's address to ASCD Jan. 27, 2014). In fact, in Barack Obama's 2011 State of the Union address, he stresses the importance of our innovation. "In America, innovation doesn't just change our lives. It's how we make a living. We need to out-innovate, out-educate and out-build the rest of the world." (State of the Union Address, Barack Obama, 2011) Yet when society discusses the ingenuity of our best teachers and commends them on their ability to make subject matter contemporary and engaging, it is clear that these teachers have the flexibility of mind demonstrative of imagination. Unfortunately, with the strict standardization of the teaching practice, it is easy for teachers to spend the majority of their time delivering content that equips students with dry, strategic processes for attaining correct answers rather than focusing on aspects of a child's conceptual understanding that lies behind learning (Duckworth, 2006). Educational society also lauds and praises students who demonstrate a creative imagination, but little is purposefully done to develop student's imaginations or elicit imaginative responses.

Statement of the Problem: The call for imagination

There are several theorists who believe that the imagination is at the forefront of what we should be teaching in schools. For them, the use of imagination for educational purposes is not a new idea (Dewey, 1910; Eisner, 2004; Egan, 1993, 2005; Greene, 1995; Robinson, 2011). The belief that the imagination is entangled with our perception of reality and deeply rooted in the collective psyche from ancient cultures is evidenced

through the artifacts from long ago (Egan, 1993; Esbin, 2008). We find indication of imagination's use throughout early history by the remaining cultural stories, mythological histories, and works of art of primitive life. The need for a strong memory in the prehistoric world ensured continued existence and the preservation of cultural rules and rituals. Long ago, the linkage between the memory and imagination, specifically with the use of narrative, was a tacit understanding of life. This use of imaginative activity as a means of mental archival created a way of thinking that became ingrained in the physiology of humans (Egan, 1993; Kearney, 1988). Philosophers like John Dewey have lauded this sentiment. In his book *Democracy and Education* (1916), he states, "the imagination is as much a normal and integral part of human activity as is muscular movement." As so, the act of engaging the imagination should be an utmost focus for educational methodologies of every level due to its ingrained educational capacities.

Some educational philosophers go so far as to say that the development of student's imagination should be the primary concern of our educational strategies today. Critical theorist, Henri Giroux (2012) asserts, "the task of deepening and expanding the imagination may be one of the most important pedagogical elements at work in any classroom." This is a sentiment shared by Mary Warnock (1976) from her book *Imagination* where she states, "The cultivation of imagination...should be the chief aim of education." Later, she adds emphasis to her point by stating that student's imaginative endeavors should be in all parts of the learning process as they seek to make their own meanings and interpretations on their experience. Utilizing imaginative teaching and encouraging its use by students is a practice that most teachers have

unwittingly employed in past years. But recently, imaginative practices have escaped the purview of many classroom teachers and occur only serendipitously. Unfortunately, it is also rare that the imagination is discussed and written about within the context of our classrooms and school systems (Greene, 1995).

Why wouldn't teachers want to engage a learner's fullest potential by enlisting help from their imaginations in schools? Dewey (1910) states the ideal mental condition for students is through the juxtaposition between their imaginative and rational states of being. To be able to harness the powers of both of these aspects of learning is a powerful tool. Coleridge argued that "We should address ourselves to those faculties in a child's mind which are first awakened by nature, and consequently first admit of cultivation, that is to say, the memory and the imagination" (as cited in Clarkson, Congram, Jones & Stratton (Eds.) 2008, p. 119). However, imagination and creativity are often seen as a lesser and peripheral student abilities in comparison to more logically oriented skills. Student's creative abilities are initiated most often in classes focusing on the arts where self-expression is the common language. Unfortunately, the 'proper work' of educating in the core subjects often denies a student their innate ability and desire to imagine and create.

Cultural Beliefs about Imagination

There are several cultural beliefs that propagate this sentiment in our educational settings. One is that by creating centers of creativity and imagination of our schools we prohibit our students from a systematic approach that will teach them the fundamentals of the core subjects (Egan, 2005). As explained later, this viewpoint posits imaginative

thinking in direct opposition to rational thinking and is deeply rooted in historical origins that are hard to shake. Most proponents for a systematic and linear approach to teaching support imagination insofar as it is subservient to knowledge acquisition (Hirsch, 2006; Ravitch, 2010), but quite often that ideal is misinterpreted leaving the methodology of instruction dry and lifeless. National concern for the disparities among socioeconomic groups in the United States, and a decreased standing amongst educational international rankings, has led schools to adopt a focus on ultra-pragmatic curricula. The trickle-down of this ideology effects principals and teachers as they try to reconcile the socio-economic inequity through a remedial standards-based approach. Unfortunately, this leads to a focus on increased seat time, decreased core curricular distractions (recess, arts classes, special projects, etc.), and mimetic approaches to teaching and learning. It is this type of deficit thinking that has unfortunately aided in programs like No Child Left Behind (NCLB) and more recently the Common Core Standards (CCS) to find purchase in American schools. Programs like these implicitly command teachers to disseminate information as efficiently and strategically as possible at the cost of enhanced quality educative experiences aimed at teaching students through wholistic means. Increased focus on knowledge input without the connective tissue found through imagination creates a disjointed and divided understanding of a topic from its context and meaning. However, it has been said that the imagination works symbiotically with knowledge and reason (Fettes, 2013). Knowledge and the imagination work best in conjunction with each other because each offers its own attributes. Korzybski (1958) summarized this understanding through his well-known dictum, “The map is not the

territory”. Otherwise stated, all of the facts and points of data that can be gathered do not convey the richness of context which experience provides. The imagination steps to the forefront of experiential learning as students pretend, create, and play with new information.

The second cultural belief is based on the stress that is situated on the teachers and students due to the adoption of assessment practices. Under the burden of new content, systematic methodologies, and pacing guides (all necessary things in moderation), it is easy for the teacher to be overwhelmed by the workload and find it additionally taxing to find ways to engage students imaginatively. The pace of many classroom environments don't allow for imaginative styles of teaching. The same goes for the students in the arena of high-stakes testing (Robinson, 2011). The content overwhelms the form and students become impeded by the gross memorization of facts and regurgitated arguments (Sword, 2007). Similarly, the pace of many classroom environments don't allow for imaginative learning. The longevity and retention of information, not to mention the general pleasure of learning, through imaginative practices by both parties would result in students experiencing their education instead of being a passive receptor of knowledge.

Thirdly, while adults have a very clear delineation between work and play, young students have no such compartmentalization (Brown & Vaughn, 2010). It is the ability to imagine that allows children to adapt to and understand the world around them at a rapid pace. Most adults view the childish ‘magical thinking’ of imagination and play as a subordinate function of the brain; a by-product of childhood. But children use play to

wrestle with new concepts, develop understanding, and establish relationships between what they have learned. Play is one of the fundamental access points to using and developing the imagination. Over the past decade, the implementation of NCLB and an increased focus on teaching students a standardized curriculum has pushed play to the side. Centers of play once found in elementary school classrooms are boxed up or thrown away. John Dewey (2011) states, "The sharp opposition of play and work is usually associated with false notions of utility and imagination". For those who are learning, play and imagination are part of the necessary work. Ken Robinson (2011) attributes student's diminishing creativity through their schooling as a direct cause from this systemic issue. In his book *Out of Our Minds*, Robinson quotes Dr. Susan Langer, one of the first female American philosophers as she discusses the imagination.

"For the brain is not merely a great transmitter, a super switchboard, it is better likened to a great transformer. The current of experience that passes through it undergoes a change of character not through...the sense by which the perception entered but by virtue of a primary use, which is made of it immediately. It is sucked into the stream of symbols which constitute a human mind" *Philosophy in a New Key*

It is through the experience of play that we can begin to imagine. Without the continued practice of imagination through this rich contextual playground, students slowly lose the efficacy needed to take risks in moving from imagination to creativity and innovation.

Lastly, there is a remaining cultural myth that a person is either imaginative or logical. The use of the imagination is not just for people who are particularly gifted in

creating works of art. Using one's imagination is an ability that can be cultivated and exercised early in life from any domain of interest (Robinson, 2011). When a student comes into a school for the first time in Kindergarten, they are ambassadors of the imagination. Having free reign on what they think about and how they play with their toys, children enter into schools speaking the language of creativity. A young student's imagination, mental flexibility, and willingness gives him a unique ability as he plays with and manipulates his knowledge. They are developing the building blocks of becoming an imaginative thinker! Eisner (2004) defines a person with this type of artistic mind as someone who has developed ideas, sensibilities, skills; a person who uses imagination to create work that is skillful executed, imaginative, regardless of their domain and area of exploration. "The Arts have no monopoly on the artistic," he states, giving understanding that there are any number of ways to be creative and imaginative. In this way, both the artistic and the logical can be imaginative. Robinson (2011) shares this sentiment in recognizing that all humans contain the potential to use their imagination to think creatively especially if they find that their use of imagination is encouraged when they are younger. Vygotsky (2004) references a certain unnamed Russian scholar when he states,

“Just as electricity is equally present in a storm with deafening thunder and blinding lightning and in the operation of a pocket flashlight, in the same way, creativity is present, in actuality, not only when great historical works are born but also whenever a person imagines.”

Professional Significance of Study

In the past decade the cultural climate has pivoted away from exploratory styles of learning and teaching that support teacher's flexibility in how they teach the content. The culture is, in many ways, propagated and preserved by the fears of teachers and administrators who are focused on the scores of benchmark and yearly achievement tests. The reluctance of teachers to allow the use of imaginative means back into the classroom is due to the perceived lack of instructional time for such activities to take place. Many teachers also believe that imaginative instructional methods would siphon funding from already decreasing budgets and time away from shrinking planning periods. This study is important because it demonstrates many ways that teachers currently engage imaginatively with their students and instruction without endangering any of these important resources.

The researcher performed observations of instruction in real classrooms that are under similar pressures of achievement and decreasing resources. These teacher participants work with public, upper elementary classes, who are tested several times each quarter to mark their growth and areas of improvement. The schedules are tight and don't allow for free-play except for two twenty minute recess breaks daily and the teacher's days are filled with meetings and scheduled duties. Through the stories of these observed teachers, the researcher makes a hopeful case that imaginative teaching can be done despite the barriers we perceive. If teachers could remove the illusion of these barriers placed on themselves and work towards providing enriching environments for students, would they encourage more imaginative thinkers and problem solvers?

The results of this study can be used to define methods of integrating imaginative ways of teaching within the normal constraints of current day teaching practice. It offers a voice of hope to inspire practitioners to tell a story, go exploring, and create works of art. While it seems that the topic of imagination is counter to the current formal perspective on teaching, it can actually exist in parallel.

Overview of Methodology

This research project was conducted using portraiture, a qualitative methodology created and developed by Dr. Sarah Lawrence-Lightfoot who is a professor at the Harvard Graduate School of Education. Portraiture is fitting for the exploration, examination, and analysis of the imagination due to the artful means by which it gathers and presents the data. This research method delves deeply into the rich contextual experience of teaching through imaginative means and represents a wholistic viewpoint through stories and dialogue. More detailed explanation of the methodology is given in the third chapter as the researcher delves into the particulars of the methodology and research design.

Delimitations and Definitions

This entirety of this research was conducted at Brookfield Elementary School, a K-4th grade public school established in 2008 within the district of Harrisonburg City Schools. This Virginia school serves roughly 540 students from a demographically heterogeneous community. This specific sight was chosen because of its stability and accessibility. It is also important to note that the researcher has been the music teacher at this school for three years. This exposure gives the researcher unique opportunity to

understand the dynamics of the school's inner workings and focus. It also has given him access to certain teachers who he has observed over time as being imaginative teachers. Over the three years the researcher has been able to develop proper working relationships with these teachers that supported the inquiry into their practice during the data collection. Appropriate measures were made to follow Lawrence-Lightfoot's guidelines for conducting portraiture research within the context of a working relationship. More information on the importance of relationship building and boundaries can be found in chapter three.

The researcher logged over 100 hours of observation of the main participants and focus group participants over the period of almost four months. Due to his teaching/work schedule, the times of observations were relatively unchangeable except for several professional leave days the researcher procured for observation. The observations of classrooms happened every day for the four months from 11:00-12:30 pm in 2nd, 3rd, and 4th grade classrooms. The researcher also gained permission from participants to video record several full days of teaching to accompany the three days observed using professional leave. Observations were made until the researcher felt that saturation of topic was achieved for each of the three teachers. Observations of focus group participants were made infrequently in relation to main participants.

Due to its qualitative focus, this inquiry is not meant to be a generalizable study. The stories and discussions are specific to the teachers and culture of the school in which they take place, and as so cannot be replicated at another school site. However, the themes developed from the observations and interviews could prove to be beneficial to

teaching practice. The effectiveness of these themes as a proper instructional strategy could be the focus of a further study.

Chapter Two: Review of the Literature

Early History of Imagination

There are several different methods for capturing the themes of imagination throughout western history. Because of its ambiguous lineage throughout the purview of western philosophy, a genealogical study would fail to capture the essential nature of the theoretical struggle. However, a thematic compilation would miss out on the rich textual associations that a linear historical narrative would bring. The best I can do in such a brief account of imagination is to provide a loosely characterized historic account of imagination and establish it in terms of the past and present theories of the imagination. My overall goal for this summative section on history is to validate that the imagination is a faculty of the mind to which there are varying conceptions and that by saying ‘the imagination’ the speaker opens dialogue to a vast number of interpretations all grounded by legitimate claims. Later on, I will explain my understanding of Dorsch’s definition of imagination for consideration as it pertains to an educational environment.

Like many topics of philosophical debate, the beginnings of the argument can be taken back to ancient Greece. This culture, like countless others, has its roots in a storied past where the imagination was doubtlessly encountered with an unequivocal power through its poets, literary figures, musicians, storytellers, etc. The Hellenic understanding of the imagination heralds back to the mythology of ancient Greece (Kearney, 1988). The use of myth is evidence in other cultures as well and is visible

through surviving artifacts primarily depicting story and art. The formulation of mythological narratives proposes a cultural necessity for imagination. It is evidenced in the writings of Homer and poets from the near-East and Scandinavia, as well as the Indian Vedas, ancient Sanskrit and Chinese literature from the Iron Age, and artifacts reaching as far back as Upper Paleolithic and Mesolithic eras (Egan, 1993, Warnock, 1976). It is not unlikely that uses of art and story predated history and were used for many purposes within their cultures. Whether they were used as conduits for survival information, lessons on economic structure and morality, or as a way of explaining the unexplainable, stories and art were some of the most important societal inventions of early humankind.

The art of the oral tradition did not become any less powerful through its transition to the written word. When mankind put pen to paper to inspire or inform, the words were no less potent than the sounds, vivid imagery, and story structuring of spoken narrative. Like earlier versions of story, written narrative still engages imagination through memory and emotions; a connection that is exemplified through the Greek myths and in particular that of Mnemosyne and the muses of poetry, comedy, music, dance, etc. (Egan, 1993). The connection between memory and imagination has steadfast qualities that support many theories to present day, even in written word. To understand the originating narratives of imagination, proper merit must be given to two similar stories are the topic of creative freedom of mankind: that of the Fall of Man and Prometheus.

Hebraic Imagination: The Adamic Myth and *Yetser*

Hebraic understanding of the imagination stems from the earliest of its recorded history; the story of Genesis and Adam's transgression against his God in the Garden of Eden (Kearney, 1988). Originating from this disobedience is the first occurrence of imagination. In the story from Genesis, Adam eats from the tree of Good and Evil, an act identified by Jewish scholar Martin Buber (1980) as being a longing for godliness. The god-like knowledge that ensues after the sinful act allows Adam and Eve the knowledge of good and evil and recognition of the opposing ideas of the yes-position and the no-position that can never be in harmonious co-existence. According to Buber, from this knowledge the First Parents have present awareness of what is, cognizance, and future awareness of what could be, possibilities. First man suddenly feels disharmony within himself and submits to shame of his nakedness (Gen. 3:10) becoming the first instance of Adam's knowledge between his contentedness in being who he is and the cost of freedom through longing to be other than what he is. He loses his innocence, but gains his own path and place in history. Mankind's new possibilities now allow him to live more than just in the moment and situates him in a new world that is filled with his imaginings and an infinite horizon of possibilities.

The main term for the imagination in Hebrew is 'Yetser', noun meaning frame, form, or purpose, but when speaking of the yetser in relation to the mind, the translation of imagination is used (Fromm, 1991). Interestingly, the same root (yzt) is used in the words for creator, creation, and create (*Encyclopedia Judaica*, 2007) a relationship between meanings that emphasize the divine power bestowed to Adam through his sin. Exegetical interpretations of the Old Testament divide the yetser into two different

forces: the yetser hara and the yetser hatov. Through this perception humankind can choose to follow the evil yetser hara in striving to see himself as his own god, or seek to utilize the good imagination, yetser hatov, through a dialogue between man and his Creator (Kearney, 1988). So the intent and use of mankind's yzr is what it deems good or evil. Imagination is not in itself an evil transgression until man makes it so. Kearney's analysis of early Hebraic understanding of imagination categorizes the yetser into four fundamental properties; the act of creation as impersonation of the divine (mimetic), moral contemplation of good versus evil (ethical), contemplation of the future and possibilities (historical), and the placement of man in a hierarchical relation to a higher divine order and the lower animal order (anthropological). Similar to the Hellenic interpretation of imagination, the Hebraic interpretation stigmatizes imagination and arouses enduring suspicions that the creative imagination is highly mimetic of a divine power. It manifests the idea, that through creation, man endeavors to be on a godly plane of existence.

Hellenic Imagination: Greek Myth and Prometheus

Through their rebellion against the gods, the mythic champions of imagination dismantle the divine order of existence by revering the creations of individuals and society. Ancient Greek myth is strewn with instances where these heroes/heroines fall prey to the temptation of the evil imagination in affront to the gods. Examples of this are the well-known stories of Icarus and his sculptor father Daedalus, whom fashion wings of wax and feathers to fly to the heavens (a myth paralleled in moral teaching to the Hebraic story of the Tower of Babel), and Orpheus, who is endowed with such musical ability

that he can bring inanimate objects to life including his deceased wife. Both Dionysus and Narcissus struggle against the will of gods for matters revolving around their vanity and aesthetic appreciation. All of these mythological beings attempted to transform their human reality into a divine image and all similarly fall to the same fate of facing the contempt and ultimate punishment at the hands of the gods (Cotterell, 2006).

The Greek equivalent to the story of the prelapsarian harmony and the fall of man from Hebraic culture is the myth of Prometheus. The name Prometheus means forethought and personifies the ability to imagine a bountiful amount of future possibilities. In *Theogony*, the earliest source of this story, Hesiod narrates the story of how Prometheus stole fire from the god Zeus and gave it to mankind; an intercession that is not taken lightly by the angered god. Prometheus is then chained by Zeus and left to have his liver eaten by an eagle anew every day for all of eternity. The stolen fire is metaphorically interpreted as being the craft of the arts and the means to a civilized existence (Roberts, 2012). The myth of Prometheus parallels the story of Adam and is noted as the first rebellion against a god/God by man to the benefit of a seemingly greater civilization. Donoghue (1973) says that Prometheus, as the benefactor to mankind, has given the endowment of conscious thought and the perspective of our relationship between our existence to nature versus a relation between humans and gods.

Both the story of Adam and Eve and Prometheus is a narrative of imagining something as different than what it is; an affront to the gods or God by setting in motion man's journey away from the divine. Through the gift, which was taken in both accounts, of limitless possibilities lies the curse of separation from the divine path of

being. In both accounts, Adam and Prometheus seek to reconcile their crime and subordinate their freedom for the sake of divine order. Adam confesses and seeks to follow the laws of Yahweh, while Prometheus reconciles his transgression with Zeus in the final act of the Aeschylus tragedy, *Prometheus Bound* (Roberts, 2012). Adam's transgression sets into motion a state of mind that can be used towards good or evil while the story of Prometheus initiates the notion of a pre-existing cosmic destiny that to create is mimesis and inherently evil.

Greek Philosophy: Plato and Aristotle

Plato struggled with the Aeschylus viewpoint and the malintent of the gods towards man. He sought to reconcile his belief through condemning acts of mimesis and imagination as motions towards obscuring the truth found only through the use of reason. For Plato, reason was the means for discovering that which could only be found through pure abstraction of thought. In direct opposition to the experience given to us from our senses, reason-based thought was all that was real and true. Conversely, since imagination only seeks to copy and provide imperfect reflections of real objects, the images from our sensorial data represents a lower form of cognition. In Plato's opinion, paintings, poetry and other versions of image-based art forms don't move us towards the truth and are thereby deemed as false (Cornford, 1957; Egan, 1993).

In Plato's *Republic*, we find the account of Plato's metaphysical model known as the divided line analogy. What is real is found in the world of the Form and is accessible only through the *nous* (intellect) developed with the use of *noesis* (pure seeing). Plato equates this seeing in a non-physical way as knowing with the soul. When a person

attempts to achieve this type of seeing but it is mixed with the obscurity of the senses, the understanding is partially diminished. The sensorial understanding that is gained through the use of the ears, eyes, and touch soon give way to decay and will vanish. In this way, through the use of the senses, there cannot be knowledge of the *noesis* (truth) only the replication of *doxa* (belief). In Plato's opinion, creative images of true Form are even further withdrawn than a sensorial imprint. Since the artist's replication is gained from what he senses, the *eikasia* (reproduction) is three times removed from the divine Form and is a vulgar imitation that seeks to demoralize the viewer.

Plato gives the illustration through the idea of a bed. The original idea of a bed is articulated by its use and properties. By this example, we know and can recognize any other bed. When a furniture designer makes a bed, it is then once removed from the ultimate reality of a bed. The artist who then represents the bed through a series of prints or a painting is twice removed from the original idea. Plato informs us, "the artist's representation is a long way removed from the truth, for it touches only a small part of each thing, and a part that is itself only an image." The bed, therefore, is only an imitation of a visible object and only superficial qualities exist in its representation. Ultimately, the artist's bed is not real. Plato expounds:

"The artist's representation is a long way removed from truth, and he is able to reproduce everything because he never penetrates beneath superficial appearance of anything. For example, a painter can paint a portrait of a shoemaker or a carpenter or any other craftsman without knowing anything about their crafts at all; yet, if he is skillful enough, his portrait of a carpenter may, at a distance, deceive children or simple people into thinking it is a real carpenter." (598b)

In Plato's view, caution must be taken in dealing with images that exist only to provide a shallow understanding of what is. Because of his view of artists and their endeavors, they are seen as no more than charlatans and betrayers of truth and have no place in Plato's arena.

Later on in his Republic, Plato makes a further distinction between the use of physical reproductions of intellectual Form. While *eikasia* is far removed from the truth of what is real, there is one more level in its distinction between rightness and dishonesty. Plato separates the iconic *eikones*, that which mimics faithfully and still true to form, but nevertheless is unreflective and passive, and that which is illusory and seeks to depict falsely, known as *phantasia*. Plato outlines how *phantasia* can be used in ways to promote reasoned thinking toward the contemplation of Form (Kearney, 1988). Plato's use of *phantasia* through implementation of images to aid in memory and the act of judging can be found in his allegory of the prison-house cave. It should be noted that there is no direct Greek translation for the word imagination, which is given attention later in the discussion on Aristotle.

Overall, it is hard to suggest how Plato would value the modern definition and purpose of creative imagination. His ambiguous attitude towards the imagination is referenced in more than a few works (Brann, 1991; Egan, 1993; Kearney, 1988). However, Plato does give a starting point to millenniums of proper philosophical debate through his distinguishing thoughts on beneficial use of imagination. As Kearney (1988) summarizes:

“The human imagination is only deemed legitimate to the extent that it acknowledges the three following conditions:
i) that it is an imitation rather than an original; ii) that it is

ultimately subordinate to reason; and iii) that it serves the interests of the divine Good as absolute origin of truth.”

For Plato, the true knowledge of the ideal consisted in grasping the unchangeable essence of the Form, and since creativity and imagination have no direct access to the true essence of divine meaning, it exists through only shadows and reflections.

Even though Aristotle was the student of the famed classical thinker Plato, his thoughts clearly diverge from the idealist perspective of his predecessor and promoted a more progressive mindset. It is also undeniable that by having the groundwork laid by his progenitor in philosophical thought, he had the ability to add, detract and denounce a preexisting philosophy. The idea of the Aristotelian imagination advocates a psychological perspective rather than the metaphysical context of his teacher although his work is still clearly aligned with the desire for an epistemological assessment of imagination (Kearney, 1988). The main contrast in his philosophical works expanded the use of phantasia as an intermediary mental activity between the sensory data received from our worldly experience and the intrinsic cognitive thought. This idea was in direct conflict with the thoughts of Plato although both placed reason at the top of the hierarchy of concern for what mattered most (Egan, 1993). Aristotle believed that mental images are the medium that allows the association of our sensory experiences with our reason-based concepts. He argued against Plato that phantasia wasn't the conjuring of images of images of things, but instead an intellectual activity that we used to reveal universal features of the human experience. With this idea, Aristotle lifted the ban on artists and poets in Plato's Republic and lauded their works as portrayals of truth rather than some idolatrous imitation of the divine Form (Kearney, 1988).

In Aristotle's *De Anima*, the claim is made that whenever a person thinks they must at the same time contemplate an image (Egan, 1993). For Aristotle, image making was at the very heart of our existence. It was closely associated to the functions of perception and memory and acted as a repository of the mind, storing the images gathered by the experiences of our senses. White (1990) propositions readers to think of all the information gathered from the senses. By removing what we taste, hear, see, feel, and smell, what do we know? Plato would have followers think that what remains are the truest forms of thought, that which is placed there by God. But very little remains to occupy the mind since the imagination is so closely linked to our perceptions and our memory. This mechanical imagination can be at the core of the apprehension of truth, rather than lead us astray. However, Aristotle still holds to the argument that the imagination is focused on reproduction rather than the production of original thought or autonomous activity (Croce, 1972; Egan, 1993).

In summary of the imaginative philosophy of Aristotle, White (1990) outlines fifteen groupings for the imagination. I will summarize these into five categories: Emotional Imagination, Perceptual Imagination, Memory Imagination, False Imagination and Dramatic Imagination. Firstly, the emotional attachment that one has through a strong visceral connection to a phantasia and can cause a mistaken perception. For example, while walking home in the dark, one might hear the sound of his/her own footsteps echoing off of nearby structure. Because there is the fear of being followed home, the senses are tricked into thinking that the sounds being received are the footsteps of a person following them. Even after looking behind them, the residual feeling of being

followed causes the person to pick up their pace which now echoes like the phantom sound is giving chase. The hope or fear of a situation can cause presentation of the hope or fear. The phantasmata (stored sensory data) of imagining fills the gap between our feared situation and the actual occurrence taking place.

Secondly, phantasia creates a way for us to understand our environment through the idea of perspective. We see an object and think of it from our own standpoint. The perception phantasia projects the sun as being small enough to pinch, or the ocean appearing different colors according to how close we are to the beach.

Thirdly, Aristotle makes a strong connection between the memory and imagination. The stored memory senses are named *phantasmata*. We use our memory imagination through every aspect of thinking and can bring forward images at will in comparison to perceptual images that have to be seen at a certain place and time. Part of our memory imagination is engaged through the searching of images, as is the case when I think of how many chairs I have in my house. I use my imagination to bring forth images of the chairs that I know to exist in my house from my repository of memory.

Fourthly, false imagination contains all senses of illusionary phantasia and phantasma that occur in illness, sleep and other states that might cause a hallucinatory recall of phantasma. Included in these are instances of after images, like looking at a bright light and then looking away, and seeing double when we press on our eyeball while trying to look at something. Similarly, a long day of driving may cause us to 'feel' as if we are still moving. Combined in the false imagination are the sense data we receive while at the brink of sleeping and waking. In psychological terms, it is called hypnagogic

and hypnopompic thoughts. For example, as a person is falling asleep they might hear a shout or a brief melody that doesn't exist. The imagination exercised during dreams also belongs in the category.

Lastly, are the narrative based imaginings of Dramatic phantasia. They are the emotional or sense data a person receives while engrossed in storytelling or examining a metaphor. The dramatic phantasia draws upon the phantasma (stored sense data) in assimilating a vicarious experience. Aristotle states this form of imagining as being 'before the eyes as future or past'. In summary, it should be mentioned that Aristotle, when using 'phantasia', 'phantasma' and 'phainetai', endows no definite connection to imagery with sensory appearances or sensory imagining, but rather gives support to the term of 'appearing' and 'what appears' to the widest sense possible (White, 1990). Overall, Aristotle presents the idea of phantasia as being the state at which our minds enact phantasma to build context for perception, dreams, thought or imagination, when an external object is present or absent. Phantasia is the ubiquitous undercurrent of our visually based mental existence.

Imagination in the Middle Ages

While the texts concerning the use of imagination in the Medieval period are profuse and cover a wide breadth of disciplines, they are collectively disproportionate to the ideas that they represent when concerning the imagination. Conventional Western philosophical thought during this era was an onto-theological assimilation of both the Hebraic and Judaic frameworks and the Ancient Greek concepts (Kearney, 1988). Both cultures interpreted imaginative thought as being highly mimetic activity arriving from

some supreme source, so the conceptual alignment, at least in theory, was not difficult to harmonize. Compared to the philosophies and theories given to them from the Judeo-Christian and Hellenic eras, there are very few new ideas from texts that find origination within the middle ages (Brann, 1991). Instead of a linear historical analysis to add depth to understanding from this thousand-year span, I will outline the epistemological essence of imagination during the medieval epoch by highlighting a few prominent thinkers who advanced the topic to a degree.

The first of these medieval scholars who solidified the concordance of Hebrew and Greek traditions in the Latin Church was St. Augustine (Egan, 1992). The alliance of the classical philosophies by Augustine served to intensify the suspicion the early church had for imagination. It held together the principles of biblical teachings that posited the imagination as a direct transgression against the Creator and the Platonic critique of the imagination as a deceitful reflection of the truth of the Forms (Kearney, 1988). Augustine was the first philosophical writer to consistently use the term *imaginatio*, from the Latin *imaginationem*, in his theories, combining the wariness of images from the Bible and neo-Platonic view of phantasia as a false appearance (Kearney, 1988). Essentially, Augustine shared the Plato-esque ideology that understanding through reason is the only way to discover the world's truths and that by relying on *imaginatio*, a person will always be deceived.

The Syriac Church father, Philoxenes of Mabboug, of the 5th century proposes the imagination as being intrinsically perverse (Kearney, 1988). Resounding the claim of St. Augustine and those of the Latin Church in assertions that what our mind interprets

from our sense data cannot be trusted on the same level as reason. Even further, Philoxenes alleges that the intertwined nature of the senses with bodily passions impedes mankind from ever knowing objects as they truly are. The imagination and image, being the intermediary of the senses and the mind, distorts reality in its very embodiment. It is important to note this drastic change in theology where use of all images are a damnable practice compared to Plato and Aristotle who claimed the neutrality of image and the practice of its use as being either good or bad (Kearney, 1988).

Lastly, I will group together some of the later prominent figures due to their similarity in mind on the subject. Both St. Bonaventure and St. Thomas Aquinas are positioned with Aristotle in believing that the imagination can be of some use if it is aligned with the will of God and not fully trusted except through the purification of reason. The later of the two thinkers, sees the imagination as a faculty of mediation between our outer and inner selves. The part of the mind that is imagination is not to be trusted, as written by Aquinas, “Demons are known to work on men’s imagination, until everything is other than it is” (Egan, 1992).

Up to this point, it should be noted that the history of imagination unfolds as the early church expands efforts to proselytize to areas in and around Greece where development of reason was at the apex of achieving a moralistic society (Brann, 1991). Much of the writings of the early church focused on aligning the Judeo-Christian beliefs with that of Plato and Aristotle. It is noted by some that the imagination was not treated as exceptionally intriguing or established as an individual function of the mind, an

idea that will begin to find form in the era of the late Renaissance and the Enlightenment (Egan, 1992; Kearney, 1988).

Imagination in the Renaissance and Age of Enlightenment

There was a remarkable shift in philosophical thought from the medieval era into the Age of Enlightenment in the 17th and 18th centuries, but the progress of this understanding was all but immediate. The prevalent discourse involving an onto-theological framework gave way to an independent form of inquiry once again dominated by the ideals of Aristotle and scientific observation. The preeminent philosophers of the Renaissance and early enlightenment era were concerned with describing the human element of knowledge separate from the scholastic endeavors of the early church and Middle Ages. The revival of this classic ideal set into motion the philosophical discussions that would launch the discovery of a new way of thinking about imagination in the Romantic era.

One of the main characteristics setting apart the philosophical endeavors of thinkers in the Renaissance from their earlier counterparts in the Middle Ages is the removal of the theological perspective (Kearney, 1988). Transitional theorists, Bacon (1561-1626) and Hobbes (1588-1679), were philosophical proponents of scientific methodology who reoriented inquiry away from the context of religion and based investigation in finding observable causes to the natural world (Brann, 1991). In this way, the aged theory of the triad re-emerges; only through the imagination can the outward senses be developed as internal images to be used in our thoughts. Descartes exemplifies this pejorative view on constructions of the imagination and promotes the

Cartesian principle of a mind governed by reason that is entirely existent separate of the mechanical world. Through this view, the imagination is subservient to the understanding that shapes our mental being and, overall, is more of a 'hindrance' in metaphysical speculation (White, 1990). In summation of the writings of Descartes, the essence of imagination is confined to the forming of images. However, there is progress made towards the benefit of imagination in its use in creative and scientific thinking as a true necessity for the comprehension of our material world. Even though the power of the imagination in matters of novel creation is given more thought in the latter part of the Enlightenment era, this classical intermediary perspective persists until the latter part of the 18th century (Kearney, 1988).

Hobbes and Hume see this sensory-based imagination as being a decaying sense, one that slowly deteriorates as the original impression becomes farther away. But where Hobbes seemingly reforms Aristotle's understanding of the imagination as being the having of images either as passively intrinsic or extrinsic experiences, Hume delineates his evaluation by explaining two separate functions of the imagination; impressions and ideas (Warnock, 1976; White, 1990). Both of these operations derive from images, differing in degree of vivacity that they are made aware (McGinn, 2004). The difference between the two ideas is noted by Hume (1985) in the beginning of his work entitled *Treatise*.

"Those perceptions, which enter with the most force and violence, we may name *impressions*; and under this name I comprehend all our sensations, passions and emotions, as they make their first appearance to the soul. By *ideas* I mean the faint images of these in thinking and reasoning."

The quantitative difference between impressions and ideas have been a topic under much scrutiny of Hume's work, but the conception of an image as just a degraded percept is an important one (McGinn, 2004). Impressions, then, are the perceptions one has with open eyes on a subject, whereas an idea, is the faint recollection of the same percept with eyes closed suggesting a link between idea and memory. For Hume, it can be assumed by comparing various texts, the imagination is the faculty for sense impression and the derivative ideas they coalesce into, creating a unified understanding of imagination as a sensed object and its representation in the mind (Brann, 1991). Hume's idea of imagination, therefore, is much more wholistic and ingrained in the processes of the mind, an idea that resounds with the ideology of the but far from the popular discourse of mainstream philosophy on imagination as of yet.

Where Hume ceased with the development of the pre-Romantic imagination, Kant begins his advancement of the idea. For Kant, the imagination is a complex uniting of Hume's "impressions" presented by our senses and the accompanying understanding that gives context and classification (White, 1990). These impressions and the knowledge that is precognized, synthesizes to form understanding. Kant states,

"Synthesis is the mere result of the power of the imagination, a blind but indispensable function of the soul, without which we should have no knowledge whatsoever, but of which we are scarcely ever conscious. To bring this synthesis to concepts is a function which belongs to the understanding..."

From this transcendental product of the imagination is developed the schema; that which help to sort, classify and recognize the object being viewed. As an example, the

underlying schema that in my mind is categorized as a tree, would allow me to view particular and different types of trees and be able to classify them as such. The rules of trees in my schema allow me to construct the image of a tree, in a general or specific sense, and compare it to the percept of a tree to recognize it as having tree-like features. Kant has criticized psychologists for their failure in recognizing that the imagination is an integral part of perception that delivers information. The understanding that Kant writes about is a necessary component for synthesizing concepts to give knowledge of objects (White, 1990). Kant also observes that the imagination aids the understanding of concepts that cannot be experienced directly or in any other form except in thought (Egan, 1992). The ideas of endless numbers (π), another person's perspective, and infinity are elements of knowledge that can never be experienced. This evidence to Kant's philosophy claims imagination as both a reproductive faculty, as in the creation of image for sorting and classifying, and of a productive faculty, that which combines elements, however outlandishly arranged, to create something new (Brann, 1991). These critical revelations had significant long-term effects on the psychology and philosophy of imagination as the Romantic Era comes to bear.

German Idealism and English Romanticism

Romanticism developed as a reaction to the rationalist movement of the Age of Enlightenment and bolstered the view of the imagination as the *sine qua non* of the human condition with the help of Kant's strong position. In this era, the imagination reaches its apogee as the ultimate power and function of the creative mind. The Romantic philosophers acquired three distinct values of the imagination from the sophists

of the Enlightenment: it was involved in the perception of the outside world and helped to classify objects; it was the image making and memory function of our minds which was used to combine elements, creating new ideas; and it was deeply connected to the emotions, eliciting a response to images that were not present as though they were (Egan, 1992). The German idealists heralded the sublime functioning of the mind as being the dominion of Kant's transcendental imagination, a position for which Kant himself was too conservative (Kearney, 1988). Fichte and Schelling, both philosophers who developed their ideas from the writings and philosophies of Kant, position the imagination as the supreme function of the mind above all other things, including reason. Fichte declares that the imagination is "the very possibility of our consciousness, our life and our being," while Schelling claims that the "productive and synthetic imagination is the organon and pinnacle of all philosophy," (Kearney, 1988). Schelling goes on to harmonize the ideas of the unconscious creative imagination of perception and the conscious creative imagination of art and philosophy, reconciling past differences between nature and art found in philosophical discourse since classical debate (Warnock, 1976).

The thoughts of the German idealists resounded amongst many of their contemporaries throughout Europe and abroad and are evident in the ponderings of the English literary figures Coleridge and Wordsworth. What Coleridge termed as '*esemplastic*' is the ability of the imagination to assimilate, a slight variation on Kant's '*Einbildungskraft*' and the German idealist's '*productive imagination*' (Kearney, 1988). He separates this function of the imagination from the mimetic activity, now

called 'fancy', by characterizing two separate and unequivocal powers within its domain. The primary imagination, that which was termed by Kant as 'transcendental imagination' and by Schelling as the 'unconscious poetry', operates as the fundamental link to the natural world. The secondary function, described by Schelling as the conscious productions of the poet, is tasked with the artistic employment of the imagination (Egan, 1992). Coleridge states in this well-known passage from his *Bibliographia*,

"The primary imagination I hold to be the living power and prime agent of all human perception and as a repetition in the finite mind of the eternal act of creation in the infinite I AM. The secondary I consider as an echo of the former, coexisting with the conscious will, yet still as identical with the primary in the kind of its agency, and differing only in *degree* and in the *mode* of its operation."

Kearney (1988) posits that through this statement, Coleridge sets the primary and secondary powers as comparable in this kind of imaginative act (i.e. as a creative act), but delineates between the two when focusing on the degree and mode, essentially distinguishing the superiority of the secondary function. The degree Coleridge speaks of as being the will of the imaginer to create an imaginative thought. Coleridge deemed this ability to control the imagination as a 'synthetic and magical power' able to create harmonious pairings paradoxical in nature to create something original.

Wordsworth echoes the understanding of the ancient Stoics in the use of imagination to create poetic meaning, bringing the listener in alignment with the orator's vision, be it past, present, or future. Wordsworth embodies the thrust of the Romantic era to transfigure and transform the rational with the vitality of human emotional

experience. The reproductive nature of the classical imagination, transcended by the ideas of Kant, is now denied its hold on the imagination as Wordsworth glorifies its creative, active, and emotive functions (Egan, 1992). He asserts in *The Prelude*, that the imagination is “reason in her most exalted mood”. This exalted paradigm of the productive imagination is by no means restricted to the English Romantics or German Idealists as evidenced by similar ideologies found in the romantic movements of France and most other European cultures (Kearney, 1988).

Imagination in the Modern Era

The remaining work of this historical analysis branches into two disciplines as it enters the Modern Era: psychology and philosophy. The branch of psychology is concerned most with the use of image, which I will discuss later in this section, while philosophy seeks to rid the imagination of image-based ideology even though the work of Coleridge and Wordsworth resolutely established imagination free of image in the previous century (Egan, 1992). As discussed previously, the notion of image somehow lending itself to the process of imagination has been debated from Aristotle to present day. According to White (1990), this theory so strongly presented itself in discourse through history that the assumption obfuscated the real work of imagination. The early work of the Modern era philosophers sought to reestablish this claim and work towards defining and exploring imagination’s purpose detached from image.

Three of the more prominent philosophers of imagination of the Modern era (Sartre, Ryle, and Wittgenstein) univocally claim imagination’s separation from the quasi-pictorial and image-laden function of consciousness known as sense impressions

(White, 1990). They also affirm the notion that the imagination is not a function of consciousness to be explored but rather an intentional act of consciousness (Egan, 1992). In Sartre's writings on the imagination, he concludes that instead of being a reference of the sense impressions from objects, the imagination represents contrasting manners by which to be conscious about objects (Sartre, 1972). In that way, the imagination cannot be a faculty of the mind but is rather an intentional act of consciousness. Through this act, the imagination purposefully engages with objects as if they are real while retaining the knowledge that they are not, allowing the exploration of the matter free from the regulations of reality. However, it is also noticed in the difference between perception and imagination that the former "receives" its objects, by no will of its own, while the latter generates them at command. As an example, Sartre asks the reader to visualize the Parthenon, a task most can do with the proper background knowledge, and then count how many columns it has, an impossible task unless the number is also included in the background knowledge of the thinker. Through this example, Sartre declares that the imagination cannot impart to the thinker any new knowledge that is not already known.

For Ryle, the intentional act of consciousness, seeing a picture in the mind's eye or imagining another experienced sense, is just a case of 'imagining that' (White, 1990) Ryle argues against the idea that sense-data is its own entity that can be re-smelled, re-seen, re-tasted, etc. in the mind's ability to visualize. Instead, he contends that the act of visualizing is to imagine 'smelling', 'seeing', or 'tasting' etc. which constitutes it as an act of play or make-believe (White, 1990).

Lastly, Wittgenstein approaches understanding the term through a linguistic vantage. Imagining and seeing differ because they are separate abilities rooted in their own individual contexts and purposes. Similar to Sartre, Wittgenstein delineates between the two features of internal visual experience by focusing on their limitations. Seeing cannot be summoned and gives new information about what is being perceived, while imagining is willed and can only be made up of what is already known to the viewer (Warnock, 1976). One further point of clarification comes from White (1990) in the book *The Language of Imagination*. He purports that Wittgenstein's definition holds that imagining is not an inner picture in and of itself, but is rather linked to an inner picture or sense impression.

In the discipline of psychology, the utilization of terms like image, imagery, imaged, etc. are employed to focus on a more specific trait of the larger function of the imagination. These attributes are chosen because they relate to a specific behavioral correlation for which the term 'imagination' is too broad and nebulous. The use of image in psychology is often linked to its more practical nature as a substructure of the memory. For example, a study conducted by Shepard and Metzler (cited in Egan, 1992), examined the act of recollection and observed how participants closed their eyes to scan images of recently seen items to remember specific facts (ie. map, floorplan). Allan Paivio's (1965) study on remembering word pairs found that objects more readily 'imagable' were recollected with more success than those that were not (cited in Egan, 1992). Even though the use of image in psychology is more directly related to memory than imagination, the interrelatedness of all three terms cannot be denied.

Imagination with Education in Mind

Within the context of education, the words play, imagination, creativity, and innovation are commonly used interchangeably rather than in marking related points on a continuum. However, for this study, I have developed the imagination as the foundation and precursor to other creative acts by demonstrating how creativity, play, and innovation need imagination to exist. Before understanding the interconnectedness of these terms, I will focus on what the imagination is as described by main theorists and philosophers.

The imaginative person engenders the image of an individual who is free-spirited and often in his/her head in a world of daydreams and fancy. Other ideas on imagination occur in common language that interjects the term somewhat frivolously and aids in its misuse by distorting the meaning (*i.e.* “I can’t image what *that* would be like....”). Because of this, the act of imagining is left to describe shallow ponderings or an act of idle amusement, when it is, in fact, the act of conceiving an idea or object that is absent or non-existent (Dorsch, 2012). For example, if I think about how many stoplights there are between my home and workplace, I imagine the task of driving the route I commonly take, albeit in fast-motion, and set to the task of adding them. I also can imagine things that are physically not possible like folding a piece of paper in half, and then folding it again, repeating the process an infinite amount of times. I can also use my imagination to place myself in the context of a book I am reading, suddenly placing myself lost deep in McDougal’s Cave with Tom Sawyer and Becky Thatcher. But the full power of the imagination cannot be realized by limiting its ability to the task of visualization.

In Vygotsky's (2004) seminal paper *Imagination and Creativity in Childhood*, the imagination is presented as a gap-filling tool that springs into action when understanding is incomplete. He purports that if the facility of the brain known as the imagination were only in reproductive function, humankind would never be able to improve beyond their current status; only able to 'imagine' elements of what has happened before. The combinatorial ability of our imagination holds the key to our survival and propagates the improvement of current situations. Vygotsky's definition of imagination demands a recalculation of its properties and leads one to think of a myriad of applications.

“But in actuality, imagination, as the basis of all creative activity, is an important component of absolutely all aspects of cultural life, enabling artistic, scientific, and technical creation alike. In this sense, absolutely everything around us that was created by the hand of man, the entire world of human culture, as distinct from the world of nature, all this is the product of human imagination and of creation based on this imagination.”

These two differing abilities of our imagination are classified in two categories: sensory imagining and propositional imagining. The sensorial imagination is used through the recollection of sense data: seeing, hearing, smelling, tasting, and feeling. The propositional imagination is involved in a type of creative problem solving that does not only include image reproduction. As so, it is a different element of imagination not directly dependent on the images stored from our senses. Several studies focus directly on this type of psychologically based construction in relation to creative learner dispositions (Claxton & Carr, 2004), biological support for creativity in children (Martindale, 1999), and problem posing and solving (P. Burnard *et al.*, 2006).

Through a different perspective on how the imagination works, Colin McGinn (2004) outlines various accounts of imagination and places them on a spectrum ranging in complexity for the developing mind. According to this spectrum, the imagination is most easily and readily engaged through the act of perception combined with the function of memory. The sensorially acquired object is the percept but through its recollection is promoted to a memory image. As the imagination advances, the memory image combines concurrently with percepts causing 'seeing-as' known as imaginative sensing. Through cognitive advancement, the imaginer is then able to shift the act of imagining from mere percept recall to the ability of recombining imaginative elements. This freedom of creative and imaginative thought is called the productive imagination. The imaginer then discovers what Dorsch (2012) would call episodic imaginings, a grouping of imaginative moments or events instigating internal fiction, make-believe, and storytelling. Through this imagined narrative, the thinker develops ideas of possibilities, modes of being that could exist within reason; all skills necessary in the act of learning. The final and pinnacle act of imagination in McGinn's spectrum is reached when one's mind is able to use this possibility thinking to contract novel and innovative thoughts. McGinn clarifies his understanding of this constructed spectrum by noting that there is no direct or logical flow or continuation of progression along the spectrum, however some of the points may develop with one's maturity from infancy to adulthood.

Mary Warnock's (1976) book *Imagination* makes no absolute claims on her interpretation of the imagination through the historical analysis of philosophers like

Hume, Kant, Schilling and Sartre, but identifies her own meaning as hinging on emotional connectedness. She states,

"There is a power in the human mind which is at work in our thoughts about what is absent; which enables us to see the world, whether present or absent as significant, and also to present this vision to others, for them to share or reject. And this power, though it gives us 'thought-imbued' perception... is not only intellectual. Its impetus comes from the emotions as much from the reason, from the heart as much as from the head."

She concludes by stating the universality of the imaginative function in all human beings as being equally present and uniformly exercised throughout our continued existence. Because of this, the properly formed imagination exists in relation to and is connected with our emotive selves, a relationship of extreme importance. When we endeavor to engage our imagination as an intellectual function, we should also strive to educate with 'seeing into the life of things' through our emotions.

Looking at a Unified Definition

The historic account of the philosophy of imagination is hard to summarize in a volume of works much less a work of this size and scale but there have been various attempts in recent history to define the process of imagining in order to create a wholistic understanding of what the imagination is and how it functions. While some authors seek a uniformed approach to the understanding of the imagination, others deny that it is possible or even a worthwhile endeavor (Brann, 1991; Kearney, 1987). The issue of partial explanations reaches as far back as the founding fathers of philosophical thought. Many of these incomplete discussions focus solely on only one attribute of the imagination (*i.e.* mental image creation, sensory reproduction). The idea of seeking an

explanation that includes all current understandings of imagination has seldom successfully been achieved but in recent exploration, a few stand out as being satisfactory attempts (Dorsch, 2012; McGinn, 2004; Stevenson, 2003; O'Shaughnessy, 2000). The most comprehensive and useful for my undertaking in the attempt to define imagination in a school setting is detailed in Dorsch's (2012) book *The Unity of Imagining*. In an attempt to capture the essence of the act of imagining, Fabian Dorsch identifies central cases of imagining and compiles five distinguishing categories that solidify our understanding through a unified account of the act of imagining. In the historic review of this study, I gave brief survey to the historical mutations of the philosophy of imagination that will aid in positioning these ideas around Dorsch's (2012) central types of imagination adding shape to the ambiguous form and purpose to the subject of my thesis.

Before delving into Dorsch's central types of imagining, it is important to distinguish between cognitive and imaginative episodes to firmly ground the discussion around the purely imaginative. While imaginative episodes are similar in outward representation as their logical cognitive counterparts, Dorsch (2012) states that they differ in their non-neutrality of content. The positioning of attitude towards a thought in imagination presents a stance that the imaginer knows can be true or false without being wrong. However, a logically committed thought, or judgment, is properly presented as being true and is considered wrong when the thought does not align with reality. Therefore, a reasoned mental representation holds an attitude that conveys a thought as being true while an imaginative representation is not constrained to such

assertion. For example, a person might imagine an oak tree in their backyard while there may not exist such a tree in real life. In contrary, a person who makes an assertion or judgment through a logical cognitive representation of an oak tree in a backyard is committing to the truth in which they believe. Whether or not the representation is correct, it is undeniable that the attitudes of both processes are inherently different.

Dorsch's second claim posits that imaginative episodes differ in epistemic function from cognitive ones (Dorsch, 2012). While the cognitive episode leads to a 'first-order' knowledge and presents a perspective of reality, imagination holds no allegiance to the truth. Because of this position, cognitive thought has the ability to affect judgments in the thinker and move him towards first-order beliefs. The imagination has no ability to cause such judgments on first-order knowledge but it does provide access to the power of introspection through contemplation of second-order knowledge. For example, visualizing or supposing that there is a solar eclipse outside does not entitle us to believe that there is a grand astronomic event occurring in reality, but it would allow us to imagine what it might be like outside if there were. Through cognition, the elements of the environment are examined to make judgments on what exists, whereas in the imagination, the elements of the environment are configured to represent them.

In his attempt to identify themes that unify an understanding of the imagination, Dorsch identifies five noticeable categories on the subject: sensory imagining, affective imagining, intellectual imagining, experiential imagining, and imaginative projects. Understanding these classifications of imagination provides a framework for my research and exploration.

Sensory Imagining

The sensory imagination is first discussed in the works of Plato and Aristotle with the use of image but later finds resonance in the works of Hume and Kant (Warnock, 1976). This form of imagination is of reproductive nature and is initiated by the knowledge gained by our senses. It is highly visual (although not negating of other senses) and works from our image making capabilities. It draws from the repository of our schema and acts as a resource for our thought processes, uses imagery, and is highly mimetic. Aristotle likened the use of our imagination as an internal mirror to our sense impressions; the mere revival of former percepts (Egan, 1993; Kearney, 1987). Sartre and Wittgenstein hold that unlike visual perception, image perception teaches us nothing new; they are not informative but rather reproductive. The image that is seen through sensory imagination only contains material that the viewer has put into it. (Sartre, 1972; White, 1990). In essence the sensory imagination initiates mental episodes of sensory content that is imaginatively entertained.

Affective Imagining

The affective imagination is simply put as the imaginative experiences of emotion (Dorsch, 2012). This is separate from the real emotional experiences a person has as a response to fictional occurrences in books or movies. To feel grief while reading a story that is wrought with the personal loss of the protagonist is considered quasi-emotional (Walton, 1990). These emotional episodes are vicarious but are based in real emotions. This type of emotional imaginative experience is not what is considered as an affective imagining but rather an imaginal project, which I will explain in the last section of the summary of Dorsch's concepts. The emotional understanding during an

imagined moment is removed from the actual experience of feeling. For example, if I imagine myself sitting on the beach in the summertime with the sound of the waves crashing in the background, I enjoy the thought that I might be relaxed and content. It would take a more extreme session of imagination to experience the actual calm that the imagined experience would afford. In this same way, I can imagine the emotion that someone else might have in a particular situation, offering a unique position to evaluate the conditions that exist for that person within their context. This type of imagining has practical applications as well, in specific, psychology, when seeking to gain understanding of a situation from an external perspective (Goldie, 2005)

Intellectual Imagining

The term of intellectual imaginings is synonymous with other words familiar to those who understand imagination's Romantic to current history: supposing, imagining-that, make-believe, propositional imagination. It is an idea that has found its form in varied contexts from psychological imagination from storytelling to geometric visualizations. The intellectual imagination forms hypotheses and is the intentional act of the thinker, which is similar to other forms of thinking. However, with intellectual imagining, the inferences contain one or more imagined propositions compared to cognitive inferences that are built around established judgments and beliefs (Dorsch, 2012). The propositional imagination is similar to other representational imaginings as well; in that they can be presumed as being connected to propositions and can stand in inferential relations (Currie & Ravenscroft, 2002 as cited by Dorsch, 2012). Groups of these imaginative happenings are called episodic representations and when combined

create a system of rules by which the possibilities exist. Examples of these types of imaginative episodes present themselves through storytelling, imaginative games, and play containing make-believe. The rules that these imaginings occur within are logical restrictions of conclusions drawn from the hypothetically entertained premises (Dorsch, 2012). Vygotsky (2004) spoke of intellectual imagining as the gap-filling that occurs between what is known and the possibilities that exist. Craft (2001) explains propositional imagining as the dimension of creative thinking that consists of the proficiency of both problem thinking and problem solving. Either way, this type of operational imagining is a requisite means for innovative thinking.

Experiential Imagining

According to Dorsch, the experiential imagining is about object awareness rather than the propositional awareness of intellectual imagining. When a person imagines a tree, they can recall how it appears or they can ‘sense’ the texture of the bark. These episodes are not as full and quasi-experiential as the final section of imaginative projects, but they do include imagined items rather than intellectually imagined propositions. Experiential imagining could also include the imagining of performing a task and the sensory experiences a person would have while carrying out the experience, including the intellectual imagining of an undertaking. For example, imagining what it would be like to hold and play a violin, or what it might feel like to climb the face of a rock wall without a harness on. However, the proposition of these imaginings could not be reduced to the sole idea of the exercise without becoming an intellectual endeavor. It has to include the actual performing of some sort of task like storytelling.

Imaginative Projects

The imaginative project is a type of episodic experience that combines elements gathered from the senses, affectual representation, intellectual imaginings, and imagined objects through experiential imagining to create a wholistic entity. This contextually rich state of imagining creates a moment of imagining-as that vicariously embeds the thinker in a quasi-experiential state of deliberation (Dorsch, 2012). Imaginative projects may also include the recognition of the episode as being from the perspective of a particular person or situation. For example, I remember reading my first C.S. Lewis book, *The Lion the Witch and The Wardrobe*, as a young boy and recall being completely engrossed in the sensorial happenings of Lucy as she pushed away the coats in the closet to find the world of Narnia. I could feel the confusion, apprehension, and wonder as she took the first steps into the snowy woods by the light post, hear the crunch of the snow and the rustle of the branches as she made her way to a clearing, and see the blanketed and wooded terrain into which she had stumbled. I was able to participate in her experience as if it was a directly represented event. The groupings of episodic imaginings are the most diverse and extensive because of the seemingly endless combinations one could have from each of the aforementioned imaginative elements.

Summary

Hopefully, this summary of main theorists on the philosophical underpinnings of the imagination has appropriately established the meaning of the term. The following examination of the use of the imagination should be enhanced and fully supported by the diligence of their work. The researcher holds the appraisal of Dorsch to be the most

useful for his school-based inquiry and uses the five dimensions listed above to frame his observations and analysis of the interviews.

Chapter Three: Methodology and Research Design

The Qualitative Methodology

The experience of an educational environment is established through a compilation of factors and the context in which these elements are at play. Because of this, no two events or their circumstances share the same physical peculiarities and socio-emotional conditions that make them unique. The researcher's responsibility through discovery is to illuminate certain themes and consistent modes of operation that exist within these similar but ultimately solitary situations. For that reason, the researcher chose to uncover cases of imagination in an elementary school setting through the use of a qualitative research methodology.

The strength of qualitative research is through its rich textual descriptions providing information that would remain hidden or excluded from more quantitative means. Its ability to reveal the human narrative that is often contradictory or hidden is in large part due to the researcher's immersion in the field of study. Qualitative methods are also compelling in providing a voice to marginalized ideas or groups of people and help to identify the complex realities of a given situation through narrative.

The method used throughout the researcher's inquiry to explore and develop the essence of the aesthetic imaginative experience is rooted in a phenomenological and narrative-based approach. However, the method stands on its own as a qualitative

measurement in a social sciences setting. The research methodology, aptly called Portraiture, focuses on a concept or phenomenon as seen through the lived experiences of individuals. It is the role of the researcher in a portraiture study to describe, with great detail, the perspectives of each individual in order to create a set of themes that are variant or invariant to the group of interviewees. Through rich description the researcher concludes the “what” and the “how” of the lived experiences of these individuals to explain the phenomenon. In a same way, narrative is a useful research methodology for capturing the essence of an event or history from the perspective of one or very few individuals. While the process can be very meticulous and time consuming, the data is rich with storied experiences and can be analyzed and written in various ways. The benefits of using narrative-based research methodologies are found through a very personal look at an event, group of events, or even a lifetime of individuals. Portraiture research captures the strengths of both of these methods and is a tool first developed by Lawrence-Lightfoot in her exploration entitled, *The Good High School* (1983). Since then, portraiture has been used as an investigative tool for numerous successful studies.

Portraiture

Portraiture is an arts-based approach of inquiry that embraces both of the tenets of a phenomenological and narrative epistemology and was developed with the intention of combining a systematic and empirical description with the aesthetic expression of an art form (Lawrence-Lightfoot & Davis, 1997). For Lawrence-Lightfoot, this methodology has merged the understandings of “contrast and coexistence, counterpoint and harmony” as it reconciles the structure and rigidity of form with the organic and expressive qualities

of art. Portraiture positions the voice of the participants at the very center of inquiry, allowing the affective dimensions of the personal experiences to shape the final form through the words of the researcher. In fact, the authenticity of the end result is built on the success of the dialogical partnership as the two meet in a shared space of creation.

In this section, the researcher will give a brief overview of the portraiture methodology to explain why this form of research best suits his endeavor to define imagination in an elementary school. Dr. Sara Lawrence-Lightfoot (1997) developed this unique research method as a means to uncover the idiosyncrasies and imperfections of a social science setting. Through the stories, rich textual description, and in-depth interviews, social science portraiture seeks to define the essence of a topic in order to provide a perspective that has not been considered before. The final product of this venture paints a narrative that in Lawrence-Lightfoot's words, bridges "the realms of science and art, merging the systematic and careful description of good ethnography with the evocative resonance of fine literature." The final portrait of the research provides an integrated view that reveals a wholistic vantage of the values, personalities, structures, and complex history of the topic. This type of work resounds with Dewey's imaginings of a balanced inquiry that captures the comprehensive image of a teaching and learning environment (Dewey, 1934).

Through the research and analysis, the portraitist sews together the pieces of narrative, observations, and other elements into an aesthetic whole through the use of four tenets that give the depiction structure. These dimensions are conception, structure,

form, and coherence. The next paragraphs will focus on each of the tenets individually to present the importance of the underlying structure of portraiture.

Conception

The amount of raw data compiled throughout a qualitative research study is quite significant and would be overwhelming to a researcher unless the information is thinned out and molded by meaning. It is the researcher's role to uncover the essence found within the expanse of information gathered, but he will find it hard to do so without the discovery of the concepts that ultimately guide the work. The research tools are the source of the information, but it is the insight and meaning applied by the researcher himself that focuses the production of concepts. The experience of living within this stream of information as it is gathered and grouped is what allows the researcher to gain appropriate perspective to identify the conceptual patterns. Once the researcher develops the overarching concepts, he begins to build the narrative.

The essence derived from participant's stories and their observed intentions help to shape the concept of the final narrative in this study. The original questions proposed to develop the understanding and intent of teachers in their uses of the imagination in a classroom setting. However, the conceptual dimension sought to uncover a hidden and unacknowledged use of the imagination as a daily occurrence by exceptional teachers. Therefore, the concept that most drives the narrative, is the idea of the unintentional use of imaginative means for teaching. As so, the researcher sought to use stories of many day-to-day activities that seem to be imaginatively benign.

Structure

If the conceptual framework of a study roots the research in a solid foundation on which to build, the structure is the floor, walls, and roof of the dwelling. The structure gives specific definition to the themes that organize the essence of the unfolding topic. Throughout the development of a portrait, the researcher combines elements of shared experiences to shape the frame of the continuing work. As the work gathers mass, more examples emerge to add support to the final work.

The structure of this research project is easily found with bold subheadings throughout the narrative of the topic. These themes were developed during the observations, interviews, and writing and brought into focus as more examples overlapped in meaning and purpose. Through this organization, the discovered themes were established and brought to prominence. While not as aesthetically minded as the preceding dimension of form, the structure has its own beauty through the designation of the account's main elements.

Form

The form of the portrait is brought to call through the depiction of the participant's lived experience with the research topic. It is the juxtaposition of the amorphous qualities of prose with the mindfulness of structure that interprets the meaning of themes with subtlety and nuance. Neither structure nor form can exist wholly on its own, but instead occur in a symbiotic relationship. "For the portraitist, form is the texture of intellect, emotion, and aesthetics that supports, illuminates, and animates the structural elements" (Lawrence-Lightfoot & Davis, 1987).

Many of the portraits written in this study are composed of the blended thoughts or emotions of the teachers themselves with the situations witnessed through classroom observations. Their intent interjected into the writing, as one would read a novel or short story. This type of narrative form is an example of the type of writing that exemplifies a portrait and works towards creating the aesthetic whole that Lawrence-Lightfoot frequently reminds a portraitist to render.

Coherence

Coherence is the use of consistent voice and perspective through the alignment of empirical and aesthetic values (Lawrence-Lightfoot & Davis, 1997). This dimension demands a consistent relationship between the parts of the narrative that bring the larger picture into view and slowly builds over the entirety of the work. If the researcher has neglected any of the previous dimensions, the cohesion of the written research will similarly be lacking. Sequence is also an important part of providing coherence. A proper sequence of events gives the work of interpretation to the reader through a slowly unfolding of events. Sometimes accompanying sequence is the repetition of similar events that help to support the theme and suggest their prominence.

In the desire to create resonance within the work of inquiry, the researcher pays strict attention to cohesion and each of the dimensions, synthesizing the empirical work with that of the aesthetic, all the while keeping in mind the overarching gestalt. Through this body of evidence, the portrait acquires authenticity and validity.

Announcing Bias

Traditionally, the identification of the researcher's bias is found in both qualitative and quantitative research paradigms. Since the researcher is the instrument of inquiry in many qualitative methods, this form of inquiry has a greater potential for personal bias to infringe upon the content and its respective evaluation. It is because of this that it is necessary for the qualitative researcher to demonstrate an honest and fair demeanor (Eisner & Peshkin, 1990).

In portraiture, the researcher carries the onus of announcing their own presumptions and inclinations through sharing their own experience, perspectives, and understandings. Through this transparency, the investigator reveals any barriers that might impede the true depiction of the topic (Lawrence-Lightfoot & Davis, 1997). In portraiture, the visibility of the researcher's self is of utmost concern. Not only does the researcher specify the focus, chose the participants, and design the inquiry, he also creates the relationships, observes the reality, derives the themes, and weaves the narrative. The portraitist must counterbalance his personal bias with the skepticism and scrutiny of proper research.

The researcher holds the presumption that all teachers have the intent to reach their students through the best instructional mechanisms they employ. This optimistic view has the tendency to bias the information gathered and analyzed in a positive slant. However, knowing this gives the researcher the ability to question the work of his observations and inspect what he has revealed to the reader through the narrative of the research, checking for a realist portrayal of events.

Another possible bias is the researcher's liberal view on the definition of the imagination as a cognitive function. In keeping with the definitions of scholars in cognitive science and educational discourse, this bias is easily managed.

Lastly, the researcher holds a firm opposition to the amount of testing that occurs with elementary aged students. The importance placed on these tests by school administration, teachers, and policy makers is aggrandized and promoted beyond the best interest of the students. The evidence of this bias may be heard throughout the voice of the researcher in writing autobiographical sections of this inquiry. However, proper precautions were taken in review of documentation and research questions not to project this bias on other participants. Any voice other than the researcher who shares a similar viewpoint has declared their beliefs on their own.

Origins of Goodness

An important element of portraiture is its intentionality to find the positive aspects of the research topic. All too often, the common voice of inquiry is slanted to the pejorative in documenting failure and determining flaws. However, in portraiture, the researcher gains understanding through the examination of the strengths and goodness of the participants. It is important to note that this methodology isn't meant to distort the reality of any given situation by focusing on the favorable. Instead, it is assumed that through the inspection of the positive, the imperfections will reveal themselves. Lawrence-Lightfoot (1997) states, "The researcher who asks first, 'what good is here?' is likely to absorb a very different reality than the one who is on a mission to discover the sources of failure". The portraitist's narrative presents the complexity of

reality through its examination of the topic from a positive perspective. By supporting the participants in the affirmation of their strengths, the sharer is likely to disclose their vulnerabilities and worries. As a portraitist, the researcher knows that goodness is often tempered with imperfections, instability, and inconsistencies (Lawrence-Lightfoot & Davis, 1997).

The above elements situate the methodology of portraiture as a tool that will appropriately uncover the uses of imagination in a classroom setting. The wholistic nature of creating a research portrait illuminates the contrasting elements within the setting of an elementary school and allows for understanding to be derived from the researchers observations, interviews, and exploration of the context in which imagination is exists.

Managing Relationships

It was previously recorded that the researcher is a teacher at the school where he has conducted this research. While with many other types of research tools this might be a point of concern, portraiture establishes several guidelines that help the researcher establish and navigate the intimacy of relationships based in a work of inquiry. Due to his rather short amount of time teaching at the school, all of the participant relationships that were built during the investigation were relatively new. When formal research for this topic began, the researcher had only been at the school for one year. As an elective/specials teacher, the time spent with the grade level teachers during the first few years has been minimal.

The upswing of the researcher's closeness to the participants is in his ability to more readily empathize with their perspectives. Lawrence-Lightfoot (1997), proclaims that this alignment gives the researcher deep understanding for the context of discussion. As the reader will notice, similar perspectives, working locations, age, or upbringing does not mean the participants and researcher share parallel histories or like identities.

School Selection and Research Site

For this study, the researcher focused on an elementary school that is part of Harrisonburg City Public Schools (HCPS). There are five total schools in the HCPS district that serve students from K-4th grade, three of which are in the immediate vicinity of the researcher. The final research site was chosen because of its accessibility and stability. Of the three elementary schools originally selected for the possibility of this study, two were removed due to systemic changes that would skew the information being collected. One school went through an abrupt administration change of both the principal and assistant principal due to restructuring. In effect, this change made access to the particular site difficult and undesirable due to the amount of change in teaching approach and methodology. The second school originally selected for research was elected as an arts infused magnet school at the beginning of the school year. Since the topic of research for this project relies on arts focused experiences in a normal school setting, this school was found inappropriate for research as well. The last school remaining from the original selection was determined to be an excellent site for study due to the consistent nature of leadership and high number of imaginative teachers specified by the instructional coordinator.

Brookfield Elementary is the newest school in the Harrisonburg City School District and was built eight years ago as a relief to the rapid population growth of the area. The Harrisonburg City area has been heralded as one of the fastest growing cities in the state of Virginia and boasts a large culturally heterogeneous population. The school consists of roughly five hundred forty students from a rather small area of the city. The school represents a similar population with 49% Latino, 34% White and Middle Eastern, 14% Black or African American, and 3% Asian students in attendance. The school gathers students from a highly diverse socio-economic population as well. No more than three blocks away from the school there is a large trailer park where many low-income families reside. Half a mile away, a golf course lined with half-million dollar houses makes up the east side school population. However, many of the school's families are lower to lower-middle class with a free and reduced lunch rate of 74%. Brookfield Elementary is a school that receives title one funding and is currently a VDOE focus school due to low performance of its black population on the Virginia State Standards of Learning test.

However, the socioeconomic makeup and standardized test score percentages don't reflect the culture of the school as effectively as does the participation of students, parents, teachers and the community in the programs and normal day-to-day operations of the academic institution. Numerous clubs and activities, afterschool tutoring classes, summer school classes, and school-wide events demonstrate the opportunities available for its students. A strong Parent Teacher Association organizes funding initiatives and plans special cultural heritage events several times a year. Class field trips to the

National Zoo and Colonial Williamsburg, to name a few, are organized by grade level and specials teachers. Monthly teacher development and professional learning community meetings focused on best practices aim to keep the instructional models fresh and relevant for teachers and students. Overall, Brookfield Elementary is a student and community focused school that effectively meets the needs of students and strives for continued improvement through collaboration and training.

The Inquiry Design and Purpose

In this section, the strategies and instruments used to collect data for this inquiry will be outlined and explained. When beginning a research project, it is important to lay the plans for a proper investigative model to ensure the comprehensive nature required for a formal report. The research tools that were initially selected to gather data were scrutinized, chosen, and employed methodically to fit within the confines of a portraiture. The final portrait then, is a synthesis of the data gathered through these instruments and given voice through the narrative developed by the researcher.

Through this inquiry the researcher explored the understanding and use of imagination to engage their student learners by second through fourth grade teachers in a public elementary school setting. Phase one of the research design included a teacher focus group interview and the compilation of data from the resulting responses. The preliminary data of this study was themed to ascertain the current standing of the imagination from the beliefs and notions of public school K-12 teachers. These short 90-minute interviews on the understanding of imagination and its practical uses in public educational settings were carried out focusing on elementary school faculty.

During phase two of this inquiry, the researcher enlisted the help of the district's instructional coordinator to identify and select three teachers from third and fourth grade who employ imaginative practices in their regular teaching habits. The researcher qualified the possible participants by performing pre-study observations and a brief interview to gauge their understanding of the imagination as well as their willingness to participate in the study. All teachers whom the researcher selected for further study identified themselves as a teacher who uses imaginative means to engage their students on a regular and consistent basis.

Phase three, held concurrently throughout the entire inquiry process, consisted of over one hundred hours of classroom observations through which the researcher collected information of the actual imaginative processes engaged in during typical upper primary classroom settings. The classrooms were selected from the school in which the researcher works in order to facilitate ease of access and focused mostly on the classrooms of the teachers selected for the in-depth interviews. One benefit of selecting a known atmosphere for this phase of the research is that the familiarity with students diminished the obtrusiveness of the observational research.

Phase four established the beginning of writing about the data collected and launched the undertaking of theming of observational notes and creating narratives from interview topics. During this phase, the researcher created presumptions regarding the use of imagination in an elementary classroom that were shared experiences from the interview participants and classroom observations. The work in this section of inquiry sought authenticity and checked for accuracy with the participants throughout the

creation of the final product. This stage occurred concurrently with the data collection phases.

Phase five of the research included the writing of the research into the final work of the dissertation and is created from the vignettes of stories, themes, and observational descriptions amassed over the period of four months. The researcher attempted to create a work of inquiry that is written in a manner accessible to those outside of academia in order to provide a practical use for the information obtained.

Research Questions

As stated earlier in this document, the thrust of this inquiry was to explore the uses of imagination by teachers in 2nd through 4th grades as a teaching method and instructional strategy. The ambiguous terms of ‘teaching method’ and ‘instructional strategies’ are by design and are meant to allow for broad categorization of the imagination in the context of the teacher’s role in imparting information to a classroom of learning individuals. The term teaching method may encompass classroom learning opportunities like demonstration, recitation, memorization of terms, etc. while instructional strategies may include more specific interventions that include generating and testing hypotheses, identifying similarities and differences, writing summaries, groupings, etc. With either term, the researcher focused his attention on the active role of teaching to provide specific content to students through imaginative means.

The research questions that guide this inquiry are as follows:

Question 1: What is the intention of teachers who utilize imaginative teaching methods/strategies?

Question 2: What types of instructional practices, activities, and learning environments support the use of student's imagination?

Question 3: How might teachers in K-12th grade make use of imaginative practices to engage students in learning?

In order to answer research question number one, the researcher focused on the perceived 'why' of imaginative work within the classroom from the perspective of highly reflective and creative teachers. The teachers were selected through consulting with the school's instructional coach and interviewed using in-depth and focus group settings. As stated in Kreuger and Casey's (2009) book titled *Focus Groups: A practical guide for applied research*, the purpose of a focus group is to discern the meaning or understanding behind a concept, issue, product, or service. Another source of information for question number one is the in-depth interviews outlined in the following section.

In order to answer question number two the researcher determined the 'how' of imaginative teaching through classroom observation. Using Eisner's (1998) ecology of schooling as denoted in *The Enlightened Eye*, the researcher focused on four dimensions as outlined by the author from the perspective of educational connoisseurship. The four areas under observation were the curricular dimension, pedagogical dimension, evaluative dimension and the environmental dimension and were directly linked to what happens through the mediation of the information from teacher to student.

The third and final question of this research study actively asks 'what now' and positions the learned information that has been themed and analyzed against the possibilities of focusing more attention on imaginative ways of teaching. The researcher

attempts to offer highly contextualized examples of each theme that has been discovered, and explores the possibility of adapting each theme as a developing skill that can be used by teachers interested in teaching through more imaginative means.

Participants

The participants of this study are categorized into two groups based on their level of involvement. Observational and interview data was gathered from all participants, however, three individuals were selected as in-depth participants. Their classrooms is where much of the observational data was gathered for the study and the accompanying interviews were more detailed and comprehensive. The secondary group of participants performed in focus group interviews and was observed rather minimally throughout the occurrence of the data collection. For the secondary participants, teachers were selected by the level of students they taught and by meeting the criteria developed by the instructional coordinator of Brookfield Elementary. The following chart shows the participants and their role at the research site school.

Ms. Katie Good	Third Grade
Mr. Jon Clymer	Fourth Grade
Ms. Eileen Murphy	Third Grade

Table 1: In-Depth Participants

Ms. Anna Fredricks	Kindergarten
Mr. Anthony Kurt	First Grade
Ms. Forester	Second Grade

Ms. Kim Garrison	Second Grade
Mr. James Malloy	Third Grade
Ms. Atkins	Fourth Grade
Mr. Singer	Fourth Grade

Table 2: Focus Group Participants

Instrumentation

- Focus Group Interview (Recruitment goal: 5-10 participants, Recruitment result: 7 participants, interview length: 90 minutes, 17 open ended questions, Protocol: Appendix B): Through a selection process involving the school's instructional coach, ten participants were named for possible involvement in the focus group discussion. An invitation was sent through email inviting the selectee to participate in the study. Several days later, those who had not responded to the original email were approached again, this time face-to-face. Seven of the ten agreed to participate in the interview and an acceptable date was set for April 10th, 2015 in the school's conference room.
- Pre-Observation Selection (Number of teachers observed: 10, Number of teachers selected for in-depth interviews: 3, Length of observation: 1.5 hours, Protocol: Appendix C): A protocol for observing possible participants for in-depth interviews was created by the researcher and the instructional coach. The observations took place on various days during the month of March and concluded by March 27th, 2015. After the final observations were concluded, the instructional coach and researcher met again to select the final participants for the

in-depth research. Five teachers were selected and approached individually by the researcher. One teacher declined participation, one teacher accepted but was unavailable for observation due to certain obligations, and the final three agreed to participation.

- Classroom Observations (Desired hours per participant: 30 hours, Total Hours logged: 107, Protocol: Appendix D) Following the guidelines for Eisner's Ecology of the Classroom, the researcher conducted observations of the three main participants over the course of two months in the areas of curriculum, pedagogy, evaluation, and environment. The observations were organized to view specific lessons as well as view entire day teaching practices and were conducted during the researcher's professional development hours or plan/lunch time. The observations were performed during the months of April and May of 2015 until the researcher believed he had reached saturation of topic.
- In-Depth Interviews (Length of interview: 90 minutes, Number of interviews per participant: 3 interviews, Protocol: Interview One (Appendix E), Interview Two (Appendix F), Interview Three (Appendix G) In-depth interviews were conducted to develop a deep understanding of the participant's view of imagination and its relation to their teaching practice. The three interviews were carried out one participant at a time until all three participants had completed all interviews. The interviews were held before and after school, depending on the participant's availability, and were scheduled three to seven days apart as suggested by Seidman (1991) in *Interviewing as Qualitative Research*. The interviews were

member checked and discussed further at later meeting times. Ms. Good was interviewed in Late April, Ms. Murphy in Early May, and Mr. Clymer in mid-May.

Data Analysis and Representation

In examination of the raw data that has been accumulated over the course of the inquiry, the portraitist researcher seeks to draw out themes that develop into a theory of imagination in an educative setting. The themes in a qualitative study are hidden in the gestures, words, inflection, behaviors, etc. of the participants and are teased out of the mass of field notes and transcriptions. Through a careful review of the raw data, preliminary themes are suggested that stand against reexamination and continued work in the field as the research continues. The work of a qualitative researcher occurs throughout the entire research process as well as the development of their own understanding of the topic. The initial framework and research questions inform the direction of the work and serve to guide the direction of the work, but often the intellectual agenda and the methods of the research change to fit the context and participants of the study (Lawrence-Lightfoot & Davis, 1997). The "constant comparative method" promoted by Glaser and Strauss (1967) encourages the dialectical process of collecting data while at the same time developing emergent themes. Through the synthesis of writing initial portraits, an act endorsed by both Lawrence-Lightfoot and Glaser and Strauss, the researcher was brought to reflection and analysis of concepts.

In anticipation of the narrative, the researcher then sorts the themes and developed a rough outline of common threads throughout participant observation and interview.

This thematic coding is the main work of a researcher when developing portraits and is ultimately the last step before the in-depth analysis begins. From these themes, pattern codes develop as exemplars and explanations of the topic's structure. Mile and Huberman (1994) note the importance of identifying pattern codes as a means for handling the volume of data in a qualitative study. They give four important functions of utilizing pattern coding during analysis:

- 1) It reduces large amounts of data into a smaller number of analytical units.
- 2) It gets the researcher into analysis during data collection, so that later fieldwork can be more focused.
- 3) It helps the researcher elaborate a cognitive map, an evolving, more integrated schema for understanding local incidents and interactions.
- 4) For multicase studies, it lays the groundwork for cross-case analysis by surfacing common themes and directional purposes.

While this type of work represents a need for focusing on patterns and similar experience of the participants, the qualitative researcher also needs to focus on the divergent voice of dissimilar experience. Both Maxwell (1996) and Seidman (1991) warn against ignoring the voice that would typically be deemed as an outlier in quantitative methods. When trying to identify the deviant voice of the participants, the researcher needs to evaluate their worth in comparison to the central themes. Do the contrasts provided by the deviant voice help to notice the boundaries of the convergent themes more readily? Seidman states, "It is tempting to try to put the [divergent themes] aside. These in particular, however, have to be kept in the foreground. The researcher

has to try and understand their importance in the face of the other data he or she has gathered" (Seidman, 1991).

The portraitist is urged by Lawrence-Lightfoot to construct the emergent themes by using five modes of synthesis, convergence, and contrast. These modes are listed as, repetitive refrains, resonant metaphors, institutional and cultural rituals, triangulation, and revealing patterns. Firstly, repetitive refrains are the themes that become obvious because of the repetition of representation either through the dialogue or observations of the classroom or culture. Secondly, the resonant metaphors are the words or phrases that present an overarching aesthetic of an experience. They are sometimes expressed through story, poetry, symbolism, or vernacular of the participants and give their perspective shape and meaning. Thirdly, the inspection of institutional and cultural rituals offers a perspective of experience that is often unspoken. The themes that emerge from this mode are focused on the continuity and coherence of the phenomenon. Fourthly, by using triangulation, the researcher looks for points of convergence that layer the stories from multiple participants or observations. When different stories offer similar meaning, the researcher has discovered a theme. Lastly, the researcher discovers the harmony of convergent voices through the mode of revealing patterns.

From this point of knowing the convergent themes and the divergent voice, the portraitist is ready to blend their understanding into a woven tapestry of narrative. The final story presented is a collage of dialogue, vignettes, and descriptions told by the voices of the participants and the researcher. This next section looks at the various voices that are present in the portrait as it reaches its final stage.

Importance of Voice

In defining the lens of social science portraiture, Davis (1997) focuses on the use of voice in all aspects of the inquiry process and enunciates the importance of proper articulation and tone in the authors writing. By proper, it is meant that the use of voice reveals the appropriate nuances that will aid in producing the developing portrait. The unbridled pen can result in a shift in focus that gives way to mixed metaphors, skewed perspective, and self-portrayal, all egregious errors in seeking a cohesive narrative. Lawrence-Lightfoot and Davis mention six aspects of voice that an author uses when representing individuals or groups of participants: 1) voice as witness, 2) voice as interpretation, 3) voice as preoccupation, 4) voice as autobiography, 5) listening for voice 6) voice as dialogue. Through careful consideration of the articulation and disposition of voice, the author can appropriately maintain the integrity of the written work of art. The next paragraphs will provide a brief summary of the types of voice that are used in this research study.

1. Voice as Witness

As an outsider to the environment being observed, the portraitist uses his voice as witness to speak from the vantage of what was recorded and perceived. This voice is able to make commentary on the habits and common ritual of the classroom and is able to notice patterns and behaviors that might be overlooked by someone who is familiar with what is observed. The researcher attempts to see the events taking place from a fresh perspective and voices his unique advantage through written descriptions.

As an arts teacher, the researcher is not totally unfamiliar with the occurrences of a classroom, which gives him some familiarity with the educational context. However, having never been a grade-level classroom teacher, he is unfamiliar with the experience of teaching multiple subjects to a consistent group of students. Also, since the research topic is situated within the context of the participant's performance as a teacher, each experience is novel and can be observed from a fresh perspective. Throughout the researcher's use of voice as witness, you hear his description, his words, and his perspective as the onlooker of the events taking place.

2. Voice as Interpretation

Through the interpretive lens, the researcher details the meaning behind events. This is found in the attempts to decipher the substance of the experience just as much as giving an expressive description to an episode. Geertz (1973), as cited in Lawrence-Lightfoot's work, makes a distinction between these two types of interpretation. "Thin description" is found through the uninterpreted, vividly described data, whereas "thick description" is accompanied by a thoughtful and penetrating interpretation (Lawrence-Lightfoot & Davis, 1997). In the writing of this research, both thick and thin descriptions are given to reveal interpretations as the researcher sees fit.

3. Voice as Preoccupation

The researcher's own interests in the episode are brought to the foreground of discussion through the use of voice as preoccupation. Occasionally, in the vivid description of an event, the feelings and emotions of the writer can be heard. The preoccupation of the researcher extends into the choice of which stories and vignettes are

shared with the audience. While the voice of preoccupation may sound like an undesirable quality in a research document, it is not the same as the bias that the author holds. The preoccupation, shaped by the personal story of the researcher, can aid in the telling of the narrative. A solid account of the background and professional experience of the researcher is given in the introduction of this research and should give insight to the meaning derived from this particular voice.

4. Voice as Autobiography

As any work of art, the creation of a portrait permits interpretation that is rooted within the identity and perspective of the artist. Similarly, the personality, values, understanding, and history of the researcher influence the style of their inquiry, the themes that they notice, and how they give voice to the story. This autobiographical voice gives an additional perspective to the meaning of the researched event and is not meant to overwhelm the voices of the participants. The voice of the researcher's past invites his experience and knowledge as resources to help interpret the meaning of the narrative.

5. Listening for Voice

Through careful observation and impeccable documentation, the researcher listens for the participant's voices. "We listen for their timbre, resonance, cadence, and tone of their voices, their message, and their meaning," states Lawrence-Lightfoot. In an effort to portray the experienced voice through a written work, the researcher must carefully choose the presentation of these slight nuances.

Throughout the data collection process, the researcher collected written notes of observations and interviews as well as both video and audio recordings. All of the data collected helped to support a wholistic depiction of the conversations and episodes. Inflection, silences, gestures, etc. were all analyzed and brought into the final narrative if they helped to reveal the subject at hand.

6. Voice as Dialogue

Unlike the other styles of voice mentioned in this section, the voice of dialogue seeks to illuminate the relationship between the researcher and protagonist as they discuss meaningful things. The researcher and participants share moments of reflection and deliberation in their conversation and it invokes an intimacy that can be experienced by the reader. In writing the dialogue, the researcher brings forth the symmetry of his voice partnered with that of the participant. As each contemplates their positions, they create a dialogue that is rich with meaning.

Data Analysis Overview

Inspection of the data collected through the measures listed above illuminated various themes that were consistent throughout the research process. These themes are nuanced by the stories and context of the participant's lived experience and give a subtle form to the data. The portraitist researcher gathered these overlapping understandings and created a thematic framework that will be the basis for the narrative construction (Lawrence-Lightfoot & Davis, 1997). The organization and development of the data analysis relied on an understanding of the symbiotic relationship between scientific and

aesthetic processes where description, interpretation, analysis and synthesis were brought into harmony through the use of richly worded narrative.

The search for these emergent patterns was not the beginning of the data analysis as the constant comparative method was used throughout the data collection process. When the task of the fieldwork was complete, the structure of themes took shape through reflective scrutiny and retrospective analysis. This type of data analysis can be the most rigorous and intellectually stimulating for portraiture due to the aforementioned balance of the scientific categorization of the data and the descriptions of authentic experiences brought to discussion through the participant's stories. It is the role of the portraitist not to merge the two unnecessarily but to allow the tension between the two to coexist as dialectical approaches (Lightfoot-Lawrence & Davis, 1997).

Research Schedule

After submission of the proposal for examination and consent on February 27th, 2015, the IRB approved exempt status of the research project on March 27th, 2015. Permission from the superintendent of schools (appendix A) had already been received for research on this topic and in the manner listed in the IRB packet. The researcher was able to select and carry out the focus group with two weeks after IRB approval and begin phase two briefly after that. Phases three through five took place during January, 2015 through June, 2015 with dissertation defense following shortly thereafter.

Chapter Four: Portraits of Teachers: their understanding and intent

Introduction

The focus of this study was to explore the use of imagination as a pedagogical tool through the observation and interviewing of teachers in normal day-to-day classroom activities. A determination for the need of this research was presented in the first chapter of this research document through the exploration of the current context of public education and further reinforced by the observed necessity for a wholistic means of content delivery. This endeavor started in chapter two as an examination of the historical context of the imagination and its cultural meanings throughout recorded history. Through this examination, I illuminated several theories to demonstrate the depth and breadth of beliefs concerning the use of imagination. This succinct inspection presented the groundwork for interpreting the modern theorists' framework and provided understanding of the variance of meaning associated with the term. A review of Dorsch's categories of imagination further worked to focus the aim of the inquisition through defining five modes of imaginative functioning that could be easily applied to the setting of the social sciences. Chapter three outlined the use of a qualitative research tool called portraiture to gather data by using in-depth interviews and observations of three specifically selected imaginative teachers and their classrooms as well as information provided by focus groups of general education classroom teachers. The method for

developing themes and elaborating on the contextual information provided by observation, completed chapter three's discussion with data analysis. This fourth chapter provides the discoveries made through the exploration of the inquiry's first research question on teacher intentions and provides examples of imaginative learning activities seen consistently throughout the data collection process.

Mosaic Portraiture

The findings from each of the three classroom teachers under observation and data accumulated through interviews and focus group participant observations are presented as a cohesive portrait on imagination. A traditional write-up of the data accumulated for a portraiture study would present the evidence from each participant as an individual narrative. However, I am looking to produce a unified image of the topic of imagination through the individual experiences of the participants. I have chosen this non-traditional style of portraiture because I feel it provides the essence of what the nature of imagination is in an elementary setting. Similar to Rivera's well-known portraits during his cubist period, the perspectives provided from multiple vantages help to define an image that allows the viewer a certain amount of interpretation while enjoying the aesthetic of the entire portrait. Each bit of narrative helps to create the gestalt of the final work, which I call Mosaic Portraiture.

The themes found in this chapter delve into the intentions of the teachers as they employ imaginative strategies in a classroom setting. Through developing the observational narrative and personal stories of the research participants focused on their intent, I aim to present part of the final portrait on imagination elucidating the reason why

teachers might attempt to engage their students in an imaginative way. Throughout the rich contextualization of the narrative, I also work to present an interpretation of the data in order to support the findings of the stories. The intent of this chapter is to provide a balanced examination of the essence of the intent of pedagogical imagination, which invites the reader to engage his or her own imagination into the fullness of the classroom context.

Perspectives on Imagination

As an arts teacher, I am surrounded with a medium that supports the use of student imagination. I am familiar with engaging students in both concrete and abstract ways with imaginative material and strive daily to get my students to connect with a form of expression that gives their imaginations freedom through performance and exploration. I am also not impeded in my work by constant district and state mandated assessments like many classroom teachers. For other arts teachers, the idea of purposefully integrating work or methodologies to engage student's imaginations is not foreign or unfamiliar territory. The work of the fine arts on any level or discipline is to connect individual students to forms of representation that expresses their artistic selves; an advanced step in the continuum of imaginative development. I explain all of this in order to demonstrate my perspective on imaginative teaching and will use it in comparison to the ideas of elementary classroom teachers who I've had the privilege of interviewing during this research.

Most, if not all, of the teachers I have spent time with during this examination on imagination have remarked on their teaching as being far from imaginative. From their

perspectives, they are teaching specific content entrenched in a strategy that develops a concept that can be assessed at the end of the unit and the end of the year state test. To them, teaching is a process that is absent of the freedom of imagination when it comes to how they teach. The teachers have shared that they feel they are using *their* imagination during planning their lessons; finding harmony between their ideology and practice. They have also noted that they use a great deal of personal imagination as they navigate discussions with their class and through the process of teaching the lesson. But when I first began formulating my idea for the topic of imagination as a teaching methodology, many teachers assumed that I wanted to see student work and the ways in which the students demonstrated their learning. I was given invitations to see student artwork on Native American housing structures, group presentations on the phases of the moon, and other student related uses of imagination. While discussion on student's use of imagination for representation of knowledge is an important topic that I address in part later in my research, it didn't quite get at the components of imagination as used by the teachers to relay subject matter to their students. My quest was to determine the means through which teachers deliver content and sort out the specific items that would be considered to be highly imaginative.

It is an interesting process to create a definition for a topic that is historically so convoluted and voluminous. Throughout our series of three interviews, teachers were given opportunities to work towards and amend their personal definition of the imagination. Their ideas were very similar but still offered unique insights from their own experience and perspectives. As an introductory glance at the teachers who make up

a majority of the research and narrative contained in this paper, I have written separate portraits for each of the three teachers as well as one about the school where the research takes place.

Portraits : An Introduction to the Setting and Main Characters

Portrait of Brookfield Elementary

From the outside, Brookfield Elementary looks like any other recently built elementary school; a brick, two-story building with dark tinted windows and a welcoming sign by the road with its name. The landscaping still young and the playground colors still vibrant and fresh. But when you walk in through the front doors, you notice there is something different about this school. The first thing that grabbed my attention on the first day at Brookfield was the warmth and jovial nature of the teachers and staff that work in the building. The principal, Mr. Abbott is an entertaining man in his early forties who would like you to believe he is the custodian. His dry sense of humor leaves you wondering if he is stringing you along for his own amusement or actually telling some portion of the truth. His sidekick and assistant principal, Mr. Weaver, will quickly jump in on the game with a nervous grin, a telltale sign that they are pulling your leg. A chiding "Mr. Abbott!" often comes from one of the secretaries in the front office, who are not to be accomplices of the charade. The teachers at Brookfield are similarly playful in social settings; quick with a laugh and a welcoming smile.

However, this is not always the demeanor of the administration and teachers. Neither of the men in charge is afraid to roll up his sleeves and dig into the tough issues when a child's future is at stake. The meetings held in the conference room are focused

on student growth and specific strategies to accelerate that growth. As a school placed on watch by the Virginia Department of Education, Brookfield needs to make suitable gains with its minority populations. The past few years have shown a steady decline in test scores as the population of the school has changed and as the state issued test has become more difficult. The administration has been successfully leading the campaign to close the gaps that are apparent from last year's data.

The teachers in the building show the same fortitude as their leaders. Focused on their mission to educate all children using the best tools they have been trained to use. However, this solitary target doesn't interfere with the teacher's other roles in the classroom. They are nurturing, caring, and friendly types who put the needs of students before the test scores they achieve. The staff organizes weekly donations for local charities by paying a dollar to be able to wear jeans on Friday, they start fundraising efforts for classroom supplies and write grants to provide backpacks full of school supplies at the beginning of the year for students in need. They also coordinate events in the school's most impoverished neighborhoods, bringing hotdogs and hamburgers with smiles and games for families to enjoy.

Sometimes, when I'm on my way to visit teacher's classrooms for an observation or a quick chat, I stop to look at the student work hung outside of classrooms. I have taught at schools before where teachers weren't allowed to display work that had spelling or punctuation errors. One school even forbade student work that didn't directly relate to content standards. Those hallways were always so bleak and uniform. But at Brookfield, it is understood that students are learners that can be celebrated even when they spell

"end" with an "i" instead of an "e". Colorful drawings of bar graphs depicting which favorite animal is most popular line the walls of the Kindergarten hallway. In second grade, the unit on Quonset huts has yielded many tiny miniatures that are gathered outside each teacher's doorway. Remnants from a recent book fair door-decorating contest still remain. The winning "Giving Tree" classroom has all of its fruit with each student's name written on a bright red or green paper apple. It is apparent that the creative spirit of learning is a celebration within the walls of Brookfield.

Portrait #1 - Ms. Katie Good

It difficult to keep track of Ms. Good as she bustles around the room helping her students situate their belongings in preparation for a new day at school. While the third graders enter the classroom still sluggish from sleeping in a little too long, their teacher is bubbly and cheery, greeting her students with an enthusiastic "Good Morning!"

If you would ask the members of Brookfield Elementary's faculty to make a list of the most creative teachers on staff, without a doubt, Katie Good's name would be at the top of the list. Katie is in her early thirties and is always dressed to match her sophisticated yet approachable disposition. She is in her first decade of teaching and yet holds the air of authority befitting a veteran teacher. She glides to a student who is raising his hand, crouching to meet the eyes and level of the attention-seeking youth. She smiles and nods throughout the conversation, as the boy shares with Ms. Good about a book he is reading from the school library.

Katie didn't start her adult life as a teacher. As one of several second-career teachers at Brookfield Elementary, she obtained her teaching licensure through a

specialty "career switcher" program from a local university. Her previous employment was as an archeologist, giving her experiences that fed her desire to travel and collect stories from past civilizations. When she began to entertain the idea of settling down with her new family in the heart of the Shenandoah Valley, she knew that her dormant passion for teaching would be her new career direction. After a year's worth of extra classes, she found herself teaching as a probationary teacher at Brookfield. Now, four years later, Ms. Good has settled perfectly into her new occupation.

Ms. Good's gentle poise carries her through the labyrinth of desks positioned in her room around a bluish grey carpet as she works her way from student to student. Her classroom walls are covered in student work from recent projects and procedures for creating a story or performing a scientific experiment. There are nooks and niches around her room for various activities. She has a bin filled with stuffed animals near the sink in the back of the classroom. During silent reading activities or inside recess, students are allowed to choose a "friend" from the bin to join them. The corner farthest from the door hosts a collection of science related materials. A snakeskin, fossils, sticks and sea shells sit around a tank of water whose filter runs continuously throughout the day's activities, adding the calming murmur of a gentle spring.

Katie crouches next to eager children and gives them her total focus as she talks them through their morning work. Most students work on morning math activities while others unpack their school bags or clean out their desks to get ready for the day. The morning routine is obviously paramount to her classroom ecosystem. All students work on a task that, for them, marks the beginning of their school day.

In the corner, a student is working on the multiplication questions.

"Ooo, I forgot about that way!" Ms. Good exclaims as she examines the student's work at his desk.

Multiple strategies for computation are often taught at Brookfield Elementary to anchor the conceptual idea behind the math problem. And even though the process that the third grade boy used for his math work was from earlier in the year, it is unlikely that Ms. Good's sharp mind would ever "forget" a strategy. Other students glance over to the corner where the boy sits, wondering what problem he might be working on and what mathematical operation he chose that brought out Ms. Good's exclamation. He smiles up from his work. Recognizing that he performed the correct strategy but discovered the wrong answer, she moves a chair over from a nearby desk to sit next to him and take a closer look at his paper.

"OK, nine times four is thirty-six, but four times twenty is not sixty..." she works with him a bit more and directs him to think of his math facts. "What is four times two?" she probes.

The boy responds with the correct answer and then quickly changes his earlier computation. Ms. Good gives him a high-five and as she gets up to push in the chair she freezes and sniffs the air.

"Who had pancakes for breakfast? I smell SYRUP!" Several students raise their hands and the boy smells his hands to see if he, too, smells like the pancakes that are being served in the cafeteria for breakfast this morning. The class giggles and one student puts his arms up in-front of him in zombie style pose and says,

"Pancakes...Mmmmm..." Ms. Good smiles and turns back to the boy she was sitting beside,

"Alright, let's try this again." She points to the next problem as she turns her body to move toward another student. The boy sets himself to task and works on the new question.

On the other side of the room, a student is working on the same question. Katie works her way to the obviously frustrated student, stopping to give checkmarks to students who have already figured out the two computations. When Ms. Good reaches the girl she asks quietly, "Did you figure it out too?" The child shakes her head. "Can you draw a picture to solve that?" she offers. The girl nods and starts drawing. Katie stands up straight and looks over the class and speaks very clearly for all to hear.

"Girls and boys, once you have finished your Morning Math and I have given you a check, you can get the supplies off the shelf to play the multiplication review game." she announces.

Several students who had finished their work earlier are already playing the game, flashcards in hand and sitting on the carpet. They move their game pieces across the board, each taking a turn when they have answered a math fact. Another student joins them and they add another game piece and start from the beginning. Ms. Good greets the students who have freshly arrived from the morning buses or breakfast and gives them the overview of the morning work. They move to situate their backpacks as the teacher works her way around the room giving more checks to correct work. One student, named James, who has recently arrived from breakfast, is working on sharpening his pencil.

Sounds of beatboxing emanates from his lips as he rhythmically "scratches" by thrusting the pencil into the electric sharpener on the offbeats of his improvisation. Ms. Good notices, but gives him time to play. James is a student whom most teachers would peg as off-task and easily distractible. A teacher could easily spend most of their day refocusing his tangential explorations, whether it is flexing his "guns" in the classroom's mirror, playing with objects at the science corner, or reciting lines from his favorite movies. Ms. Good understands the nature of this unique child and allows him a bit of wiggle room as long as there aren't major distractions for the other students. Eventually the beatboxing reaches a crescendo that is hard to ignore and Ms. Good politely asks him to finish and return to his work. Like an obedient puppy, he smiles that his errant behavior didn't go unnoticed and quickly finishes sharpening his pencil and gets back to work.

Ms. Good finishes handing out graded work to individual students just as the bell tolls and the morning announcements begin. As per normal at Brookfield Elementary, the beginning of the school day is welcomed with a peppy song. Some students choose to file away their morning work in folders and clear their desks while others move to the center of the carpet and begin to dance and sing with the blaring music. Onlooking students grin and watch the merrymaking of their peers from their desks while Ms. Good makes her way to the whiteboard to update the schedule for the day. When the music has finished, the booming voice of the principal takes over and welcomes students to another day of learning.

"Good morning boys and girls! As we begin another school day, let's pause for a moment of silence." A palpable hush falls over the class as the dancers return to their desks to put away any unfinished work from the morning.

Ms. Good takes the quiet opportunity to check in with the final student to walk in from breakfast. They have a brief conversation that is filled with nods and smiles and the girl happily unpacks her pink backpack and sits in her chair.

Mr. Abbott's voice begins again, "Congratulations to our 3rd and 4th grade award winners for mini-society..." he runs through a list of fifteen students, "...and remember teachers, as mentioned in yesterday's news brief, we will be having a tornado drill at 9:45. Thank you, and have a great day!"

At the mention of a tornado drill one student starts spinning around his desk while another pretend to be blown away by a fierce wind. Some kids look at the clock and argue whether or not 9:45 has already passed or whether it is actually earlier than that.

"Nine forty-five is in three minutes!" announces a young girl with long brown hair.

"No, it isn't even 9-0-0 yet. Look at the clock," declares a boy from across the room.

The girl points her finger at the analogue clock and begins to count from one under her breath. When she gets to nine, she tilts her hand and her head to line up the big hand to see that, in fact, it precedes the tic mark representing nine. She thinks for a little and then nods her head in agreement to her classmate's statement.

"Alright, alright, alright...", Katie half-raps in a low voice, "Let's get back to our seats, get back to your seats." She positions herself at the board in front of the carpet and surveys the students. "Table group three, table group five...you look ready," she commends. "I think they were the first ones to be in their seats and ready." She turns to put a tally mark under each of the two table group's names on the board. After a few announcements she quietly says, "If you have a class number that is less than ten, you can line up for specials." Half of the class stands up and moves across the room to the door.

One student pipes, "What if my number is ten?"

Ms. Good answers his question with a question, "Is ten less than ten?" Her hands demonstrate the idea of "less than" by creating an imaginary number line in front of her. Her left hand moves in a vertical chopping motion when she says the word "ten" the first time while her right hand sweeps away from the left while she articulates the words "less than".

The eager and smiling student sits back down from his half crouch to wait for the next group of numbers to be called. After a very small moment, Katie calls for the rest of the class, "If you have a class number that is greater than or EQUAL to ten," she looks directly at the boy who asked the question, "you can line up at the door." The student and teacher share a grin. After the final students line up, the class quickly moves through the door and out into the hallway on their way to specials class. The classroom that was only moments ago filled with bustling activity is now empty and silent.

Ms. Good's classroom is most often filled with students wearing smiles. That is not to negate the hard work that is performed everyday, the children are proud to work

for such a charismatic and caring leader. The demonstrated exuberance of their teacher is a model of the learning affect expected of each member of her class.

When I sat down with her to discuss the topic of my research, she was enthusiastic and reflective of her past experiences. "Imagination is freedom to step out of what you expect and what others expect of you and just let go. Freedom from being self-conscious..." her voice falters as she speaks with a hopeful air, "it is your imagination; it can be whatever you want it to be." Ms. Good is sitting across from me with her hands clasped together on the desk of one of her students. It is after school on a Friday right before spring break, a testament to her dedication to professional development and the task of teaching. Her classroom is finally still after a long week of teaching; the only noises are the bubbling of the fish tank in the science corner and the flip-flop sounds of her daughter playing with a friend in the hallway. When I asked Katie if she would be a participant in my study a year or so ago, she jumped at the chance. She enjoys discussing theory and ideas especially when they have to do with her work. She is an enthusiastic teacher whose level of energy matches and even outpaces her student's throughout a full day of learning.

No stranger to the act of imagining, Katie has divulged to me on several occasions how she uses her imagination to wrestle with personal situations and to relieve stress. She blushes when she tells me this and sheepishly remarks about how foolish she feels admitting this to another adult, but I've also witnessed her teaching persona. She has transformed into a character from a short story, pretended that she is on a safari, and has moved her body to demonstrate falling rain while talking about the water cycle, all

without a moment of hesitation or ounce of embarrassment. Somehow being in her classroom in front of her students removes her self-conscious filter and she is free to share her imaginative escapades.

After a pensive pause, her eyes look to me for acknowledgement that she is on the right track and I nudge her with a nod to continue. She looks to the wall to her left as she mentally prepares what she wants to say next. A slight smile and playful demeanor emerge as she turns back to me and says, "If you're daydreaming or imagining, it is freedom from what is often our typical social constraints. I see kids imagining mostly during recess and it's an unstructured time of the day." She shrugs. "So, it lets them have a break from what we expect of them for the rest of the day."

Katie describes a group of children who run around the playground pretending to blast each other with lasers or gather in the "bus" on the playground where they reenact the responsibility of dropping students off at their homes at the end of the day. She mentions a group of students, mostly girls, who play games where there are very specific roles for each of the actors. One student plays the mother, while the other playmates fill the roles of sisters and best friend. The dialogue that occurs is remarkable in its mimicry of a real life situation.

"Then I wonder...is it something that is only controlled by our background knowledge about stuff?" she continues, "I mean, can you really imagine an ocean if you've never been to a large body of water before?"

Her eyes become distant as she thinks about what she just said. Her hands now clasped underneath her chin, she ponders, "I'm wondering about people who do

something that has never been done before and I feel like they had to have a lot of imagination to be able to do that." She pauses, thinking of an example, "Like starting a new artistic style... I feel like those people use a lot of background information, but where does *that* stop and where does something *new* begin?"

When Katie was a child, she had plenty of opportunities to play by herself and with a neighbor friend. She remembers long periods of time where she was allowed to play outside and in a clubhouse. They would play teacher games, prepare food in a make-believe kitchen, and entertain the idea of having to dodge acid rain. Her and her friend would jump from the chair to the sofa and then on to the coffee table in order to escape the deadly rain. She laughs as she remembers and she blushes again.

Katie's thin athletic frame repositions to lean forward on the desk in front of me as we discuss artist and musicians. She is a passionate speaker and although she feels like the words she shares tumble out of her mouth as incomplete thoughts, they resound with ideas and questions that I have about the imagination. What are the relationships between what we know and what is new? How do we develop new understanding? What is the imagination's role in creating something novel and innovative? I can tell that our conversations will divulge many new questions, insights, and stories.

Portrait #2 - Ms. Eileen Murphy

It has been a difficult year for Ms. Murphy. Her group of students has tested her calm demeanor throughout the second half of this year. Yet somehow, she has retained a firm grip on their behavior and is still regarded by them as a loving and doting teacher. Her sigh as we sit down to talk is evidence of a long day filled with third grade

shenanigans, but it doesn't take long before she is bragging about their work and showing me a picture that one of them had drawn of her. Her love for her job and the joy the student's bring her is apparent, even on days like these.

She shows me a small postcard-sized manila envelope and says, "I bet you can never guess what is inside of this?!" Her eyes dance with the challenge she is giving me. I have no idea whatsoever, but I am intrigued. "I saw an advertisement in one of the education magazines for a frog egg," she answers. "The kids are so excited. We put him in my tank today after I filled it with pond water." She continues with a story about how she collected the pond water at a friend's farm and about how she almost tipped the boat over while dipping in a large five gallon bucket. Her stories are filled with detail and exciting developments. I feel like a student in her classroom listening to her share her personal story.

Eileen is a graduate of the school system she now works for as a third grade teacher. Her perspective as a gifted student who was raised by divorced parents, both struggling to make ends meet, is as valuable as her university teacher training. She has an unmatched compassion for her students and is concerned with their exposure to adult problems in today's culture. Even though she is single and without children of her own, every year she adopts twenty-three new students as her own.

When she was young, Eileen was often allowed to entertain herself. As an only child bouncing between two households, she kept busy by imagining that her stuffed animals were real. Her dad had an old VHS video recorder that she would often set up and use to film interviews with her characters. She would have to wake him up

sometimes to ask for more tape after spending the whole morning recording. Since he worked evenings, he would oblige and then often go back to sleep. She always had a specific goal in mind as she played make believe. "Being the only one playing is easier because you already know the rules." Her favorite, a stuffed bear named Mr. Bento still has a place in her home, on a shelf in her study.

Eileen remembers the difficulty, as she grew older, of playing with other students her age. In middle school, she would play with a group of girls in the after school program at the city's recreation center. They would create their own dance routines to popular music from the radio and it wasn't always easy trying to follow along with someone else's ideas. In her classroom, she helps students navigate the unfamiliar territory of working together. For her it was difficult; she wants it to be easier for them.

We are sitting at the u-shaped table that also seconds as her desk. Stacks of completed papers line the far edge and a few picture books lay open, the products of a busy day. She shuffles some notebooks around as I ask her about her personal definition of the imagination. Before she begins, she grabs her water bottle from a nearby chair and sets it in front of her.

Her room is a creative catastrophe. Piles of artwork and schoolwork intermingle on countertops; the fish tank with a newly acquired frog egg is squeezed in-between a bookshelf and a box filled with hanging files. The walls are covered with student work and charts highlighting specific desired behaviors and knowledge. The desks in her room outline three sides of a square with two smaller rows of desks nested in center. There are several areas that are established work zones and reading corners for center work.

Despite the room being messy, Eileen knows and utilizes every inch of her room. During small groups, students spread out to the corners of the room to work on their reading or math classwork.

After thinking about my question on the essence of imagination for a moment, she begins. "I would think of imagination as creativity and new ideas or different ideas about something that you're thinking about. You have an idea about something and then you come up with a new idea about it." She pushes her brown, short cut bangs to the side and adds, "Not just blindly accepting what something *is* based on what other people *say* it is. Think about it in your own way!" She declares the last statement as if she is actually speaking to her students. It is a phrase I have heard often in my observations of her teaching. She works tirelessly to motivate her students to do the thinking beyond the work that is assigned. She has mentioned in our discussions how students can follow the procedure of a math problem and get the right answer even without even understanding the concept behind it. "But the student needs to have the concept as well."

"It parallels a critical thinking; the way you think about something deeply in order to get your own perspective," she continues, "a person can be imaginative in anything you are doing. I even think, like in math...you can think of ways to solve a problem that other people didn't think of." That's why she asks kids to explain the strategies that have used for a math problem. Their thinking may not be as linear as the process that was taught, but they may still understand the underlying concept. "When students put their work into words, they come to a realization that they either know or don't know what they are doing. We talk a lot about math and science in our classroom."

Throughout our discussions, she peppers the dialogue of her thoughts with examples of her own students. She embraces each of their unique personalities and works to see the good in even the most difficult of students. She understands the importance of acknowledging her individual learners and they love her for it. That is not to say that she isn't occasionally at odds with a student. She moves easily between the compassionate, mother-hen disposition and the disciplinarian when students need more than just a stern look.

Eileen remembers one of her most favorite classes as she worked to get her degree several years back. During the class, they were encouraged to explore their creativity and worked to imagine a classroom without the typical boundaries. Through this class, she reconnected with some of her childhood passions. She recently submitted her painting from that class in the school's art show and her students were amazed. This type of personal connection to art changed the way she thought about teaching and it revived her passion for drawing and painting from when she was a child.

When she was in fifth grade, her teacher allowed her to work on special projects to demonstrate her learning. Her work on those projects now makes up a majority of her memories of that school year. So now, she tries to give her students those same types of memories. Her classroom and lessons are filled with opportunities for the students to create. "Imagination can be applied to anything...any time you are having a different idea, which can be different from the way someone else, or even you, have ever thought about it before. That can be imagination."

Every year at Brookfield, Ms. Murphy works with her class to learn a choreographed dance to perform at the school variety show. In the past few years, her students have owned the stage with their sunglasses and handcrafted t-shirts; stepping, clapping, and moving to a popular song with rewritten words about reading. When I walk by her room, her students are most often engaged in conversation or practicing some sort of movement to help them learn. "An active student is an active mind," she comments. She stands at the front of the class with her arms outstretched. With their eyes glued to the teacher, students mimic her movements placing their arms on an imaginary horizontal line to either side of them.

"Line segment!" they shout. She moves her right arm to point towards the ceiling.

"Angle!" they respond.

She has sorts of tricks up her sleeve to get her students to remember the information they are required to know in 3rd grade.

Portrait #3 - Mr. Jon Clymer

Mr. Clymer towers above his fourth grade students who are sitting at their desks. Within four strides he reaches the back of his classroom to help a student whose hand is raised. He teaches three different classes the same material throughout the day and struggles with the dry content of teaching math processes. "If I move this number down here," he points, "I won't be able to subtract it. This is the remainder." He takes a moment to remind a student about their activity with grouping numbers using physical objects. Mr. Clymer uses his hands to stack imaginary chips on the students desk. "You see, I end up with three piles of seven, but I have two chips left over..." His eyes look to

the student as she purses her lips and does the 'I'm thinking really hard' look. "Let's do this over again," he states. He moves quickly to the front of the room to grab a container of poker chips. He spends the next minutes helping the girl stack and regroup the number twenty-three into three stacks.

Jon and I met early in the morning for a couple of sessions to talk about the imagination and his teaching practice. He is a tall, long-legged man in his mid-thirties with a charming smile and gentle personality. He entered into my room, coffee in hand, and sat down at a student table on smaller than average chairs. He places his mug on the table and leans back. With his right leg crossed over his left, with his hands behind his head, he began to pick away at his understanding of the imagination.

"Probably, what I think of mostly [of imagination] is being able to take things around you, come up with things in your head," he says slowly, "and create something that may be real life situations...maybe not real life situations." He and I share a similar past. He grew up on the farm and until he was older, didn't have many chores to keep him busy throughout the day as his parents worked. Instead, he filled his time with playing in the haymow, sometimes alone, sometimes with his cousin. He would create mazes, stacking square hay bales to create structures and play "Cowboys and Indians". Often, when his cousin would come over to play and they would stray from the normal territory, playing aliens or some other imaginary game. "He was always more imaginative than me, making up all kinds of strange situations," he remembers chuckling.

Other times on the farm, when he was older, he was tasked with the job of mowing hay on a tractor. He remembers singing tunes from the radio at the top of his

lungs while by himself on the tractor, the deafening noise of the machinery all but overwhelming his tenor tone. "It takes a long time to mow a field," he recollects. "Sometimes, I'd be out there for a full day or two just mowing or baling hay." He ponders about the introspective times as well. While on the deafening tractor, it's easy to lose yourself in your own thoughts as you complete your repetitive task. "It could be cathartic just sitting on the tractor in your own thoughts," he added. He would sit and imagine conversations with friends or try to figure out how to build something for a specific purpose.

Growing up with a lot of time on his hands, he found himself imagining all types of things. "To be able to create from either some things that you do have access to or maybe you don't have anything. You can come up with and create things to entertain you." Growing up on a farm also meant growing up with simple means. He didn't always have everything he needed to play a game, so he would have to make it up. He shares a probable scenario from his youth where, basketball in hand, a younger him would challenge the clock to drop the winning shot at the buzzer. "The crowd goes wild," his arms spread out gesticulating the enormity of imagined sound, "five...four...three...two..." His hands posed with perfect follow-through as he watches his shot catch "nothin' but net!" The crowd goes wild as he runs a victory lap or two around the small gravel court on a farm in the Midwest.

The passion in his adult life reflects the skills he learned in his adolescence. He is a hard worker and has a part-time job over the summer months building and painting to help provide for his family. He enjoys working with his hands and his eyes light up when

he talks about building something from scratch out of wood. "Imagination sometimes for me is not having any kind of blueprint, just knowing what I want it to look like in the end. Not necessarily having a set of written plans for whatever it is that you are doing. Just getting creative in the process of moving to that endpoint."

Jon doesn't necessarily see himself as an imaginative teacher. He teaches fourth graders math, an area he thinks isn't as creative as social studies or writing in his perspective. However, he is a highly reflective teacher and through our discussions he is beginning to see what I see; the use of imagination is inescapable when teaching any subject.

Jon often shares his own experiences with students when he teaches. The connection that is made through sharing a personal story is an important thing for him. He also enjoys creating scenarios that make the math processes applicable to student's lives. "I don't know how many of my students have actually measured anything besides in a classroom. I like to have them connect their learning to something that's real." Using stories is a great way he connects students to the information being taught.

At recess, Mr. Clymer enjoys playing basketball or soccer with his students. He taunts them with his size, holding the ball way above their heads with one hand. The students enjoy his playfulness and look forward to the days when he has outside playground duty after lunch. One day, I saw him break up a scuffle between two boys that was about to go to fists. It would've been easy for him to wrangle the two boys and walk them sternly to the office but instead he decided to have a talk with them. The boys were obviously agitated with each other, but came together to talk when Mr. Clymer

crouched down between them. With a hand on each shoulder, he gently talked with them about the issue that caused the skirmish. The conversation ended with a few words from each of the boys, a couple of smiles and a three-way fist bump. The students dashed away to continue playing.

Mr. Clymer holds the personal development and educational advancement of his students in the foremost of his thoughts. For some reason, this year is particularly difficult when teaching his classes math procedures. He has struggled to find new ways to teach the same concept since the students need to relearn how to do long division. The thought of his students leaving fourth grade without knowing the needed information keeps him up at night. In and out of the classroom he is a mentor and possible father figure especially for many of the boys in fourth grade. Always quick with a smile and a chuckle, Mr. Clymer makes real connections with his students that live beyond the year they are in his classroom.

Defining Theory of Imagination

Throughout my interviews it was clear that my teacher participants didn't have a clear understanding of what the imagination was or its probable role in an educative context. Through our series of in-depth interviews and focus group interviews, we determined a definition that seemed to satisfy everyone. The imagination's tie to self-generated thinking is evident through research, etymology, and the discussions of the term in the interviews above. It is performed as a cognitive act either purposefully or intuitively to manipulate our percepts, sensory data, and conceptual knowledge. It can be used to picture a probable reality or a totally impossible future. This type of creative

cognition gives the user opportunities to take what they know and use it in a different way or to from a different perspective than before. When someone is thinking imaginatively, there are no barriers in their way except for what the person knows. They can imagine something that is real or fantasy, something nearby or far away, and they can imagine possibilities to complex situations through playing out various combinations of elements involved. The imagination is the aggregator of our thoughts and the cohesive structure that continuously gives play to new thoughts and ideas.

The Intent of Teachers

In early correspondence with my teacher participants it became evident that the idea of teaching using imaginative means in a classroom was all but a foreign concept. The teachers understood the idea of imagination, even in relation to their classrooms, but did not think that the ways they taught were linked to that understanding. Often times, after an observation of their classroom, the teacher was very apologetic. "I'm sorry what we were doing wasn't very imaginative today" or "I'm sure there weren't a lot of things about your topic for you to see in *that* lesson". On the contrary, I found that every single lesson I observed had the potential to engage the students in the use of their imagination in at least a minimal way. So what causes this gap in understanding for teachers as they reflect on their own teaching practice? I'm suggesting that the use of imagination as a means for educating is an engrained and intuitive practice for many teachers. It is such an innate ability for good teachers that they don't notice the use of imagination as a separate function of their delivery of content. For my first research question I sought to

delve into the intentions of teachers who use imaginative teaching methods. However, the intentions of those teachers tend to be more implicit rather than explicit.

Reading between the lines of the interviews and observations allowed me to derive themes that focused on the intention of teachers who are considered imaginative by their peers and administration. The given value of the individual themes is due to their prominence in everyday teaching practice. In my final focus group interview with the main participants of the study, we were able to talk about these themes with more specificity (Appendix H). In section of the portrait, I will aim to summarize the intentions of teachers who use imaginative teaching methods and focus on the four themes; developing background schemes, creating engagement, retaining knowledge, and promoting self-generated cognition. It is interesting to notice that all the themes are curriculum focused and are bent on building familiarity with content, in contrast to arts teachers who teach in a manner to also build an individual student's efficacy for expression and creativity. Also of note, is the overlap found through discussing the topics. There are many instances where a certain illustration could be used in several different sections. This speaks to the multi-dimensionality of imaginative moments and how interrelated the themes are in the practice of teaching.

Building Background Schemes

Not all students enter school with the same background knowledge. Teachers in many schools educate students from diverse backgrounds making the search for common knowledge difficult. What do students know? How did they learn what they know? To what depth and accuracy did they learn it? In a progressive perspective of education,

learning and experience develop simultaneously over time creating a naturally occurring cycle. However, when student's exposure to experiences are increasingly diminished and they are pushed ever harder to think beyond what might be considered to be developmentally appropriate, their operational context proves to be inadequate. The only significant connection students have with new information is through the relevance provided by their own lives and thoughts. These new connections are the conceptualization of personal meaning combined with the possibility of what could be.

Every student has their own set of schemes that they use in every intentional cognitive process that informs them of the best probable outcome for the given situation. These schemes are built from the student's past experiences so are uniquely combined when engaged. Teachers from my focus group panel as well as my in-depth interviews prioritized the building and engaging of background schemes as one of the top uses of the imagination in their classrooms. Taking the time to build the background knowledge before a given assignment or lesson works to bring all students to the minimum amount of understanding necessary for intellectual engagement with the lesson. Attempting to make further connections too soon and too forcefully could disrupt the natural learning pattern that would anchor the new knowledge through the discovery process. Using an imaginative tool to promote individual thinking and scheme building gives the learner the ability to make the necessary connections between the new and old material. Duckworth (2006) has noted that the development of meaning through the imagination is meant to be a personal experience made by the thinker's own compulsion. If this is the case, a certain amount of trickery is involved for people who work to teach imaginatively! The

interviewed focus group participants remarked on ways in which they use imaginative means to purposefully develop student's background knowledge. Ms. Fredricks, a kindergarten teacher known for her action filled lessons, shared a story about how her students work through the unknown using their imaginations.

"We act out a lot of things in our class. Kids put their own spin on things and I think that's imagination. For example, today we were acting out the lifecycle of the ladybug. One of my kids ran to the front of the classroom when we talked about what happens in the larvae stage. He shouted, 'I'll be it!' and booked it to the front of the room. He got to the rug and got down on all fours and realized he didn't have enough legs to represent the picture. Another student shouted out 'Cut some paper, we need more legs,' and suddenly there was a group of boys cutting and tearing paper to make more legs. When the legs were finished, they laid the paper down on the floor beside the boy and said, 'Ok, now move!' The boy tried moving all six legs...his hands and knees and the pieces of paper, but he soon realized he couldn't do it on his own and asked for help from the other boys. The two boys jumped in, reached around the boys back to each move a leg, and like a giant game of moving twister, made their way around the rug. I think all of the kids will remember that a ladybug larvae has six legs now!"

This type of play learning to develop understanding isn't isolated solely in the lower primary. Ms. Murphy shared with me the story of how her students were wrestling

with the new concept of angles as they made their way through the forest during recess one day.

Ms. Murphy led her students out of the school and they walked towards the neighboring copse of trees. The grass was still wet from the storm of the previous night and students were delightfully stepping in gathered pools of rain in the uneven turf. They made their way onto the walking path of the *Bunny Trail* and started to follow the guided path but quickly found their own adventure in the wooded area amongst the downed sticks and brush. The spring storm from the night before had knocked down a significant amount of old limbs and debris supplying ample tools for the busy hands. Quickly students started lining up sticks to make shapes and designing things in the fresh mud. A group of three students came over to Ms. Murphy, holding two sticks between the three of them. "Look, Ms. Murphy! Angles!" they declared gleefully as they began positioning themselves to create first acute then obtuse angles. Other students lifted their heads from their work to observe the work of the three. The smiles on the watcher's faces made their eyes shine as they recognized the topic of interest was from class earlier that week. Soon other students started mimicking the work of the three, drawing in the mud or creating with sticks their own angles. Moments flew by unbelievably fast. Students were disheartened to learn that it was time to go back inside the classroom because recess was over. Some of them brought sticks back to the classroom to share with the rest of the class.

The previous stories highlight a moment of learning that is student led where discovery is sought after by students grappling to understand a new idea. But how can a

teacher harness the natural learning that occurs spontaneously for children when they are playing in a more direct and planned fashion? A second grade teacher named Ms. Forester was a member of my focus group team. I was able to observe her when she taught on several occasions and I witnessed a very similar moment during one of her reading group sessions.

The student stops mid-sentence and stumbles with a word that he doesn't understand.

"Sway?" he asks. His brow is furrowed and his head is cocked to one side looking to Ms. Forester for an explanation.

"Let's everybody take our hand and go like this," she answers. Her hand is in the air like the branch of a tree and she starts to move her body from side to side. The students mimic her as her hand and fingers move from right to left depending on which way she is leaning.

"Now let's all say 'sway'...'sway'..."

The students respond and the entire group moves back and forth swaying gently as if pushed by a gentle breeze.

The student look back to the book and starts reading out loud again as his class members listen to the story unfold.

One of the strongest uses of imagination in the development of background knowledge is in surrounding the facts of a topic with the context to which it belongs. The pinnacle of the imagination in a classroom is found through the fullness of having everything connected and contextualized. In a period of history where information is

readily accessible and easily stored on mechanical devices, it is easy for our society to see thinking as a parallel function to the inner workings of computers. However, information that is stored in the human mind is never one-dimensional. It is made multifaceted by the emotion, intention, and personal meaning of the learner. This bias colors the meaning of every scheme as it enters the brain and works with other bits and pieces to ground the new information, immediately forming new connections. Kieran Egan (1992) speaks to the imagination's ability to make new meaning by combining elements from its knowledge base.

"All kinds of associations curl around each new fact, there is endless blending and coalescing, and connections are made, broken, and remade. And no small part of this activity involves the imagination. The more energetic and lively our imagination, the more are facts constantly finding themselves in new combinations and taking on new emotional colouring as we use them to think of possibilities, of possible worlds."

One could say that the power of the imagination through engaging background knowledge is in its power to make connections between similar and disparate information. The more tenuous the connection, the more the brain has to work to reconcile the difference of the objects. This causes information to become isolated and easily forgotten, unattached to a context or story. On the other hand, the more connected a concept is with other information, the more fluidly the set of schema reconfigures or absorbs new schema. This is the true nature of the imagination, in its combinatorial power for revealing the alternative and parallel meaning for a thinker's background information.

Ms. Good makes connections to her student's prior learning by using examples that she is sure everyone knows. In the following depiction of a lesson on measurement,

Ms. Good uses items like a swimsuit and a tear to develop understanding of terms that are memorable and instantly relatable.

"Travel high, travel low, but just don't travel slow," chants Ms. Good. Students who have been scattered around to different stations throughout the classroom make their way to the carpet that surrounds her vintage rocking chair. She is perched on the edge; her elbow leaning on one chair arm, hands clasped, waiting for the return of her students. She looks around as the third graders start to cluster together at her feet. The last student hastily closes his folder and joins the rest of the class on the floor.

"Today, we are reviewing what we know about estimation while learning about something new known as volume," Ms. Katie Good begins, "What is an estimate?"

Several students call out their answers, "A guess...nearby number...a number that is close to the real answer."

"You're right. We are going to make an estimate, a prediction, and decide if it is reasonable," she continues. "But what about that word 'reasonable'...?" Her voice trails off and she places her finger over her lips as if thinking quietly to herself. Several other students do the same thing as they think of what the word might mean. After a period of ten or so seconds she jumps into the discussion again.

"Would a bathing suit be a good example of what would be 'reasonable' to wear today?" She places an emphasis on the word reasonable while her fingers trace air-quotes.

"No! It's too cold. Not at school!" comes the cries of her students. The class shares in the distaste of the idea, some feigning shivers and grinning around the cluster.

"And what about the word 'volume'," she asks, "believe it or not, we will not be talking about how loud something is today...that is only *one* type of volume."

After a bit more thinking, she instructs the kids to open their math vocab folders that were handed out earlier and turn to the "cheat sheet" near the back. They read the definition together from the list of science terms and stumble across a word that is unfamiliar to most students.

"Have you heard of the word capacity?"

Students shake their heads quietly and focus their attention on her gentle featured face. They know that Ms. Good would never resent or begrudge them for not knowing something.

"I'd like you to circle the letter 'c' of capacity and the letter 'c' of the word container in this definition."

The students take their pencils and make loops around the letters she asked. When they look up from their notebooks, Ms. Good is holding an empty cylinder shaped container.

"Sometimes you try to pour a liquid into a container and it's too much and then you get a mess. The container doesn't have the capacity to hold all of the liquid. Has that ever happened to you?" She reaches down to the other side of her rocking chair to unveil a one-liter bottle filled with bluish liquid.

"Uh-oh!" one kid exclaims. Other students look on nervously wondering if Ms. Good is about to make her own mess.

"I can use this liquid to fill it all the way up or just fill it partially, but I can't measure it if the liquid is on the floor!" she explains, "this is called a cylinder. Draw a picture of a cylinder in the square on your sheet."

While the students are drawing, Ms. Good sets down the bluish liquid and the cylinder and picks up a lipped glass cylinder that is shorter than the previous one. "I bet nobody knows what this is?" she challenges, "You're gonna laugh when you hear the name of this type of container. It's pretty funny! Are you ready...do you want to hear...?"

At this point all of the students are finished drawing and are eagerly waiting to hear the strange name of the measuring device that Ms. Good is holding. "A beaker!" she introduces, "isn't that funny?" Her students laugh and repeat the word to nearby friends. She places the measuring device beside other sized containers on the desk next to her.

"Beaker...beaker...beaker..." she says, "that word just gets stranger the more I say it." She looks around at her eager class with a straight posture and her flat hands on her knees. When Ms. Good has the attention of her class once more she continues.

"Turn and talk to your neighbor about what a unit is."

The class instantly fragments into groups of twos and begin to chatter about what a unit might be. When Ms. Good believes that all of the partners have had the chance to share their ideas, she calls for their attention with a hushed voice. "3...2...1..." Hands immediately shoot up around the group as individuals yearn to be called on to give their definition. Ms. Good selects a few of these students to share. Students offer their understanding, "a pint...a cup...a gallon?"

"All of these are measuring units but remember we are measuring using the metric system," nudges Ms. Good.

"Liter!" one child exclaims causing another child to add "milliliter" to the discussion.

Holding up the bottle of bluish liquid that was used earlier, Katie Good leans forward toward the class and shares, "I have one liter of potion in this bottle."

"No it isn't," argues a boy from the back, "it's water with food coloring in it!"

In a hushed tone with her hand by her mouth as if sharing a secret, Ms. Good responds, "Oh come on, don't spoil the fun," and then continues with her normal voice, "We can use both liters and milliliters to measure the *potion* inside this bottle."

"In order for our estimate to be reasonable, we have to understand the units of measurement we are using. The beaker I was holding earlier can hold 500 mL and the first cylinder I showed you this morning can hold an entire 1000 mL, also known as a liter," she points to the containers on the desk beside her.

"Did you know that we all have our own personal measuring device for measuring a milliliter?" Her voice inflects a tone of disbelief and her eyes widen when she says this, "each one of you can measure one milliliter without a container."

"A tear!" she points to her eye, "A tear is about the same measurement as a milliliter!"

One girl near the front of the group with pigtails and big brown eyes contorts her face into a pout.

"Now I don't want to see anyone using this personal measurement in *my* class. Especially during measurement time. No tears!" she grins at the girl.

"So let's get to our estimations. What would work better for measuring the amount of water in a pool?" she continues, "Would you measure using a unit equal to the size of a tear or something larger?"

As the discussion continues, more examples are given that help the students to clearly understand the concept of measuring with mL and liters. They are asked to choose the appropriate unit for milk in a baby bottle, water in a rain barrel, juice in a small cup and the water used to wash laundry. Throughout the lesson, Ms. Good references the containers that are positioned on the desk nearby and asks kids to think about the amounts of liquid each represents.

Connecting material in a cross-curricular fashion is also a means for seating new ideas within a background that has already been mastered. The isolation created by distilling facts or subject matter from context causes boredom and tediousness at its best and discontinuity at its worst. Teachers made note of the imposed isolation currently given subject matter throughout our discussions. The partitioning of particular subject matter works in contrary to their ideal sense of an imaginative classroom.

Teachers also provide context for student's knowledge base through the imaginative activities they provide for their students. Learning about subject matter in a discontinuous and fragmented style makes the material isolated from the connections mentioned earlier. The more background and connections a student has for new information through experience, the easier it is to recall and use at a later date.

Mr. Clymer is certain that his students don't get many opportunities to measure outside of the context of school. In his perspective, sometimes a teacher has to take the lesson to the next level in order to provide an opportunity situated in experience. These engaging types of experiences build both the context and develop the meaning simultaneously. Jon brought up one particularly fun lesson about measuring liquid volume and planning/following a recipe that he called "The Drink Mix Challenge".

"I know they're engaged because when I look around the room at the students who are normally off-task, they are totally engaged in what they're supposed to be doing," Jon begins. "That's fun to see and that's probably the highlight of their day." He's commenting on the way his fourth grade students have gravitated towards the work of an imaginative lesson he planned for yesterday. "I knew the Drink Mix Challenge was going to take a majority of the class, but I took a few minutes at the beginning of class to let the kids look at all the supplies I had set out and make predictions about the activity I had planned.

"I took the sheet that they were going to fill out, their recipe, and modeled for them how I was going to plan the drink I was going to mix." Jon then describes how his students remember the breakdown of a gallon into their smaller measurements of quart, pint, and cup.

"I call them King Gallon," he states, "and each King Gallon has four Q's, queens, and each queen has two princes or princesses..." He draws for me a large G on the board in my room and situates four smaller Q's inside of the G. Each Q is given two P's thus creating a visual representation of the measurement breakdown in a very memorable way.

"It's a lot easier than trying to get kids to remember that there are four quarts in a gallon, two pints in a quart, and so on," he adds.

"When I modeled my recipe, I told them the rules are that they have to use at least one cup, one pint, and one quart in their concoction." He motions as if he is pouring these measurements into a larger container. "The recipe they had to fill out had sixteen boxes, so we talked about why there were sixteen total boxes they had to fill."

Later, Mr. Clymer describes the scene as the students plan and they combine their measurements to total a gallon. "There were some kids who suffered the grief of their miscalculations. Juice was pouring on the table and they realized they had made a mistake!"

"In the end, students made their different juices and were able to try other student's juice mix, they had a good time," he says with a smile.

In observation of this activity and others like it, it is clear to see the student's enthusiasm for this type of learning. Quarts, pints, cups and tablespoons are no longer amounts known purely by their quantitative measurement; they are means to an adventure of creating something new! While preparing for and maintaining this type of teaching style for every new lesson would be more than fatiguing for a teacher, the implications for this type of learning environment are undeniable. Students engaged their prior knowledge for the subject matter and used what they knew to solve a problem. For the students of Jon Clymer's class, measuring liquid now has a very clear purpose other than to get the right answer on an assessment or worksheet. The factual content, the imagined

context of King Gallon and his four queens, is clearly linked to an experience that was created through the participation in the challenge.

Another example for building background knowledge leads students in an activity that adds an imaginative dimension through the use of storytelling. Story presents history as a living entity, perspective as an intimate new way of knowing, and the impossible as the near future. Through the use of narrative, students are connected to another time, place, and/or person. As mentioned in the literature review on this topic, the story of the "other" has always been a crucial part of education both formal and informal.

Teachers use narrative to establish a firm connection between an ephemeral or inaccessible concept and a context. The imagination grants the narrative mind an ability to transcend the obstacles of time, space, and self by providing rich textual language that initiates the pseudo-visual. I remember sitting on the rug in my third grade classroom, fidgety and easily distractible, finding great satisfaction in our daily story time. I had the chance to observe a similar moment in Ms. Murphy's classroom on a Thursday right before lunch.

In the moments before lunch, Ms. Murphy routinely reads a book to the class out loud. It is five minutes before leaving for the lunch line and she is perched on the edge of the countertop. The students sit on the carpet by her feet and sprawling back to the boundary of the desks. Ms. Murphy holds the paperback with one hand and pushes her brunette hair around her right ear as she begins to read into the next chapter. The story she is reading is the 2001 Newberry Honor book *Because of Winn Dixie*.

The students sit transfixed. Some of them are facing Ms. Murphy and watching her as she reads, others are just listening to the story with their heads perched on their knees or leaning against the wall cabinets. Ms. Murphy's gentle voice weaves the tale of Opal and her summer of finding new friends. At present, she is reading a dialogue between Otis and Opal.

"Music makes them happy," Ms. Murphy manipulates her voice to sound more man-like, *"I take them out because they don't like being locked up."* She adds a slight southern accent to her impression.

The voice she uses for Opal is very close to her own, but made more nasal to give it a child-like quality. Her cadence is very terse and abrupt as she reads through the little girl's lines, *"Do you ever play for people?"*

"I used to. But police told me to stop. I didn't, because playing guitar's all I love doing. So they took me to jail, Otis replies."

"But you could play now!"

"Shaking his head, Otis responded, "They made me promise never to play outside again. Now I only play for the animals."

A student starts to whisper to a friend and Ms. Murphy stops just long enough to make eye contact with the boy and shake her head. Her look says it all so she doesn't have to voice her disapproval. *Reading time is special time.* Students don't turn to shush the boy, but some do recognize the interruption and turn to look at him. She continues reading when she feels the space will be respected.

At the end of her reading, she gently sets the book to the side and states, "And I'll finish the rest of that chapter if we have more time at the end of the day."

As always, the conclusion of her oration is met with an "Awww!" from the class. Students look up as if they have been daydreaming, vivid images of the story still dancing in their mind's eye. Some stretch and yawn while others discuss the story as they make their way to the line for lunch.

I can still remember the empathetic feelings of despair I had for the boxcar children when I was eight years old in Ms. Stoltzfus's classroom. As Henry and his siblings struggled to live out in an abandoned train car in the wilderness through a cold and snowy winter, I was empathetically sharing in their journey. I can still imagine the place where the boxcar sits in my imaginary woods; an old stump as the stairs and a little stream to the side. In this way, the story of the children was a vicarious experience for me. The power of story as both a memory device and engaging activity add to the importance of narrative as a primary tool for developing background information. Jon Clymer also has strong memories from when he was a student in one of his favorite teacher's classes.

"When my fifth grade teacher would read a story with inflection and character voices, I would really buy into the moment as well," Jon begins. He's talking about the focus and involvement that is enacted through a teacher read-aloud of a good book. "I remember hearing the different character's voices. Even when she read the father's lines, I could hear his voice, just because she did it slightly different than just reading it all the same."

"I can still visualize the dad from *Where the Red Fern Grows* the way I imagined him in fifth grade." Mr. Clymer sits in his chair with his arms crossed, a pondering fist at his chin as he recollects. "He has a very certain look in my head, even to this day. A movie came out where the dad was very different from what I imagined, but I still remember him from her reading."

"I think that book talks about the Ozark Mountains," he adds. "We lived next to some small mountains, so I took what I knew about those..." he pauses. "The book made these mountains wilder and more isolated. I had the picture of a tiny little farm that this family lived on with the huge, wild mountains all around them."

"It was kind of a combination of what I already knew a little about, with something that was more intense...a bigger scale."

Through talking with Jon about his memories of the book, it is clear that the images still live in his head. Even twenty years after he experienced the story being read to him as a child, he can recall a vivid picture of the sparse meadow surrounded by the overwhelming and daunting mountains of the Ozarks.

Story is a strong catalyst for engaging background knowledge. Similar to imaginative play, the likenesses that are conjured during the imagining of a story are made of the bits and pieces to which there is an association. Narrative brings the distant experience into close proximity, like an actual experience, for the person in the imaginative moment. During the act of storytelling in a classroom, a teacher describes the context and perspective that invigorates content for students. The affect of a classroom engaged in a storytelling moment is remarkable! Often students are silent and

focused on the actions of the storyteller, engaged with a near trance-like quality. A story that is told with complete conviction can be a magical moment where students experience imaginary content as a real event (Jagla, 1994). Storytelling used in the classroom can be a tenable connection between the imagination of the teacher and the imaginations of his/her students with the valued content.

Narrative takes place through other various forms in a classroom setting. The telling of a story can be a full and drawn-out imaginative episode or as small as an allegory. It can be read from a book or recalled from memory and it could be performed by the teacher or even in a collaborative way with the students. In any case, the similarities are in the sharing of information within the conditions of a setting and a character in a way that incites the imagination to fill in the gaps. Many people see the act of storytelling in a classroom as being more appropriate for younger audiences, but it can be an effective tool for students of any age.

Creating Engagement

Planning lessons that are engaging for students is one of the primary goals for teachers. There are many tricks for eliciting the attention of students for a moment of time, but to hold the attention of twenty-some student minds during the entirety of a lesson is a near impossible feat. Using imaginative activities to engage learners is a worthwhile endeavor to grab and maintain student's attention. Teacher questioning is one way that is proven to engage the learner in thought. This type imaginative use is called generative cognition and when paired with other types of learning activities it can be a formidable tool. Questions alone, like in answering a worksheet or single student

response, do not suffice and are seen as rather weak engagement tools (Marzano, 2012).

An example of questioning that can be done in small groups or whole group instruction is called Socratic seminar and moves from simple questioning into more in-depth group investigation. The examination of multiple perspectives through discussion is what makes this type of activity strong in relation to imaginative tools.

Asking a question to students isn't as easy as one might think. Soliciting answers that promote engagement need to be properly scrutinized to fit the learning objective and the readiness of the students. Ask a question that is too easy and all of the students will answer it with almost mindless response; ask a question too difficult and many of the students will sit on the sidelines and only halfway listen to the answers proposed by advanced students. Ms. Forester is an excellent example of getting students to answer questions in group settings by strategically pairing them and letting them discuss before sharing with the whole group. She also moves her student's thoughts through a story by asking a series of quick questions that most students can answer before asking more difficult questions. The following example is a quick glance at how Ms. Forester uses questioning in her reading groups to get continued engagement from her students.

Ms. Forester stands up at her chair once again and claps rhythmically five times in a staccato pattern that is used by most teachers at Brookfield Elementary. The drone of student activity comes to a halt as she gives the directions for moving to the next center.

"I am aware that there are a few friends who haven't finished up their fossil writing," Ms. Forester comments, "I would like those individuals to continue their work when they have finished their silent seatwork activities. I'm talking about the group that

is moving into the center at your desks." She motions with her hands in a circular motion where the student desks are.

"Orange group, I would like you to go over there, red group with me, and yellow group take your spelling test."

She sits back down in her kid-sized chair and starts handing out blue reading books to the students from the red group who are gathering around the outside edge of the u-shaped table. The students turn to page seventy-five and look at the picture that begins the chapter titled *A Curve in the River*.

"We aren't in a very good spot of this book are we?" she asks. "We're not feeling really good about this, right? Let's just think about this. What is happening in the story so far?"

The six students with their books open peruse the past couple of pages to remember the preceding events.

"It would be good if we could use a sequence of events to get our discussion going," she continues, "like 'in the beginning'...or 'then', 'first', 'second', 'third'..." She gives her students a partner to discuss the story with and let's them give summary to the first seventy-four pages of the book.

The second graders turn to each other and start to share.

"Ok," she interrupts after a minute or so, "are we finished?"

"Yes, ma'am," the students reply in unison.

"Good, I heard some excellent summaries from your groups. That Jullian kind of had a secret project, right...that he didn't tell anyone about and he put a message into a..."

"Bottle," adds a girl with brown shoulder-length hair.

"And he throws it and he imagines that it is going to go where?"

The students offer their suggestions, "Africa...Hawaii...France...China...India..."

"Or a tropical jungle..." she continues for them, "but instead, who finds it?"

"Gloria!" they shout.

"And he's not very happy is he? And you know what, I also read a really good word in the last chapter that we talked about for awhile. What was it?"

"Disappointed," a boy with black short hair says after a moment.

"We thought about a lot of different ways the story could continue, didn't we?"

She looks around at the children. "Most of you thought that maybe Jullian would be mad for a little while and then he and Gloria might talk it out with each other and be okay. I hope that's what will happen. It'd be pretty sad if they couldn't work it out and be friends. Let's read and find out if you were right."

The students lean over their books and ready to dig in to find the answer.

"We are going to take turns reading the chapter. Each of you will read for half a page, but of course we are going to start by reading together. Before we start, what are our reading goals for this book?"

"Read faster."

"Read with feeling."

"Right, we don't want to speed read. I want to hear what you are reading. And we want to read with expression. I want you to pay attention to all of the text clues for *how* you should read the story."

"Let's begin," she stated.

"*In a couple of days...*" they begin reading, "*my father started noticing. 'I haven't seen Gloria lately' he said...*" The students continued to read chorally until Ms. Forester interrupts.

"So what do you think?" she asks her students. "Jullian's dad is going to notice that Gloria hasn't been hanging around lately and he knows that they are really good friends...and *then* Jullian is going to have to tell him about the bottle. We know that Jullian's dad gives really good..."

"Advice," answer the students.

"Turn back to your partner and predict what you think he might say."

The students get back to talking with their partners and share their ideas. Ms. Forester sits back a bit and listens to her students speak.

This active style of questioning engages the learners in Ms. Forrester's class to follow her train of thought and outline the story. The student's imaginations are working to reconcile the two pieces of the puzzle as they respond to the blank spaces in their teacher's dialogue and remember the sequence of the storyline in their book.

Students experience learning through many channels of media in the 21st century. Some are passive experiences like watching a television show or movie, while others can be more imaginatively stimulating. For example, Calvert and Valkenburg (2013) found that television shows have the ability to stimulate the imagination through communication between the main characters on-screen and the viewer. These moments of stimulation allow for occasions of reflection and engagement that place the viewer in a

more active role even though they are viewing the story on an electric device. An example of this type of parasocial engagement is found in the children's TV series *Blues Clues* where the viewer participates in a sequence of challenges to solve the problem of the day. Many teachers use the same type of imaginative play in their classrooms during their lecture and development of topic. Despite the teacher not being a fictional character on television, I was often struck by the similarity as the observed teacher assumed a persona different from whom they normally are in order to engage their student's imaginations. Questioning through this method can also be seen as engaging the imagination. One of the focus group interviewees who teaches first grade mentioned a similar experience he had in observing a mentor teacher using this technique.

"I saw a teacher perform a read aloud once," states Mr. Kurt, "where the teacher showed the kids a wig and glasses and said, 'these belong to my Aunt Mabel'. He then turned around, put on the glasses and wig, and faced his students as his 'Aunt Mabel'," he laughs. "Despite them knowing he was the same teacher who was just sitting in that exact same spot, the kid's totally bought in to him playing his aunt. They asked 'her' questions after she read them a book and at the end, had forgotten it was their normal teacher who was sitting in the chair right in front of them. Afterward, the teacher turned around again, removed the glasses and wig and addressed the children as himself again. He asked the students to summarize what his Aunt Mabel had talked about since he 'wasn't there'.

In this way he was able to question the kids twice about the book they had read."

Sometimes a teacher plays the role of actor. This is, in part, an example of the trickery of imaginative work in the classroom. Students even in upper levels of elementary school enjoy the idea of a teacher pretending to be someone else, using different voices in a read-aloud, or even participating in dress-up. The playfulness that is embodied through this type of instructional demeanor is thought of as being contagious in a classroom setting. Soon, students adopt the flexibility of reality and are willing to participate in this type of expressive learning.

Participants from the focus groups also noted a similar effect with students in their class when, as teachers, they pretended to not know the answer. In the eyes of my interviewees, there is no greater immediate engagement booster than purposefully making a mistake so that students can emphatically disagree with your statement. It rewards the students who are paying attention following along with the lesson and draws in students who have lost focus by making them feel like they might miss out on the glorious moment. Each of the in-depth participants in my study performed this trickery at one time or another.

Mr. Clymer takes particular delight in making errors for his students to catch.

"Is everyone looking for a mistake? I might make a mistake!" exclaims Mr. Clymer as he finishes his computation on the board. His back towards the class, he smiles as he knowingly writes a three as the remainder.

"NO!" the students shout. Even though they know he has made the error on purpose, they delight in being able to catch their teacher at fault.

Mr. Clymer wasn't the only one who relishes in making obvious mistakes in front of his students. Ms. Good enjoys pretending that she doesn't understand a process.

Standing at the SMARTboard mid-computation, Ms. Good turns around.

"I can't believe I've forgotten how to do the next part!" she exclaims in disbelief.

The students on the carpet start shouting out the appropriate measures for continuing the process. It's a free-for-all shouting match but the kids stammer to try to put into words their understanding of the process.

"So I need to move this here?" she asks naively with big eyes.

"No!" the students plea.

"You can't do that," states a third grade boy, "it has to go over there."

"Ohhhh, over here!" She over corrects and places the item too far to the right.

The kids are up on their knees indignant with her poor understanding of what to do.

Finally, she is directed to place the number in the correct position and the entire class sighs with relief! Laughter and chatting about the recent interchange take over the next few moments as Ms. Good sets up for the next problem.

"I can't believe she forgot how to do that, " mentions one boy in the back row to his friend, "she's the *teacher!*"

I don't think anyone who knows Ms. Good would ever really think that she forgot how to fill out a graph, but there is just enough acting to blur the lines between reality

and fiction for her students. Ms. Murphy takes the trickery a step further in the following story where she creates a false narrative on how she was almost fooled into choosing an incorrect answer.

"Let me show you a problem I saw on someone's paper that tricked me!" Ms. Murphy says.

Students look up from their own papers to see their teacher's work. On the board, Ms. Murphy wrote the number 99,954. The students have been working on rounding their numbers to the nearest thousand for the past week. Some students have shown confusion with the process when rounding the number in the thousands position effects the place value of the number in the ten thousand position. The number Ms. Murphy has placed on the board pushes their learning even more by getting into the hundred thousand value.

"Whoa!" says one student, "that's a BIG number!"

"Does anyone know the answer?" she asks.

The students are silent. Waiting for Ms. Murphy to show them how to round the number correctly.

Ms. Murphy begins by speaking through her thought process. "I first looked at the number in the hundreds place value, just like we practice. When I noticed that it was a nine..." She underlines the nine. "I knew I had to do what?" she asks.

"Round up!" the class cheers.

"So when I saw that the next number was also a nine..." She underlines the next nine. "I was confused. What should I do?" she makes a bewildered face.

"Round up to the next thousand?" offered a girl in the back.

"That's correct!" congratulated Ms. Murphy, "But then I got to the next number...and I REALLY got confused."

She underlines the nine in the ten thousand position and stands in front of the number looking out at her class. One boy nearest to the fish tank on the right side of the room jumps out of his seat with his hand raised.

"You round it up again!" he shouts gleefully.

The class claps and squeals with delight as Ms. Murphy writes "100,000" on the board.

"What if the number was nine hundred and ninety-nine million, nine hundred and ninety-nine thousand, nine hundred and ninety-nine?" proposes a boy near the front, his eyes gleaming with challenge.

"We'll save that number for another time," Ms. Murphy smirks.

Each of the participants in this study use trickery in some manner or another to engage their students. For the most part, the students play along, even when they know what the teacher is trying to do.

Even though storytelling was previously discussed in the section on developing background knowledge, there are elements of storytelling that work towards engaging students in a lesson. Sometimes a story is a way to use narrative to create a hook for engaging the learner. By adding characters that students know in word problems, acronyms, and other such work, the teacher creates immediate buy-in from the students. Each of the teachers I was able to observe in their regular teaching practice used at least

one of these types of engaging stories to make the information more relatable and exciting. Occasionally, a teacher uses props or disguises to add additional mystery and fun into the telling of a tale. Other times, the students are the actors and can assume the role of a profession or a person from a certain period of time. Ms. Good utilized both of these one afternoon during her lesson on understanding what we are reading. The teacher and students went on a safari to look for clues!

The rowdy group of third grade students made their way in from afternoon recess, their faces red with the last thirty minutes of activity. The sweat and accompanying stench of outdoor play quickly filled the room. As soon as students filed through the doorway they went directly to the desks carrying on lively conversations. A group of girls giggle as they try to squeeze their way through the opening at the same time. Behind them was Ms. Good holding a kickball and a soccer ball with sunglasses on her forehead. She walked towards her desk, placing the ball in its spot in a crate, and started shuffling some papers and setting up for the next lesson.

The teachers don't always participate with the students in their play at recess, but occasionally Ms. Good joins in their fun. She is not shy with acting kid-like in front of her students. She is often seen on a swing or in the pretend bus, maybe even involved in a lively game of tag or make-believe. The spirit of creativity is alive with Ms. Good and her students enjoy that part of who she is.

The students are settling down now that they are back in the air-conditioned school. After having a chance for a water and bathroom break, the students are ready to

focus. They set out their notebooks and make sure they have sharpened pencils for the next period of the day: language arts.

After a few moments it looks like everyone is ready. Ms. Good stands in the front of her classroom and the students are at their desks ready to begin.

"Today we are going to need our special reading hats," she begins lightly.

Some students reach into their desks to pull out their hat. They are all different types of hats and were obviously brought by these students from home. Ms. Good dons a safari hat with a string tie for under her chin. She fastens the bead, tightening the strings securely and straightens the brims on each side with her fingers.

"Good reading can be like a safari! We have to go on a safari every time we read," she exclaims, "put your hats on and put up your binoculars for our reading journey!" She takes her hands and pretends to look through binoculars at the students. Some of the students who don't have hats are positioning imaginary ones and others are looking at her through their own pretend binoculars.

One student is a bit distracted by getting his hat to sit correctly on his head. He has recently adjusted the strap on the back and now it's too tight. He keeps taking off his hat, repositioning the clasp, and trying on the hat again. This happens at least three times before Ms. Good walks over and helps him while she talks.

"Our purpose today is to learn how to be more descriptive," she adds. "We are going to be reading the book by Chris Van Allsburg called *Two Bad Ants*. Has anybody read this one before?"

She moves back to the front of the room where she has the book sitting in the marker tray of the whiteboard. Picking up the book she carries it around the front row of desks to let everyone see the picture of the cover. Two giant purple ants are sketched on the front, arms tangled around each other in front of looming dark green blades of grass.

"We can't tell much by the cover, but it looks like an interesting book!" the teacher says. "Before we begin reading though, let's go over our rules for understanding what we read."

Ms. Murphy uses stories to bring interest to normally mundane math problems. She has quickly discovered that when she uses student and teacher names in word problems students are instantly engaged. The personal connection that the students have with the individuals in the problem demands that they care about the solution.

Routinely Ms. Murphy uses word problems during math that contain the names of teachers and students from the third grade and Brookfield Elementary. Today, there is a question on her projector screen that reads, "Ms. Bingham ate 1732 grains of rice. Ms. Good ate 2005. About how many grains of rice did they eat together?"

The students enjoy reading about the imagined lives of their teachers. They giggle to think of Ms. Bingham and Ms. Good sitting down to eat a plate of rice.

"Everyone write your answer on your desk's white board," she instructs, "we are going to do a gallery walk. You get one minute to silently walk around to look at each other's boards. Remember that we are working on rounding to the nearest thousand!"

Students quickly look at the math problem about teachers and grains of rice and write their answer with a dry erase marker. Ms. Murphy presses play on her computer's

media player so the kids can listen to her collection of songs she titles "Barbie Music". The students start to move around the desks clockwise, perusing the answers of their peers. Suddenly the music stops and the students hustle to find an open desk to stand behind. When the last student finds his place, Ms. Murphy instructs them.

"Look at the number on the desk in front of you," she says, "if it is correct, give me a thumbs up, if it is wrong...a thumbs down."

After a moment she begins the process again and the students walk around looking at the numbers on the desks. When the music stops, the children make either a thumbs up or thumbs down motion with their hand. This process is repeated again until finally, students are back at their own desks.

"Ok, the answer for that question was 4000 grains of rice," she informs. "Some of you solved the problem instead of giving me an estimate. Remember you need to round the numbers first, then add."

Ms. Murphy asks the students to erase the answers on their boards while she switches the paper on the projector to a new question. The next question reads, "Jessica collected 1,562 seed to plant in her garden. Her brother Jeremy collected 729 seeds. About how many seeds did they collect to plant together?"

Before the students begin to answer the question, Ms. Murphy interjects, "The words 'about how many' is asking us to do what?"

"Estimate!" the students reply.

"Good. Also, this question needs to be rounded to the nearest hundred since we are dealing with smaller numbers. Begin!"

The students quickly get to work, looking at the word problem about their classmate and his older sister. One student is counting on his hands while he counts up to the final answer. His hand shoots up in the air to be the first to share his answer. Ms. Murphy reminds him to wait for the music so he can walk around and look at other student's answers. She pushes play and the students begin to walk around the room.

Sometimes the students are more than just a character in a word problem. In Ms. Forester's class, the students were able to assume the character of archeologist and perform their role in front of an audience of first grade students.

The students of Ms. Forester's second grade class have recently returned from a field trip to a rock yard behind the local high school. While they were there, the students learned about and searched for fossils to bring back to their classroom. Ms. Forester currently has the students writing about the newly learned information about fossils from their expedition. The fluorescent lights are turned off and a few lamps give the students enough light to work on their writing. Gentle music can be heard in the background as students sit at their desks writing in their writing journals. The classroom is a calm and relaxing place for the students to work.

A collection of books focused on the topic of prehistoric animals, fossils, and archeologists are scattered over a u-shaped table that is often used for small group work. Several students already have books from this compilation at their own desks and are thumbing through the pages looking for more information.

"We are going to be visiting the first graders and sharing your writing with them early next week," Ms. Forester announced earlier, "this will be a great way for you to be an archeologist for them because they probably don't know what you know about fossils."

A few of the students were shocked that they would be trusted to teach other students, even if they were only first graders. Now they are sitting, working earnestly to make sure that their facts are correct, asking each other to proofread their writing and requesting that Ms. Forester also review their work. One little girl with white beads cascading down the back of her head is sitting with Ms. Forester at another small table by the teacher's desk.

"Sweetie," Ms. Forester's smooth silken voice, "You need some more facts for the first graders in this part of your writing. Do you know how the fossils were formed?"

The little girl shakes her head making her beads rattle. Ms. Forester directs her to a book on the table that is titled *Fossils*.

"I think you should be able to find what you need in here," she offers, "why don't you go back to your seat and look for some more facts."

Ms. Forester's grandmother-like persona adds to the environment of nurture in her room. The students seem very relaxed and willing to make whatever corrections necessary to gain her approval. She moves slowly around the room checking in with a few students who need some redirection. They quickly get back to task.

A few students who have finished their writing seek each other out and move to a separate part of the room to practice reading their research. The student who is playing "archeologist" sits very tall, crisscross, and on the floor as the other two listen attentively.

Each student in the group assumes the same posture when it is their time to share also adapting their voice with an edge of authority. The determination on their faces demonstrates the seriousness with which they approach their new roles.

Assuming the role of a profession is a practice that many teachers use when their students are sharing what they have learned. By being mini-experts in a field of knowledge, they have to synthesize what they have learned. It is a great practice for students as they develop learning skills and provides them with a reason for what they are learning. A fourth grade teacher from my focus group shared his class with me one Monday afternoon. Mr. Singer's class had just learned about the phases of the moon in the previous week and now it was time to assess what they knew.

"Let's take a look at the rubric," announces Mr. Singer as he opens a Word document on the screen for students to see. "The rubric for this project is based on a three, a two, and a one. A three is well done, a two is getting there, and a one...that's a need's improvement." He points to the titles of each column as he reads their titles.

"So I am going to be looking for students who are spending their time wisely in the computer lab today, and your job is to look for teaching ideas because you are going to pretend to be the teacher. It's your new job!" his eyes smile as he reveals his idea to the kids.

A very audible and disbelieving "No!" is whispered from the back of the room. Many of the fourth graders look eager and ready for the challenge but a few shake their heads. One boy sits with mouth gaping staring directly at Mr. Singer.

"So you're gonna look, today, for examples of lessons you could teach for this project. You might look for a moon phase video, or a moon phase book that somebody created," he continues, "it's a good idea to look at other people's examples to decide what you can do."

Mr. Singer walks over to his computer and pulls up a Google search page. "Maybe you can look for creative examples of moon phase books," he types the words in quickly, "and there will be a lot of different examples for you to look at."

The class spends the next moments listening and watching Mr. Singer as he pulls examples from his Google search, demonstrating how easy it is to find other people's projects, from all over the world, on the topic of phases of the moon.

You are pretending that you are the teacher," he reiterates, "you are looking for ways to teach the subject of phases of the moon...you are building your lesson plan. Think about the ways that you can teach so that your classmates will enjoy and learn from your lesson."

Mr. Singer switches back to the rubric after answering a few questions. "Working hard and finding those ideas like a teacher would, get's you a three," he says as he points to the far left column.

"If you are wanting to do something like a PowerPoint, I want you looking at ideas from other people's PowerPoints from the Internet. That's what teachers do when they are looking for ideas. We are constantly looking for the best way to teach our students and present the material. And since you are going to be the teacher, that is *your* job today."

The students are beginning to nervously chat about their ideas with tablemates, a sign of the excitement they feel with the upcoming task. They are inspired to work hard and think of creative ideas to share with their peers.

"Ok, teachers, this is going to be next Tuesday," he speaks over the growing chatter of his students, "so you have a little bit of time to work on this...but not a whole lot. Keep things moving. Got it?"

The students barely acknowledge his last bit of advice as they group together to talk about the ideas they are going to research. The students begin to share with their group members the ideas they have for the project before they move to the computer lab for research.

Through story, the first examples in this section worked to create context for their students in order to make their educative space something special and hopefully memorable. The latter two positioned the student learning through the context of an assumed role, giving them context and purpose for the work at hand.

Through using varying voice qualities teachers also engage students in the dialogue of the ongoing learning. While this technique isn't necessarily a straightforward imaginative activity, there are a few certain ways that teachers use their voice to draw the students into the excitement of learning and through this, create an imagined space. The use of empathetic cadence, wide inflection, and the use of different voices also add an imaginative expression that gives context to the educational conversation. Certain voice qualities do more than just mimic the sound of a character read in a book, they can also invoke certain emotion in the listener.

I remember sitting as a teacher in the gym waiting for a presentation that was starting late. The entire school was invited down for the special moment where specific students were going to be recognized for their citizenship by the principal. The kindergarteners were first to arrive and by the time the ceremony was about to begin, they were already beginning to get restless. The assistant principal tried to calm them down by counting sternly from five. He counted down directly in front of the rowdy group in hopes that there would be transference of intent due to proximity. He reached one and there was no change in the five year olds. In a flash, a veteran Kindergarten teacher was in front of her little ones with a finger on her lips. In a sing-songy voice as gentle as a breeze she started reciting a well-known mantra.

"Zip it, Lock it, put it in your pocket," she sang. In moments the entire school had their hands in their laps and a 'bubble' in their mouths.

The intent of a teacher as they adjust their tone can also be found in the numerous other examples given in this research. Quite often, teachers use a quiet voice for calming students or to impart the importance of a certain fact or idea. Sounds of disgust or tones hinting at unbelievable propositions also find their way into the conversation of imaginative teachers.

Similarly to the use of expressive voice is the operation of expressive hand gestures. Like a secondary voice in the conversation, hand motions that are made while talking add emotive qualities, describe a physical understanding, or paint the picture of imaginary props. I found the use of this imaginative counterpoint to be most intriguing because many teachers employ them unknowingly. Several teachers recounted training

in a style of teaching for Limited English Proficient learners called sheltering where hand gestures accompany simplified teacher talk. Through this type of expression, the teacher can provide visual context that embellishes the voiced meaning.

Mr. Singer uses his hands a lot when he speaks but when I asked him about it, he didn't recognize it as one of the ways that he speaks to his students. I videotaped a lesson for him so we could look at it afterward to see the many different ways he uses his hands expressively when he speaks. For the lesson I recorded, he spoke about the various layers of the Earth,

"We are talking about the different layers of material that make up our Earth," states Mr. Singer. He sets down the dry erase marker and motions to the students.

"The outside layer," he begins as he uses his hands to outline a sphere with spread fingers, "is made of rocks, dirt, minerals, even bits of cooled lava and animal bones."

"The next layer," his fingers come together a bit and the sphere he is outlining becomes smaller, "is called the mantle and it is filled with hot and dense, semi-liquid rock."

"The third layer," the sides of his fingers completely closed together, "is called the outer core and is filled with liquid nickel and iron." His hands motion around a baseball sized sphere.

"And at the very center," his fingers pull together on one hand to make a fist, "is the inner core which is filled with solid nickel and iron."

While most of the teachers I observed used hand motions, none of them commented that it was a way that they teach imaginatively. Yet when we look at the

following example, it is clear that an imaginative dialogue is created between the lecturer and the listener that is non-verbal.

Ms. Good is standing in front of her class trying to explain the idea of whole, half, and quarter. She has taught this lesson before, closer to the beginning of the year, but she wants to make sure that all of the students have a good understanding before introducing the new material.

"Whole is another word for complete, every part of it is there that is supposed to be. While she is talking her hands move in a circle type shape. Her pointer fingers continue to absent-mindedly trace the outside line of an imaginary pizza in front of her.

"Half," her hand slices down the middle of the image she had just drawn in the air, "is creating two equal parts of what was once whole. There are two separate parts that when together make whole. When they are apart, they make one-half and one-half." Her hands work frantically to separate the two halves only to slam the imaginary objects back together as she says the word whole. Her hands turn away from each other and push outward when she says the phrase, "when they are apart..."

She continues in the same fashion as she discusses quarter. Drawing the lines to make a perfectly sliced pizza for the students to see in their mind's eye. Her hands swoop, divide, gather, and slice throughout the entirety of her explanation.

Retaining Knowledge

The third topic brought to the forefront of discussion surrounding the intentions of teachers when addressing their imaginative teaching methods and strategies is the imagination's connection to memory. In the first chapters of this research study, it was

made evident that there has been a long and enduring history between the use of imagination and a person's memory. The connection can be seen through two main uses; the imagination working to build new experiences through schema stored in the memory or the memorizing or memory making of certain facts/instances due to their involvement in some imaginative experience. The former of these two possibilities is an interesting discussion as it brings to attention the importance of developing stores of information that becomes the medium for future imaginative thought. The use of memory in this instance is similar to the previous section on building and developing background knowledge. The latter of the two, creating memorable experiences, is the theme that was most often referenced while interviewing the research participants.

Often when a person recalls moments from their childhood, especially moments from their early educative years, they think about specific activities or moments that are profoundly attached to a powerful emotion. Whether that moment is a positive or negative experience is non-essential to the point that these landmark experiences make up student's personal histories. These types of landmark experiences are described by Blakemore & Frith (2008 Jossey-Bass *The Brain and Learning*) as episodic memories. Not unlike or unrelated to Dorsch's category of imaginative episodes, these moments in time are formed in a person's frontal cortex and hippocampus and are made memorable because they have occurred with the emotive learner as the main observer or participant. The episodic memory is more likely engaged by an event that is out of the ordinary or emotionally charged in some way. In a classroom setting, this can be performed in numerous ways.

The depth of the experience is gauged by the intensity of the emotion linked to the experience. Quite often a story that is funny or incredulous in some manner, finds a place in our memory and can be recalled at will. When teachers use humor or a story to engage their learning capacities through memory the activity is called a mnemonic. During my study, I found many quick uses of a story by teachers who were trying to get their students to remember a quick fact or procedure. Mr. Clymer used one of these to teach students the procedure of long division by inventing an acronym with a funny fact about one of the other male teachers on staff.

The students of Mr. Clymer's second block math class are working on performing long division without the use of place value charts or manipulatives.

"Now, back when I was a kid," Mr. Clymer says, "this was the only way we were taught how to do division."

He points to the board where two problems are written. "This is exactly the same type of problems we've worked on before, but I'm going to teach you a different process for coming up with the right answer."

He turns to the first of the two questions, forty-seven divided by five. "If we were going to be using our cubes or chips to come up with this answer we would be making five groups out of the forty-seven and end up with a remainder." He uses his hands to create five imaginary stacks of chips in the air in front of him.

"Does anyone remember what we do with a remainder?" He looks around the classroom. Students are slumped in their chairs detached from the content and seemingly bored. The concept of division is worked on from many different angles throughout the

fourth grade school year. Mr. Clymer admits that, at times, reworking math concepts can be tedious and boring.

"What? Nobody?" He looks around the room, "am I going to eat them?" he laughs as he stuffs his mouth full of air, "throw them away?" he motions as if crumpling up an invisible piece of paper and shooting it like a basketball into the back trash can.

A boy in the back nearest the trashcan plays along and waves his arms to block Mr. Clymer's shot.

The students perk up a bit to hear their teacher laughing and playing.

"No, you have to keep them," says a boy from the opposite side of the classroom.

"That's right. Make sure you right it down as part of your quotient. Some of you, on the last test, didn't do that and you missed points." he wags a finger at them.

"Now, today I'm going to teach you the process of doing division like it will be on the test at the end of the school year. Take a look at the chart in the back of the room." He points to a metal-framed easel that is positioned by one of the u-shaped tables meant for small group work. "We have a saying here at Brookfield that will help us remember the steps. *Does Mr. Singer bake cookies?*"

Mr. Singer is the name of another male teacher on the fourth grade team and the thought of him baking cookies makes the kids chortle and smile.

"Let's say it together," Mr. Clymer propositions.

All of the students in unison chant, "Does Mr. Singer bake cookies."

The class that was sullen and unresponsive a few moments ago is now upright in their chairs and attentive to the task at hand.

"The steps go like this...divide, multiply, subtract, bring down, and compare," he lists. Mr. Clymer takes time to explain that the earlier phrase is an acronym that will help them remember the starting letter for the individual steps of the process.

The teacher turns toward the board once more and applies the newly learned process to the problem on display. Students write down the problem and follow along on their sheets taking time every so often to think about Mr. Singer baking cookies.

It has been mentioned that teachers often use hand motions to accompany their thoughts as they teach, but it has also been observed that teachers have their students recite facts or understanding of certain topics through body movements. The following story is from Ms. Murphy, a teacher who uses kinesthetic approaches to instruction on a daily basis in her instruction. These movements are as imaginative as a metaphor as they make meaning through the actions of the students.

Ms. Murphy's students are waiting in line to walk into the library. It is a few minutes before the third graders have specials, so they have to wait patiently in the hallway. Ms. Murphy uses every moment to reinforce what her kids know and sees this as an opportunity.

"Alright, third graders!" she demands, "show me inclined plane."

The students contort their bodies to a tilt, with their arms spread wide like airplane wings.

"Now lever!" she adds.

The students twist at the torso to demonstrate the idea of the simple machine they have been studying. The kids are attentive and everyone is moving, including her most difficult students.

"Show me a screw!"

The kids place their hands on their hips and begin turning in place, their feet taking small steps as they turn around and around, bending their knees to a crouch as they spin.

The students finish as the door to the library finally open. Ms. Murphy calls for the student's attention and direct them to stand quietly in line. Fingers on their lips and lips pursed, the students walk silently in their line through the doors.

Self-generated Cognition

Through procedure-based thinking and reasoning skills, students can learn how to make sense of new concepts. As written about in the history of imagination in the literature review, reasoned-based thinking, or logic, was often misconstrued as the antithesis of imaginative thought. But as the imagination began to be understood as a cognitive process that worked in tandem with other mental functions, the awareness of the symbiotic relationship between reason-based thinking and the imagination grew. Today, many teachers use imaginative means to support the development of procedure-based learning through relating to a perspective, drawing on student's background information to make connections, and many other ways. Students who are led by a masterful teacher, can learn to think about thinking and take steps towards being better learners.

Ms. Good wants her students to understand how to analyze their own writing by looking at different examples of writing from other students and giving a critique. Students are able to use their imaginations to see the difference between the provided writing samples and the exemplar.

Ms. Good flips open the lens of the projector and four letters are illuminated on the screen. The paper reads C-A-M-O in all uppercase letters.

"When we read using our CAMO strategy, we take charge of our learning and use metacognition," states Ms. Good.

The students reach up to their scalps and use their fingertips to massage their heads and chant the word "metacognition" together.

Without missing a beat, the class continues and students put their hands back at their desks. The rehearsed term and motion alerts students to the fact that they are thinking about thinking.

Ms. Good slides the paper to the side and reveals the work of a student from a previous year.

"I want you..." she begins as her hands work to straighten the paper, "to look at this assignment from a student as if you are the teacher. Let's see if they understood how to summarize the writing."

The students take a moment to look over the summary. The analysis provided is sloppy and missing a lot of key components that Ms. Good has trained her students to look for.

"They aren't complete sentences!" shouts one girl.

"There isn't punctuation, either," adds someone else.

Continuing observation is given to the quality of penmanship and the lack of description given in the writing. Ms. Good smiles as she circles each of the items her students highlight.

"Now let me show you another student's work," she says.

She swaps out the current paper with another of obvious higher quality. The students read over the sentences and have very little to offer as far as critique.

"I like how they used third grade words," points out a boy with jet black hair.

"And whoever wrote this writes really neat!" exclaims the girl beside him.

Ms. Good mentions that it seems as though this student put a lot of thought and time into using their strategy.

"This is the type of work I hope you decide to show me," she finishes. "Let's take out our notebooks and work on our assignment."

The struggle of reconciling the differences between the perceived and the ideal present a real challenge for students as they work to make their writing better. The distance between the two is mediated with a strategy by student suggestions and Ms. Good's recommendations. Ms. Good and other teachers know that if they talk the students through this self-critique it will make them better students in the future. Hopefully, students will eventually learn to imagine their own strategies for improving their writing.

Teachers lead their students through the same type of thinking activities in other subject matter too. Ms. Atkinson is a fourth grade teacher who teaches math and science.

She works to make real life connections with the questions on a worksheet. By using examples embedded with familiar objects and people, she makes the questions into a type of story that is more easily imagined by her students. Today, Ms. Atkinson's students are working on a worksheet focusing on measuring distances using various standard and metric units.

"How many meters in a kilometer?" Ms. Atkinson asks in a calm voice.

The student looks at the guide on the worksheet and quickly speaks the answer, "1,000".

"How many kilometers in a mile?"

The girl looks at the paper and realizes the answer isn't in the guide this time. Ms. Atkinson points out that the guide does state that there are roughly 1610 meters in a mile.

"So are there fewer kilometers in a mile or more?" Ms. Atkinson ponders.

The student and her partner wrestle with the question for a bit while Ms. Atkinson continues to probe for the correct answer. The girls finally reach their answer and give an approximate answer.

Ms. Atkinson claps her hands as applause and stands up from the chair. The girl and her desk mate continue to the next question as the teacher looks around the room. A boy near the front of the classroom with a buzz cut has his hand raised and is waiting for her attention. When she arrives he points to a question on the worksheet.

"Alright," she begins, "The bus travels 85 _____ (what?) in one hour"

The boy looks at her and shrugs his shoulders, "I can't drive! I don't know how fast to go."

She smiles and pats his near bald head as she laughs, "Thank goodness for that!" she exclaims. She sits down across from him at his desk.

"On the interstate, the big road where cars travel really fast and there aren't any stoplights...." her eyebrows arch up as if to ask for confirmation, "the speed limit is 65 miles per hour." She pauses to see if the information has sunk in.

She continues, "Out of town where the cars can go really fast, the speed limit is 70 miles per hour." She looks at him and he looks at his paper.

She can tell he still hasn't connected the dots quite yet.

"Think like an old geezer, like me," she says, "eighty-five miles per hour is pretty fast even for a car. Do you think our principal would let the bus drivers drive that fast with a busload of our sweet students?"

The boy shakes his head.

"Do you remember when we went to Williamsburg at the beginning of the year?" the boy nods, "It took us about two hours by bus to get there and it's is about 130 miles away."

The boy still is having a difficult time understanding how to find the correct answer for the question. Ms. Atkinson decides to shift gears.

"So do you think it would be wise to travel down the road at eight-five miles an hour?" she asks.

The boy shakes his head and speaks a very quiet "no".

"So let's look at our other choices, then." She points to the paper a list off the remaining choices to the question, "kilometer, meters, inches."

"Let's start with inches," she grabs the boys hands and pulls him out of his chair. A big smile makes an appearance on his face. "Look at the clock, we are going to travel sixty inches per hour. That's one inch per minute."

They stand side by side looking at the clock, neither one moving until the boy says, "Now!" Each of them takes a slight step forward. The boy seems ready to stand for the next minute as well but Ms. Atkins doesn't let him.

"So is that a very fast pace?" she asks.

"No," responds the boy.

"A meter is about two gigantic steps for you," she continues, "let's travel sixty meters per hour. That's one meter every minute."

They stand and look at the clock again, waiting for the big red hand to reach its peak as it ticks around the face of the analogue clock.

"Now!" the boy says, this time loud enough for other students to hear.

Both teacher and student take two big steps and then wait while watching the clock. She takes him back over to his seat and they look at the problem again.

"Now, we weren't exactly going eight-five an hour, but sixty is kind of close for this example. Do you think going eighty-five inches an hour is very fast for a school bus?"

"No."

"How about eighty-five meters per hour?"

"No," the boy repeats bashfully.

"And would Mr. Abbott allow the bus drivers to zoom down the road at eighty-five miles an hour?"

"No!" the boy chuckles.

"So I think that leaves us with one reasonable answer," she states. She watches as the boy circles 'kilometers' and he pretends to dust off her hands as she walks away from the boy.

In the example above, the student has grappled with understanding small to large measurement units and what effect they might have on the pace of his imagined travel in a school bus. Without a doubt, the student will think about this example in future measurement exercises and apply what he learned in this lesson to a different task. Through the development of his background knowledge and applying it to what he knows about his real life experiences, he can generate hypotheses using his imagination.

Lastly in the discussion on self-generated cognition, I focus on a prime example where a teacher is using physical objects to represent ideas. This symbolic representation of an idea helps students to grasp the meaning behind the concept being learned. It also equips them with a mental tool to use as a resource at a later date. Several times during my observations of Mr. Clymer during his long division unit, I noticed students pondering imaginary stacks of foam circles on their desks as they solved for the quotient.

Mr. Clymer's fourth graders are sitting at their desks learning about the process of long division. It is mid-morning on a Friday and this isn't the first time the students have worked with dividing large numbers into groups. Mr. Clymer is re-teaching the concepts behind division because of a recent assessment where this particular class demonstrated

their need for more work on the subject. Mr. Clymer's large frame stands at the fore of his class, by the SMARTboard where there is the drawing of a place value chart. There are three columns on the screen. The first one to the left is titled with a "1", the middle column a "10" and the last column to the right has "100" written above it.

"Think about the materials you will need for dividing using your place value chart," Mr. Clymer adds, "you will need enough foam circles to fill in the columns and you will need your place value chart."

He begins handing out the pieces of laminated legal-sized paper to the students at their desks while a helper passes out the foam circles. The papers have the same drawing of columns that is being projected onto the SMARTboard. When students get their circles they start sorting the colors: blues, reds, and yellows. The fourth graders work diligently to get the correct colors stacked in their places on the chart, a task they have completed before. Mr. Clymer finishes handing out the papers and walks around the classroom to check in with the student's progress in setting up the manipulatives. His large gait allows him to move quickly and he completes his circuit and is back in front of the classroom as the last of his students are finishing their sorting.

"Today we are reviewing dividing whole numbers using place value charts," he begins again, "If I can have your attention up here, we can start." He waits patiently as individuals finish their conversations and focus towards the front of the room.

The classroom is set up as three sides of a square with two rows of three desks end-to-end in the center. This arrangement gives Mr. Clymer the opportunity to place students who need more direct attention towards the front of the classroom. It also allows

him to be able to skirt around the outside edge of the square to help more independent learners when there is the need. Right now he is standing, firmly planted at the front of the square, looking out at his learners with kind, compassionate eyes.

When he feels that he has their attention, he opens his arms and asks, "What is division?" he asks. "What does division mean to you?"

Students offer a few suggestions, "the opposite of multiplication" and "equal groups" and are rewarded by affirmation from Mr. Clymer. "Very good," he states.

"Let's take this question," he places a simple word problem on the whiteboard, "If we have fifty-four apples and we want to divide it into four groups, what do we do?"

At Mr. Clymer's request, the students get busy counting out fifty-four foam circles. In the meantime, he writes the problem two different ways on the board: $54/4$ and $54 \div 4$.

"Ok, here we go. Are you ready?" he asks, "let's regroup this number into four different groups." The class begins to count out loud as they place the foam circles into four different piles.

When they get near the end, Mr. Clymer jumps in again, "Make sure you stop if you can't make equal groups."

Some students backtrack and pick up two circles from their first two piles and set them to the side.

"These are our remainders," one student states.

"That's right...set those to the side and let's count how many we have in our groups. You should have equal amounts in each of your four groups."

Students begin to count their groups to make sure they have performed the function correctly. Mr. Clymer moves to help a boy who is confused as to why he doesn't have two remaining circles to set to the side. Other students share their final number with nearby classmates. It is decided that the number they have regrouped is four groups of thirteen with two remaining.

"Ok, now let's try that same problem another way. Let's use our place value charts," Mr. Clymer suggests.

Students clear the charts pile their foam chips to the side. The instructions are given to recreate the number fifty-four in the place value chart. The student's teacher demonstrates on the board.

"Let's place the five in the ten's column," he directs, "and four in the one's column." He draws five circles in the middle of the chart and then four more circles in the far right column on his sheet. Students follow suit and use their chips to mimic his work.

"Now let's determine how many times four goes into five..."

"Once," calls out a student near the back. Mr. Clymer writes a one below the ten's column.

"That leaves us one that we need to move from the tens column to the one column." He erases the circle and redistributes it to the column on the right as ten ones. Students follow his example and perform the same function on their charts.

"So now..." he says as he draws, "how many do we have in the one's column?"

The students tally up the new amount of circles they have that column and come up with their answer. "Fourteen" is the response.

"Now, using our math facts," he urges, "let's find the highest number of fours that fit into a group of fourteen. Four times two is..."

"Eight!" the students respond.

"Four times three?"

"Twelve!"

"Four times four?" Mr. Clymer asks dubiously.

"That's too many," states a girl to his left.

"So the answer is three," Mr. Clymer answers. He jots down a three below the one's column. "How many do we have left over?" he asks.

"Two," they respond.

"So is our answer the same?"

The students check the answer they wrote down from the first attempt using regrouping. They nod their heads and answer that it is. Mr. Clymer reveals the answer on the SMARTboard and commends the students for their hard work.

"Now it's time for you to try it with your table partner. Here's the next question..." He moves the paper that is covering the next question down and the students get to work.

By giving the students manipulatives to explore and work through a division problem, Mr. Clymer is building the understanding of grouping that can be recalled at a later date. When the students take the assessment paired with this learning activity, they

will not be allowed the chips and the place value chart but will most likely remember how they moved chips from column to column as they worked through the problem.

All of these teachers use specific strategies to access student's background knowledge and help individuals to work to sort out the best probable outcome. Self-generated cognition using these provided strategies helps to find connections between what is and what will be. Essentially, the imagination bridges the gap between the present understanding and the future realization.

Disparity Between the Ideal and the Reality

Through my interviews it was clear that teachers have a large disparity between the ideal and the practice of teaching with imagination. Each of my participants discussed with me at great length their own imaginative journey throughout the first in the series of in-depth interviews. In the third interview sessions, they brought to surface their ideal or utopian classroom where imaginative development was at the forefront of their focus. Both of these sessions promoted an understanding of the imagination as a vehicle of self-expression very similar to how I have always understood it. However, when observed through the practice of teaching, the focus of imaginative tools was largely to serve the needs of the curriculum rather than student imaginative development. In the next chapter, I seek to discuss the opportunity teachers have to foster both subject matter understanding and self-expression.

Chapter Five: In-Depth Analysis of Imagination

The Imaginative Continuum

Throughout my research into the history and intellectual properties of the imagination, I have noticed several themes surrounding my concept that easily prioritize themselves into a process that works towards innovation. Borrowing from main constructivist theorists, I have established this continuum explaining the totality of the imaginative experience from its most rudimentary elements to the more complex functions of creation and innovation. The reason for my interest in a continuum of imagination is to show the connectedness of the individual steps and demonstrate how each one is not an isolated term. In the discourse of education, especially in relation to currently popular topics like STEM, the end goals of creativity and innovation are promoted. However, these advanced uses of imagination seem out of reach especially in elementary education. Teachers often expect their students to jump to a higher level of imaginative experience (innovation) before they have had ample time to develop their understanding of individual schema and the relationships between information (play). Hopefully, this outline will more completely suggest the process for attaining the final stage of innovation and highlight the importance of the imagination throughout the continuum's entirety.

In the next paragraphs, I will introduce my idea and give a brief overview as to the specific relationship between the imagination and each individual component. The continuum functions in this order: development of schemes, play, discovery & wonder, creativity, and finally innovation. With increased familiarity of these themes, I suggest that teachers will be more able to plan for learning along the continuum that promotes imaginative growth of their students.

Development of Schemes

The idea of developing adequate background knowledge, what Piaget calls *schemes*, for imagination is an important endeavor in the practice of teaching and learning. In order to think about a topic any number of schemes is necessary. The conceptualization of an idea is made of many bits and pieces of information gathered over time and from many different experiences. The ability humans have to make connections between these building blocks are made possible by the combinatorial powers of the imagination. This background knowledge doesn't have to only be chunks of memorized facts or definitions, but can also include the context of when the information was learned, and a personal affect or emotion tied to the information. The imagination engages with the schemes to bring forth the stored memory of emotion, sensory data, and previous thinking into a gestalt-like whole that is applicable to the new situation (Murphy, Peters, & Marginson, 2010). For example, let us envision an early childhood education classroom where students are learning to read a story with the common sight-word "dog" in it. For students who have a dog at home, their ability to imagine their dog as the sidekick character in the book is quite easy. They know and

have spent time playing with their dog at home and hopefully have amorous feelings towards the pet. Other students may have a feeling of fear towards dogs due to some traumatic encounter when they were younger or a cultural bias against the animal. In order for these students to understand the dog role in the story as the protagonist's friend, they need to make a connection between the ideas of the terms 'friend' and 'dog' in their operating schema. In this classroom, there might even be students who have never touched or seen a dog up-close but have only seen pictures or videos with dogs in them. Their understanding of the comfort found by the main character in petting his dog might be found in the connection to something that brings them comfort or maybe how it feels to touch something that feels shaggy like a dog. It can be imagined through these examples that students in the classroom all have different perspectives on what the word “dog” means to them. Each and every student operates within the context of his or her own experience and it is the role of the teacher and student to bring individual understanding to the minimum amount necessary in order for them to participate fully in the learning context.

At times, educational practice has gone so far as to remove the necessity of students engaging their background knowledge by pandering to a sterilized content that is focused on imitation and regurgitation of facts. Unfortunately, these types of learning attitudes are often adopted in schools in dire need of improvement according to annual test scores. The back-to-basics approach considers every learner to be in acute deficiency of academic background knowledge and works to fill the gap by force-feeding factual knowledge. The pedantic pandering of this type of system only impartially fills the

student's understanding and is void of the connections necessary for deep personal understanding. As a middle-school student, I remember memorizing factual content about moments in US history that were void of context that would make the information relevant to me. Our final exam was to create a timeline of important moments from the 18th century to present day. To be honest, I can't remember any of the important moments specifically as related to my 7th grade year, although I may have learned some of the moments in history more in-depth as I grew older. It wasn't until much later in reading novels and historical fiction that the connections between politics and advancements in technology made the industrial revolution much more significant for me.

As written in *Living by Wonder* (Lewis, 1998), the current interest of empirical knowledge in schools has partitioned away the natural aspects of learning that builds intuitive understanding. Scholarly learning can accentuate the schemes but cannot replace it. Duckworth (2006) notes that until the individual student makes a new connection with their own thinking, they do not really grasp the novel idea. It is also more likely that the student will imitate the concept using exact words or representation rather than trying to situate the idea within their own set of schemes. One of the participants in the focus group elucidated on this idea by sharing what happens with her kindergartners:

"In my classroom we do a lot of storytelling and retelling. So when you are telling the story of *The Three Little Pigs* we have a lot of props. You've got the brick, you've got the stick... and now they can make up

how the story goes. First, I would act it out with some students with the props and the book or the story. And then we would change the story and they have to act it out with friends. So, you could be another type of animal and you can get different props and things like that. There are some students who always choose the same animal and same prop that is in the story, over and over again. Some of them are too young or not ready to move beyond the imitation. They are still trying to grasp the continuity of the story and are really just trying to understand sequence, character, and dialogue. Then you have some kids that are ready to go! So you kind of have to teach with the proverbial door open, so those kids have the opportunity to move forward into their imaginations when they're ready."

Duckworth emphasizes that students need to do the work to make the connections themselves in order to grow in understanding. This is not to say that learning cannot occur within the confines of one's own intellect alone, but many more schemes developed from personal experience is necessary for that kind of thought. However, it was noted by more than a few of the research participants, that seat time has increased even in the classrooms of our youngest students in order to make up for deficiencies in background knowledge. Natural learning environments have been traded in for more efficient means to educate the status quo. How unbearably suffocating it must be for a child to enter kindergarten completely fluent in the language of his or her imagination and to have to conform to the

mode of learning deemed appropriate by adults. As quoted from Lewis' *Living by Wonder* (1998),

"...the prerequisites of getting ahead in school are to divide play from work, imagination from fact, feeling from truth. How confusing it must be for children to be told that their senses (hence their bodies) are not where they learn, and that real learning takes place only in the citadels of their intellect."

The natural curiosity of children's learning ability is evident when you watch them play unhindered during recess or exploration time. They might not have all of the correct information as they play, but they improvise to fill the gaps of their knowledge. Through imaginative play, new connections are made between schemes and are put through the test of abiding by the rules and context of the children's game. During and after play, intuitive judgments are made from the schemes that establish new ideas and concepts (Brown, 2009). In the first section of the topic of developing background information through imaginative means, I will provide the essence of imaginative play as seen in the classrooms of my participant teachers at Brookfield Elementary and frame my theory through a look at Brown's philosophy of the undeniable importance of play activities.

Imaginative Play

Play in the United States educational system has markedly diminished in the past half of a century with the rise of a new focus on early preparation of students especially from low socio-economic backgrounds in the early grades (PreK-4th). Teachers are feeling more pressure to focus on the development of specific academic skills using a more didactic approach rather than allowing a more child-centered, constructivist

approach. Many times when teachers use play methods in their classrooms, they take the approach or context of adult perception, which lacks spontaneity and imagination. It is important to remember that the inner world of the student's imagination is not entirely disjointed from learning and that play remains as an active catalyst for building and using background knowledge. It is paramount that imaginative play be noticed as an inseparable part of a student's struggle with any learning task. Play in classrooms is too rigid and categorized rather than integrated into the normal learning structures and teaching habits. Quite often, it was observed that teachers would start their classes with a lecture, allow for questions, have students practice the new concept individually or in groups, and then sometimes move into an activity that was rich with imaginative work/play.

Integrating play into the classroom isn't the act of replacing didactic educational structures with more play time and the freedom to explore. It isn't the addition of play as a separate entity in a classroom either. Imaginative teaching needs to be a systematic integration of play into the context and curriculum of the classroom (Burton, 2013). It's more that just a what, it's a how.

What would happen if the kids showed up to class one day and the teacher said, "Today we are going to learn about (*teacher states topic*). Ready, set, GO!" How would students go about learning the topic when they are so explicitly put in charge of their learning? Most likely, there would be a moment of the class staring at the teacher and the teacher staring back. Then the students would look at each other, smile nervously at the

teacher, hesitate to take the directions into their own control, and then explode into an enthusiastic bustle as they devise a plan.

As documented in Stuart Brown's research and publications, the act of play is the basis of our new discoveries, our greatest achievements as humans, and the basis of our understanding of the meaning of civilization (Brown, 2009). Similar to the definition of the imagination, play is varied from participant to participant. It is an objective understanding but has similar characteristics for us all. Vygotsky (1967) claims that through play, the early years of a child's life are rife with natural proximal development. It advances the participant beyond what they already know and provides an expanding view of the world of possibilities. The possibilities that are presented are the work of our imagination; the making of understanding through the material already presented and known. Brown defines seven attributes that surround the shared experience of play independent of the medium we choose to participate in as humans. I will spend the next paragraphs discussing Brown's properties of play as seen from the perspective of a shared human experience and situate the themes within the context of childhood learning environments.

Brown begins his list of characteristics with children's apparent lack of purpose while in play mode. 'Purpose' as stated by Brown is doing something for the benefits of survival or something more than just fanciful tasks that can be embraced for their practical value. The participants of my research recalled moments from their childhood where they were at the task of playing. No real objective in mind, just running wild on a farm or playing games with neighborhood kids. Usually this free play coupled with time

would turn into moments of imaginative play, where a child would turn into a teacher with a full class of rambunctious kindergartners or the carpet would turn into a pool of lava and they would have to safely maneuver their way across the room using couches and chairs as rock outcroppings.

Katie Good would often play in her toy kitchen when she was young. Her grandfather hooked up her tiny kitchen sink to real water so she felt like it was a *real* kitchen. She would work for hours, preparing meals for her stuffed animals, friends, or parents and really enjoy getting into the tasks she set for herself. In her mind, she was preparing elaborate meals for kings and queens but the outside observer would see a little girl playing to her hearts content. Sometimes, she would play with her up-the-road neighbor and they would prepare meals and clean up dishes together. Their only focus was on the current task. They weren't concerned by what they didn't have as they played. The food, knives, and other objects were all imagined. This type of play is free for manipulation but is still set within the confines of certain rules. The navigation of the storyline embedded within the context of certain guidelines is where the implicit learning takes place. While the act of play may not be full of purpose, the act of pretend play promotes cognitive and social development and promotes self-regulation, cooperation, and interpersonal perspective taking (Nicolopoulou et al., 2009). It is also regarded as being a means to developing implicit background knowledge into explicit understanding.

Brown also identifies a state of mental flexibility during play that he names the improvisational potential. The imagination steps to the front of this type of play to provide the narrative and context, to manipulate and change objects into other than what

they are, and to help identify with someone other than who they are. Through improvisation in imaginative play, participants again are engaged in a subtle type of learning where new context gives insight to novel behaviors, thoughts, strategies, movements, etc. (Brown, 2009). This type of play corresponds to the movement of the world, which is in a constant state of improvisation. Rules of our society that are unspoken can be uncovered and made explicit. Perspectives can momentarily shift within the safety of play and then revert back to normal when the play situation is complete. This type of play uncovers what is known and what is not through its very essence.

Another game Katie and her neighbor would play was called acid rain. Her friend's dad happened to share brief details of the environmental threat one afternoon, and it became a game that the girls played for months to come. The friends didn't know specifics, but they knew about the game many kids play where the carpet becomes hot lava and you have to traverse from one side of a room to the other without burning your feet. The game acid rain was created in a similar fashion. If they were outside, the grass was poisoned. Inside of the house, the floor represented the deadly pools of liquid. The kids would hop from rock to road or chair to stairs trying to avoid whatever was wet with the vile substance. Realizing that they didn't have all of the information, they made up the rest to fill the gaps.

This type of imaginative episode can also be called fantasy. I find this term off-putting because it immediately becomes categorized as non-essential and frivolous. Fantasy thinking removes many of the law-bound structures that inhibit our possibility-

thinking, a mental environment that is perfect for new connections, and presents a form of activity established in the moment from shared and voluntary laws. Within this self-created structure the participants are driven to participate with the goal of mastery of their role. Through improvisational play, the contributors gain intellectual efficacy and empowerment through self-expression (Nicolopoulou et al., 2009). Vygotsky makes mention that through fantasy-based play, a child takes his/her first steps towards loosening external control over thoughts and actions and experience thought in an independent and internal way (Vygotsky, 1933/1967). As an example, in order to commit to play pretend, there has to be a certain suspension of reality in order to see things other than what it truly is. A blanket is a patch of soft grass on a rainy day when kids can't go outside for recess. A tree branch is a medieval sword in a campaign against tyranny. A stuffed animal is a best friend during moments spent in isolation. This type of play also requires a certain amount of efficacy built either through practice or modeling from a peer or mentor as well as a certain amount of background knowledge. These two items work in tandem to fill the gaps and make imaginative play congruent. Without a high level of efficacy, children have difficulty filling in the details of what they don't know and without supporting levels of background knowledge during narrative creation, children's efficacy could possibly flounder.

Another characteristic that Brown discusses is the voluntary nature of play. Often times, the moments remembered from childhood involved imaginative play that was instigated by a desire to do something novel with free time. The time wasn't set to "play house" in a pretend kitchen or scheduled to drive spaceships around the front lawn with

buckets on the player's heads like helmets, it happened on the child's own volition usually to necessitate avoiding boredom. Many of the research participants recounted imaginative play moments that accompanied the performance of menial tasks or chores.

Jon Clymer would sit on the tractor as he worked to mow the field of hay and sing at the top of his lungs. Imagining that he was on stage in front of hundreds of fans, he would sing his favorite country tunes. The hours sped by as he imagined many scenarios and soon the task would be complete. It made his time in the field enjoyable.

Through adding a novel aspect to the mundane errand, children are able to make the routine exciting. Sometimes the act of adding imagination to a process that would otherwise be considered dull is a way to trigger the memory or entice further exploration. Ms. Murphy does a great job of incorporating the arts and play into her normal classroom activities. Even when she is working with small groups in math, she engages her students through playful activities like in the following example.

At Ms. Murphy's signal, the small groups rotated to new stations around the classroom. Students grabbed their notebooks and pencils and moved clockwise as the teacher counted out papers for the next group. When the new group of students are situated, Ms. Murphy hands everyone a half sheet of paper with a word problem on it.

"Picture it in you brain," she comments. "Try to see what is happening in the math story."

The seven students quietly read the paper and appear to be thinking about the word problem.

"We are going to read the problem, we are going to draw the problem, and we are going to act out the problem," she states. "Let's read it out together first."

The students read chorally the word problem on the paper, "*Ms. Murphy was baking cookies. She had two cookie pans and could fit twelve cookies on each pan. After she baked all of the cookies, she divided the cookies equally between eight students. How many cookies did each student get?*"

"What are the important parts of the text?" Ms. Murphy asks. She hands out highlighters for the students so they can bring attention to the words 'divide' and 'twelve in each pan' and 'two cookie pans' and 'between eight students'.

"Now let's go back and reread so we can make sure we didn't forget anything." Ms. Murphy uses her hands to motion reread by throwing her two thumbs briskly towards her shoulders.

The students read over the text once again and add emphasis when they read the highlighted portion of their sheets.

"Now let's break it down sentence by sentence to make sure we understand what is happening," she continues, "What is the first part we have to figure out?"

"There are twelve cookies on each pan," a girl reads, "and there are two pans...so that means there are twenty-four cookies."

"That's right, Ana," the teacher responds, "so what do we have to do with that number?" Ana looks at her paper and reads the words of the second part silently, her lips moving as she thinks over the words.

"It says we have to split them equally between all of us," says a boy named Hector. He looks to Ms. Murphy for affirmation.

"And how many is that?" she asks.

The boy counts all of the kids in the group including himself and responds, "Seven!" Some of the kids in the group think he counted incorrectly so they begin to count their group themselves.

"Is that what the paper says?" Ms. Murphy leads.

The third graders look back at the paper and catch their error.

"It says EIGHT!" responds Kelsey. "We need to give everybody eight cookies."

"What do we do with what is left over? Does the paper say that we have a remainder?"

The students check diligently and shake their heads. Some more time is spent looking at the paper when one more student pipes up.

"We have to give them until there aren't any left," he answers.

"Uh huh," Ms. Murphy agrees, "So how many cookies would each student get?"

"Three!" two students shout in unison.

"Good! So now that we understand the story, let's go ahead and draw our picture," Ms. Murphy continues, "Below the text on your sheet, I want you to draw two rectangles for the cookie pans."

The students draw the two rectangles quickly and most begin to draw circles for the cookie right away. Ms. Hunt leans forward to urge a lingering student to continue drawing by whispering, "Don't forget the cookies."

"And now let's group the cookies by three to show that each of our students get three cookies."

The students continue drawing and are soon finished.

"Done." says one student, eliciting similar responses from his peers.

"Done."

"Ok, now we are going to act it out!" Ms. Murphy states jubilantly, "Who wants to be Ms. Murphy?"

All seven kids raise their hands to play the main role. A quiet girl who has been very attentive during the lesson is chosen and she is given two lids from storage containers that serve as the 'cookie pans'. A box of plastic Unifix cubes are pushed towards her as the cookies and she sets to counting twelve for each pan. She is very deliberate in her choice of colors and spaces them equally around the parameter of the lids. Finally, she is finished and she stands up ready to serve them to her classmates.

"Wait!" Ms. Murphy interrupts, "You aren't going to feed them unbaked cookies are you?" The teacher gives her student a wary look with big eyes.

The students and the girl laugh together about the near misfortune and she quickly places them on a nearby table to bake.

"DING!" chimes Ms. Murphy a mere two seconds later.

The kids laugh and look on eagerly as the girl travels to each of the students and they each grab one cube from the tray. Ms. Murphy plays the part of a student and gets a 'cookie' as well.

"Wait, we need another student," reminds a longhaired blonde boy. Ms. Murphy quickly takes another cube from the tray and sets it on the table beside her.

"This is for Luis since he's not here today," she remarks.

The girl goes around two more times before the tray is empty and all the students, including Luis, have three cookies. The children enjoy the moment of acting like each bite of pretend cookie is real.

One student comments, "I'm SO full!" while he rubs his puffed out belly.

Ms. Murphy sets to collecting the cubes once more as she calls out to the whole class, "Switch!" The students take their notebooks and pencils to the next stations stomachs full of imagined cookies.

In his fourth property of play, Brown implies that there is an inherent attraction towards play. Play happens because it's fun and it makes the participant feel good. Play encourages us to move and express ourselves, to use our creative brains and imagine. We are rewarded by our involvement in some sort of play activity through mental and physical health, which our minds categorize as pleasure. Conversely, when we don't have moments of play, our viewpoint becomes more bleak and dull. Possibilities seem to be stunted and our creativity diminished. We are drawn towards the positively stimulating actions of play rather than the negatively stimulating behaviors of monotony.

In is the opinion of many of my research participants that students spend too much time sitting in seats. In Ms. Atkin's class, she takes an active approach to learning and often has students physically involved with learning. Even when they are working on measuring, they are out of their seats. In the following example, Ms. Atkins teaches a

student the difference between different metric measurements using a playful, movement oriented approach..

The students in the fourth grade class are working towards finishing a math worksheet that focuses on the skill of measurement. The children are given several examples of distances that they need to appropriately measure. Due to the measurements all being in metric units, there is some confusion as to the actual length of units like kilometer and millimeter.

The classroom is a science-centered lab. A class set of microscopes sit on a rolling cart in the corner next to three desktop computers. There are posters of student work plastered to the walls as a reminder of the units covered so far this year: phases of the moon, water cycle, and ecosystems. The large multi-person desks are positioned in rows across the front and back of the room enabling plenty of space for movement if needed.

Right now, Ms. Atkinson is taking large steps with a student while saying the word, "Meter, meter, meter..." with each step. She is holding on to the boy's wrist as they walk to ensure that he participates with her. The student looks a bit embarrassed as he takes lumbering steps and mumbles the new word under his breath. The student's friends guffaw as they watch his movements in between the rows of desks.

Ms. Atkinson often uses imaginative movement to engage her students in learning. "It helps them to connect to the information in a physical way," she says. On any given day, a person can see fourth graders jumping, spinning, and walking

backwards, around the classroom as they explore a new dimension of science or math learning.

The spoken words of Ms. Atkinson and the student changes to a staccato as the start shuffling their feet and saying, "cen-ti-me-ter, cen-ti-me-ter..." The boy now fully embarrassed puts his free hand to his face as he continues to move around the classroom. Finally to his delight, they reach the end of the row and he is released from her grip, her body spins around and she delightfully asks, "Who's next?"

Brown has also determined that through play, the participant gains a diminished conscious of self and time. The engagement of imaginative play is so encompassing that time no longer becomes a noticed structure just as the participant becomes less focused on themselves. Csikszentmihalyi calls this type of transcendence of self "flow" and "optimal experience" (Csikszentmihalyi, 1990). Through this type of play, one's concentration is so profound that all else becomes irrelevant. A "flow" activity is one that demands the concentration and engagement of the attendant to the point that all else falls away. There are certain activities that bring about this type of consciousness more readily than others. Uhrmacher (2009), outlines six dimensions drawn from progressive theorist John Dewey's *Art as Experience*, which sustain a higher likelihood of aesthetically engaging students; moments of connections, active engagement, sensory experience, perceptivity, risk taking, and imagination. Many of Uhrmacher's themes correspond directly to some sort of play activity as described by Brown and flow experiences as illuminated by Csikszentmihalyi.

As elucidated in earlier parts of this section, play is memorable, fun, and engaging and it is because of these positive aspects we are drawn to engage in similar activities time and time again. Brown calls the final attribute of imaginative play continuation desire. He states, "Play is its own reward, its own reason for being". The participants in this study often reminisced about play in their childhood with fondness and longing. Their visits to imagination as adults created as an endeavor to reconnect with the freedom of their youth.

It is with this fondness in mind that I transition to modes of imaginative play that I have witnessed through classroom observations of creative teachers. Students are quick to move into imaginative moments and play when given even the smallest amount of freedom and space. Often though, there is not the space, time, or freedom for self-created imaginative play in a classroom setting. Master teachers find ways to engage their students through many imaginative means despite these hindrances although the control of the "what" and "how" of play is dictated by their curriculum and resources.

Vygotsky's (1933/1967) idea of play incorporates the imagination into two interrelated and essential elements: an imaginary situation, and implicit rules within that imaginary situation (Nicolopoulou et al., 2009). An imaginary situation is not only fantasy play but can also involve games or activities with explicit context and defined rules. In actuality, imaginary situations all include some form of rule system whether it is explicit or implicit. The rules allow the activity to progress with the defining characteristics that position it within the context of the narrative. For example, there is a game that my family plays called Forbidden Island where each player adopts a character

who can perform certain actions on the game board. Much like chess, some players can move diagonally, some can move to any open space, and some can only move laterally. Because of the limitations imposed by the rules, the game is more engaging and problem solving is at its pinnacle. Similarly, games and other imaginary situations that are defined by a set of implicit or explicit rules in the classroom give students the chance to develop their understanding of the context and the roles that the rules play. The next two stories are an example of this type of play in the classroom. However, one is student driven and the other is teacher driven. The game that is played is basically the same, but the rules situate each for a different purpose.

Ms. Good kneels down with her small group of students on the rug while the rest of the class is working independently. This particular group of students is having difficulty grasping the concept of making change from larger denominations of currency. A forest green backpack leans against the teacher's hip as she checks to see that each of the five students has the correct amount of pretend money to make change for the exercise.

"Remember that there are several strategies you can use when making change," Ms. Good announces to her group, "you can either count up from the price of the item or you can count down from the money the customer gave you." She situates herself in a more comfortable pose and then places the backpack in a central position in front of her knees. The students turn their focus to their teacher and listen for the directions.

"Judith, you will be our first shopper," Ms. Good begins as she unzips the backpack, "what item would you like to buy?" The contents of the bag are brought into

view as Ms. Good carefully brings out each item that is marked with a price tag. Judith watches carefully as she looks over her choices. Her eyes light up when she sees the item she would like to buy.

"I'll take that," she says pointing to a set of colored pencils.

"They are \$2.50. Do you have any money?"

Judith gives Ms. Good a pretend five-dollar bill and waits for her change.

"I'm not gonna make it that easy for you," the teacher remarks, "How much change should I give you back?"

Judith thinks about the strategies that were mentioned earlier but has difficulty working through the math on the spot. Ms. Good looks on with a pleasant smile as the student tries to visualize the problem. She counts on her fingers but soon gives in to a shrug.

"That's OK," offers Ms. Good, "which strategies were you using to determine the correct amount of change?"

"Counting down," answers the girl. Her anxious demeanor suggests that she feels uncomfortable having to do this work in front of her peers.

"So what number should we start with if you gave me a five-dollar bill?"

The girl shrugs again. She begins to rock forward nervously.

"Does anyone want to step in to help Judith with the answer?" Ms. Good asks.

"What's the question?" asks a boy who was busy stacking his change during the previous interchange.

Smiling, Ms. Good repeats, "If Judith wants to buy these *amazing* colored pencils which are \$2.50 and she gives me \$5.00, how much change should I give her back?"

The boy thinks awhile and answers, "Three dollars!"

"That's really close, Demetrius. What strategy did you use to get that number?"

The boy takes out his fingers and counts up from two, "Three, four, five."

"Let's check our work by adding the change of \$3.00 to the price of the pencils,"

Ms. Good prompts. "Alvin, do you want to try that?"

Alvin does some quick addition and shakes his head, "Five dollars and fifty cents."

"So let's try this together, out loud, she we can all get some practice," she says.

The group collectively counts down from five dollars using their fingers. When they get to three dollars Ms. Good steps in again, "Can we take away another dollar without going below the price of the pencils, \$2.50?"

"No," answers the group of 3rd graders.

"So what do we have to do?" she asks.

"Less than a dollar," answers Judith.

"That's right, Judith! We have to subtract the remaining fifty cents to get change that will be less than a dollar."

"Fifty cents, " replies Alvin.

"Good! Let's add that to the amount we counted down and we get..."

"\$2.50?" offers Judith. She looks a little skeptical that she has the correct answer but she answers without the hesitancy from before.

"Yay! That's right!" Ms. Good celebrates. "That was fun! Let's do another one. Judith can you pick our next shopper?"

They continue to play the game each of the five students around the circle getting their chance to be the shopper. Slowly, the students are able to apply the strategies themselves, both counting up from the price of the item and counting down from the amount of money given by the customer. After a few more minutes of applying their newly discovered abilities, the group disbands and joins the rest of the class with independent work. Ms. Good takes the items that were on display and places them gently back in her backpack. Once finished, she stretches a little and then calls over the next group of kids.

In the next vignette, students create a self-driven scenario that shares some commonalities with Ms. Good's playful activities. However, the focus is on the relationship and the storyline rather than the academic skills being taught.

On a particularly cold day in April, students in Ms. Good's classrooms stay inside for their midday recess. Students are scattered to every section of the room either by themselves or in groups as Ms. Good sits down at her computer to check her email and school announcements. The students know the routine of indoor recess well after a particularly cold and harsh winter. Groups seemingly form naturally as playmates gravitate to different activities that interest them. A few individuals decide to read a book at their desk or sit down in a spot of the floor with art supplies to draw. In a bucket next to the white board at the back of the room is a handful of stuffed animals and puppets. One child selects her favorite animal and cuddles with it a bit as she reads.

A group of girls and boys have brought out a box of Legos, figurines, and a plastic dragon and are sitting on the carpet. They quickly set up a few buildings and position characters to stage the attack. One student grabs the dragon and starts circling the air above the village. The other students make sound effects with their mouths and move the "villagers" inside the castle to protect them from the torment of the winged creature.

In another corner of the room, two girls have grabbed wooden blocks that they are pretending are phones. They are full into a discussion with each other about "those teenagers" and setting plans for "going to a party" together. They very emphatically move their hands while talking on the phones and ignore the fact that they are within feet of each other as they make their plans to meet.

Meanwhile, a group of girls have set up "shop" at a u-shaped desk in the far corner of the room. A cash register with play money is placed in a central location at the inside small part of the desk and one student takes her position as the cashier and owner of the store.

"You have to have something to sell if it's a store," states one girl with curly short hair and glasses. She moves towards the bucket of stuffed animals on the other side of the room and comes back with her arms full of monkeys, bears, puppies, and a dinosaur. "Here!" She unfolds her arms and the animals spill out near the student playing cashier.

Another girl sets to the task of quickly making some pricing signs for the animals. She folds the paper carefully so the number stands up in front of the particular animal.

Before long all seven animals are set up and presented to the girls satisfaction and the negotiations begin.

"Hmmm...Can I buy....this one and this one?" she points to a bear and the dinosaur. "I have five dollars."

"Yes. This one is on sale," states the cashier firmly pointing to the dinosaur, "he's a sad, sick puppy and will need food and rest."

The girls continue to play their roles as storeowner and shoppers. Rehearsing their parts as they envision the rules of the game they are creating. One of the girls assumes the role of director and stops the other participants every so often to offer her advice.

"Here, you should give her the money now so she can make your change." She helps the customer hand the cashier the play money. "And you need to give her some money back."

There is a discussion about how much money to give as change as the girls pause their play. Once a decision is made, the actors decide to try the interaction again. This time, the customer hands the money to the cashier on her own and the storeowner opens the till and takes out two bright orange dollar bills.

"Here's your change!" she states.

The girls seem happy with the play they have created and with whispers dispatch the girl playing the customer to invite Ms. Good to come to their store. Ms. Good spins her chair around from her computer and walks behind the proud student across the room to the pet store.

"Hello, I would like to buy a pet!" she says.

"Which one would you like?"

"I'm partial to puppies. Do you have any of those?" Ms. Good feigns looking over where the puppies are placed on the table, as if she doesn't see them.

"Here they are," offers the director.

"I will take them both, please," Ms. Good gathers them from the table and looks at the cashier smiling.

"Oh no," whispers the director to the cashier, "we forgot to give her the money to spend." Adjustments are quickly made as two blue pieces are handed from the cash register to the director and then to Ms. Good.

"I have ten dollars. Is that enough?" Ms. Good offers the paper bills to the cashier who promptly takes them back and secures them in the till drawer.

The girls giggle at the funny interchange and Ms. Good smiles at them.

"That's a fun game, girls," Ms. Good exclaims, "thanks for letting me play!" She places the animals back in their proper spot on the counter and the girls busy themselves with setting up the shop to play again. Ms. Good watches while price tags are repositioned and money to spend is handed to a "new" customer. The interaction starts from the beginning and Ms. Good walks back to her desk with a smile on her face.

I suggest that moving towards a play system similar to the student-directed episode might be more yielding in participation and tailored to student's interest. Nicolopoulou (2009) examines the self-imposed rule system from a Vygotsky-ian

perspective when he notes the importance of play in fostering the contradictory combination of self-regulation within boundless freedom of creativity and imagination.

"The system of rules is central to constituting the playworld itself, and in turn, these rules derive their force from the child's enjoyment of, and commitment to, the shared activity of the playworld. Indeed, as Vygotsky emphasizes, a crucial aspect of the theoretical significance of play is that it is one of the first activities in which children self-consciously impose rules on themselves, rather than merely receiving them from others."

During several instances in my observations, the teacher participants engaged learners through imaginary play situations. In contrast to the free play mentioned in the previous paragraph, there were very specific objectives. For the teacher led imaginary situation, the rules were of the utmost importance and the narrative was the assisting framework that gave the students a possible context for the information they were learning. No specific rules were given about how students should interact with each other besides in a way that furthered the adherence to the main rules. For the student led free playtime, the context and narrative were the driving force behind the play and the rules were developed from already established norms or were developed through the building of the story.

The focus group determined that in a group of students who are playfully imagining, there is often a group/individual who is making the rules and another group/individual who is following the rules that are created. Katie Good summed up this idea by saying, "The students in-charge are creating the rules from a context that they have already imagined while the other participants are playing by the rules to imagine the context created by the others."

Nicolopoulou describes both of these types of imaginary situations as being on opposite ends of the same continuum. One situation with an overt imaginary story embedded with covert rules that need to be defined by the participants, and another situation where there is a covert imaginary situation with more overt rules. Either of the situations are ripe learning environments where the performers operate within the parameters set forth by the context and rules and both work towards making the implicit more explicit as the narrative unfolds.

Intellectual Imagining and Finding Wonder

The spontaneity of excitement and wonder has been replaced with remedial instruction focused on knowledge gap remediation, fact drilling, and process oriented strategies. It is without a doubt that imaginative, relevant and wonder-filled learning has diminished in the public school system. While many teachers and administrators cherish its memory, the reconstitution of imaginative teaching practices is seen as an arduous and almost impossible task. Despite this, the spirit of early progressive educators like John Dewey live on through inherent creative dispositions of teachers who continue to push against the prevailing winds of testing culture. While this research isn't directly about the creative development of students or how students are engaged imaginatively with content in a formal classroom setting, I would be remiss if I didn't bring to light the importance of allowing wonder and discovery back into the classroom learning environment.

Throughout my discussion with teachers on the topic of imagination, time and again the theme of inspiration and awe through learning surfaced as being paramount. But what is wonder and how does it link to the imagination? In the next paragraphs, I will outline the

ideas of several theorists on the phenomenon of instilling wonder during learning and make the connections necessary to situate its essence within the paradigm of imaginative teaching and learning.

The ways that students learn are diverse and complex. Teachers are equipped through university prep programs, professional development opportunities, and other types of training to implement strategies that work to navigate the intricacy of student's learning behaviors and abilities. However, due to the large amount of curricular territory current teachers are expected to cover, group momentum of the average level of development often gets precedence over individual achievement. Concepts are packaged into a procedure and understanding is replaced with facts. Teachers, administrators, and instructional trainers are not at fault for this. They work hard to gather data on students and apply specific strategies to reconcile differing growth rates, background knowledge, and test scores. Almost every moment of a teacher's day is filled with implementing specific tactics for individual student gain, but the truth remains that when a specific unit is complete, it's time to move to the next packaged set of ideas. Individual gains are necessary but group pacing is the reality of the educative system.

"We start the day by meeting briefly, taking attendance and lunch count and are on to specials before the day has really ever started. When they come back, it's time for an hour of math followed by switching classes to their social studies teacher. Lunch and recess is after that. When they come back to me for the afternoon, we write and work on our language

arts block using whole class, individual, and small group breakouts. By the time we are finished with that, there is only an hour left in the day! "

"When one lesson is finished, it's time to assess their understanding and then doing a bit of re-teaching when going over the assessment. The pacing guide keeps us moving forward though and we have a lot to teach. We hope that if they have missed out on learning a concept, they get it later from another teacher in fourth or fifth grade. I guess that's the benefit of a spiraling curriculum. But it's really hard to leave one topic to the next when you know some students haven't learned it yet."

It's difficult to find a way to talk about the possibility of involving wonder and fascination into curriculum without also having the discussion about time, lesson structure and class schedule. Through my in-depth interviews I asked the research participants about their utopian ideas of a learning environment as it pertains to different aspects of the imagination. Each one of the four made comments regarding the allotment of time for given subject matters, pacing guides, and the compartmentalization of knowledge as being inhibitors to the environment that would allow the imagination to flourish. Throughout the school day, the teachers I observed had every element of their day structured and planned to the last minute. As an example of the rough terrain teachers navigate throughout their day with scheduling and subject matter, I will share one of my narratives that focuses on the lack of time and depth of subject matter.

The students gathered around the floor in front of Ms. Good and she began to teach them about a new type of graph. The students are attentive and responsive and work hard to make comparisons between previous graphs they have learned about.

"We won't have as much time to work on this type of graph, but if you think about the other types of graphs we've learned about there are a lot of similarities," she says.

Drawing on the board and fielding the class for input and answers to her questions, Ms. Good navigates the new material expertly. Although this is new terrain for the students, she has obviously taught this lesson before and works to negate the normal misconceptions of students about this particular information.

She is teaching very efficiently and with good reason. In forty minutes, students move on to their next class and this is the only day they will be covering the information. When she reaches the end of her lecture and questioning, she gives the students their small group assignments. The learners are broken down into ability groups assumed from the assessments from previous lessons and they get to work. A teacher assistant takes control of one group, another works with Ms. Good, and the final group works independently. The two-page packet covering different forms of graphs and accompanying word problems is enough work to keep the students working for twenty-five minutes.

Finally, students are called back to the rug and they go over the answers for the packet. Students share with the class the strategies they used to get the answers. Katie works to get them to verbalize their thinking for each answer. She uses questions like,

"How did you get to the answer?" and "Did anyone figure this out using a different strategy?"

After ten minutes of review, students are given a half-sheet exit ticket that they must complete before lining up to go to social studies. Each student moves back to their desk after receiving the assessment and works to answer the two questions accompanying the graph. Most students finish with a few minutes to spare and start to gather their supplies for switching classes. In a few moments, Ms. Good announces that if students are not finished they should go ahead and give her the sheet of paper. Smiling she gathers her student's papers and orders them to line up at the door to switch classes. A brief moment later, the students are swapped out for another class section and the graph learning begins anew. The students gather on the carpet and Katie announces, "Toady we are going to learn about a type of graph that we won't be using very often but it is similar to other graphs that you have seen before."

Due to high levels of attrition of students from one school to another, the need for student's equal exposure to content, and alignment of what is taught to what is assessed, the need for curricular consistency of grade level material is of utmost importance. One of the ways school systems work towards this horizontal and vertical alignment is through the use of pacing guides. Current pacing guides are very similar to the scope and sequence documents of recent decades but have changed to reflect the per topic outline of what is expected on benchmark assessments and annual state tests. These instructional guidelines not only give overview of topics to be covered but also the amount of time needed to adequately cover the subject matter. Today's teachers face profound pressure

to meet the requirements of the pacing guides before the end of the year. Every curricular unit, teachers are torn between their pragmatic and idealist selves. Do they stick to the guide and lose the depth of understanding for their students, or do they slow down the pace and risk having to eventually skip topics that will be assessed?

Overall, pacing guides are not a bad idea, just very indicative of the expected role of the teacher in covering curriculum in a timely and efficient sequence. David (2008, What research says about pacing guides) outlines harmful outcomes of using pacing guides as the definitive blueprint for scheduling learning in a classroom. Firstly, teachers feel drawn to fall back on less effective techniques like teacher-centered lessons that are efficient and more predictable but allow for less authenticity and depth of understanding. Teachers have also been found to drop certain activities that have been proven an effective part of the learning process. Elements or activities that are meant to enrich and give context to the factual elements of the lesson are rushed through or not focused on at all. Lastly, teachers in pacing driven environments who teach lower performing groups of students are found to structure lessons around pendantic methodologies rather than cognitive demanding student-focused activities. If left unchecked, pacing guides that were meant to structure learning in a logical sequential fashion and offer curricular guidance become a prescribed set of steps used to monitor teacher effectiveness.

The last theme around the inhibiting factors of a wonder-filled environment is the isolation placed on a subject due to their compartmentalization during the average school day. As mentioned earlier, a student's day is most often broken down into categories where math, language arts, and other subjects have their own time and place during the

day. Rarely are there moments of cross-curricular exploration where students are urged to discover the connectedness and interdependence of the subject matter. As an exception, I regularly observed writing being used in a cross-curricular fashion. However, writing was mostly used as a tool for recording answers and writing about topics rather than as a discipline of self-expression and exploration.

Many teachers share the thought that learning could be enhanced through more fluid learning schedules. Ms. Good brainstormed some ideas with me on this matter.

"I think the approach would be much more interdisciplinary than it is now. It would be a lot more interest-based as well. I would have the freedom to say 'Okay, this particular group of kids had an interest in discovering things about plants, so I'm going to have them focus on measurement using plants as the topic.' Since those students would be really into plants, I would focus everything in the unit around them working with plants so they can benefit of learning a skill through the subject matter. For example, they could spend two weeks studying the soil composition or the height of the plants, counting leaves...so that the learning is directly related to the things they are interested in. Seeing the topics and lessons as not being an isolated thing but something that we can learn about it in many different ways. This way the students can see that what they're learning is a meaningful thing...that it is embedded in our lives in a meaningful way and that it's useful and there are many different ways to

go about it. With the learning topics so compartmentalized and identical, we are missing out on so many learning opportunities."

Testing culture forces us to structure the learning of students in our classes around a logical and linear style of learning based on Piaget-ian levels of development when in fact the ideas of Piaget are grossly misinterpreted by the educational system. According to Duckworth (2006) who was a protégé and researcher under the direction of Piaget, the area of intellectual preparation that focuses on logical structures and frameworks should be the least of our concern as educators. Given the appropriate experiences and left to explore their interests using thoughtful discovery, a child's familiarity of the world will develop and flourish naturally. The combinatorial imagining of our previous knowledge forms new ideas and through this, a novel experience is created. In a way, until a student sees the connection between two separate and disjointed ideas, learning hasn't taken place.

The thoughts a learner has, what is already known, and his imagination, work to mediate the values of the different blocks of schemas to see what is created through a successful partnership between the two ideas. If the combination of the building blocks creates the desired outcome, the process of trial and error begins. Whether or not the new process yields a positive response, learning has taken place. The main focus is that the learning happened within the context of the student's personal knowledge and understanding. In order for maximum benefits, this thinking and imagining has to take place through a process of self-discovery. As Duckworth mentions, the connections between our ideas must be made as a personal elaboration and sometimes a person is not

able to make a connection based on the thinking of another person. This is why it is important for teachers to frame their thinking on a subject with the proper amount of background information and represent the structure of the learning through varied forms of representation. Taking an example from Elliot Eisner's *Art and the Creation of Mind*, multiple forms of representation is not only important as a way for students to demonstrate their understanding, but also should be used as a tool for teaching, to provide various aspects of the same concept from a myriad of perspectives. Each representation a teacher chooses both reveals and conceals important aspects of the intended curriculum. The recreating, reinventing, and restructuring is the struggle both performed by the teacher and learner in an ideal classroom setting. And it is through the wrestling of content with one's own mind that leads to intellectual discovery and wonder-filled moments

So what do moments in cultivation of wonder bring to learning and how does it relate to the development of imagination? First of all, allowing for a sense of wonder builds efficacy of independent thinking in a learner. That efficacy allows the participant to have confidence in their own ideas and states of mental awareness, which in turn gives the student more flexible thinking and helps to develop learning habits, urging students to seek out opportunities of similar fortitude.

As a theme in my interviews and observations, the topic of excitement in learning through independent thinking came to the surface more than once. Moments of realization, "ah-ha" moments, aesthetic moments, to name a few, are all forms of the same wonder that leads students to have a deep personal connection to the moment of

learning something new. A few of my interviewees recounted experiences from their past that changed the way they felt about learning; moments when the struggle of understanding came to a sudden realization of understanding. These stories epitomize the phenomena known to many as the "Ah-ha" or Eureka moment, where something that lies just beyond current understanding is suddenly brought into harmonious accord with previous knowledge. Vygotsky's famed "zone of proximal development" outlines a sweet spot in a student's learning path that facilitates authentic learning connections to be made. While the word "authentic" might be a loaded term in popular educational discourse, I explain the notion as being self-driven and student-centered learning that is appropriate to the individual readiness of the learner. In opposition of the term is a style of teaching that is extremely process-based and didactic, where the student is fed a list of directions for getting the right answer despite their understanding of the concept. In her book, *The Having of Wonderful Ideas*, Eleanor Duckworth (2006) makes mention of the importance of discovery in the learning process. The training of students in process-oriented material is just as important as the development of background information, but learning shouldn't stop there. Engaging students in self-thinking put those building blocks into action to solve problems, shift perspectives, and develop connections with other material.

Duckworth states,

"...the development of intelligence is a matter of having wonderful ideas. In other words, it is a creative affair. When children are afforded the occasions to be intellectually creative - by being offered matter to be concerned about intellectually and by having their ideas accepted - then not only do they learn about the world, but as a happy side effect their general intellectual ability is stimulated as well."

And this "happy side effect" known as intellectual efficacy can serve the student by giving them the confidence to think for themselves. It is, as noted by Duckworth, the essence of pedagogy. To summarize, more didactic teaching attitudes of both students and teachers inhibits the cultivation of independent thinking on the part of the learner. However, encouragement of independent thought is directly related to the cognitive freedom propagated by the imagination and development of good feelings about one's own mental prowess, which are indispensable traits for a self-driven learner.

Creativity

There are many misconceptions about creativity as an entity separate of academic intelligence. Western culture paints a creative individual as having uncontrollable hair who shows up late to work because they labored late into the night on an idea or invention. This unreliable and unintelligible being conjures an entity automatically pitted against such agencies as education and success because of their unorganized and sloppy nature. This stereotype just adds to the idea of creative people being set apart from the rest of us. And while the description may hold true to a very few prominent creative geniuses, on the whole, it's a bogus idea. Human intelligence is essentially creative. We look at the world through our experiences and beliefs and interpret our surroundings based on how we find meaning in our lives (Robinson, 2001). No one capable of making decisions can escape their own creativity. Our ideas and preferences shape the world as we interact with it, making moments that are unique and original to us.

Common ideologies in modern education commit student and teacher interaction towards the efficiency model of the industrial revolution where seat time and empirical

methodology reduce teacher error and fabricate students as products within our schools. Assessment of this 'lean manufacturing' judges the correctness of the output; the logical linear reasoning behind intelligence. Creativity, in many ways, is separate from intellect and is appraised on it's 'goodness' depending on the appropriateness to the problem or situation (Sternberg, 1999). However, it is also understood that a certain amount of knowledge is imperative in the creation of something worthwhile. The theoretical basis that saturates our common educational beliefs today doesn't recognize space for coaching and evaluating students in the sometimes-ambiguous field of creation.

While the domain of creativity is open for all who are interested in participation, not all creative activities are equal. Within this section of creativity, I will discuss the differences between reproduction and production as well as compare creativity against the latter stage of my continuum, innovation.

By training students to integrate their own beliefs and ideas into what they learn, we are creating self-thinkers who are more versatile in the way they connect and interact with the world around them. Student's lives are enriched knowing that what they do makes a difference in their own world and they understand the concept of other's perspectives because they understand their own. But is it possible to train students how to think in this manner? Is there room in the curriculum for enabling students to utilize creative methodologies even though assessing the creative process can be precarious and irresolute? Many teachers see creativity as the end result or 'practice' activity of a lesson. When I shared my topic of research with the teachers at Brookfield Elementary, many of them invited me to their classroom to see similar student projects. However, most of the

creative activities that I was able to observe fell into the category of reproductive creativity. The following is an example of this type of classroom activity from Ms. Forrester's classroom where second graders are being creative by making Quonset huts during their unit on Native Americans.

Students are sitting and standing around their desks working on individual projects from their study on the Iroquois people in early American history. Every student has a cardboard platform where they are building a small structure. Glue, scissors, sticks, paper, and other various supplies are strewn across the tables as students work to recreate the building in the picture.

On the SMARTboard, an image is projected of a Native American longhouse. It is a twinkie-shaped building that is made of large sticks and trees that housed the Iroquois people in the long winter months and provided shelter from the heat during the summer. Students have been asked to make their own structure look like the one in the picture.

The second grade students are busy and talkative. It is easy to tell that they enjoy the experience of building something on their own with two hands. Students look at each other's buildings to see if there is anything to learn from the table-mate peers.

One student leans over and asks a friend how he got his sticks to curve for the roof. Another student walks across to a friend at a different table to ask if she can borrow yarn. While all the students are working on their own buildings independently, there is real community building in the creation of the huts.

In this example, students are not allowed to stray too far from the assignment on longhouses. The objective is clear, they are learning about different shelters from Native

American people to understand how life was for the early people on this continent. However, this type of creativity is focused on reproduction. In the many classes that I observed, this type of creativity was used as a summative experience of the unit or lesson. The second graders spent a week talking about shelter and Native Americans. On the last day of the week, a half-day, the students spent their day creating longhouses and other structures from various civilizations.

The other type of creativity demands a more complex function of the imagination through problem solving. Projects on this higher level of thinking skills demands that students understand concepts and are ready to use their combinatorial abilities to create something that works as a solution. This type of creativity was hard to find in a classroom and is focused on production. So, what is the best way to develop this type of thinking in a classroom setting?

Guilford (1975) purports that there are four main factors involved in problem solving: the ability to recognize problems, fluency, flexibility and originality (Starko, 2001). I think that using these would be a good starting point for developing emerging productive creative thinkers.

The ability to recognize problems, also known as sensitivity of problems, enables the student to analyze possible outcomes of a situation or idea. For example, if I'm creating a painting using multiple perspectives, I might have a problem with balance in the overall piece. Merely identifying what problems might occur takes considerable effort depending on the form of representation.

The second skill set discussed by Guilford is that of fluency. The number of ideas imagined during the creative process represents a person's creative fluency. The more familiar a person is with the subject(s) being examined, the higher his/her fluency. Fluency can be compounded when paired or grouped with multiple thinkers. It can also be subcategorized into Ideational Fluency (the ability to produce many ideas rapidly), Associational Fluency (the ability to name similar objects, words or ideas), Expressional Fluency (the ability to use multiple ideas to produce new ideas).

Thirdly, is the skill of flexibility. Flexibility is similar to the idea of Eisner and multiple forms of representation. A creator chooses the best medium for expression available to him/her and can adapt to a new form if necessary. Subsets of Flexibility include Spontaneous Flexibility where quick-mindedness is used where there is no pressing need, whereas Adaptive Flexibility is where the creator is flexible when needed.

Lastly, originality is mentioned by Guilford as unusualness. The ability for someone to create something that is different than the norm, an antithesis to the thesis. Unusualness is not evoked for the sake of being set apart, but is created out of the necessity of needing something authentic and new.

In my music class, I hold a composition competition for my students during the month of January. Students are always very excited to jump headfirst into writing notes that they want to play on an instrument or the iPad. However, similarly to a young child who experiences finger-painting for the first time, the result is messy and the image is indistinguishable. Student's first response is to place notes randomly on the music staff

without a concern of scale, progression, or time. They mostly just want to know what their music sounds like!

The next lessons on writing melody lines and choosing a chord progression teaches them that there is more to music than randomness. A formula to follow, while not always necessary, is helpful. While they work towards their end goal of creating an original song, they learn that there are many more factors than just notes on a music staff to be considered. After students grasp the understanding of melodic structure and chord progression, then they learn about musical form, themes, and patterns. Each of these components help them to produce an original song that is built around the theory of composition. Their songs, while unique, are built on similar structures. It is the decisions that they have made through the process that makes their creativity production oriented instead of merely reproducing something that already exists.

By training students to assert their uniqueness through creative process, we allow them to experience the world through a more wholistic means. We also give them tools that will help them adapt to the world as it changes, giving them self-efficacy and the ability to determine the best choices for them. The existing models of our current educational institutions need to be rethought if they are to keep from collapsing beneath the weight of a changing world. Educational society needs to reinvent the way they see human imaginative capacity and begin to cherish uniqueness by promoting creativity.

Innovation

To be honest, writing a chapter about innovation as a form of imagination was at the top of my interests when I started the endeavor of this research. As I spent time in

numerous classes, observing master teachers and interviewing highly imaginative teachers, I realized there was a disparity between the ideal of innovation and the ability to initiate innovation in today's classroom. The ideas of student and teacher innovation echoed in the desires and educational goals of my interviewees, but were left mostly unrealized in the observations of over one hundred hours of student focused teaching.

When we discuss our goals for students, the skill of being innovative is at the top of our list as educational society. For corporate America, innovation ranks high on the list of qualities of employees. As reported in Tony Wagner's book *Creating Innovators* (2015), the 2008 Conference Board reported that creativity and innovation was situated in the top five skills that will increase in importance over the next five years. In 2010, a McKinsey & Company global survey echoed the importance of innovation in today's workforce, citing that 84 percent of executives deem innovation as extremely or very important to their company's growth strategy. Needless to say, the ideas of innovation and creativity are held dear by 21st century global culture as well.

So what is innovation and how does it manifest itself in the working of students and teachers in the classroom setting? Similar to the word imagination, innovation has a loaded context for many people in education. For a teacher, it could mean new ways and strategies for teaching or using technology to enhance their students learning. For administrators, it might focus on a new type of scheduling or school-wide curriculum. The essence of innovation within the context of a school setting points to innovation as being a new way by which something takes place. However, when I am discussing innovation as a physical, or mental, characteristic of a student or teacher, the word takes

new meaning. As the apex of the educational imagination, innovation is the moment where old territory is left behind and the ideas and actions of a student and/or teacher are fresh and novel. Innovation in this context is deeply personal as a learning tool and finds meaning through the user experience of exploring something that is new. To find validity as a mode of learning, innovation only has to be new to the learner, removed from the view of what is known in broader world.

The innovative imagination makes it possible to see future outcomes. This is where complex uses of imagination takes place. Full immersion into imaginative realm is necessary to be able to dream the possible into fruition. Advanced thinking and cognition, as outlined by Maxine Greene (1995), fight against the boredom of the obvious and opens the innovator to new relevant thought. She sees innovation as having a direct connection to artful thinking and arts curricula.

"Ideas of possibilities are trapped in predictability. But our imagination, as I have been illustrating, obviously deals in unpredictabilities, in the unexpected. It then requires reflectiveness on our part to acknowledge the existence of these unexpected and unpredictable vistas and perspectives in our experiences. The passive, apathetic person is all too likely to be unresponsive to ideas of the unreal, the as-if, the merely possible. And it is this passive person who bars the arts as frivolous, a mere frill, irrelevant to learning in the post-industrial world."

The benefits of innovation in learning communities are undisputable and draw students into moments of awareness and intensified consciousness through the

curriculum. Students who are encouraged to look beyond the regurgitation of facts and process-based learning modalities into self-thinking are beginning to make the move toward innovation. Changing from the age of information into the era of innovation calls for a paradigm shift of how educators look at the role of teaching and learning. Tony Wagner (2015) illustrates the shift between knowledge paradigms and innovation paradigms and highlights the importance in making the necessary switch.

"Today knowledge is ubiquitous, constantly changing, growing exponentially... today knowledge is free. It's like air, it's like water. It's become a commodity. There's no competitive advantage today in knowing more than the person next to you. The world doesn't care what you know. What the world cares about is what you can do with what you know."

The having of personally new ideas was brought up continually throughout the discussion with the research participants in this study. I think it is safe to say that one would be hard pressed to find a teacher who didn't believe in cultivating the skill of self-thinking in learners no matter what the age or subject. Most often, the desire for students to be innovative thinkers emerged during the discussion of a utopian learning situation where all teacher-defined barriers were removed. Katie Good stated,

"I think that the optimum experience for my kids would arrive when they are in charge of what they are learning. I can imagine us learning about measuring and the students deciding what it was that they would be measuring. Or maybe we are learning about ancient civilizations and one group decides that they are really interested in the tools that ancient people in Egypt used. I can see that that would be such an invigorating experience for the students...to be in charge of what they learn."

Other teachers spoke to the idea of students selecting the strategy by which they solve problems as being innovative. They also found importance in letting students choose the output or representation of their learning. However, beyond writing prompts like "Choose a person you would like to be from early American history and write a letter to a family member" and similar types of assignments, student invented representation was not observed.

Chapter 6: Conclusion - Using Imaginative Practices

Overview - Why Imagination

For the most part, schools are still built on traditional models of education. They are inherently and systemically focused on the transference of our 'cultural literacy', a term penned by E.D. Hirsch in his book *The Knowledge Deficit* (Hirsch, 2006). Some would even say that our educational systems are still working towards the task of sorting students (Sizer & Sizer, 2000). These ideas seem to portray the image of a dry and unyielding coursework that is bent on separating those who know from those who don't. However, the human component of the curriculum, the teacher, is positioned as the savior or the enemy of the knowledge as they bring interpretation and expression into what is being taught. Through purposeful management of how the information is presented, teachers bring to light connections that can become personal and real for their students. I propose that there is no greater method to do this than through imaginative teaching.

In this research study, I have observed master teachers in their teaching and learning environments focusing on their use of imaginative-based instruction, interviewed them about their own imaginative upbringing and experiences, and held focus groups to discuss the themes of imagination that were observed. Chapter four focused on the understanding and intent of the teachers at Brookfield Elementary and developed themes that included developing background schemes, creating engagement, retaining knowledge, promoting self-generated cognition, and providing imaginative learning

environments. Chapter five developed the idea of an imaginative continuum through the investigation of the instructional practices, activities, and learning environments that support the use of student's imagination.

How Teachers Can Grow Imaginatively

So now that there is clear evidence that there are successful teachers who instruct students using various imagining tools, what are some ways a teacher can begin to improve their imaginative classroom practices? This final chapter outlines how K-12th grade teachers can make use of imaginative practices to engage students in learning. I will focus on three main areas that could possibly have profound effects on the way that a student learns when the imagination is engaged in a classroom setting: scaffolding learning activities to match the continuum, using storytelling and storylistening, and creating an imaginative atmosphere.

Scaffolding Learning Activities to the Continuum

In chapter five, I proposed a continuum that placed educational activities within a hierarchy of complexity. The continuum begins with the development of schemes, moves into play, finds meaning through discovery and wonder, is shared with others through creativity, and establishes something novel through innovation. Most often, teachers are encouraged to focus on developing innovative students but are only given the means to work with students to establish the schemes, background knowledge, and context. In this last section, I suggest that teachers should scaffold their learning activities to move their students through the continuum. While most people would think it counterintuitive to express the development of imagination in a linear fashion, these

points of entry allow for a more clear understanding of the progress of incubating a new idea.

Anyone who has spent significant time in a classroom understands that no two students are the same in how they learn and what background experiences surround the knowledge that is taught. As such, students will move at different paces throughout their imaginative development of an idea and will most likely move forward or backward as learning necessitates. It is important that students are given the freedom to develop their understanding of a topic through their knowledge development. For some, significant amounts of time will be spent collecting the details to support their understanding of a topic. For others, they may already be equipped with sufficient background knowledge to support their movement to the next stage of the continuum, play. This type of differentiation is necessary throughout the imaginative development of an idea.

As mentioned earlier, a certain amount of flux is crucial between the stages of the continuum. Through my observations and interviews it was noted that one of the benefits of play is that it lets us experience what we know and what we don't know. Playing around with an idea is not dissimilar to playing a new board game. The rules need to be clarified as the game progresses and adaptations to the player's strategies needs to be made throughout the first game. In a classroom, this can be evidenced through student's questioning to determine the "rules". One of my focus group participants shared a particular activity where this type of learning is apparent.

At the beginning of the class, the students are given a bead. They are told that the bead will change colors under the right circumstances but are given no other explanation.

The activities that follow are student led as they play and explore with the bead to determine what factors might cause the change. Students immerse the bead in cold water first and then hot water. Others rub the bead to see if friction and temperature will cause the bead to change. Another group of students are putting their beads side by side to see if there is some sort of physical change when beads are in near proximity to each other.

"While listening to the students you hear them sharing ideas, then testing them out to see if they were right. When they prove to be incorrect, they move to another idea and then another until finally someone in the class places the bead beside the window. Slowly, the exposure to the sunlight changes the bead from a pale green to a yellow."

The next observations are imperative as they move into developing further understanding about their beads. Students ask questions, explore what they know and don't know, and work to create more information about the bead. Does it turn a brighter yellow with longer periods of exposure? Does it appear duller on a cloudy day? Does it matter what time of day we do the activity? What if I cover it with my hand? These explorations lead to the next learning objective and the "ah-ha" moment where students discover that the bead is photosensitive. From this point, the students create a list of rules together about how the bead is changed by the strength of the sunlight and the teacher has an excellent setup for talking about UV rays and how different materials, animals, and plants react differently to exposure to the sun.

In the next part of the project, students are asked to protect their beads from exposure by creating a shelter of their choosing. The goal is to keep the bead pale green. Students are given a bevy of supplies as they cut, glue, and staple materials together that will shield the bead from the rays of the sun. During the next day the structures are placed outside, each housing a student's bead. The results are collected at the end of the day as the class records the change in their structures and the bead. Some students suffer the disappointment of their beads being bright yellow as results of their building's design flaws. Some structures blew over with a slight wind; other project's glue and tape melted in the heat and fell apart.

If this project was allowed to continue further students could redesign with their new knowledge to make better structures. The design could also move into an innovative mode if students were given a framework or problem-based project to complete. As an example, the teacher could have set new parameters for the project to promote innovation like, "Without touching the bead or shelter, the bead needs to start greenish-yellow but be yellow between the hours of 10:00 am and 11:00 am. After that the bead needs to be green again by 1:00 pm". Then a whole host of facts need to be uncovered about the position of the sun as it travels across the sky in relation to the position of the shelter. How do you make the bead greenish-yellow? What amount of break in shelter signifies an hour of time? What should the shape and material of the shelter be? This type of higher-order thinking is seldom in place for activities at an elementary level, but can be a crucial part of imaginative learning as students reach the end of the continuum.

If a teacher would design a unit or lesson in a similar fashion, with the continuum in mind, they would surely find that their students are learning with enthusiasm and rigor. This type of learning promotes the retaining of information, engagement, self-generated cognition, and is designed where the background knowledge is developed for all students.

Storytelling and Storylistening

Throughout this research study, the use of storytelling has surfaced time and again. This points to its importance as an engaging tool within the learning environment. While storytelling has been a natural part of our human educational account for millennia, it is not a familiar practice for many teachers. The second suggestion for K-12th grade educators from this research study is to learn how to engage students and develop context through the art of storytelling.

Years ago, I began teaching students how to set up my classroom with instruments by using simple storytelling methods that I read about while writing a paper for my doctoral coursework. I would wait for silence, look at my students in the eye, lower my voice and slow my speech, and begin to tell a story in a sing-songy voice. As I would tell the story, about a selected student in my class, it would give the directions about getting the instrument off the shelf, out of the case, and into their hands. As I would narrate, the student would follow through my directions as the rest of the class watched in anticipation. It made a process that I usually found tedious and stressful into a magical experience that unfolded right before my student's eyes. It would go something like this:

"Emeril was so excited to be back in class. It had been a full week since he was in Mr. Shank's music class and today was a big day; the class was going to learn how to hold and strum a ukulele! Emeril gently stood up from his chair and made his way to the back of the classroom where Mr. Shank stored the Ukuleles. He gently took a case with both hands from the top of the shelf and walked it over to the side of the room. Kneeling on the floor, he opened the case and there it was. A brand new ukulele! He smiled and reached into the case, carefully holding the instrument with two hands as he stood up and walked directly back to his chair. He was so happy to have the instrument in his hands and he knew he had to be careful with it. As if it were a small child, he cradled it in his arms while he waited in his seat for Mr. Shank's next directions. With a nod of understanding the rest of the class knew what to do. They stood up from their chairs and made a perfect line behind Casey, waiting for their turn to get an instrument."

Even after weeks of playing the instruments, the students would still beg me to make up a story about one of them as they followed the directions about caring for their instruments at the beginning of class. Children love stories. They are rapt with attention and claim an affect that calms even the most rambunctious student when done correctly.

Once a class knows that a teacher likes to tell stories, they know and look forward to listening to more.

Metaphors and allegories can be like stories as they paint a picture of something to think about that uses descriptive wording. It is the subtle nature of the object that makes a connection to what is being learned in a way that causes the learner to think with dimensionality, perspective, and depth. I walked into Ms. Atkin's classroom one afternoon to hear her talking about how to drive a car. Curious to understand its relation to the curriculum she was teaching that day, I quickly sat down and listened to her.

"When you are sixteen and are ready to drive, you will be the one with a steering wheel in your hands. If it's raining, you'll have to turn on the windshield wipers. If you want to turn left, you'll have to turn the blinker on in that direction. When you are driving, no one else is moving that vehicle. It's you! Have you ever seen a car with two steering wheels? What do you think would happen? You would probably crash or drive off the side of the road together. There's only one steering wheel because a car is for one person to drive. If you don't drive it the right way it could lead to disaster!

"Now, do you think I'm saying you should go drive a car? Goodness, NO! I want to bring it back to what we were talking about before. In my class, every single one of

you has a job to do. You have to make your brains do the work. Just like driving a car and all the decisions you have to make. If you just sit in a car, you ain't goin' nowhere! In my class, every 'driver' has to ask questions, talk about what their learning, and do their seat work. If you don't...you're just stuck in the parking lot. That's no fun!"

The strength of a story is that it grabs the attention of the listeners and immediately engages their brains with images of the characters and situation. The context created by the descriptions builds background information that may be missing or incomplete. A story helps develop what is already known by placing it in a certain time, place, or situation. When used in an allegory like the one above, a story can make a strong connection that reveals a new understanding for the listener.

So what can teachers do to become storytellers? One of the most crucial elements in the classroom is that there is an expectation for students to story-listen. Oftentimes, when I am in a classroom during story time, the teacher is in a chair and the students are huddled around at his or her feet listening to the narration and sometimes looking at the pictures in the book. But quite often, when a teacher is mid-lecture or activity and begins to tell a story, students are scattered around the room or in their desks. Students are less focused and distracted by their surroundings. To gain the student's attention is the work of the teacher, to keep it is the role of the storyteller. A simple pause until all students are quiet is a great way to begin. Then the teacher can begin their story with "Let me tell you a story..." or "Once upon a time..."

Using a different type of voice is also helpful in catching and holding student's attention. In my observations, I recorded how many teachers use different types of voice to engage students in various activities. When a story is being told, quite often the tone is smooth and silky, the pitch is lowered, and the pace is slowed significantly. This type of aural change marks that something different is happening and that the student needs to pay increased attention to the teacher. Using character voices and voices that expresses emotion is also important in that it allows the listener to experience the characters and feelings of the story.

Lastly, teachers who want to get better at telling stories should practice. By starting with a story from their lived experience, it will be easier to remember the events in the correct order that they happened. The teacher who shares a personal experience through story also knows the characters, setting, and emotion in the story firsthand. This allows them to manipulate the voice and tone of the story in a way that reflects their actual experience. With their firsthand knowledge, they can add supporting details and environmental context that might aid in the coherent representation. When the teacher decides to tell another person's story, it should be in the same fashion. The story should be well known to the storyteller and the important elements memorized. Many storytellers use the help of mental storyboards or flowcharts to remember the sequential narratives (Daniel, 2007). All storytellers use methods for memorization that works for them, but in the end there is only one rule, don't learn the story word-for-word. Storytelling needs to have a flow and flexibility that memorization doesn't allow.

Whether the use of storytelling in the classroom is a separate learning activity or seamless in its incorporation into the lesson, it is an imaginative practice that has observable benefits. The storyteller holds the imaginations of the listeners and in the moment of sharing, can have direct access to the student's attention. While most teachers, especially in elementary schools, have read their classes stories, storytelling is quite a different thing. It can be an enriching and memorable experience for the students and teacher alike.

Creating an Imaginative Atmosphere

The final category in this chapter focuses on engaging students in learning through a purposeful creation of an imaginative atmosphere. Cultivating any type of culture in the elementary classroom is a tricky endeavor. Where else in life are people packaged together with twenty other similarly aged people of different backgrounds and ability levels other than a classroom? This unique mix is ever changing and different from year to year. A strategy that may prove to be successful for creating harmony one year may be a complete bust the next year. Sometimes, the simple addition of one child in the middle of the year can cause the affect of a class to change dramatically. The common goal of teachers is to keep learning at the forefront of the class's mission, not to mention working to create an environment that allows for the development and nurturing of student's imaginative selves. The characteristics of a class and their social structure can have tremendous impact on the outcomes of learning for individual students during the year.

Many of the teachers I interviewed for this research topic defined an imaginative classroom as one that is specific to their learning and teaching style. The results of what it takes for a classroom to be deemed imaginative are divergent. It seems that the individual characteristics of the teacher themselves, whether it be their charismatic personality or focus on niche interests like STEM, music, etc., help to define and shape the product of classroom atmosphere as well as the personalities of the teachers themselves. Participants I interviewed discussed the former teachers they remember as being imaginative with various subject matter, levels of teaching, and modes of teaching. The only connecting thread between the teachers they described is that each one worked in their own way to draw their students out as creative self-thinkers.

The teachers that were observed for this study demonstrated a certain playfulness and tolerance for student tomfoolery. The mental flexibility that this type of learning environment encourages can only be assumed, but I have seen it in my own teaching practice. In the interviews, teachers were asked what types of characteristics embody the imaginative learner. Two of the three teachers described a student who they struggled to connect with who was an independent thinker with a mischievous side. The students they described often used humor and playfulness in their classrooms, sometimes to the distraction of their peers. The master teachers allow for this playfulness and are mindful of the possible negative aspects of letting things go too far.

Student's involvement in class seems to be both paramount and obvious in cultivating the type of atmosphere that encourages the playful cognitive habits of imagination. As mentioned in Brown's *Play* (2009), the voluntary participation in actions

concerning play is a crucial element for its existence. A similar need can be assumed based on the close relation of the two important elements of play and imagination. An important question to ask is how do teachers encourage participation in imaginative activities and modes of learning, or even require it, without it seeming forced. Already, students are in an assigned space at required time and are bound to follow a rigid schedule. How can they be made to feel the freedom that gives them opportunity to engage imaginatively with activities and the subject matter being taught? The master teacher draws students into learning experiences through varied access points and similarly exposes them to play opportunities based on their risk readiness level. Some students need help in rediscovering this side of themselves within the context of a classroom while others may need no help at all.

Overall, it was mentioned and observed more than once that students should to be given the ability to play in the environment in which they learn as long as it doesn't negate the learning that is happening simultaneously.

It is also important for teachers to identify student's imaginative capacities and cater towards their individual expression of what they know and how they learn. When Ms. Eileen Murphy was a 4th grade student, she had a teacher who understood the importance of relevant and personalized curriculum. As an imaginative student who was most often finished with class work far before others, Eileen was given special projects that would push her learning into areas that interested her. The thing that Eileen liked the best about these moments is that she had control over how she learned the information as well as the project she chose to demonstrate her learning. The teacher recognized her

student's ability to investigate and create meaningful learning that has stuck with her to this day.

A young Jon Clymer shared a similar perspective through the need to work through ideas with his hands and his body. His imaginative capacities were met through building his ideas, often times without a blueprint, with parts and materials he found on his farm. Jon remembers how his projects engaged his brain in mathematical procedures learned at school. Measuring, adding, subtracting, and dividing were all put to good use when tools were in his hands.

Similarly, master teachers create moments of learning that are cross-curricular and connected to other learning on various levels. Through allowing multiple forms of representation, problem-based learning adventures, and similar concept application methods, students work towards assimilating their ideas into innovative displays of understanding. A classroom that is rich with this type of opportunity for students is one that cultivates an imaginative environment.

Creating novel experiences is another way imaginative teachers work towards engaging their students in memorable learning. A large project, field trip, guest speaker, or in-class explorative lesson encourages student to be an imaginative thinker. As an example of this type of learning, Mr. Singer, a fourth grade science teacher, transforms his classroom into a planetarium.

Mr. Singer walks towards the windows and positions large pieces of cardboard over the rectangular space to prevent the streaming sunlight from interrupting his next lesson. Even though he is dressed sharply in dress pants, a pressed white shirt, and a tie,

he climbs up on the low counter to fasten the corners with adhesive so the cardboard stays in place.

He has also moved the chairs of his classroom in a cluster at the very center of the room. The tables are pushed away to prevent any blockage for the class's upcoming experiment.

So far, the students have learned about the phases of the moon by reading about the process in their science journals. Students have carefully cut out individual moon images at various stages of the cycle and labeled them with the correct name after gluing them in place.

Today is going to be different than most of their science learning experiences. Mr. Singer is making his classroom into a planetarium, preventing the light from creeping in to the space by whatever means necessary. The door's window is covered by black paper and his electronics are powered down so they don't accidentally wake up during the presentation.

Right now the students are at lunch recess, but they will soon make their way to their upstairs class. The sound of the fourth graders can be heard coming up the staircase with heavy feet.

"Here they come," Mr. Singer says and turns on the second set of lights so the room will appear to be normal for when the students enter.

The first wave of students make their way through the door and move towards their desks to get out their science notebook. It doesn't take them long to see that things aren't in their normal place.

"Mr. Singer...why did you move my desk?" asks a taller curly headed boy. Mr. Singer smiles but doesn't respond.

"Put your things away and take a seat in one of the red chairs," he announces. His booming voice can easily be heard out in the hallway where most of the class is. When they come in to the classroom, there is a quick game of musical chairs while students jockey to sit by their friends. Finally all of the students are seated and Mr. Singer begins his lesson.

"We are going to be discovering the phases of the moon today by looking at the night sky as the moon makes it's cycle." He holds up a white foam sphere, a representation of the moon about the size of a soccer ball.

"Night?!" exclaims a dubious soon-to-be teenager.

"That's right," Mr. Singer responds. "Adrian, could you go turn off the lights for us?" Mr. Singer grabs his flashlight while the student walks over to the light switches and flips them both down. The students "aww" and "ooo" over the incredible darkness that Mr. Singer has achieved in their classroom. The teacher briefly turns on his flashlight so that Adrian can get back into his seat and then he begins.

He holds up the moon and turns on the flashlight so that it shines only on the back portion of the sphere opposite of the viewing position of his students.

"You are now seeing the dark side of the moon," he begins. "The sun is still shining on the moon, but you can't see it because of the earth's angle. Does anyone remember what this phase is called?"

"New moon!" calls out the class.

"That's right. The moon is still there, but we can't see where the sun's light is reflecting on it because of the position." He walks a few steps anti-clockwise to his next position, "I'm gonna walk over one phase..."

"Now, we can see just a very little bit of light from our position on the earth." The flashlight now illuminates a small sliver of light on the right side of the sphere. "Does anyone remember what this phase is called?"

"Crescent," chimes one student.

"Close," Mr. Singer informs, "this phase of the moon is known as the waxing crescent. Can you say that with me?"

"Waxing crescent!" everyone repeats.

"What you see is a little sliver of reflected light. I still see the full thing lit up," he adds. "Because from my perspective, I'm right by the light source...but your position sees something different. You have to imagine that from earth...you can only see what is visible."

"How many of you in here have ever eaten a crescent roll?" Mr. Singer interjects.

Several students raise their hands and a few remark in the affirmative.

"A crescent roll or croissant is shaped like a banana, right?" he asks.

"So this represents our first visible stage of the moon's cycle which we call waxing crescent." Mr. Singer moves another few steps to the nine o'clock position now revealing to his students a moon that is visibly reflecting light on half of the sphere's surface.

"What do you see?" he probes.

"Half!" reply a handful of students.

"This is called a first...quarter..." he states slowly. "And is the lit up portion of the moon on the left or the right?"

"Right!"

"It's gonna stay on the right as the moon comes around to the full moon position over there." He motions to the spot directly behind the group of chairs where the students are sitting.

Mr. Singer continues to demonstrate the different vantages of the moon from earth at different stages of the cycle until he ends up back where he started in front of the class. Each stage of the moon was rehearsed and explained, giving the students ample time to grasp the understanding of what happens in the night sky.

When Mr. Singer turns the lights back on, the students stretch and yawn, standing up after being inactive for such a long time. They move their chairs and tables back to their original spots and get out their journals to write about what they have just observed.

"That was cool," says one boy to his friend, "I'm gonna do that at home!"

Imaginative episodes that are as immersive as the experience Mr. Singer provided for his students cannot be performed with every lesson of every day. The amount of time the teacher spends setting up for and supporting the lesson makes this type of activity an understandably rare occurrence. However, the positive learning impact that an imaginative episode produces makes this type of enterprise a worthy endeavor.

On the opposite end of the spectrum are the imaginative daily activities of teachers. The operational mode of a teacher who cultivates an imaginative atmosphere

allows for pockets of creative engagement throughout even the most mundane lessons. I observed many lessons that were peppered with play-acting, rapping, joking, poetry, singing, and other types of seemingly spontaneous play by the teacher. Whether these moments are planned or improvisations, they serve a purpose to draw in the students and have the probable outcome of creating a classroom atmosphere where the imagination is revered. The following account of a normal lesson embedded with minuscule moments of imagination and play was observed in Ms. Good's afternoon math class.

Walking into the classroom as an outsider, a person would probably see the activities of the day's math assignment as being similar to free playtime and rather chaotic. Students are moving around the room, hopping from their seats to different tables where there are an array of colored liquids, containers, and activities. However, it is actually a formal assessment on measuring volume using metric units that Ms. Good is calling a "challenge quiz". Each child has papers that they work to fill out to demonstrate their learning, but the lesson's activities include much more than just putting pencil to paper.

Earlier in the class, Ms. Good had the students working on review as a class while sitting in front of the whiteboard. She is very clear about what the assessment will be about.

"We will make an estimate and decide if it was reasonable," explains Ms. Good, "and we will name the metric units for measuring liquid volume."

She spends some time reviewing the work of reading the number lines on the side and has students count the individual line marks in between 50 and 55.

"51, 52, 53, 54..." they chant together as a class. Similar examples were made using beakers with number lines that counted by tens and twenties.

"Before we begin our challenge, we need to go over the rules," Ms. Good explains, "Our goal is to figure out exactly how many milliliters are in a liter."

She goes on to describe the task to be performed at the tables with colored liquids and measuring equipment. "Everyone must measure at least two times and each time you measure, your partner must check for accuracy." She goes on to explain how each of the measuring containers needs to be used at least once during the experiment.

"And most of all," she highlights, "you *must* have a plan before you begin."

So now, students are moving around their classroom, having thought of a plan for determining how many mL are in a L. Two boys and two girls work separately at a table near the bubbling fish tank. Each one is carefully pouring liquid from unmeasured containers into a beaker that fits their plan. Occasional drops splash out and bead up on the table's laminate top as untrained third-grade hands struggle to pour water from large containers with accuracy. They are sharing in the pure delight of the moment, being able to do what they are most often told not to do at home and in the classroom. Making a grand mess!

The type of activity is reminiscent of young toddler play. Where on a hot summer day, small children are given a basin of cool water and containers of all different shapes and sizes. They sit under an umbrella or on a sheltered porch and play contentedly for hours, pouring water from one cup to another. Except in this scenario, the students are expected to use proper measurement and accuracy as their ultimate goal.

Giggles and exclamations can be heard throughout the learning space as Ms. Good's students endeavor to fill out the worksheets.

Lastly, teachers can support the imaginative development of their students with the words they chose to use. Common speech that is focused on creative terms will undoubtedly encourage student's imaginations. Quite often, adults lose perspective of what it is like to be a kid. We throw words at them that will help them talk like a professional writer, scientist, or mathematician. Throughout my observations, I witnessed teachers using words like schema, metacognition, resilience, fluency, strategy, differentiate, etc. All terms which are great for discussing learning with undergraduate education students, but void of meaning and lacking in interest for students in K-4th grade. However, if teachers decide that there is curricular importance in using the technical jargon with students, imaginative words can be infused into directions and descriptions to enhance the creative perspective of their work. Even terms that are used daily to work with a math problem could be enhanced with imaginative words. As an example, I collected a few worksheets from my observations that had the simple directions of "think" and "solve" above a series of problems. The idea of "imagine" could easily replace the word "think" in many contexts and the idea of "solve" isn't totally dissimilar to the process of "create". Imagine the difference in a student's participation with a topic when we ask them to engage with learning using these types of words.

The Essential Imagination

As presented throughout this research study, recognition of the imagination as a valuable tool in education is a necessary step towards educating the wholistic child. The

past decades spent focusing on assessing student knowledge has shortchanged the student education experience and has left many teachers feeling cornered into an artless profession. Many teacher's innate ability to make imaginative connections with the curriculum through stories, playfulness, and creativity need to be encouraged and set free. Training for all teachers in the practice of engaging students imaginatively needs to be set as a priority in order to make schools a place of learning that is student-focused and kid friendly. The focus on teacher and student development of imagination is essential to our survival and progress as an educational system.

Recommendations for Future Research

The stories brought to the surface through this study have left many questions in my mind as a teacher and researcher. With a topic almost already too broad to examine within a person's lifetime, the role of the imagination in an educative setting demands immediate exploration and focus. The evidence available from this study determined specific interventions that could be formulated and integrated into professional development. These strategies and others need to be employed and tested for effectiveness in aiding the development of student and teacher imaginative capacities. Studies could also be performed which examine student development as they progress through the continuum that was asserted in chapter five. Through a study of student imaginative ability as they work from schema development, play, wonder, creativity and innovation, a researcher could determine other steps of the continuum that were hidden from this study and/or focus on specific characteristics for each dimension.

Finally, this study could be expanded through the addition of research studies performed at other schools, focusing on their unique identities. As a qualitative study, the findings from Brookfield Elementary are a depiction of the imagination found specifically within its walls and the teachers observed. It would be of further interest to gain insight to the uses of the imagination at various levels of schooling and with schools that have focused curricula as arts or technology schools. Finding other examples of imaginative learning at other sites would help to further define the educational understanding of the imagination.

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Appendix A



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"A place where learning has no limits and together we work for the success of all."

May 21, 2014

Perry Shank
Brookfield Elementary School

Dear Mr. Shank:

Your research request to use classroom environments for an arts-based qualitative research tool that uses personal experience, classroom artifacts, teacher observation, and teacher/administrator interviews has been approved as stated in our recent meeting.

Please contact our office if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Kizner".

Scott R. Kizner, Ph.D.
Superintendent of Schools

SRK/ll

Appendix B

Focus Group Question Route – Imaginative Teaching Explored

Introduction Questions: Describe who you are. (Brief bio about you as a teacher including level of education, how many years in teaching, what levels/what subjects, favorite unit or lesson to teach)

- Share an imaginative instance or activity that you experienced as a child.
- In recollection, what was it like to be in this imaginative moment?

What is the intention of teachers who utilize imaginative teaching methods/strategies?

- What are your ideas about the word imagination? Let's come up with a group definition.
- How do you think our educational culture views the use of imagination by teachers and students?
- Why do you think a teacher would use imaginative instructional methods during a lesson?
- Why do you think a teacher would choose not to use imaginative methods during a lesson?

What types of instructional methods, activities, and learning environments support the use of student's imagination?

- What are some instructional methods/strategies a teacher uses that you might consider imaginative?
- What is an example of a learning activity that requires imagination?
- What is an example of a learning activity that does not require imagination?
- What types of learning environments are best suited for engaging student's imaginations?
- What parts of a lesson do you think lends itself most to imaginative teaching?
- Are there parts of a lesson that do not work well with imagination?
- If we were to rank these in order from most imaginative to least imaginative, what would our list look like?

How might teachers make use of imaginative practices to engage students in authentic learning?

- Picture yourself visiting the classroom of a teacher who uses highly imaginative ways of interacting with his/her students. What do you see?
- How do you think they learned to teach in the imaginative ways we listed above?
- What is the skill set necessary for a teacher to be an imaginative teacher?
- How can a teacher improve their ability to teach through imaginative means?

Appendix C

Pre-Observation Selection of Teachers

Teacher Name _____ Grade _____

Students are often engaged in creative lessons.

Less likely 1 2 3 4 5 Highly Likely

Teachers use a variety of methods to teach his/her students.

Less likely 1 2 3 4 5 Highly Likely

Teachers are highly reflective.

Less likely 1 2 3 4 5 Highly Likely

Teachers consider themselves to be imaginative individuals.

Less likely 1 2 3 4 5 Highly Likely

Teachers are recognized by peers to be master teachers.

Less likely 1 2 3 4 5 Highly Likely

Total Score : _____ / 20pts

Appendix D

Observational Guide structured around Elliot Eisner's Ecology of Schooling

The Intentional – The observations from this viewpoint will focus on the intentional dimension, the aims and goals, of the teacher. Both explicit and implicit educational goals will be observed and recorded. Items of note will be the proportions of various pedagogical methods throughout a lesson/day, educational goals and values of the instruction, the discrepancy between the intended aims and operationalized aims and the degree to which the intentions are met. My observations in the realm of the intentional will be minimized due to the constraint of time and importance when factored into the big picture of imaginative pedagogy.

The Structural – Considerations of structure of class size, space planning, and daily schedule will surround my analysis of observations from the structural standpoint. The structures may also include organizational items like curriculum, pacing guides, etc. and will ascertain whether these items are conducive or deleterious to the act of imagination and teaching imaginatively.

The Curricular – Most likely the one of the most important to my research goals is the area of Curricular development. My observations will include the content of the curriculum and the activities being chosen to accompany the lessons. Also important to the theme of curricular development is the value of what is being taught and from what perspective. Are the students engaged? Are they encouraged to think for themselves through the curriculum? Do the students have ownership in the learning?

The Pedagogical – From my perspective, the pedagogical dimension is the most important of all of Eisner's dimensions to the exploration and development of an imaginative pedagogy. Through the examination of the manner in which the content is being taught, I will discover modes of imaginative teaching and be able to distinguish their opportunities at revealing or concealing the curriculum being taught. How does the teacher act as intermediary between the students and what is being learned? What tools do teachers employ to be most effective from their perspective?

The Evaluative

Due to time constraints and the scale of this research project, I will not be focusing on the evaluation section of Eisner's ecology of schooling during my observations.

In-Depth Interview Question Route

Interview One – Focused Life History

1. Let's start by discussing your personal understanding of the term 'imagination'.
2. How does your past influence the meaning you attributed to the word imagination?
 - a. Family influence
 - b. School influence
 - c. Identity influence
 - d. Other influences?
3. Share a story with me of a time where you felt imaginative as a child.
4. How did it make you feel to be imaginative?
5. In what other ways did you experience using your imagination?
6. Did you have any imaginative teachers? If so, what makes them come to mind as imaginative?
7. What are your feelings toward this/these teacher(s)?
8. Tell me the story of a moment where you experienced imagination while learning in a classroom setting.
9. How did it make you feel to be imaginative while in a classroom?
10. What are some of the ways you learned as a child that you would say are the opposite of imaginative?
11. As you grew older as a student, how did your experience in the classroom change in relation to the imagination?
12. Focusing on your teacher training, how was your use of imagination developed in a way to help you teach children?
13. In your opinion, what is the ideal environment for the development of a child's imagination?

Appendix F

Interview Two – The Details of Experience

1. Begin by telling me the schedule of your day. What do you teach, for how long, what breaks are there for you and/or your students, what is your role/student's role during learning, etc.
2. What moments of your day are the most enjoyable for you? Why?
3. What moments do you perceive as being most enjoyable for your students? Why?
4. How do you go about planning a lesson or unit? Be specific with a recent lesson that you have planned for your class.
5. What activities do you plan for engaging your students in learning? (OR) How do you choose the activities that you use with your lesson?
6. Which, if any, of these activities/lessons use imaginative means of teaching (pedagogy)?
7. Discuss one/ a few of these lessons/activities and describe their connection to imaginative pedagogy.
8. How do students respond to your imaginative teaching practices?
9. In your opinion, can any student be an imaginative one?
10. What are the attributes/characteristics of a highly imaginative student?
11. Can you give an example of a student from your teaching career who embodied the idea of imaginative?
12. From your perspective, what is the affect of a student who is using their imagination by themselves? In a group?
13. What are the environmental needs for the classroom of an imaginative teacher?
14. What types of language/ways of talking do you use when you are teaching with your student's imagination in mind?

Appendix G

Interview Three – Reflection and Meaning

1. What benefits, if any, do children gain if they become fluent in their use of imagination?
2. What is the best way for students to gain that fluency?
3. What does the teacher gain (personally, professionally) through the development of her/his imagination?
4. What is the best way for an adult/teacher to develop their imagination?
5. Is there a difference between:
 - Imagination and creativity?
 - Imagination and play?
 - Imagination and innovation?
6. What are some things that get in the way of teaching through imaginative means (systemic, economic, individual, group/social, etc.)?
7. If these hindrances were removed, what would the ideal lesson using an imaginative pedagogy look like?
8. What do you think the student's responses would be to that type of lesson?
9. How is that in contrast to their response to normal teaching practices?
10. Describe your perceived relationship between a teacher's imaginative pedagogy and a student's imaginative learning?
11. What access, if any, does the imagination give the students to the curriculum you teach?
12. Are there certain subjects that lend themselves better to the use of imaginative teaching practices? Are there some that don't?
13. If you were creating a professional development for teachers to increase their pedagogical use of imagination, what skills would you focus on?
14. Rank the skills that you listed in the previous question.
15. (Read their initial definition of imagination from the first interview) How has your definition of imagination changed since our first meeting?

Appendix H

Focus Group Question Route - Final Themes Assessed

1. These themes were drawn from the observations and interviews of participants in the research study. Please take some time to make note of each of the highlighted words and think of specific examples on how you engage your learners imaginatively in relation to these themes.

Building of Schemes

Student Engagement

Retaining Information

Self-Generated Cognition

2. Take the following words and place them in the order you think best provides a hierarchal understanding: wonder (ah-ha), self-generated cognition, play, intellectual imagining, schema development, innovation, creativity, fanciful imagining.

