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MY EXPERIENCES INCORPORATING CONSTRUCTIVIST TEACHING STRATEGIES IN AN ART EDUCATION CLASSROOM

by

John Marlon Heard

Under the Direction of Melody Milbrandt

ABSTRACT

A reliance on a teacher-centered model of instruction presented the foundation for my research. I chose to investigate constructivist theory and to implement constructivist teaching practices within my art education classroom to determine if constructivist teaching practices would facilitate a shift to a more student-centered learning environment, and to determine if constructivist strategies positively impact student learning. I collected my raw data using autoethnographic recording, documenting my results over a two month period in January and February of 2007 from my experiences as an art educator at a public, Metro-Atlanta elementary school. A positive impact on student learning was observed and the constructivist teaching strategies did produce student-centered learning environments. Based on my experiences constructivist teaching strategies may be beneficial to the creation of student-centered learning environments and assist in broadening student inquiry and investment with lessons.

INDEX WORDS: Constructivism, Art Education, Student-Centered Learning, Auto-Ethnography, Teacher-Centered Instruction

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by

John Marlon Heard

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Art Education

in the College of Arts and Sciences

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John Marlon Heard
2007

MY EXPERIENCES INCORPORATING CONSTRUCTIVIST TEACHING STRATEGIES IN AN ART EDUCATION CLASSROOM

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CHAPTER 1: INTRODUCTION

Purpose for the Study

I chose to conduct my research on constructivist theory because I wanted to transition from a teacher-centered transmission model to a student-centered model of instruction. As a new teacher, I realized that I instructed students in the same manner that I was taught. This teacher-as-authority-figure role who actively gives knowledge to students is one that I have become less and less comfortable with in my career.

I concluded there are times in teaching when it is appropriate to use a more direct teaching method; however, through self-reflection and observations of other professionals, I believed myself to be overly reliant on teacher-centered instruction. Because of this realization, I determined that I would like to develop other teaching strategies. I did not seek constructivist theory as a means to an end, but more of a way to broaden my perspectives of teaching and learning as I developed my skills as an art educator.

In Polk's (2006) article, *Traits of Effective Teachers*, he asserts that educators must stay current in their field with ever-changing methods, ideas, and of course, content knowledge. I viewed this thesis as a way of doing just that. By investigating constructivism, I anticipated that I could integrate components of a sound educational theory into my classroom. As Virginia Richardson (2003) points out in her article, *Constructivist Pedagogy*, "perhaps the most critical area of work in constructivist pedagogy at this point is determining ways of relating teacher actions in a constructivist classroom to student learning." (p. 1635)

The outcomes I expected are that this knowledge will serve to make me a better teacher and that my integration of constructivism will facilitate a richer and more comprehensive learning environment for my students. Specifically, I wanted to gain a working understanding of constructivist theory and determine how I can integrate constructivist philosophies within my teaching practices. Additionally, I intended to gauge student response to these practices in an effort to determine constructivist theory applicability within my art education classes. In this study, I field tested constructivist teaching methods, documenting the results through autoethnographic recording.

Methodology

For my research, I collected data through autoethnographic recording. I structured lesson plans to incorporate constructivist philosophies using the twelve descriptors of constructivist teaching from *In Search of Understanding: The Case for Constructivist Classrooms* by Brooks and Brooks. The following descriptors were used as a framework for lesson development and were used as a device to comprehend, implement and analyze constructivist teaching strategies. The descriptors are:

1. Constructivist teachers encourage and accept student autonomy and initiative.
2. Constructivist teachers use raw data and primary sources, along with manipulative, interactive, and physical materials.
3. When framing tasks, constructivist teachers use cognitive terminology, such as classify, analyze, predict, and create.
4. Constructivist teachers allow student responses to drive lessons, shift instructional strategies, and alter content.
5. Constructivist teachers inquire about students' understandings of concepts before sharing their own understandings of those concepts.
6. Constructivist teachers encourage students to engage in dialogue, both with the teacher and with one another.
7. Constructivist teachers encourage student inquiry by asking thoughtful, open-ended questions and encouraging students to ask questions of one another.
8. Constructivist teachers seek elaboration of students' initial responses.
9. Constructivist teachers engage students in experiences that might engender contradictions to their initial hypotheses and then encourage discussion.

10. Constructivist teachers allow wait time after posing questions.
11. Constructivist teachers provide time for students to construct relationships and create metaphors.
12. Constructivist teachers nurture students' natural curiosity through frequent use of the learning cycle model: first, discovery; second, concept introduction; third, concept application (Brooks and Brooks, 1993).

When I present these lessons to my targeted elementary school classes, I will gauge student response through teacher observation, documenting my personal experiences with the lessons and constructivist teaching strategies through written reflections, ultimately seeking answers to the following research questions.

Research Questions

1. In what ways may constructivist approaches to teaching facilitate a shift from a teacher-centered learning environment to one that is student-centered?
2. In what ways may constructivist strategies positively impact student learning?

Participants

Since this is an autoethnographic study, I am the primary participant and subject. I will document my experiences with classes currently under my tutelage at a socially and economically diverse elementary school located in a Metro-Atlanta county school system. The research data will be my observations and experiences teaching various classes and grade levels within the school. For a demographic perspective of the school, I am presenting a representative sampling of the student population. The demographic information is from two third grade classes and is consistent with class populations throughout the school.

Table 1. Gender Distribution in Combined Third-Grade Classes

Gender	**Number & Percentage**
Male	20 or 40.8%
Female	29 or 59.1 %

Table 2. Ethnicity Distribution in Combined Third-Grade Classes

Ethnicity	**Number & Percentage**
Asian	11 or 22%
African-American	4 or 8%
Hispanic	11 or 22%
Multi-racial	2 or 4%
Caucasian	21 or 43%

Table 3. Socio-Economic Status Distribution in Combined Third-Grade Classes

Socio-economic Status	**Number & Percentage**
Free lunch	11 or 22%
Reduced lunch	5 or 10%

Table 4. Special Needs Distribution in Combined Third-Grade Classes

Special Needs	**Number & Percentage**
Gifted	7 or 14%
Special Education	9 or 18%
Both Gifted & Special Education	1 or 2%

Timeline

The study will take place during the months of January and February, 2007, and will be conducted over a period of approximately seven weeks.

Limitations

Limitations to the study include not documenting my experiences with every grade level. Age and maturity at various stages of development may offer different outcomes to the study. Secondly, I am conducting this study based on my personal characteristics as an elementary art teacher in my current teaching environment. These conditions will not exist for anyone else but me so the generalizability of results may be limited to art teachers with similar teaching dispositions and goals, and in similar teaching contexts. Thirdly, time is a limiting factor to this study. A more thorough longitudinal investigation would provide more conclusive data.

CHAPTER 2: REVIEW OF LITERATURE

History of Constructivism

Constructivism offers the theoretical foundation that learners actively construct knowledge from the intersection of previously acquired understandings with the new information the learner encounters. Per Fox (2001), generally accepted guidelines of current views of constructivism encompass the following criteria:

1. Learning is an active process.

2. Knowledge is constructed, rather than innate, or passively absorbed.

3. Knowledge is invented not discovered.

4a. All knowledge is personal and idiosyncratic.

4b. All knowledge is socially constructed.

5. Learning is essentially a process of making sense of the world.

6. Effective learning requires meaningful, open-ended, challenging problems for the learner to solve. (p.24)

Forefathers of constructivist theory include Vygotsky and Piaget, developmental psychologists who contributed much of the framework to current constructivist theory. Vygotsky's basic premise was that all knowledge and knowledge-making tools, such as language and symbolism, inherent to a community, actually reside within a sociohistorical context (Edwards, 2005). This sociohistorical context is viewed as the knowledge and beliefs that have been built over generations with the members of the community gradually accepting the knowledge and psychological framework of their group (Edwards, 2005). Additionally, Vygotsky saw as fundamental the role people, parents, peers, and teachers, possess in aiding children's learning from the earliest days

(Watson, 2000). From this perspective, learning is constructed jointly through social interaction, and understanding can be enhanced with a connection established to what children know and can already do (Watson, 2000). This process emphasizes potential rather than maturation with the role of the more learned other being of great importance (Watson, 2000).

Piaget's research on development lay in his work on cognitive structures "with their genetically determined base, continually being adapted and elaborated through individual life experiences, of the active nature and learning and the role of cognitive conflict or contradiction in enabling understanding" (Watson, 2000, p. 135). Piaget's work, however, was not without its limitations. Piaget downplayed the importance of language and social influences on learning. Piaget considered children's self-discovery of great importance, rather than having children rely on assistance from others (Watson, 2000).

These creative thinkers helped to lay the foundation of constructivist theory; however, many interpretations of constructivism exist and there is considerable literature documenting various founders, approaches and foci. Philosophical and social literature, that, when written, was not labeled as constructivist, are now seen as important work that is foundational to current ideas of constructivist theory. There is some agreement around a differentiation of two forms of constructivism. However, arguments insist that we are indeed not dealing with two completely polar approaches to constructivism. These identified approaches in question are social constructivism and psychological constructivism (Richardson, 2003).

For the moment, let us take a look at these two approaches to constructivism. Social constructivism embodies the idea that knowledge and disciplines are human constructs that are built up through ideologies, religion, politics, social status, exertion of power, and economic self-interest (Richardson, 2003). This approach is formed around the aforementioned ways that exert influence on people's understandings and formal knowledge of their world (Richardson, 2003).

In contrast, psychological constructivism asserts that learners actively construct knowledge around phenomena and that these constructions are distinctive, correlating to the learner's background knowledge. The learning that takes place transpires in a social group providing the participants opportunities to share and assist in the construction of knowledge. "If the individuals within the group come to an agreement about the nature and warrant of a description of phenomenon or its relationship to others, these meanings become formal knowledge" (Richardson, 2003, p. 1625).

The major difference between these two approaches is the focus on how the knowledge has been influenced in its creation. Both accept that knowledge is actively constructed in the mind. Social constructivism focuses on how that formal knowledge has been influenced through political, social, and economic stimuli, among others. The psychological approach focuses on how knowledge is created within the individual and how shared meaning is facilitated through a group process (Richardson, 2003).

Constructivist Theory Examined

For the purpose of my study, I will focus on the psychological approach to constructivist theory. "Current interest in what it means to teach in a constructivist manner was sparked by authors such as Atwell (1987) and Fosnot (1989) in the

reading/language arts area" (Richardson, 2003, p. 1625). The focus of this interest required a shift from how individual students learn to how to facilitate that learning, first in the individual and later in groups. Constructivist theory has also begun to be examined within a sociocultural theoretical framework. Rogoff has identified three interacting planes where development is argued to occur: the individual child; the community; and the sociocultural context of knowledge sharing and production (Edwards, 2005). This expansion of an additional plane arises from the work of Vygotsky, who identified psychological development as occurring on two planes: the intrapersonal and the interpersonal. The interpersonal plane appears between people as an interpsychological category and the intrapersonal plane appears within the child as an intrapsychological category (Edwards, 2005). The instance of these planes gave rise to the idea of the zone of proximal development characterized at one point by the child's natural abilities and at the other end of the continuum by the achievements of the child with the assistance of a more accomplished peer and/or adult (Edwards, 2005).

Work from psychological researchers during the 1990's began to shed light on the practices of teachers identified as constructivist. Specific subject areas were the focus of much of the research. Richardson (2003) lists constructivist pedagogy practices identified by researchers comprising the following characteristics:

1. attention to the individual and respect for students' background and developing understandings of and beliefs about elements of the domain (this could also be described as student-centered);
2. facilitation of group dialogue that explores an element of the domain with the purpose of leading to the creation and shared understanding of a topic;

3. planned and often unplanned introduction of formal domain knowledge into the conversation through direct instruction, reference to text, exploration of a Web site, or some other means;
4. provision of opportunities for students to determine, challenge, change or add to existing beliefs and understandings through engagement in tasks that are structured for this purpose; and
5. development of students' metawareness of their own understandings and learning processes. (p. 1626)

In her 2003 article, *Constructivist Pedagogy*, Richardson posits that these elements are not specific practices; rather, they are imperatives towards which a teacher initially aspires which become fundamental aspects of a teaching praxis. Richardson further comments that constructivist pedagogy is thought of as the creation of classroom environments, activities, and methods that are grounded in a constructivist theory of learning, with goals that focus on individual students developing deep understandings in the subject area of interest and habits of mind that aid in future learning.

Richardson continues that constructivist pedagogy realizes students also make meaning from activities encountered in a direct-teaching model, and that direct teaching may still be a part of a constructivist classroom. She asserts that of greater need is the understanding of how student learning transpires within a constructivist classroom and that a need exists for empirical research on the topic (Richardson, 2003).

So after confronting the theory of constructivism how does one take the theory into practice in the art classroom? The five characteristics listed earlier do not provide specific practices for implementation in the classroom. Where, then, does one begin in

order to practice effective constructivist teaching? Practice of constructivist theory has oftentimes focused on what not to do in classrooms, such as discouraging the use of basal readers, direct instruction, and providing answers to students, rather than on positive constructivist teaching behaviors. Also at issue with constructivist theory is the teacher's breadth of subject matter knowledge particularly at the elementary school level (Richardson, 2003). This is an issue because traditional, elementary classroom teachers much instruct students in all subjects

Research within the last several years has indicated the importance of developing deep and strong subject matter knowledge in a constructivist classroom, be it K-12, teacher education, or professional development. This requires knowledge of the structure of a discipline as well as its epistemological framework. Such knowledge helps teachers in the interpretation of how students are understanding the material, in developing activities that support students in exploring concepts, hypotheses and beliefs, in guiding a discussion toward a shared understanding, providing guidance on sources of additional formal knowledge, and, at times, correcting misconceptions (Richardson, 2003).

There are two points at issue here. The first is that most of the constructivist research is being carried out within specific subject domains. There seems to be little regard for the fact that elementary teachers must teach all subjects. Second, in order to be an effective constructivist teacher is it reasonable to expect and possible to insure that elementary teachers have the requisite knowledge of all disciplines they are expected to teach (Richardson, 2003)? As I am an elementary art educator, I do not have to be concerned with multiple subjects for instruction. My focus on art education affords me the opportunity to concentrate on one subject area; however, I felt it important to bring

this concern of implementing constructivist theory to light as my research was targeting an elementary population.

Richardson provides suggestions for addressing the first issue of research being carried out within specific subjects. These suggestions are to consider what transfer of understanding, habits of mind, and skills would mean in such a context. Although Richardson asserts there is a lack of research focusing on this phenomena, “more current calls of reconceptualizing the concept could prove useful” (Richardson, 2003, p. 1632). She provides examples to include the work of Salomon and Perkins who offer an important approach to transfer, distinguishing “general and contextualized rules when considering this topic” (Richardson, 2003, p. 1632). As for teaching skill, “Leinhardt provides an example of a teaching skill that may be useful in a general way across subject matter areas. In an examination of the role and skill of explanation in the teaching of mathematics and history, she identified a set of generic core goals for an instructional explanation…” (Richardson, 2003, p. 1632). I call attention to the work of these researchers as a way of providing insight to elementary educators that indeed research is being conducted that may one day provide solutions to effective constructivist teaching within their classrooms.

Constructivist Theory and the Student-Centered Classroom

How does one define a classroom as student-centered through a constructivist lens? “To date, a focus on student centred learning may well be the most important contribution of constructivism” (Mvududu, 2005, p. 51). It may be first helpful to point out that misconceptions exist as to what are truly constructivist learning environments. One misconception is that of co-operative learning and collaborative teaching. As

Mvududu (2005) points out, “co-operative and collaborative teaching methods provide the opportunity for more competent students to scaffold tasks as they interact with less competent students” (p. 50). This view relates to the Vygotskian view of the zone of proximal development, whereby less knowledgeable others benefit from interactions with more knowledgeable others. Mvududu (2005) further asserts that students can work in co-operative learning groups, many of which are consistent with views on constructivist learning.

Another misconception of constructivism is that students should always be actively and reflectively constructing. Construction of knowledge can occur through varied types of instruction, to include learning by experiencing; learning by intuition; learning by listening; learning by practice; and learning by conscious reflective thinking. By engaging in these activities, students are able to construct valuable but different kinds of knowledge. Instructors, themselves, must learn to balance these activities to meet the varying needs and goals of their students (Mvududu, 2005).

Constructivist classrooms must provide students with the opportunity to explore, speculate, and brainstorm in an emotionally supportive atmosphere. Students must be willing to engage in activities, participate in discussions, and write about experiences in order to pursue topics in depth. Activities that engage students might include group projects, such as reader’s theatre, a process in which students write dramatic scenes from a book and present it as drama to a class (Passman, 2001). Furthermore, students must be motivated to work through problems and accept that right and wrong solutions are a part of the learning process. Through this process, the teacher must act as a facilitator of every student’s social and personal construction process that promotes “each individual’s

exploration and resolution of ideas within the socio-cultural context" (Mvududu, 2005, p. 52).

Another component of a student-centered learning environment is offered in the work of Goolsby, who studied the positive aspects of reinforcing verbal behaviors. It was determined that expert teachers were less reliant on verbal instruction versus novice teachers who were more reliant. Furthermore, the expert teachers' communications included more positive overtones (Polk, 2006). These conclusions can be viewed as facilitating a student-centered environment where the expert teacher offers less in the way of direct teaching and creates an environment that is safe and supportive for the students.

From his research on student-centered instruction in high-stakes assessment environments, Passman (2001) offers suggestions when implementing student-centered teaching strategies. These include: more time spent in group and individual inquiry discussions; more reliance on student-focused inquiry within an integrated curriculum approach; more time spent reading authentic literature from trade books; more time spent in learning to understand in depth the content being learned; more time spent in active learning, which may be noisy; more emphasis on heterogeneous grouping and inclusion groups; and lastly, more reliance on developmentally appropriate portfolio assessment that includes teacher assessments.

Directly correlating to the ideas of Passman (2001), though more general in scope, are the ideas of Wilbert J. McKeachie who first studied student-centered instruction in the 1940's. In Eric Landrum's (1999) interview of Robert McKeachie, *Fifty-Plus Years As a Student-Centered Teacher: An Interview With Wilbert J. McKeachie*, Landrum asks McKeachie to define student-centered learning. McKeachie (1999) offers the following

descriptive teaching strategies: creating student trust and an environment to openly ask and express questions; emphasis on student to student discussion and less on lecture and question and answer sessions; emphasis on deeper learning rather that rote learning; more of an emphasis on student choice and intrinsic motivation; emphasis on student goals and teaching to those goals; emphasis on attitudinal and affective outcomes; and lastly, a concern about student misconceptions and working to clarify those misconceptions.

In conclusion, when looking at the history of constructivism and the theories that have contributed to the working definition that exists today, it is apparent that constructivism is not without its faults. However, it is a viable theory that seems to have a natural fit and that warrants further research towards effective implementation within art classrooms. Building on the foundation of constructivism, teachers may create student-centered learning environments designed to provide students with more in-depth, individualized approaches to learning. Art educators who desire to move away from teacher-centered instruction to student-centered instruction will benefit from the use of constructivism within their personal pedagogical practices. Although it may be difficult to replace one’s personal teaching style, the work involved may offer students a richer, more comprehensive and personal approach to education.

CHAPTER 3: AUTO ETHNOGRAPHIC RECORDING

January 8, 2007

Today I begin my autoethnographic study and I am anxious about starting this journey. I suppose I am curious as to what will be revealed with my research. It is not an easy task to place one's self under a microscope; however, I know the research will serve to make me a better teacher. When I was in my thesis committee meeting in December discussing my proposal, I made the statement that I believed this study to be more about me than my students. I immediately felt embarrassed when I said this, the thought going through my mind that I had said something wrong and that I would be reprimanded for having such an idea. At the time, I did not realize this statement would lead me to autoethnographic research. Beforehand, I was considering combining qualitative and quantitative research for my study of constructivist theory. After my comment, it was suggested that I consider autoethnographic research as a means of data collection. A sense of relief came over me as I realized I could accomplish the goals I seek with my research.

I have always wanted my research to focus on identifying effective constructivist approaches for an art classroom as I sought to move from a purely teacher-centered model of instruction. I wanted to measure student response, but, more importantly, I wanted to understand my own responses to these changes. Would I like the changes? Would the changes be effective? Would I lose control of the classroom by giving more responsibility to my students? Would students still learn? Would they learn more than if the lessons were teacher-directed? What would happen if I did not like the process?

Would the administration be receptive to the changes? All of the questions circled my thoughts as I have prepared to begin my research.

What has led me to this investigation is my reliance on teacher-directed instruction. I am a product of how I was schooled, and, as a novice teacher, I rely heavily on my past experiences of instruction. Growing up in rural South Georgia, I recall sitting in classrooms throughout my entire school career with desks lined in rows and teachers that dared you to say a word during instruction time. Woe to those that broke these commandments. I have been in enough classrooms, through my own teaching and classroom observations, to realize that schools today operate much differently than they did when I was coming through the system. Recently, I asked a colleague, Ms. Kasper, a twenty-nine year veteran of public education how teaching has changed since she started as a teacher. “It’s more fun,” she replied, “because children are allowed to be children.” She further elaborated, “When I was in school, you sat in straight rows and didn’t say a word.”

January 9, 2007

I have started a clay lesson with my third grade classes. At the start of the lesson, I am giving students background information on different ways to work with clay, including a discussion of clay terms and the formulation of a working definition of functional art. As I sit here writing before class starts, I realize I am already envisioning the class from a teacher-centered perspective. In the statement above I have used the words “giving students” to indicate how they will receive instruction. I see this as an opportunity to begin to make changes today. I can still make changes so the lesson will be more student-focused, even though this the last class to receive the clay introduction.

To make the lesson more student-centered, I will not stand in the front of the class and lecture. Instead, I can have the students work in groups to define the clay terms that are listed on the board. Also, I will have students choose two pieces of pottery from their books and each table group will have to make a prediction as to what process was used to construct the form. Here I begin to make my first changes to a constructivist teaching environment.

Third grade is my first class of the day and I have just finished the lesson on clay processes. I attempted to move the focus from teacher-centered to student-centered and feel that I failed miserably. I had the students work in groups at their tables. My art classroom has six tables that seat up to six students each. The tables are identified by color. Students, unless the privilege has been taken away, have their choice of seating. One problem that identified itself early on was seating. One student raised his hand and informed me that was having trouble sitting next Jason because Jason always wanted to talk and disturb him. My reply was, “What can you do the change the situation?” After thinking for a moment, he replied, “I can move to another table.” “I think that is a good choice,” I said. Apparently Jason is having social problems because all of his table mates decided to move, leaving him alone. It took another minute or so as I then had to work him in at another table. As I introduced the lesson, I informed students they would be working in groups to identify the terms that were listed on the board. I instructed students as to where the books were located, and then sat back to observe the behaviors of the groups. It did not take long for problems to arise. Issues that occurred during the lesson were: the art books the students were using did not have all of the definitions listed. Also, I had checked out books from the school library for student use. I had reviewed the books

prior to class and determined most of the definitions could be found in the glossary. However, there were only seven books and it took most of them to locate the definitions, so the groups needed to look through multiple books. There just were not enough books to go around.

I learned that if I am going to use this process, I must plan appropriately. I do not believe I did the planning necessary for a well-executed lesson. I found myself twelve minutes into the lesson stopping the students because I did not think they were learning what they should. Time was passing before me and the students were floundering. “Mr. Heard, what am I supposed to do?” “Mr. Heard, these books do not have the definitions in them?” These were a few of the phrases that I encountered during the lesson. “Have you looked in all the books, I replied?” “What if you divided the terms up at your table and had each person look up a definition?”

Also, at the beginning of the lesson, I asked students to help their group out by discussing any of the processes they had prior knowledge of. As I walked the room during the lesson, I heard no such discussion. However, when I took over the lesson after my twelve frustrated minutes and started to quiz the students on the processes, they invariably had knowledge about most of them. How do I get the students to share their knowledge during group work, educating the group with what they know? There has to be a process that will make this way of teaching work. As of right now, I don’t know what that process is.

January 10, 2007

Third graders began working with clay today. I decided, rather than give them one clay process; I would allow them choice of the process. I understand that with these

choices comes added responsibility on the part of the student. When I instruct students to score and slip clay for the coil building method and they choose to not follow my direction, there will be consequences for this action. The consequence is their clay project will probably not turn out well. In this instance, it is more about the process than the product. As I am teaching I have understood more and more that it is acceptable for students to fail. What I comprehend is that I can set standards and objectives for my students and they may not meet these objectives. However, it does not mean that my students have not learned. Their learning may come about through failure, but they still learn. When I was teaching middle school, I talked extensively about the scoring and slipping process and how crucial it was to do this in order to form the pot correctly. Inevitably, about twenty percent of the class would not follow my direction. I remember being so frustrated that the students had not listened. As a teacher, I cannot control the choices of the students. All I can do is my best to guide students towards meeting the objectives. Their failure can be a part of the learning process. In my day, it was called learning the hard way.

Since beginning the clay project, I have observed students struggle with the clay experience, as well as exceed my expectations. What I haven't seen is much interaction with others in the way of sharing ideas and offering assistance. I am curious as to how I can facilitate this process? Ms. Tomlinson's 3rd grade class was working on their projects. I assisted a student who wanted to build a small vase using a slab process. I showed her how to roll out the clay, cut the base and then wrap and slip the clay. Other students in the vicinity stopped to observe what I was doing. As soon as I finished with Madeline, Bethany at the neighboring table was asking me to show her the same method. "I want

one like hers, Mr. Heard." "O.K., this is how you start," I offered. Away I went, instructing another table how to make vases using the slab method. As I try to incorporate constructivist philosophy in my classroom, I am beginning to understand there is an organic component to this philosophy. Things need to be allowed to unfold in the classroom. I am starting to see it as planting a seed and watching the growth happen before you.

January 16, 2007

Today, I had a table of third grade boys that were becoming transfixed by the clay process. Ernesto wanted to make a teacup and was confused about how to start. I sat down to show him how to first form the clay into a ball and to then use a simple pinching method to create the form. Lastly, I showed him how to create the handle and then to score and slip it so that it would stay in place. "You must scratch to attach," I said. When finished, most of the other boys at the table wanted the same assistance offered to Ernesto to complete a teacup. Looking at Ernesto I said, "I just showed you how, now go and help Jose get started on his teacup." He did just that and did a remarkable job showing Jose the steps that I had just shown him. "I want mine to look Japanese," stated one of the boys at the table." "If that's the case," I said, "you don't want to put on a handle." "In Japan, they simply hold the teacup like this." I demonstrated how using a small pot that was in front of me. A question that arises from this experience is, "Can students be taught to assist one another?" I know that from my own personal experiences, education was very much autocratic. I received information from the teacher and then was expected to, by myself; solve the problem presented to me. As an emerging constructivist teacher, I believe it important to have students work independently as well as dependently with one another.

The preceding situation was a good example of how students can assist in their own learning processes, rather than relying on the teacher for direct instruction. I know this to be a positive step for my classroom.

January 18, 2007

I am currently reading *In Search of Understanding: The Case of the Constructivist Classroom*. I am finding the information to be invaluable in helping me to formulate a structure for my curriculum and expectations of a constructivist teaching environment. The following list of constructivist practices comes from the book. I am working to comprehend and implement these practices within my classroom in order to transition my approach from teacher-centered instruction to student-centered instruction.

1. Constructivist teachers encourage and accept student autonomy and initiative.
2. Constructivist teachers use raw data and primary sources, along with manipulative, interactive, and physical materials.
3. When framing tasks, constructivist teachers use cognitive terminology, such as classify, analyze, predict, and create.
4. Constructivist teachers allow student responses to drive lessons, shift instructional strategies, and alter content.
5. Constructivist teachers inquire about students' understandings of concepts before sharing their own understandings of those concepts.
6. Constructivist teachers encourage students to engage in dialogue, both with the teacher and with one another.
7. Constructivist teachers encourage student inquiry by asking thoughtful, open-ended questions and encouraging students to ask questions of one another.

8. Constructivist teachers seek elaboration of students' initial responses.
9. Constructivist teachers engage students in experiences that might engender contradictions to their initial hypotheses and then encourage discussion.
10. Constructivist teachers allow wait time after posing questions.
11. Constructivist teachers provide time for students to construct relationships and create metaphors.
12. Constructivist teachers nurture students' natural curiosity through frequent use of the learning cycle model (Brooks & Brooks, 1993).

Furthermore, the book informs that when posing problems for students you must not isolate the variables or give the students more information than is necessary. Also, one must not oversimplify complex problems, as oversimplification can confuse students (Brooks & Brooks, 1993).

I have been reflecting on the information given by this book and my own schooling. A part of me can't help but to feel disappointed. For example, the book talks about how information in schools is taught from part to whole, with the job being left to the student to eventually make the connection. This is opposite of a constructivist philosophy which relies on teaching from whole to part. As I think about my own schooling, the memories of subjects and knowledge of these subjects seems disjointed and confusing. I can understand that certain relationships between subjects can easily be made; however, I remember little in the way of an attempt to bridge the knowledge. An example in the book refers to how directions are given. For example, when you build a ready-to-assemble desk, the directions are broken down into parts. However, you continually refer to the picture of the wholly assembled desk to gain perspective of where

you are in the construction. I found this statement to be profound, as that is exactly what I do! Now if I can only uncover how to accomplish this task within my teaching. That prospect seems like a mountain to climb.

January 22, 2007

I am reflecting on a third grade lesson from the end of last week. I have started a lesson on radial balance. Students helped to distribute books and we looked at examples of artworks that exhibit radial balance. We also discussed things in nature that show radial balance like flowers. The lesson ultimately culminates in the students beginning a radial balance design. Each student is given a large, printed circle on which to draw their radial balance design. These circle sheets were found in a file folder in my storage closet. As I am passing out the circles, I realize that some have dots for the center and some do not. The thought goes through my mind, “This could be a problem.” I address this issue with the class and tell those without the dots to do their best to locate the center of the circle from which to build their designs. This doesn’t go so well. As I walk the room observing student work, I realize those without the dots have done a poor job estimating the center of the circle. I make a mental note to change this for the next day’s lesson. I am not one to waste supplies and I wanted to use all of the circles regardless of whether or not they had a dot. I decided that I would use this as part of the lesson.

Because I tutor a student in Ms. Tomlinson’s third grade class in the afternoon, I know the entire third grade is being introduced to basic geometry. Using this background knowledge, I decide to distribute the sheets the same as before with some students getting the dot and some not. During my demonstration on beginning the design, I bring up the issue of the missing dot. “Some of you have sheets with dots at the center of the circle

and some do not," I begin. "How would you find the center of the circle?" I ask. This was a question that had stumped me the day before. "How would you find the center of the circle," I had thought. I had formulated my own solution by drawing a square around the circle and lining up my ruler from corner to corner, making an x mark to locate the center. This solution worked for me, but I was curious to see if students had their own solutions. This directive correlates to the first constructivist rule, that, "Constructivist teachers encourage and accept student autonomy and initiative."

When I presented the question to Ms. Wilson's class, students began to shout out possible solutions. "You measure across," one said. "Measure the diameter," offered another. "Make an X across the circle," said someone. "Measure the circumference," shouted a student. My reply to all of these was, "How would you know that you had found the center?" Ashley replied with an answer that I had not considered. "You can measure from the dot all around the circle," he said, "If the measurement is the same, it's the center." I lit up. "Exactly," I said. He had offered a solution to the problem that had not occurred to me. Now, let me show you how I found the center of the circle. The class looked as I lined up the ruler and drew a perfect square around the circle and then made lines from corner to corner. "That's how I solved the problem; however, is there more than one solution?" "Yes," most replied. At that point I knew that I had made some connection and that I had treaded on ground unfamiliar to me. I allowed myself to be vulnerable to the unknown by not having all the answers. I relied on the students to provide their own solutions and watched in amazement at how each person was able to offer something that eventually led to a working answer.

January 25, 2007

I am continuing to read The *Case for the Constructivist Classroom*. I am finding the book really helpful in interpreting constructivism within my curriculum and classroom. One point that I find fascinating is how as teachers, most of us have one correct answer or solution in mind and how this construct dictates how we work in the classroom. Not only does it dictate how we, as teachers, work; more importantly, it lays a foundation for how students interpret the learning process. Students become trained to search for the one answer that we have in mind. When students guess incorrectly, we simply say "no" and move on, searching for the correct answer.

I have been reflecting on my classroom strategies and I identify with this practice. More often that not, I have one idea in mind that I seek to have validated by one of my students. The book offers that as teachers, we must take every opportunity to understand where students are in the learning process. I should be valuing their incorrect responses as opportunities to explore where they are in the learning process. The book states that one must ask questions of the students, probing their brains for knowledge and connectivity to the lesson (Brooks & Brooks, 1993). It is here that great strides will be made in their educational endeavors, not by playing leap frog around the room searching for the one correct answer. As reflect on this process, I realize that I never try to make a student feel bad about offering an answer. I try to be supportive and will oftentimes make a comment on what the student has said, even though the answer is not correct in my mind.

It is the last chapter in the book and I feel as though I am gaining invaluable knowledge. At one point in the chapter, the author speaks to how teachers often feel

overwhelmed when attempting to move to constructivist teaching practices. That is exactly how I have felt, overwhelmed. Several reasons are discussed why some choose to stay with their current practices: they are too invested in their careers and current system of performance; loss of control in the classroom; disapproval from the administration; and above-average performance from students with the current system (Brooks & Brooks, 1993).

As a novice art teacher, some of these fears do not apply. However, several rang true as I read this passage. One of the greatest for me was a fear of loss of control in the classroom. I always feel as though I am walking a tightrope in my art room. I want students to experience an environment that fosters creativity and a sense of community. However, I do not want chaos at this expense.

January 29, 2007

I walked Ms. Sutton's class back to their classroom and was surprised to see most of the students run up to their teacher proudly showing off their work from art class. We had just finished a lesson on sewing where I had talked about quilts and showed examples of art that had been made using fabric. It was a very simple lesson, one in which the students worked with yarn and burlap to create basic designs. I demonstrated how to use the needle and yarn; how to tie the yarn; and how to go back and forth from the face of the fabric, to the back of the fabric.

I had never done a lesson using fabric and did not have a clue as to how this lesson would go over with the students. I was pleasantly surprised when all of the second grades classes became engaged with the project. It was, for all of us, a very hands-on lesson. I ran around from table to table assisting students who had difficulty tying their

knots or difficulty starting a design. Mostly, the designs were simple patterns, or the student's initials. I realized during the lesson that this experience was more about exposure and process than the creation of a finished art work worthy of display.

It was interesting to listen to student discussions about sewing being something that only girls did. Every time I heard this comment, I challenged the students on their opinions. "Boys can't sew," I asked? Every time, there was a resounding "yes" that, indeed, boys could sew. I even heard comments about some fathers that sewed.

All-in-all, I think the lesson was a success. The student's abilities were challenged and they gained experience with a new medium. Yes, the students had difficulties. There were those that left the art room without an art work. I felt this was acceptable as long as they were engaged in the process during class.

When I returned Ms. Sutton's class and she was shown the artwork, her response was, "And what is this called?" There was a quizzical look about her as she peered at the art. I was taken aback by her comment and the body language she presented while looking at the finished product. I felt challenged by this teacher who seemed to me to be disapproving of the art works. I briefly summarized for Ms. Sutton the objectives for the lesson, as I sought to validate this experience with her students.

Why is it, that as art teachers, we are often so focused on the end product that we diminish the opportunity of the experience? I thought about this and realized that the lesson had been a success, even though the product may not have looked like much. Ms. Sutton may have meant nothing by her comment, I realize this. However, it's ultimately not about what Ms. Sutton, or the administration, or the parents think about the finished

product. What's important is that students leave my art room with an appreciation for art and knowledge built around varied and challenging experiences.

February 1, 2007

Katy, a student from Ms. Sutton's class, brought in an artwork that she and her mother had completed together. It was a sewn piece, done on the blue burlap she had used in last week's class when I had introduced them to sewing. She had done a beautiful job of using pink yarn to create a flower design. She was so proud of her work. I showed it off to the class, as she stood beside me smiling broadly. This was the lesson where I had reservations. The product was not one of fine art. However, as I reflected on previously, I came to understand the experience as being invaluable to the students. I questioned why I was so concerned with the finished product.

As I sit writing, I can relate this experience to current trends in education where the focus is on high-stakes testing. In this scenario, educators, administrations, parents, and state and federal agencies seem to only be focused on the end product i.e. the test score. Are we missing the most important part, the journey? Additionally, how does constructivist education challenge this? In my brief experiences, the process seems to be more interested in educating the whole child. Building on previously held knowledge and allowing children to explore and bridge this knowledge are important components of constructivist education. Did I achieve this with Katy from Ms. Sutton's class? As I held up that blue burlap fabric decorated with pink yarn, I thought, "Has this child had this experience before with her mother?" I do not know the answer to that question, but what I do know is that I engaged students in an exercise that elicited excitement and interest in a subject. I am making an educated guess that Katy had some background knowledge of

sewing. If she had ever investigated this art form with her mother, I do not know. I do know that she now has and that it was a positive experience for her. Education is greater than knowledge. It is a connection to the people and places around you. I think Katy found that in some small way.

I have noticed with my classes that I am challenging the students to become less dependent on me, and to start to rely on their classmates for guidance. Inevitably, students ask me for assistance when at least one member of their table is on task with the lesson. “Mr. Heard, can you come help me?” This is a regular phrase in my classroom. “It looks like Jordan has it; you can ask her for help.” This exact scenario happened in my room the other day. When I checked on the table a few minutes later, all the students were on task.

February 2, 2007

Fifth grade students are completing a nonobjective painting. As is always an issue, I have to consider students that are finished and students that need additional time to complete their project. The activity that I planned for the students that have completed their work is a visual texture assignment. Even though I am a novice teacher, I learned quickly you must keep students engaged in order to have good classroom management. I drew from *Birds and Blooms* magazine a picture of a Northern Mockingbird. I asked that students observe the magazine photo clipped to my cabinet and that they work to create realistic, visual texture on the bird and the log the bird is resting on.

As I observed students completing the project, I realized they are rushing through the assignment. Maybe ten percent of the class is giving this real consideration. Although designed to keep students focused, I do not regard this as merely a filler activity. It’s clear

to me that students need exposure to a new idea on multiple levels and they need time to process the information. I do not see this activity as compatible with constructivist philosophy as I have not allowed students to have a real problem to solve. The students are interested in the mockingbird because all have participated in the assignment. The questions for me are: How do I incorporate meaning into this activity? and, What can I relate visual texture to that would give students some working knowledge of this concept? Should I start with a smaller exercise and build on it; or make this a whole lesson, spending the appropriate time on it?

A challenge of the elementary curriculum is the time and pace of the schedule. I only see first through fifth grades once a week. I am constantly balancing spending enough time on a project and too little time on a project. What I have discovered is that that for kindergarten and first and second grades, it is best to spend no more than two or three class periods on any one project. Their focus and attention seems to wane if I go any longer. For grades three through five, I can spend longer amounts of time on projects, but I do not like to go longer than four or five class periods. Of course, I vary shorter lessens and longer lessons because I would never be able to cover the curriculum if I did not do so.

February 5, 2007

I do not know if it is my new outlook on education brought about by constructivism, but I feel a renewed commitment to education. I am learning to relax when it comes to teaching and I seem to be less stressed about control within the classroom. This attitude shift is showing in my lessons and seems to be having an effect on the students. For instance, I am doing a positive/negative space lesson with fifth grade

that I started today. The lesson went a little slow in the beginning. We all sat around one big table to begin our investigation of positive and negative space. I began by asking, “What comes to mind when you hear the words positive and negative?” “Like a battery,” one student exclaimed. “Yes, exactly,” I replied. “Where else have you heard the terms?” “In math, two negatives make a positive.” “Negative is bad.” “Negative is nothing.” I used all of the information the students were giving me to introduce the concept of positive and negative space. I listened to the students, working to understand where their perceptions of positive and negative. I also worked to support their contributions and to encourage elaboration. The discussion allowed me to segue into positive and negative space. I then passed out pencils, scissors, and newsprint. I had each student arrange two pairs of scissors into a small still life. I then directed them to observe the space around the objects and to practice drawing the negative areas. “But isn’t that just drawing the object,” one student retaliated. “Yes, however, it’s a different way of drawing the object.” “You’re looking at it in a different way,” I added. I then proceeded to walk the room and observe as students were working on the drawings. I could easily tell if someone was looking more at the positive than the negative. One “tell” was if the student was drawing really quickly. After redirecting several students to slow down and observe the negative space, I was amazed at the quality of work the students were producing. Their perception of the objects had changed by focusing on the negative space as evidenced in the work.

As I am relating this to constructivist philosophy, I think what did I do differently? First, I had an open, honest group discussion with students where I encouraged and supported their prior knowledge to build on my lesson. I never sought a correct answer and worked to make everyone feel supported and included in the

discussion. Secondly, I encouraged students not to be focus on the end product. I explained that what was important was observing these objects in a new and enlightened way.

As the preceding examples indicate, I do believe I made progress as a constructivist teacher today. Additionally, with my first grade class, I am relinquishing control of what I expect with a lesson. My first grade students are working on still life drawings of flowers. This is my third time presenting the lesson and it has gotten better as I have progressed through the week. Students were instructed to place the horizon line, or table top, behind their vase. Also, I encouraged students to add originality to their designs by adding windows, patterns, curtains and additional elements to their design. Some took my suggestion of adding elements and some chose not to. In my opinion that is perfectly acceptable, as I believe art work should be original and should be a reflection of personal experiences. I think this is one reason that I have always disliked lessons where students make an artwork in the style of another artist. Monet is one that art teachers continually use. My belief is that if the focus of the lesson is art history, to make an artwork reminiscent of Monet is perfectly acceptable. However, if the focus is creativity and self-expression, I can't think of a poorer example than to build a lesson around painting like Monet. Monet painted like Monet. I had much rather develop in my students the ability to pursue their own personal style, rather than copying the style of an artist that has been dead for over a hundred years.

February 7, 2007

I have made progress today as a constructivist teacher. My fourth grade classes are working on designing a CD/DVD cover. I have plenty of empty CD cases in my

storage room, so I decided to let my students create their own personal CD covers. On Monday, I presented the lesson to Ms. Brown's class. I resorted to my usual lecture format when presenting the lesson on the first day. I went on about what they could do, how they should begin, etc. Needless to say, the results were not spectacular. Students were inattentive and they appeared bored while I was talking. After the class left, I sat down and analyzed the lesson. I realized that I had done a poor job of implementing constructivist strategies within the lesson. I made a few notes for myself and decided to change my approach for tomorrow's lesson.

Today, when I presented the lesson to my next fourth grade class, I made the changes I had thought of yesterday. First, I distributed written directions to each student. When the class was settled, I informed them we would be creating a CD cover. They immediately responded with eager anticipation. Next, I passed the lesson instructions to each student and asked that they read the directions. I started to say something else, but stopped myself. "No, I am not going to do any more talking, you have the directions, so get started," I said. There were a few claps that could be heard around the classroom after I uttered those words.

I instantly noted a difference between Monday's class and today's class. Today's class was focused and was interested and inquisitive of the lesson. Today's class worked collaboratively at a steady pace. I had students requesting to use my computer. I have never allowed a student use my computer, but today I changed that. Students were waiting to use my laptop. Students were excited about personal items they had in Ms. Stewart's classroom they could use in their designs. I allowed three pairs of girls to return to Ms. Stewart's class to retrieve items they wanted to reference. I sat down at one point

and simply observed the class. It was working. The lesson changes were working and I felt good. I assisted students as they needed help; I distributed supplies when they asked for them. Some students requested additional supplies and I accommodated their requests. I feel that today I made a tremendous stride as a constructivist teacher. I relinquished control; I didn't focus pre-set ideas of what the lesson should be; I administered advice and direction as it was asked of me. Today, I feel I accomplished my goal of incorporating constructivist principles within my teaching.

February 8, 2007

I failed miserably at a lesson that had slowly deteriorated all week. I began the lesson Monday with Ms. Pearson's class fifth grade class, which I positively reflected on earlier. The special thing about Ms. Pearson's class is there are only sixteen students in the class. I am able to do much more with the smaller class than I can with the larger fifth grade classes that average twenty-seven students. With Ms. Pearson's class, I began the lesson by pulling two tables together. Because of the class size, I was able to place everyone at the large table. I explained the lesson, distributed scissors to all the students, and proceeded to watch as they all practiced drawing by concentrating on the negative. I was very impressed with the work that I saw, as I had written about earlier.

Unfortunately, this has not been my experience as I have continued the lesson with other fifth grade classes. It has slowly digressed to the point that, with Thursday's class, I had to stop the lesson. After observing students struggle, ask question after question, and exhibit near apathy, I informed the class that too many problems had arisen and that they would not continue the lesson next week. Nearly the entire class clapped

after I spoke those words. You know a class was not enjoying a lesson when the entire class applauds at the fact they will not have to be subjected to a lesson.

Anyway, I felt relieved in a way. I could never get myself situated with the day's lesson. Where did I fail where constructivist philosophy might have prevailed? Did I not create meaning with the students? Did I give them too much information? I think I might have. What I did not realize with the lesson was how to get students to see the bigger picture. There has to be a simple approach that I could perform that would make this happen. The students were clueless as to what to do. "Mr. Heard, this is hard," was uttered more than once. "You'll never learn anything if you are not challenged," I replied. However, I do believe the students were challenged beyond their capabilities with this lesson. What worked with Ms. Pearson's small class did not transfer to this larger class. What was I able to achieve that day that I was not able to achieve with the other classes?

As I ponder this question, I reflect on how I had altered the material throughout the week to try different approaches. With Ms. Pearson's class, I gave each person two pairs of scissors and a few small blocks. They had to set up their own still life from which to render the picture, while focusing on the negative space. With Mr. Dillinger's class and Mr. Gray's class, I asked each table group to set up one sculpture using scissors and blocks. This scenario worked better with Mr. Dillinger's class than with Mr. Gray's class. Students in Mr. Gray's class kept intentionally knocking down the blocks, giggling, and were inattentive to the task at hand. I would say about forty percent of Wednesday's class were actually focused on the lesson and really gaining perspective into positive and negative space.

With Thursday's class, I went back to individuals creating their own mini sculpture. As I walked the room I observed students who were trying to perform the task. Most were concentrating on their drawing, but they clearly did not have a grasp of positive and negative space. Most students were simply concentrating on drawing the positive image before them, obviously ignoring the negative space. I tried every way I knew to make this information more clear. I demonstrated; I asked questions; I sat down with students; I helped to assemble their sculptures. At last, I surrendered to the fact that the lesson was not successful. It must be said the class did put forth effort in attempting to follow my direction; however, I believe the direction was inconsistent and confusing. I felt defeated after this lesson; however, I will find a way to teach positive and negative space to fifth grade students.

February 9, 2007

What "big ideas" are missing in my teaching? Constructivist teaching seeks to employ these ideas in the classroom. As I think about that question, I wonder how I missed an opportunity for an authentic activity with my fifth grade classes that participated in the positive/negative space lesson. As I reflected on earlier, the lesson was successful with Ms. Pearson's smaller class of sixteen students. As I tried to replicate that experience in other classes, it became less and less successful, culminating in the abandonment of the lesson. I will have Ms. Pearson's class continue the lesson as I had planned. I haven't yet decided on what to do with the other classes. Do I simplify the lesson? Do I leave it all together and introduce a new topic next week? I am undecided on what I will do. The question that perplexes me is why did something work so well in one class and fail so miserably in others? As a constructivist teacher one must always

approach students where they are. Maybe I placed expectations on the other fifth grade classes based on my experiences with Ms. Pearson's class. I must understand that each class, each student is unique. I think I failed because I did not approach the students where they were with their background knowledge. I think I failed because I did not create a meaningful, engaging experience for the students.

I decided to give it one more go with the fifth grade positive/negative space lesson. Ms. Vann's class was the last of the fifth grade classes to be presented the lesson. I decided to make changes, yet again, earlier in the morning. I copied out of my fifth grade art text book a page on positive and negative space that gave definitions and that illustrated space reversal. I decided to use view finders to focus student attention on the negative space of the still life. When the class arrived, I assigned class helpers to distribute the space definition sheets, an index card, a pair of scissors and a small block, and a pencil to each student. First, I reviewed the definition sheet as students took turns reading the definitions for positive and negative space and viewing examples of each. I then asked students to hold up one hand in front of their face and to identify what was positive and what was negative. After doing so, I walked the students through how to fold and cut a square from their index card to make a simple view finder. I then instructed students to use their block and pair of scissors to create a small still life in front of them. Students then took a piece of practice paper and, using their view finder, practiced drawing their still life on the paper. "Remember, you are concentrating on drawing the negative space, not the positive. I know this is a different way to think about drawing, but if you follow my instructions, you will wind up with a unique drawing," I said as I walked the room observing students focused on the task. It was very obvious when

someone was not focused on the negative. They drew quickly, their gaze fixated on the positive shapes and their paper reflected this approach. When focusing on the negative space, the drawing should come together like a puzzle. I observed many students not using their view finder, so I directed them to do so. Every student had been given a good sheet of square drawing paper. As they finished their practice drawing, I asked they start on their good drawing paper. I was amazed at the difference in the student work as I compared it to other fifth grade classes. The way that I had structured the lesson was more appropriate to this learning objective. Was the lesson teacher-directed? I think it was, but it worked. My research pointed out effective instruction can occur when teachers alternate between student and teacher-centered lessons. I learned this was a time to focus my energies on a teacher-centered approach. However, I must add I believe there are times when one could opt for a student-centered approach. Each class is different, presenting an ever-changing set of variables. It must be left to the teacher's discretion to decide the approach that will be most effective for the lesson.

February 12, 2007

Ms. Mahoney's class is currently working on their CD case designs. I have worked to limit my discussion in the beginning of class. It has been interesting to watch the fourth grade classes begin their designs. Clearly, they all have working knowledge of CD and game case designs. I have given little instruction as to how to begin. Some students have traced the cases, beginning their designs in the rectangles created. Some have used rulers to first measure and then draw the rectangles. Students continue to use my computer to type text and insert photos from clip art to create their covers.

I have noticed that if I allow students time to work out their design problems, they are more attentive to their work and are more content in class. Consequently, if I spend long amounts of time trying to discuss how to do something, like how to measure the CD case, students get bored and seem to disassociate from the lesson. Attention to these changes is altering my teaching methods for the better, as in the example above. I am allowing students time to work through problems to find their own solutions. This is a positive change, as I realize that I often have preconceived notions of student and lesson performance. Inevitably, this expectation is not met. The benefit of this research is I understand it is the journey, not the product that is important. I am working to give students experiences that focus attention on their realization of problem-solving through creative endeavors. I do not believe art class should be about giving students specific instructions to attain some uniform product at the end of the lesson. Art should be about developing originality, forming creative solutions, exhibiting self-expression, and advancing communication skills. I also strive to instill in my students a sense of discovery and exploration. Approaching teaching from a teacher-centered stance limits these outcomes. There are many different ways to approach these objectives. Little ideas, built over time, become big ideas.

February 14, 2007

I have started a lesson with two fifth grades classes that will not be continuing the lesson on positive/negative space. I had students start the lesson by reading a couple of pages in their art textbooks on the subject. One class, Mr. Dillinger's, has exhibited particularly poor behavior in class. Students have been inattentive, talkative, and disrespectful. I had to stop class last week because of their behavior. After speaking with

their teacher and phoning parents of repeat offenders, the class reconvened for their normal Tuesday morning session. I could tell, walking the students to the art room, that there was a different energy to the class. I was very firm with them as I started class, immediately calling out students that were talking and not focused. However, as compared with previous class sessions, they were extremely attentive. I had the instructions for the day's lesson written on the board, which directed the students to read from their textbooks on the subject of radial balance. The students were placed on silent art and as they began reading the selected passages. This was the same lesson that I had recently completed with third grade and decided to use it as a short lesson for these two fifth grade classes. Mr. Dillinger's class is one that needs structure throughout a lesson. It does not serve my purpose as a developing constructivist teacher to implement constructivist strategies with this class. It has not worked so far, so I decided to revert to an extremely structured class environment. It intrigues me as a teacher how each class presents unique experiences and how instructional delivery must be specific to those experiences. Mr. Dillinger's class is one that needs things to be very black and white. If I allow too much freedom, they take advantage of class time by talking and not focusing on the objectives. As a specials teacher, I am an extension of their regular classroom environment. I do not know specifically what goes on in their regular classroom, but I do believe there is a lack of mutual respect that facilitates some of the behavior problems I am experiencing. Do I believe these students incapable of the type of learning environment that I would like to achieve? The answer is "no." However, limitations to my instruction include once weekly visits to the classroom. If I were to hypothesize about the situation, I would say the students are too controlled in their normal classrooms and

have taken advantage of freedoms offered in my classroom. In essence, they do not know how to handle the situation I am trying to create for them. In order for me to maintain a learning environment, I have had to come closer to what they are familiar with. Is this what I really want? Again, the answer is "no." However, I have not yet developed all the skills necessary at to create the class environment I ultimately desire.

February 20, 2007

I had an interesting experience with my first grade class today. I have been looking in my art storage room for supplies that would inspire me for my next lesson. I have a huge box of wooden craft sticks (popsicle sticks) located in one of my closets. I have looked at it for months now, perplexed as to how I could use them. I have wanted to try a three-dimensional sculpture where students cut small sections from the wood and put the pieces together like a puzzle. However, after an attempt today, I could not solve how to cut the pieces so they would stick together. Also, the lesson was for a first grade class so I could not have the students working with sharp tools. What I decided to do was to just try a lesson with the popsicle sticks and see what the students were able to accomplish with few parameters.

I started the class today by telling students we would be making an artwork with popsicle sticks. I then asked them, "What could you make with the sticks?" "A kite," one student replied. "Or a house," said another. "How would you put the sticks together if you wanted to make it three dimensional?" I asked. "You could tape them," offered a student. "O.K., I am not going to tell you what to make. Please have a seat at one of the tables while I distribute the sticks," I instructed the class. The students went to their tables, already discussing what they might make. I went to each table, giving students

fifteen to twenty sticks each. Everyone immediately began to work on their designs. Some of the students started drawing with the sticks on the tables by placing them flat. Two girls that I usually have behavior problems with busied themselves at their table. One was creating an elaborate house complete with fence and sky, while the other was creating a three dimensional house by stacking the sticks. One of my boys became entranced with the idea of creating a motorcycle, while another began building a ladder.

Walking the room, I discovered Ricky had started a house, using tape to hold the pieces together. When he was finished, I took the piece outside and painted it purple on a complementary sheet of yellow construction paper. The positive shape was created on the paper when I sprayed the house. All of these wonderful ideas were coming to me as this lesson was unfolding. In all honesty, it was one of my less structured lessons that worked beautifully. As I held on of the sticks, I asked the students what art word the popsicle stick represented. One student offered, “A line.” “Yes,” I replied, “and lines are one tool we can use to make art.” I also brought aesthetics into this lesson by asking the students, “Does art have to last forever, or can we just create art in the room today and then put away all the supplies?” “Yes,” answered almost all of the students. I was surprised to here that answer. I thought the concept might be a little above their heads, but they seemed to understand it. This was a lesson that I walked into with my newfound knowledge of constructivist teaching. I don’t think I would have been as brave five months ago. I do believe that my approach to teaching is changing because I feel more courageous as a teacher. I also feel the need to surrender control and I am more comfortable in seeking answers from my students.

CHAPTER 4: DISCUSSION OF RESULTS

Within the methodology section of my thesis, I outlined twelve descriptors of constructivist teaching that would be used as the framework for my teaching practices. For the purposes of my research, I used those descriptors when originating lessons. Over the course of six weeks I gathered my raw data through autoethnographic recording. I will now analyze the data using the constructivist teaching descriptors as a means of drawing conclusions to my research questions.

Lesson 1: An Introduction to Clay Processes; Grade: 3

With this lesson I sought to: (a) encourage student autonomy and initiative by having students work in groups (Descriptor 1); (b) use raw data, primary sources, and interactive materials with the use of library books (Descriptor 2); (c) encourage student to student engagement in the dialogue of clay terms and clay building processes (Descriptor 6); and (d) encourage student inquiry with teacher and peers (Descriptor 7) (Brooks & Brooks, 1993).

I expected that students would be capable of engaging one another in a discussion of clay terms, anticipating that most students had a least some working knowledge of the terms presented. I wanted to create an environment where students worked collaboratively, using the library books as a guide through the information. I expected to act as a guide, rather than in a direct role, as students acquired and processed the information for this lesson.

The results for the lesson were students were confused as to what to do and were confronted with a number of problems they seemed incapable of working out. It took all of the resource materials to locate all the clay terms presented. This presented a problem

as there were five groups sharing all of the books. I only observed one table that had an actual discussion about the coil building process. I never observed the other five tables participating in any discussion about the class processes. For that matter, I also noted little discussion of the clay terms and observed twelve to fourteen students that were not engaged in the lesson at all. As a result, I stopped the collaborative work and took a teacher-centered approach to complete the lesson. When I assumed this role, I was able to establish dialogue on clay processes and had four or more students raise their hand to detail their experiences with the different processes.

As I analyze the results of the lesson, I believe the experience happened for several reasons. I was not as prepared as I should have been to conduct the lesson. The lesson was a last minute effort on my part to incorporate constructivist strategies. Although I did some preparatory work beforehand, like checking out library books, I did not consider all the variables. For instance, the number of books the students had to work with was too low. Also, I removed myself from the situation too early. I did not create any type of meaning, intrigue, or authenticity with the students. I literally began class and immediately presented students with the problem to solve, creating no relevance to their lives. I believe the problem presented was oversimplified. This was a third grade class and I have had excellent results throughout the year with my third graders. The grade level, as a whole, has strong teachers and the students are receptive and accommodating to tasks in the art room. If I had structured the class correctly applying the principles of constructivist teaching, I know my results would have been successful.

Lesson 2: Building with Clay; Grade: 3

For this lesson, I decided to use the following constructivist strategies within my lesson. I sought to: (a) encourage student autonomy and initiative by allowing students to choose their clay process (Descriptor 1); and (b) to encourage student inquiry with their peers as they began to build their clay form (Descriptor 7) (Brooks and Brooks, 1993).

I anticipated that students would have problems when they started to build using clay, especially those that decided to score and slip with the coil-building method. I knew that the previous art teacher had done clay lessons with all of her elementary classes and the students would have at least some experience with the medium. My third grade classes work well together, so I expected students would help each other out if problems arose.

During the lesson, I reviewed the processes students were allowed to use: coil building, pinching, and slab construction. Although we had reviewed and discussed wheel-throwing and mold construction, students did not have access to materials for these methods. Students elaborated on the processes they had been exposed to in the previous week's introduction on these methods. Students were given their clay and tools and began working on their form. As I walked the room, observing student progress, I encountered students who were having difficulty formulating ideas for their form. Rather than immediately offering assistance, I decided to allow them time to work through this problem. I reiterated that if students chose the coil building method that one must "scratch to attach" the coils together. From previous experiences with clay lessons, I knew some of the students would not perform this action. Indeed, I saw several students, four to be exact, that were not employing score and slip construction. I warned them of

their mistake and walked away from the table. I observed students that discovered ways to work with the clay that they had never experienced. For instance, a table of girls was working rolling out slabs using heavy cardboard rolling pins. One student was having difficulty starting a vase, so I sat down to work through the problem with her. All the girls at the table sat and watched as I talked her through the problem, and then, they all set about making a vase in the same manner. A similar situation happened with another class, but I took it one step further. After demonstrating to a student how to create a handle on a cup, I had other students at the table seek the same attention. I simply turned to the student that I had just helped and asked him to demonstrate to the students what to do. He did, and as I checked on the table a few minutes later, all the students were busy placing handles on their cups.

From a constructivist standpoint, this lesson was a success for several reasons. First, I created a situation for students that allowed them to explore and discover knowledge on their own. I believe allowing student choice of the clay process was a key to their success. The enthusiasm with which they approached the task was refreshing to observe. Secondly, the structure of the lesson allowed students to become dependent on one another. On many occasions, I observed students stopping to help one another and offering suggestions as to how they could solve a problem. It was things as simple as where to locate a tool or how to score and slip the clay that I observed.

Lesson 3: Radial Balance Designs; Grade: 3

For a third grade lesson on radial balance, I implemented the following constructivist strategies within the lesson. For clarification, I will simply list the strategies employed and then discuss them as they took place during the lesson. I sought to: (a)

encourage student autonomy and initiative (Descriptor 1); (b) use raw data, primary sources, and interactive materials (Descriptor 2); (c) allow student responses to guide instructional strategies (Descriptor 4); (d) first inquire of student comprehension of concepts (Descriptor 5); (e) encourage student inquiry with teacher and peers (Descriptor 7); (f) seek elaboration of student responses (Descriptor 8); (f) challenge students' initial hypotheses and encourage discussion (Descriptor 9); (g) allow wait time after posing questions (Descriptor 10); and lastly, (h) to allow for construction of relationships and metaphors (Descriptor 11) (Brooks and Brooks, 1993).

It must be acknowledged that changes to the lesson occurred as it progressed. As I am an elementary art teacher, I teach all classes one day a week. I have the same daily schedule of class times, but I teach different classes each day which means I am presenting a lesson five times. My lessons evolve as the week progresses and the radial balance lesson I will now discuss is a good example of this.

As I planned the lesson, I saw myself as guiding students towards knowledge of radial balance. I planned to use the art text books as a primary source for information on radial balance by asking students to read information from the book and observe examples of radial balance. I sought to employ constructivist strategies throughout the lesson, reviewing the list of constructivist practices before I began my lesson.

In the beginning, I encouraged students to engage in dialogue about things in nature that showed radial balance. This was after they had used the books as a primary source for background knowledge. It took some encouragement on my part, but students did eventually discuss examples of radial balance, giving examples like sunflowers, car tires, clocks and roses. Every time I asked a question, I consciously sought to allow wait

time after the question was asked. I noticed that if I allowed time for students to respond, the majority of the time they would formulate an answer. I noted a problem with the circle template sheets as we moved from the discussion portion of the lesson to students beginning their radial balance designs. Half of the sheets I distributed to students had a dot indicating the center and half did not. I asked students to do their best to estimate the center of the circle. As I walked the room, I noted that students had done a poor job of locating the center of the circle and decided to alter this for tomorrow's lesson.

It is important to note that as I sought to implement these strategies within my teaching, I was always looking for opportunities to do so. The preceding example of the missing dot from the circle sheets is a good example of this strategy. Students' response to the circle sheet presented an opportunity for me to change the content of the lesson with my next class. I had background knowledge that third grade students were being introduced to basic geometry because I tutor a third grader every afternoon during his math lesson. I decided to build on this knowledge by inquiring of student comprehension of math concepts and to encourage discussion of these concepts during my class. Prior to my next class, I had formulated my own solution to the missing dot by drawing a perfect square around the circle and making an X from corner to corner.

When my next class convened, we went through the discussion of radial balance and presentation of examples. Next, I asked that students gather around a table and I sat down with a circle sheet without the dot. I asked students how we could locate the center of the circle. Students began to shout out answers that ranged from making an X mark across the circle to measuring the diameter of the circle. One student finally offered that you could take a ruler and measure from the center and that when the measurement was

the same all around, you had located the center. What he was describing was the radius of the circle and he was exactly correct, a solution that I had not thought of. When I asked the class if there was more than one way to solve the problem, there was a resounding "yes" throughout the room. I was able to incorporate challenging students' initial hypotheses by a discussion on multiple ways to solve the problem of the missing circle. Some of the solutions in class would not have worked. However, by allowing students to discuss possible solutions, we eventually arrived at ways that would work. Students were also allowed time to construct relationships between knowledge gained in their regular education classrooms on math concepts to concepts learned in the art classroom. It is important as a constructivist teacher to bridge and support knowledge across the curriculum.

Lesson 4: Understanding Positive and Negative Space; Grade: 5

With this lesson, an introduction to positive and negative space with fifth grade, I sought to: (a) first inquire of students' comprehension of concepts; 6.encourage engagement in dialogue (Descriptor 5); (b) encourage student inquiry with teacher and peers (Descriptor 7); (c) seek elaboration of student responses (Descriptor 8); (d) challenge students' initial hypotheses and encourage discussion (Descriptor 9); (e). allow wait time after posing questions (Descriptor 10); and, lastly, (f) allow time for construction of relationships and metaphors (Descriptor 11) (Brooks and Brooks, 1993).

The class that I planned to begin the introduction with is the smallest of five fifth grade classes, consisting of only seventeen students. I have a good relationship with the class and I anticipated the lesson would go well. Because of the size of the class, I

sometimes begin by pulling tables together and have students sit around for a group discussion. This is how I planned to begin my discussion of positive and negative space.

When the class arrived, I did begin by pulling tables together and asking that everyone gather around. I asked students what came to mind when I said positive and negative. Students began a discussion by relating their knowledge of positive and negative to math, batteries, and concepts of good and bad. I accomplished several of the indicators of constructivist teaching with this dialogue. I first inquired of student comprehension and then set about in a discussion where I encouraged dialogue and built on the contributions of my students. There was not as much inquiry with peers as I would have liked; however, students were actively engaged in the discussion as I acted as a facilitator. I allowed wait time after I posed my questions so that students could form opinions and then contribute to the conversation. When students were off base with there interpretation of positive and negative space, I thanked them for the contribution and redirected the discussion to more relevant information.

As we began the production portion of the lesson, I instructed students to create a small still life in front of them using two pairs of small classroom scissors. Students were instructed to use a small sheet of paper and pencil to draw the still life while observing the negative space. As I walked the room observing student progress, I corrected those that were focusing on the positive image, encouraging them to look at the negative space. I was patient with the students, allowing them time to construct a relationship between the knowledge from the discussion and the work they were now doing. Not all students grasped the idea drawing while concentrating on the negative space. However, I would say the majority of students from this class did so.

As I tried to replicate this experience with my other fifth grade classes throughout the week, I was presented with problems. As I stated earlier, I began with my smallest class of seventeen students. My other fifth grade classes average twenty-seven students. I altered the lesson for two of the classes where I had table groups construct the still life using more scissors and small building blocks. This did not work out. There were always students at each table group that were not taking the project seriously, thus creating a negative situation for the students that were engaged in the project. These students continually knocked over the still life and displayed inappropriate behavior by talking and being disruptive. The fourth time I presented the lesson, I had moved back to my original idea of having individual students create their own sculpture. This worked well, but I had problems with students constructing relationships between the idea of positive and negative space and the realization of this concept in the creation of a drawing. I became frustrated with this experience, stopped class, and informed students we would not continue the lesson next week. Students were excited by this revelation.

Not wanting to be defeated, I decided with the last fifth grade class to receive the lesson on positive and negative space, I would, yet again, make changes to the lesson. I decided to move to a teacher-centered method of delivery. When students arrived, I had volunteers distribute books and we began reading and observing examples of positive and negative space in the fifth grade art text books. I worked to make the examples more concrete for the students and spent less time on a discussion of positive and negative space. This quickened pace of the class seemed to work to my advantage. Additionally, I demonstrated to students how to create a small viewfinder from a folded index card. All students were instructed to use the viewfinder when observing the positive and negative

space. This method of instruction had a positive impact on the class and I was impressed with the work the class was able to complete.

When I analyze the data from these classes, I realize that the variables presented by each class had an impact on the performance of the lesson. For example, the positive experience from my first class did not translate to the other, larger sized classes. I believe class size, in this instance, played a significant factor in the success of the first lesson. I was not able to replicate that same experience with the other fifth grade classes. Students in the other classes were not able to make the same connections that were evidenced in the first class. There seemed to be a lack of investment with the lesson. It could be with my limited experience using constructivist strategies, I was not able to gauge the needs of the classes, implementing strategies that worked. I do have students in the larger classes that continually present behavior problems. I do believe the larger class size, combined with behavior disruptions, negatively impacted the lesson. When I moved to a teacher-centered role in the last presentation, I had a positive experience. I am curious if constructivist experiences in the classroom can present opportunities for behavior issues to arise? This may stem from increased responsibilities on the part of the students. However, behavior problems could have arisen due to the lack of understanding of the project. When students do not understand what they are to do, they may resort to negative behavior as a means to coping with feelings of inadequacy. These are questions that warrant further investigation.

Lesson 5: CD Case Designs; Grade: 4

This fourth grade lesson was on the creation of a CD cover for a game or music case. With this lesson, I sought to employ the following constructivist strategies: (a)

encourage student autonomy and initiative (Descriptor 1); (b) use primary sources, raw data, and interactive materials (Descriptor 2); and (c) allow time from construction of relationships and metaphors (Descriptor 11) (Brooks and Brooks, 1993).

I did not know what to expect with this project. It is one that I had done when I taught middle school, and I remember having limited success with the project. I decided to give it another try for a couple of reasons. First, I had two large boxes of empty CD cases that I needed to use. Second, I had finished a project with fourth grade that I felt was a little rigid and I wanted them to experience more freedom in the art room.

When I first presented the lesson, I assumed a teacher-centered role and lectured the students as to how to begin. I noted the class seemed bored and uninterested in a discussion, so I decided to alter my approach with my next class. The next day, I simply told students they would be creating a CD cover design. This employed the use of cognitive terminology. Secondly, I instructed students the design could be of a music CD, a gaming CD, or a movie DVD. The only other instructions I gave was that the design could be for a movie, game or music/artist that already existed, or they could conceptualize their own movie, game or music artist and work from there. I encouraged student autonomy and initiative by allowing students choice of subject matter and by limiting my discussion and instruction on how to begin the project.

After I distributed CD cases to every class, students began to busy themselves with their designs. Some started by drawing around the case on paper, some measured using rulers, and some simply sketched designs onto paper with no consideration of size. I sat back and observed the class and offered advice and assistance when it was asked of me. I also allowed students to use my laptop to go online and search for images to

incorporate within their designs. Students also used Microsoft Word to print clip art for their cases. This was a use of raw data and primary sources that I had never allowed before. I believe this to be a positive step in creating a dynamic, constructivist classroom environment.

I noted a difference between yesterday's class and today's class. Students already had concepts of CD cases and did not need an elaborate discussion of how to begin. Yesterday's class had been bored by this discussion and I do not think it reflected constructivist teaching. With my next class, I worked to limit my discussion and created an environment where students could work at their own pace and in their own way to create their design. Students worked at a steady pace and were very interested in the project. Also, allowing the use of technology and providing supplies as requested seemed to work in my favor. Additionally, students were given time to create relationships with the project. It took some students a while to comprehend they could create their own, personal band, movie or video game for which to create a CD case for. As time passed, it finally was understood by the students and they worked to create CD cases that reflected this knowledge. I noted that students referenced other students' work. It was not that they copied work, it was that they saw students creating personal bands, movies and games and it was understood by them they could do the same.

Lesson 6: Creating with Popsicle Sticks Grade: 1

With this lesson, I employed the following constructivist teaching strategies: (a) encourage student autonomy and initiative (Descriptor 1); (b) use of interactive materials (Descriptor 2); (c) use of cognitive terminology (Descriptor 3); (d) encourage student

inquiry with teacher and peers (Descriptor 7); and (e) allow time for construction of relationships and metaphors (Descriptor 11) (Brooks and Brooks, 1993).

As referenced in my autoethnographic recording, I had access to two, large boxes of popsicle sticks that I could not determine a use for. I decided to build a lesson around the popsicle sticks by simply allowing students to work with the sticks to complete and artwork of their choice. The art would be temporary, an exercise that lasted only the duration of one class period. I did not know what to expect with the lesson as I had never conducted a lesson of this type. I was curious if students would be interested in the material and how long it would hold their attention. This was a lesson that did not take long to plan and I was apprehensive if it would be successful. However, I do know that my incorporation of constructivist philosophies in my classroom had given me a greater degree of confidence and I was more willing to relinquish control while investing more responsibility and trust in my students.

When class began, I introduced to students the popsicle sticks and informed them that today they would be using them to create an art piece of their choice. I noticed that students immediately were excited by this prospect. For the next thirty-five minutes of class, I walked the room observing students who were actively engaged in the creative process. Students worked independently and in groups to create a range of art. Two students that I usually have behavior problems with worked together at a table. One created an elaborate house out of the sticks, laying the sticks flat on the surface "drawing" with the sticks to create a detailed two dimensional art piece. The other girl focused her attention on the creation of a three dimensional structure. When I asked her

what is was she replied that it was a house. A group of boys busied themselves creating three dimensional forms, using tape to hold the sticks together.

As I continued to observe student progress, thoughts came to mind as to different strategies that I could use within the lesson. One example of this was incorporating aesthetics into the lesson by inquiring about the permanence of art. Taking this opportunity, I asked the class if art had to be permanent. “No,” was heard throughout the room after I asked the question. I must say I was surprised at the students’ responses. I thought this might have been a concept too advanced for them, but it was not the case. Another idea I had while conducting the lesson was to introduce the concept of positive and negative space. I took one student’s art work outside and spray painted it a dark purple. I placed it on a complementary sheet of yellow construction paper, another component that I thought to add to the lesson. All of these ideas were not introduced to students; however, these were ideas that I could incorporate with lesson at a later date.

It must be addressed that the constructivist strategies that I used were not a conscious decision on my part beforehand. As this is one of the last lessons reflected on, I know that I am becoming more confident and naturally incorporating these strategies within my lessons. I certainly encouraged student autonomy by having students work with the material in any way they desired using popsicle sticks as an interactive material. I employed cognitive terminology by asking students to create in any manner they desired. Student response to the materials manifested new ideas for instructional strategies, some of which were introduced to students during the lesson. Students worked collaboratively as well as independently, inquiring of knowledge with myself and their peers. As students worked with the material, I allowed time for construction of

relationships and metaphors. At one point asking the class what element of art the popsicle sticks most closely represented. “Line” was the response heard by several students across the room.

In the end, this was a clear example of a lesson where I effectively incorporated constructivist strategies within a lesson. The difference being, from previous experiences, that I am beginning to do so naturally.

As the data indicates, a shift did occur to environments that were student-centered. Through use of the descriptors of constructivist teaching, I created learning objectives that increased autonomous activity, student inquiry, student to teacher dialogue, student to student dialogue, and peer assistance. Also, a positive impact on student learning was observed. This was evidenced by increased interest and active engagement by the students.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

When I first began my investigation of constructivist theory, I sought to understand the theory and consider how it may be incorporated within my teaching. This came about due to my reliance on a teacher-centered method of instruction. From my gathered research, I can ascertain that the implementation of constructivist teaching strategies have had a positive impact on my performance as a teacher. Additionally, my students responded positively to the changes that I made with my teaching strategies.

My first research question was, “In what ways may constructivist approaches to teaching facilitate a shift from a teacher-centered learning environment to one that is student-centered?” I address this question by explaining how constructivist teaching strategies worked to create a more student-centered learning environment.

First, by emphasizing the strategies in my classroom, I was able to place in perspective my role as teacher. I gained knowledge, for example, of how to encourage student autonomy and initiative, one of the principles of constructivist teaching. I placed emphasis on student learning by encouraging independent thought, peer assistance, and development of ideas. I actively sought to move away from a teacher-centered method of delivery, where I was the active keeper of knowledge. There is a vulnerability that I believe one must allow in the classroom. The best way I can define this is acceptance of the unknown. I had to work to allow myself to not have all the answers and to accept situations where students found solutions to problems that had not occurred to me. As I reflect on my schooling, I have always thought of the teacher as the one with all the answers. I carried with me this philosophy, incorporating this dynamic within my teaching practices.

Towards the end of my research, I began to understand that teacher-centered and student-centered learning environments did not exist separately, but were very much a symbiotic partnership. I now believe it essential for them to co-exist in harmony in an educational setting. There were situations that called for a move from a student-centered approach to a teacher-centered approach in order to accomplish my objectives. Ultimately, it was at my discretion how I structured a lesson. Being a special area teacher, I am presented with a unique situation where I teach all students, kindergarten through fifth grade. Each class presented me with ever changing variables, in the form of behavior, class structure, age, etc. I had to judge the approach taken for each lesson and quickly found that what may have worked in one class, certainly did not work with another. Also, there were several documented instances where I started with one strategy and shifted to another in the middle of the lesson.

My second research question was, “In what ways may constructivist teaching strategies positively impact student learning?” I observed ways that students were positively impacted by changes in my teaching methods. First, I saw students become actively engaged in problems presented to them. This manifested in several ways. By not having every problem solved for my classes, students’ interest in the lesson increased. This was observed during discussion time and during group work activities. One of the most exciting examples of this occurred during the third grade radial balance lesson where some of the circle worksheets did not have the center dot. Because I was seeking ways to incorporate constructivist teaching strategies, I saw this as an opportunity for students to further invest in the lesson. I saw students who were excited about offering solutions to these problems. Their cognitive abilities were challenged, and they

incorporated information from another discipline, math. Second, I was changed by employing these strategies in my teaching, which ultimately impacted student learning. I relinquished control in my art room, allowing students freedoms that I had never presented. An example of this would be my allowing students to use my laptop while researching images for their CD covers. I observed a shift in the structure of my classroom. It became less rigid and I served to assist students with their needs, rather than merely have students work on a problem that I presented, confined to the methods I dictated. The positive impact on student learning was active involvement and student engagement with the lesson. No measure of student learning occurred during this research other than my own personal observations. A recommendation for future research is how constructivist teaching practices may increase student learning, using qualitative research to measure the data. Also, research could be conducted on student behavior to measure behavior expectations in constructivist teaching environments.

Additional conclusions to my research can be drawn by an examination of the descriptors of constructivist teaching as they were applied to my teaching practices. When implementing my lessons, several of the constructivist strategies appear multiple times. Four of the twelve descriptors appeared four or more times during my lessons. Descriptor 1, regarding student autonomy and initiative, and Descriptor 7, regarding student inquiries through questioning, both appeared five times. Descriptor 2, regarding use of raw data and primary sources, and Descriptor 11, regarding construction of relationships and metaphors, both appeared four times. I viewed these four descriptors as central components of a constructivist teaching environment, ultimately becoming integral concepts that affected the shift to student-centered learning environments.

Another reason why they may appear more often is they are more general in scope, being easily applied to multiple situations. When this is considered, along with the overlap of characteristics from some of the remaining descriptors, it becomes more evident why these four appear more often.

Descriptor 1, concerning student autonomy and initiative, was a primary focus of most of my lessons. Taken further, the directive of this descriptor helped me facilitate lessons whereby students were in control of their learning. An example of which occurred during Lesson 5 with the CD case designs whereby students decided for themselves how to begin, what resources to use, and which genre of music, movies, or gaming would drive their designs. Also used five times, Descriptor 7 encourages student inquiry through open-ended questions and asks students to question one another. I observed student learning being positively impacted when this descriptor was used in my lessons. Student answers were built upon with open dialogue facilitated through open-ended questioning strategies. Also, students were encouraged to question one another through peer assistance. Specific instances of which were observed numerous times over the course of data collection.

Additionally, a close relationship exists between Descriptor 7 and Descriptors 6, 8, and 10. I mentioned previously that the descriptors at times overlap one another. Descriptor 6 seeks student engagement with dialogue. Descriptor 8 seeks student elaboration of initial responses. And lastly, Descriptor 10 asks that teachers allow wait time after posing questions. Taken independently, each directive has its key point. However, as I consider the structure of lessons, I realize that these four descriptors are closely related to one another and are likely employed relative to one another. It could be

ascertained that I realized this interdependence of Descriptor 7 and Descriptors 6, 8, and 10. I could have concentrated on 7 while incorporating components of the three aforementioned descriptors. This is likely why Descriptor 7 appears as often as it does.

Descriptor 2, used four times, involves the use of primary sources and manipulative, interactive and physical materials. Because of the nature of my teaching, art education, I continually expose students to interactive and physical materials. Additionally, I incorporate raw data and primary sources when introducing lesson concepts. Because of my research, a greater emphasis was placed on doing so. For instance, allowing student use of my lap top during Lesson 5 certainly was an example of a student-centered learning environment. Creating this environment and allowing students additional resources had a positive impact on student learning in that students were more engaged in and inquisitive of the learning objectives. It was an intentional shift in my approach brought about by the descriptors of constructivist teaching that caused the lessons and teaching environment to be more student-centered. This shift occurred by actively reflecting on and pursuing ways that students could use and interact with the materials with less influence and direction from me.

The last of the most used descriptors was Descriptor 11, which states that teachers provide time for students to construct relationships and create metaphors. I saw this as a crucial goal of constructivist teaching. I created a learning environment where I acted as a facilitator of student inquiry and student investment with the learning objectives. This was probably one of the more difficult descriptors to observe; however, there were multiple instances where students verbalized their connections on newly acquired knowledge to prior knowledge, the most exciting moments occurring during Lesson 3 on

radial balance. I observed during a class discussion students connecting knowledge surrounding radial balance to prior experiences in math. While implementing the twelve descriptors of constructivist teaching, it was imperative that I create experiences that connected students to prior knowledge and that allowed for the formulation of metaphorical relationships with this knowledge. Inquiry of prior knowledge through exploratory dialogue with students was paramount to this endeavor.

In an educator preparatory program, I know constructivist teaching strategies can serve future educators well. I did note some similarities between the way I was trained and some of the methods offered. Examples include the use of dynamic, open-ended questions; use of primary sources; wait time after posing questions; and encouragement of student dialogue. Where I believe the teacher preparation community could benefit is the employment of constructivist strategies in lesson development. However, merely including the strategies is only one step in the right direction. I found that you must continually be open to these ideas as you are engaged in a lesson. As one of the principles indicates, student responses guide instructional strategies. If teachers can be trained in how to realize these opportunities, I know they, and the students served, will benefit.

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