EXPLORING THE EFFECTIVENESS OF ART AS A FORM OF ASSESSMENT IN GENERAL EDUCATION CLASSROOMS

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SPRING 2014

A thesis
submitted in partial fulfillment
of the requirements
for a baccalaureate degree
in Childhood and Early Adolescent Education
with honors in Childhood and Early Adolescent Education

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ABSTRACT

The focus in the classroom has started to turn towards the individual, trying to accommodate the learning needs of each student. Though, styles of teaching may have started to change, the methods of assessment have not. Traditional methods of assessment can be constraining and invalidating to some types of learners. Varied styles of learning and assessment are important to ensure all students get a fair chance to succeed in school. Art, though traditionally seen as a “fun” classroom activity, demonstrates children’s understandings of the world because in order to create something new, you must rely on prior knowledge. Through an observational study 1st and 2nd graders at The Saturday Art School, I was able examine whether or not you could assess knowledge through art. The data from this study and my student teaching experience combined with the literature showed that pairing artwork with a chance to explain their art provides teachers with a way to assess artwork for understanding; thus, showing how students can be taught and evaluated in new ways.
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ACKNOWLEDGEMENTS

First off, thank you to everyone at the Saturday Art School for everything you did to make me feel welcomed. Everyone was so friendly and helpful, and I am gracious for allowing me to observe your school for eight weeks. I especially want to thank Christine Marmé Thompson, Ph. D, for working with me to make this happen. I also want to thank the four student teachers: Leah Marshall Ellert, Jessi Grentz, Danielle Allison, and Jenna Elker for allowing me to be in their classrooms and document their work. You all were a huge help to my research.

Secondly, thank you to my honors advisor, Kathleen Collins, Ph.D., for working with me throughout my time as a scholar, both on my thesis and independent studies. You were a great help in accessing amazing literary resources and research advice that not only changed my ways of thinking, but also allowed me to grow as an academic.

Lastly, thank you to everyone in my life, my family, friends and teachers, who have supported me through this thesis process. They got me through the stressful times of trying to manage my academics, co-curricular activities, and this thesis by lending their ears and their wisdom to help me succeed.

It has been all worth it, though, and I am thankful for the learning opportunities Schreyer Honors College has given me.
INTRODUCTION

Talent in art is no accident; it reflects a way of thinking. I am a creative and visual person. A whirlwind of visual ideas constantly swirls in my mind. I have an aesthetic consideration for the world, as it is, every shadow and highlight, the hues of colors, shapes and sizes. I notice much that many others do not. This is why I have found success in the visual arts. I take what I have learned and apply it. When the light hits an object at a certain angle, I know where the shadow should go because I can picture it in my mind. Then I work my hands into creating what I see in my head. This is what is like to be a visual learner and to have a visual and aesthetic way of knowing the world that is unusual.

Some will identify with what I am saying, while others will never experience an artistic sensibility. This is because everyone learns and thinks a little bit differently. Howard Gardner (1989) understood this difference in how brains function and articulated this phenomenon in his Multiple Intelligences Theory. Gardner’s theory of multiple intelligences highlights the many learning styles that exist and the different ways that people think and process information. “Individuals learn in different ways and education is most effective when these individual differences are taken into account or even placed at the fore” (Gardner, 1987, p. 34). This is why varying styles of teaching, as well as, forms multiple of assessment, are vital to any classroom.

As a future elementary teacher, I recognize in my students a wide variety of learning styles that exist in my classroom. In my student-teaching experience, even with only thirteen students in a class, I still see wide differences in how students go about completing tasks, in how well they process visual and auditory information, and in how they answer questions. For example, a student can orally explain how a chick hatches out of an egg, but when asked to put it in writing, he has great difficulty figuring out what to write. Situations like this happen often. Though my students have the knowledge, they do not know how to express it in every format.
Given that students demonstrate such diverse thinking and cognitive processing, it is appropriate to offer students a diverse range of evaluative formats. Though this would be ideal, typical classrooms feature only a few ways for students to demonstrate understanding. Tests and formal essays are the main instruments used to measure the understandings of all these diverse learners. This is a problem. These assessments constrain and invalidate those students’ knowledge and understandings. “Integrating the arts as a forum for expression gives students whose learning styles tend toward the visual, kinesthetic, spatial, or auditory more freedom to communicate their understandings.” (Goldberg, 1997, p.14) By allowing students with varied learning styles to freely express their knowledge, the teacher is building a student-specific classroom environment.

I always knew I wanted to foster artistic expression in the classroom, but it was not until I was taking an online summer class that I realized the urgency of this problem. Our professor assessed half of the lessons with multiple choice quizzes, while the other half of the lessons were evaluated with short answer questions. I did the work for each lesson in basically the same way, but my scores on these assessments were drastically different. I did extremely well on the short answer questions, while my multiple choice scores were lower. It frustrated me because I knew the information, but the format of the multiple-choice test was confusing and did not allow me to demonstrate what I knew. This really made me think as a future teacher of how my students will react to the different forms of assessments that I will use. Since art and creativity have always been an important part of my future classroom, I started thinking that visual arts should be promoted as a valid means of measuring understandings.

“By learning through the arts, students are engaging with ideas rather than reporting on them. As they work through the arts to express subject matter, they are stretching their imaginations and pursuing the challenges involved in critical thinking and learning” (Goldberg, 1997, p.xi) Just like writing, drawing expresses a child’s understanding of the world. Building upon schemas in their prior knowledge, students use past experience to create visual
representations of the world. Everything a child sees, hears, and feels contributes to this catalog of ideas, which is constantly being modified with each new experience. “The test of understanding lies in the student’s ability to make that information his own – to work with it, to transform it, to be able to apply it” (Goldberg, 1997, p.16). Therefore, everything a child is putting into their art is coming from what they have already learned. A students’ art can demonstrate a tremendous amount about how they know the world.

In addition delving into literature that supports arts-based learning, I decided to also find answers in to my own research by observing at The Saturday Art School, a children’s program taught by pre-service art education students. I chose this location because I really wanted to observe elementary-aged students creating art in a classroom. This school was just what I needed. For my observations I focused on two classes, an aged 6-7 class about dreams and an aged 8-9 class exploring the theme of America. The first grade class engaged more in free drawing, where a child can draw whatever they want. This data allowed me to see how students might incorporate educational ideas into their work without being constrained by a traditional formal requirement. The second grade classroom focused more on art integration. For these observations I looked to see whether students were taking what they learned in class and applying it to their work. I also wanted to see students combine prior knowledge with new instruction. The goal of this eight-week observation/ study was to really see if what I believed was true: that a child’s artwork is a valid way for them to demonstrate their learning and that visual arts help promote learning and validate learning styles that have historically been marginalized.
SUPPORTING RESEARCH

Theory of Multiple Intelligences

Prior to Howard Gardner’s research on intelligence, the popular idea at the time was that each part of the brain executed various discrete functions. Then, Gardner claimed that cognitive processes overlapped, and the parts of the brain used to understand symbol structures varied from person to person. From this, Gardner articulated several differing modes of thinking. He noticed learners employed two types of thinking: linguistic and logical-mathematical (Gardner and Hutch, 1989, p. 5). Therefore, the traditional sense of the word “intelligent” primarily focused on individuals who excelled at those two dominant types of thinking. Teachers then neglected non-traditionally intelligent students that were not primarily linguistic or logical-mathematical thinkers. Gardner set forth to determine other realms of thinking and intelligence by studying “special populations,” or those individuals who demonstrated intelligence in unique ways that were not traditionally recognized (Gardner and Hutch, 1989, p.5). This included individuals on the Autism spectrum, savants, prodigies, and the learning disabled.

Out of this research Gardner advanced seven main types of intelligences: logical-mathematical, linguistic, musical, spatial, bodily/kinesthetic, interpersonal, and intrapersonal (Gardner and Hutch, 1989, p. 6). Gardner acknowledges that everyone exhibits some of each of the seven intelligences, but individuals vary in their strengths and weaknesses. Spatial intelligence pair readily with visual learning and is most applicable to arts-based learning. Spatial intelligences’ core elements include the “capacity to perceive the visual-spatial world accurately and to perform transformations on one’s initial perceptions” (Gardner and Hutch, 1989, p. 6). In
other words, being a good visual thinker includes seeing the world as it is and being able to transform, or express, what one sees in some form, typically through art.

Gardner’s findings led to several studies looking at an “intelligence fair” method of assessment (Gardner and Hatch, 1989, p. 6). Gardner saw that those intelligences required a broad range of assessment instruments: “If different kinds of items were used, or different kinds of assessment instruments devised, a quite different view of the human intellect might issue forth” (Gardner and Hutch, 1989, p. 5). Traditional schooling is structured to measure individuals mainly by how well they can speak, write, and how well they perform on examinations. Hypothetically, if two students had equal knowledge of a particular subject, but one were a better multiple choice test taker, the other would not receive equal rewards for his/her thinking, and such evaluations of their learning would be downgraded or discounted. The first student would always be seen as more intelligent because they fit the traditional mold. What would schools be like if assessment methods were to cater other forms of intelligences? Gardner’s view was that we must change definitions of what it means to label someone intelligent or not. By broadening this definition, more students would be successful in school, and their intelligence, their learning, and their talents would be validated.

**Schemas**

The concept of *schemas* has been around since Aristotle and Plato, and the word itself comes from the Greek language, meaning “form”, “shape,” or “figure,” and informs how one describes an object or concept (Marshall, 1995, p. 4-7). Since then, there have been three main people that have advanced understandings of schema: Immanuel Kant (1787), Frederic Bartlett (1932), and Jean Piaget (1952).
Immanuel Kant believed that there were “pure concepts” that already existed in one’s mind, meaning individuals compared what they observed in the present to those original concepts (Marshall, 1995, p. 7). Schemas became the bridge between original and new ideas. Though future thinkers abandoned his belief in pure concepts, Kant’s original idea of using prior knowledge to help learn new knowledge still holds value.

Frederic Bartlett’s view of schemas focused on memory. Believing that schemas were summaries of familiar stories or situations, he felt an individual would try to understand a new story or situation by comparing it to their memories (Marshall, 1995, p. 11). If parts of the new idea did not fit in with the old one, those extraneous elements would alter. The true, original memories would then disappear. Memories and ideas, thus, are constantly monitored in an intellectual process that revises memories based on new experience.

Jean Piaget’s schema also was adaptable, but he implied that schemas only occur when there are repeated events or situations that make you believe that idea to be true (Marshall, 1995, p.14). Over time, the schemas become more general, making them more applicable to new situations. In each new situation, the schemas control an individual’s behavior and thought processes, leading them to add new ideas to their pre-existing collection of ideas. The two parts of creating schemas included assimilation, or new concepts fitting into the old ideas, and accommodation, or the adapting of new concepts to make them consistent with the old ideas (Marshall, 1995, p.14). Piaget’s ideas really connect to Bartlett’s definition because they both recognize that schemas are always changing. Both involve the assimilation and accommodation of old and new ideas that are later saved in one’s memory. These memories become the catalog that artists can use when they create their artwork.

From these philosophers and psychologists’ definitions, one can see the overall idea of a schema: use of prior knowledge to help one decipher new information. Once deciphered, this new information becomes a memory, newly mixed in with prior knowledge. This mix of knowledge
then becomes what an individual knows. They can refer back to these schemas, or prior knowledge concepts, and use them to acquire more knowledge in the future. The mind of an artist, and their work is based on a compilation of schemas.

Assessment

Because schemas are developed based on an individual’s experience in the world, no two individuals will develop the same schemas about the same concept (Marshall, 1995, p. 267). Since each person processes information in a different way, how can there be one form of assessment for one’s knowledge? Teachers must develop methods of assessment that examine common schema understandings and how students assimilated those schemas into their knowledge, without downgrading students for unique understandings of the world (Marshall, 1995, p. 268).

Often evaluations are comprised of many scattered, varying pieces of a topic (Marshall, 1995, p. 269). The goal is to see if the student understands a wide scope of the information, but how the test is organized may not be conducive to how individuals commonly think. Intelligence is broad and is built on many past experiences (Marshall, 1995, p. 269). Due to the individualized development of schemas, the way knowledge is organized over time follows a unique pattern. When all students are asked the same question, each of them will follow a unique path to find the answer. These links between ideas in the brain help one formulate the reasoning behind the answer, which leave each individual with an answer slightly different from the next. Because of this, all students cannot succeed at evaluations that have unlinked questions and confining answer choices.

Of course, there are some examples of problems that will always have one answer, but they will not always be found in the same method. For example, to solve 62-45 on a math test,
one student may use the traditional method of borrowing, which involves borrowing a ten from 60 and giving it to the 2 to make 12 and then subtracting ones column and tens column afterwards. Another student may subtract the tens and ones separately, solving 60-40 and 2-5, giving 20 and -3, which would then be added together. Both methods arrive at 17, but both methods were not completed using the same processes. Therefore, having an area to show work on the test would inform the teacher in what ways their students think.

Assessment also needs to reflect tasks that they may encounter outside of schools (Eisner, 1998, p.140). Throughout most of people’s actual lives outside of school, they will most likely not need one correct answer. Therefore, limiting evaluative formats to force students to give one correct answer is not allowing them to practice problem solving in the real world. Students need to demonstrate that they have “grasped ideas as a part of a larger field” (Eisner, 1998, p.142). They need to understand why they are learning what they are learning and to be assessed in ways that match that way of thinking. Multiple-choice and true and false tests are objective (Eisner, 1998, p.144). They provide no opportunities for the student to explain their thought process and provide no option for creative problem solving.

For example, on a pre-assessment for plants in my first grade student teaching placement, I asked my students: “How do new plants start?” I provided a space for a short answer response because I wanted to understand their thinking. I hoped that they would respond with some variant of seeds, since seeds are the most vital part of plant reproduction. To my surprise, instead of answering with seeds, one student gave this response: “by a tiny drop of pollen from a flower beside it”. Her answer was still correct, even though it was different than my intended correct answer. This, itself, showed me that there is not always one correct answer. You need to understand the reasoning behind the answer to really validate a students’ knowledge. By constraining assessment to fit that “one correct answer,” teachers may have no idea the true understandings that lie within their students’ minds. Therefore, by providing assessments that
allow more freedom of response, such as short answer or artistic expression, students truly show what they know.
SATURDAY ART SCHOOL

Research Context

Located in classrooms in Patterson Building and the Arts Cottage at Penn State’s campus, the Saturday Art School is taught by pre-service art education teachers. Each classroom is broken up by age: 4-5, 6-7, 7-8, 8-9, middle school, and high school. Two of these pre-service teachers work together to develop a theme for the eight weeks of classes. The Saturday Art School began on Saturday, September 28, and continued every Saturday from 9-11am until November 16. All of the students’ and teachers’ cumulative efforts culminated in an art show on November 23.

I chose to focus on the 6-7 and 8-9 age groups. The 4-5 year olds were only beginning to formulate schemas, and were still unused to structured school environments and behavioral expectations. The middle school and high school groups were outside of my certification area, so I was disqualified from using their classes towards this research.

The first 6-7 classroom with twenty-eight students focused on dreams. Called Dream Big!, this class taught the students how to express their dreams: what they wanted to be when they grew up, their dreams when they are sleeping, and the images they dreamed in their imagination. Within those areas, they learn about dream-like art, dream catchers, literature describing dreams, and created dream books. Each day typically involved a warm-up activity, main project, snack, and stations.

The room’s stations were Play Factory, Reading Cloud, When I Grow Up, Creation Zone, and Draw Big. Students were placed into groups and moved around to the different stations about every twenty minutes. Play Factory was a play area with various creative toys and Reading
Cloud was a cozy reading area with various books about imagination and dreams. When I Grow Up was a station involving activities students can do to learn about different jobs. The first day, one teacher’s father taught the students about being an architect, which involved having students create blueprints and making houses out of Legos. Other days involved students taking photographs and recording videos using cameras on their iPads. Creation Zone is where the students could free draw in their sketchbooks, and Draw Big was a big piece of paper on the wall that students could draw on. For the purpose of this study, most of my observations came from various free draw activities, typically occurring during warm-up sketchbook activities, Creation Zone, and Draw Big.

The second classroom had 30 students aged 8-9, called Exploring America, which integrated social studies, literacy, and art into in activities that helped students learn about America and road trips. They started at the northeast, then traveled to the other parts of the United States: southeast, southwest, west, and mid-west. Each day typically involved sketchbook time, a main project, snack, and then stations. Main projects included flags, street art, animals, and road signs. The stations typically included: finishing past projects, sketchbooks, mailbox center, and reading. The mailbox center involved examining sent postcards and creating a postcard to mail back. I hoped the data I collected would show a great correlation between art integrated classrooms and learning.

Main Wonderings and Sub Wonderings

From all of this, my main wondering is:

- How can artwork be used as a form of assessment in a general education elementary school classroom?
Within that main wondering are two sub wonderings:

- How does a child’s prior knowledge affect their drawings?
- Why is creativity and art an important part of a child’s learning process?

Method

Collection of data at The Saturday Art School was strictly qualitative. Using pictures, videos, interviews with the children and teachers, and written observations, I attempted to collect evidence that would show how students’ understandings of the world were reflected in their artwork. Each Saturday, I would break up the two hours based on the activities. During times when minimal activity prevented the collection of data, such as snack, I moved to the other classroom. On most Saturdays, I split my time between the two classrooms. If activities occurring in one classroom were productive and I was getting a lot of data, I stayed in that classroom the whole two hours. Conversely, if the lessons for that day were not giving me good data, I would move to the other classroom. Most students were willing to explain their work, especially those in the younger classroom. If children were not open to talking to me, I would not take photos, videos, or written records for that child. Explanations from the child of their work were very important in demonstrating their learning. Though I could guess, I could never fully understand their artwork until I had discussed the piece with them.

Types of Teaching Styles Examined

Teacher-Directed Art In teacher-directed art, the teacher gives specific directions to complete a project. The students go through the steps together, and they produce similar products. In terms of art, this is often called “school art,” or art specifically guided towards a result that the
teacher specified (Efland, 1976). An example of this type of project is turkey hands, where every student makes a handprint into a turkey for Thanksgiving. These projects exhibit no real learning or creativity from the students. For the most part, the expectation is that if the students follow instructions, the products should look the same. Students gain no experience using the materials in non-sanctioned ways, their creativity is invalidated, and the art coerces good behavior by committing instructional time to “busy-work”.

**Student-Directed Art** Free art or student-directed art allows the students freedom to determine the direction their artwork takes. The teacher simply provides the materials and allows the student to create what they wish from those supplies. Because the students are given no real guidance, students access their imaginations and their prior knowledge in order to create their work. Because an individual cannot create something from nothing, students riff off of previous concepts. The conceptual foundation comes from schemas. Just as every house needs rooms with walls, windows, doors, wiring, etc., every creative idea takes inspiration from schema, even if the final product varies as much as houses do throughout the world.

An example from one of the children during free draw exemplifies this exact process. On the first day of school in the Dream Big! classroom, one girl was working at the Draw Big section, which was a large area of wall covered with a piece of paper. In this area, two girls were drawing birds in trees. One girl had drawn a bird just standing in a nest. This demonstrated that she understood the parts of a bird: the body, head, beak, legs, and wings. The second girl had taken that understanding of a bird and expanded on it. Her birds had the same parts, but her drawing of what a bird in a nest looked like was then radically different (See Appendix A). Instead of just standing, her birds were babies reaching up for food.

ME: “Why did you draw the birds like that?
GIRL: “Baby birds do that when they are hungry. I know because at my grandma’s house I saw them in an umbrella.”

ME: “The nest was in the umbrella?”

GIRL: “Yes, they were so hungry.”

She had taken her prior knowledge of baby birds and applied it to this new situation, birds in a tree. Without being guided at all, this girl was able to analyze and synthesize understandings.

**Teacher-Guided Art** Over the eight weeks, I was able to gather many examples of student learning and creativity. Some activities followed teacher directed instruction, while others were student directed activities. The rest of the activities that did not fit into those two categories fit into a new category of instruction that combined the two together. This instruction could be called teacher-guided instruction. Utilizing the structure of teacher directed lessons and the freedom of student directed lessons, this instruction focused on letting the students have freedom within a context. For example, a teacher will give the students a main idea that their artwork should embody, but the students are allowed to interpret that idea how they want. This allows for a similar theme amongst pieces, but has a larger variation between products.

**Data and Analysis**

The goal of my research at the Saturday Art School was to see children’s understandings of the world around them demonstrated in their artwork. As Elliot Eisner (1998) states, “what was not first in hand, cannot be later in the head” (25). In other words, any new creation is based on schemas developed over the years from their home or school environments. Therefore, in a classroom, children have the potential to create products that demonstrate their knowledge of the
world. In order to observe a wider scope of schema use and to see how the instructions affect the
product, I observed the two different classrooms. I hoped that both classrooms, with varying ages
and concepts, would show evidence that art is an effective way to assess learning. Since
Exploring America was an art-integrated classroom, I believed I would find the best evidence for
my research. Instead, Dream Big, a class focused on free art, surprised me by providing amazing
examples of students demonstrating their learning through their artworks. Because of this, I spent
a majority of the eight weeks in the Dream Big! classroom.

Exploring America taught children about the theme of America through art. They
introduced many different art techniques: silhouettes, painting, sculpting, and printmaking, and
tried their best to incorporate aspects of culture and literacy throughout the country (see appendix
B for examples). The problem with this classroom was not necessarily the concepts they were
teaching, but how they were teaching it. It worked well for an art class, but their style of art
integration would not work in a general education classroom. Though many of the projects were
aiming for a teacher-guided approach, they often became teacher-directed. The products did have
variety, but I felt that the teachers gave too many examples for the students to look at. For
example, for the road sign project, the teachers gave about twenty pictures of different road signs.
This helped them accomplish the product that the teachers wanted, but showed no individual
understandings from the students on what they believed a road sign looked like. Instead of using
prior memories of road signs to develop their creations, they relied on the models.

Therefore, though I appreciated the attempt to integrate other subjects into an art
classroom, it was harder to find examples of understandings that were not constrained
conceptually by the models. I expected more culture and academic content outside of art
techniques from this classroom that boasted a desire for art integration. Though the class
“traveled” to different parts of America, the correlation between the main project and that part of
the country was not clearly evident. I had difficulty understanding the true connection between
making combined animals out of tinfoil or silhouette stories to American culture. Of course, they were fun, creative art projects, but not true art integration material. They often felt isolated and without meaning.

“The study of art should not be studied in isolation,” and instead relate more to social and cultural contexts (Efland, 2002, p. 49). By teaching mini-lessons on regional American culture that paired with the main projects, the students’ work would have more depth. It would have provided opportunities for students that have traveled across America to demonstrate their unique knowledge and connected it to a real-life road trip. In addition, sharing their work along with their personal stories would have increased the academic value of the art class. The students would have learned from the teachers in the mini-lessons and from each other during the group share, thus further developing their knowledge about our country. Overall, the theme was a good idea, but its execution was lacking, and this prevented it from being good resource for assessment.

_Dream Big!’s simple concept of dreams was definitely suited to foster creativity, but I was unsure of its ability to demonstrate understandings of the world. Like _Exploring America_, the teachers taught many different art techniques and incorporated literacy, but how they differed was in the style of teaching. This classroom’s main projects were teacher-guided, and the additional small projects were all student-directed. Almost every main project involved an overall concept, basic instructions, and a couple of examples. Providing these elements laid a good foundation for the theme and ensured materials were used properly, but allowed creativity to flow more freely for each child. The products came more from each student’s understanding, instead of just mimicking the examples (see appendix C). Therefore, an increase of freedom led to more authentic products.

Evidence of the use of schemas in the _Dream Big!_ classroom came from main projects and free draw activities. While creating a Monet inspired landscape, one girl painted her sun without the typical round shape. Instead, she painted strokes of color coming down from the
circle (see appendix D). When asked why she painted it in that way she said, “They are rays from the sun. The sun is shining down on the grass.” This showed her basic understanding of light. She knew that the sun was not simply a bright circle in the sky, but a source of light and heat that radiates down to Earth.

While free drawing on strips of paper, one boy drew an ant town (see appendix E). He described the parts of the town, including the school, houses, hotel, and a way to get out. The mention of the way out of the tunnel-like structures he drew demonstrated his understanding of how ants live. He combined human life with ant life, showing that he knew that ants lived underground in tunnels and needed a way to get out to get above ground.

In a class free draw on a large piece of paper, one boy drew two examples of falcons (see appendix F). One was just flying and the other was “diving because it puts its wings and tail back.” He said he knew this because he saw a falcon in real life, and proceeded to demonstrate how they fly by performing the motion using his body.

These examples are just some of the many ways the students were able to utilize prior understandings to develop their artwork. In each of the previous examples, students took the art assignment and made it their own. Because they were not bogged down by examples or instructions, they had to rely on their own prior knowledge to create. Therefore, it seems that teacher-guided or student-directed art styles develop products needed to assess art-based learning. In order to truly assess one’s knowledge through art, a teacher needs to provide only a limited set of guidelines and then observe what happens.

In addition, since schemas are individualized, a follow-up will have to occur to allow the students to explain their piece, either through written or spoken word. “Individual artworks may show a student’s ideas and technical ability, but there is much more about thinking and learning that will become evident when the teacher listens to students talking about their work” (Douglas and Jaquith, 2009, p.33). For every piece of artwork I observed, I had to ask the student what it
meant. I needed to see the art through their eyes, not mine. Thus, in order to truly utilize art as a valid form of assessment, it needs to be within a teacher-guided lesson and matched with an explanation of work.

**My Future Classroom**

What I have learned from this research is that using art as a form of assessment is possible. It may not be a simple solution, but I believe it is my responsibility as an educator to work towards developing art assessment methods that work. They are important not only so that varied learners are provided equal opportunities to express their understandings, but to practice creativity. As students grow up they become more attracted to “realism and literalism,” which often decreases the acceptance for imagination (Gardner, 1982, p.94). Even in first grade, they are beginning to lack the ability to see past the literal and pretend.

For example, to explain how a seed sprouts in my first grade student teaching placement, I used a painted Easter egg to represent a seed breaking open to allow roots and a stem to grow out. Though some of them understood that they had to use their imagination to pretend the object in my hands was a seed, others had difficulty getting past the fact that was actually a plastic egg. In order to fully understand my demonstration, they needed that brown plastic egg filled with paper roots and a pipe cleaner stem to represent an actual growing seed in their minds. Therefore, not only did they construct their own egg piece by piece, but they also had to act out the process of the growing seed. By practicing both visual and expressive arts, more of the students were able to connect the constructed representation of the seed to a real live seed.

The different forms of representation [developed] different cognitive skills (Eisner, 1998, p.47). They had to use their auditory/linguistic skills to hear my description of the seed sprouting, their visual/spatial skills to connect my demonstration to an actual seed growing, and their
kinesthetic skills to be able to move around the room to collect sun and water and to act out the seed breaking open. Because each of these different forms of representation requires different cognitive skills, my students’ minds are growing in ways that they could not if I explained it through just words or just pictures (Eisner, 1998, p. 47). Growth is living and moving, therefore, it seemed only appropriate to teach it using a visual and mobile activity.

This is what I want my future classroom to be like all the time. I want my students to be able to tap into their imagination to see the world in new ways. To do this I want there to be a variety of ways of learning and assessment. Not only does variety make learning more fun and active, but it also allows me to see my students in different forms. “When observing students engaged in art work, teachers gain a fuller picture of the whole child. For example, the child who often acts as the class bully might surprise the teacher by writing a sensitive love poem to his mother” (Goldberg, 1997, p. 15) From this, the teacher gets to see his/her students in multiple facets of learning, thus allowing him/her to have a “broader source of information to assess her students’ understanding” (Goldberg, 1997, p.15). During the seed sprout activity, I was able to visually assess my students’ actions. I saw who was participating, who remembered the plant needs learned the week prior, and who was able to remember the next step of the sprouting process. Each observation gave me more information about how my students learn and what they understand.

Besides observation, I will pair the art activity with explanatory opportunities to demonstrate what their artwork means. Currently, I have focused on providing space to write down a description of the picture because it leaves a permanent product. It is easy for me to collect their work and grade it all at once when it is attached to the art. This does not work for all students, though. Students who have difficulties with written language need to express themselves orally. In my current first grade placement, I have one student who is potentially on the Autistic spectrum and a few others who have lower-level writing skills. For these students, I have to
individually ask them questions about their work and then write it down as a reminder for my own grading. This works out well for the most part because it is only a few students, but does take more time than collecting written work. With bigger class sizes in the future, I may have to develop new techniques to collect oral responses for students such as these. Additionally, if there are students with trouble communicating through writing and speaking, I will have to create additional methods of collection. Some examples could be a word card match to his/her picture, sign language, or yes or no questions.

Of course, each class of students will present a different set of needs, but I am confident that I could develop ways to make art assessment work in my classroom. It will not be the only form of assessment that I use, though. I cannot just skip all traditional forms of assessments, since those pair well with many curriculum guides used in schools today. In addition, they still need practice with traditional assessment for standardized testing. Art will just be one additional variety of learning and assessment that my students will experience throughout the day. Hopefully, this variety of experiences will prepare my students for future schooling and for the outside world.
CONCLUSION

Both classrooms I collected data in were wonderful examples of how to foster children’s excitement about the world. In their own way, each classroom taught important art techniques and history, and incorporated culture and literature. As a future general education teacher, and not an art teacher, I needed to be critical about what would work in my classroom and what would not. Art in the classroom needs to be seen not as an extra activity, but as their full potential in knowledge and intellectual development (Goldberg, 1997, p. 5). Thus, I needed to find a method of art assessment that I could justify as effective. I believe I found that in teacher-guided art, backed up by the evidence from the *Dream Big!* classroom.

Art was always going to be a part of my future classroom, but now I know to better use it to ensure my students are learning from it. Explaining the big idea or theme of the project will ensure that my students create projects on the ideas I am trying to assess, but after that I must let my students direct their own outcomes. What they decide to create will show me how they individually interpreted that concept, and their explanation will ensure that I have interpreted their work correctly. With the art project and explanation, I can fully evaluate his or her understandings of what I have taught them.

The key to this assessment efficacy is that it allows for each student to represent the specific ways his or her collection of ideas function. Eisner (1998) believes “tasks used to assess students should reveal how students go about solving a problem, not only the solutions they formulate” (p.141). Instead of confining them to specific ways to express an answer, like in multiple-choice examinations, art assessments allow the teacher to see all the links the students have formulated in their minds about the concept.
This is particularly important for students who have difficulties expressing themselves, such as individuals diagnosed on the Autistic spectrum. These individuals have a different way of thinking and processing, and often art is a way that works for them to express their thoughts and feelings. “Autistics have problems learning things that cannot be thought about in pictures. The easiest words for an autistic child to learn are nouns, because they directly relate to pictures” (Grandin, 2006, p. 14). Therefore, utilizing art as a form of assessment may be a valid method of accommodation for children diagnosed with Autism.

In my current student teaching placement, I have seen this first hand. The student that is often bored and not motivated to work always participates during art-based lessons. He can put his full attention into it, participating with the class and demonstrating what he knows. Though he still has difficulty writing full sentences of thoughts, he can still tell us about his work orally. It may not the traditional methods, but it works for him and for us as teachers. He gets to enjoy learning and we get to finally see a glimpse of what is going on in that mind all day.

In summary, I recognize art-based learning and assessment is not the only solution to providing a varied and individualized learning environment for all students, but it is a supported option. Any assessment that allows for full expression of ideas is a better fit than the traditional methods to evaluate any students’ understandings. Therefore, art-based assessment is a technique general education teachers should experiment with so that both teachers and students are learning in new ways.
Appendix A

Baby Bird Drawing (from Draw Big center in *Dream Big!* classroom)

(Baby Birds in nests. Red= heads, orange=beaks)
Appendix B

Artwork from *Exploring America* classroom – Main Projects

Class Flag – Cut in pieces, individually designed, sew back together
Road Signs
Silhouette Stories
Creating Photos in Frames
Postcards from Mailbox Center
Aluminum Foil Sculpture of Combined Animals
Appendix C

Artwork from *Dream Big! Classroom – Main Projects*

Picasso Inspired Portraits
Architecture Blueprints and Model
Monet Inspired Landscapes
Exquisite Corpse Monsters
Dream Pillows
Pollock Inspired Marble Painting
Appendix D

Artwork from *Dream Big! Classroom*— Schema Example 1

Monet Painting: Shining Sun
Appendix E

Artwork from *Dream Big! Classroom*— Schema Example 2

Free Draw: Ant World
Appendix F

Artwork from *Dream Big! Classroom*—Schema Example 3

Free Draw: Falcons Flying and Diving
BIBLIOGRAPHY


ACADEMIC VITA

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Education
The Pennsylvania State University, University Park
Schreyer Honors College
Graduation: May 2014
Major: B.S. in Childhood and Early Adolescent Education (PK-4)
Minor: Special Education

Honors and Awards
2012-2014: Nancy S. and Glenn W. Gamble Trustee Scholarship in the College of Education
2013-2014: Jeanne Leonhard Scholarship in Education
Spring 2014: Nancy Colfelt Scholarship
Dean's List: Fall 2010- present

Professional Experience

Student Teacher, 1st Grade
Centre Elementary: Clearfield, PA
September 2013-May 2014

America Reads Classroom Aide, 3rd Grade
Easterly Parkway Elementary: State College, PA
Fall 2013

Camp Counselor, Pre-school
ESF Summer Camps: Newtown Square, PA
Summer 2013

Related Experience

Volunteer ELL Tutor, K-3rd grade
Easterly Parkway Elementary: State College, PA
Spring 2013

Teaching Artist Apprentice, 2nd-4th grade
Main Line Art Center, Haverford, PA
Summer 2012

Classroom Aide, Pre-school
Bennett Center, State College, PA
Fall 2011

Teaching Assistant
Greater Norristown Art League’s Summer Art Camp, West Norriton, PA
Summer 2011

Classroom Aide/ Tutor
Easterly Parkway Elementary, State College, PA
Fall 2010- Spring 2011
Professional Presentations

**Autism**
2012
- Studied personal narratives and films that captured the voice of individuals diagnosed on the Autistic Spectrum about their life, especially looking at school experiences
- Presented a lecture and activity to my ECE 451 class about the “presumption of competence” and ways teachers can better teach Autistic children

**Marginalia: Children’s Drawings in Books**
2013
- Surveyed my class on their experiences as a child and their interpretation of children’s drawings in books
- Presented a lecture and activity to my LLED 400 class focused on my survey results and how marginalia related to teaching literacy

Co-Curricular Activities

**Eclipse Winter Guard**
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*Performing Member* 2010-2014
*Treasurer and Dance Captain* 2011-2014

**Penn State Blue Band Silks**
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*Performing Member* 2011-2012

**Jobs**
*Fiddlehead Soup and Salad Café* 2012-2014
*Nittany Notes* 2011
*Findlay Dining Commons* 2010-2011