

Evaluation and Assessment in Middle-Level Art Education – Applications of Constructivist Theory

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Abstract

Art education is closely aligned with constructivism due to the ways in which students are evaluated through demonstration of knowledge and skills learned in the classroom. Differences between evaluation and assessment are highlighted, yet both are important in developing effective art education. Constructivist practices are particularly useful for middle level education in the arts. Some of the author's methods of assessment and evaluation at this level are described.

Introduction

This article looks at various methods of evaluating student achievement and understanding in the visual arts; the difference between assessment and evaluation; and the importance of utilizing effective methods to evaluate student learning in the visual arts. It will examine a variety of multiple-measurement tools that reveal the students' knowledge of the concepts, principles, theories, and skills related to visual arts and the students' ability to apply that knowledge to understanding advanced versions of those concepts, principles, and theories. Evaluation is necessary to gauge and to report progress in student work to the students and the parents. For art teachers, evaluating student work provides the vital feedback needed to offer a rigorous and coherent standards-based curriculum and art program. Student achievement is carefully assessed by the student, peers, teachers, and through a public display of art as a special focus for excellence in the arts. Furthermore, and perhaps most important, evaluation procedures and assessment instruments help art teachers to determine what students understand about art and how effectively they are able to use art techniques in the classroom..

There are distinctions between the terms *assessment* and *evaluation*. By definition, assessment is the process of determining the nature and the degree to which students have developed desired knowledge and skills against predetermined standards or expectations, while evaluation is the process by which teachers judge the quality and value of student learning and performance (Hausman and Smith-Shank, 1994). Grading is simply a symbolic assignment of relative value to student performance signified by a number or letter used to rank, track, or qualify students in the subject area; thus grading is sometimes a final product of evaluation, even though evaluation is often accomplished without the assignment of a grade. Teachers may assess students' learning and performance without assigning grades to their work, such as their accomplishment against state learning standards. But in most cases, the assignment of grades to rate and rank students relies first on assessment and then on a more comprehensive overall evaluation. Thus assessment (measurement against standards) is one component of evaluation, but not necessarily the only one to use in assigning grades. In general, art teachers should base their evaluation and grading of student work on assessments in part; however many other factors may enter into an evaluation (and grade) for an individual student than progress toward standards alone.

The exploration of assessment and evaluation in the visual arts is particularly germane to considering how constructivist theory is applied in educational settings. Perhaps more than in many other disciplines, study in the arts engages students in active learning focused on project-based demonstration of newly learned skills. In a visual arts classroom, students must routinely construct new knowledge based on the concepts, principles, and skills they are learning and apply it in practice in a studio situation. In art education, there is essentially no other way.

Students of the visual and performing arts deepen levels of understanding of what they are studying by using a variety of evaluation methods. Just as there is no single definition of "art" or the "nature of art," there is no one approach to evaluating in the visual arts. However, there are countless ways that art educators can "judge" the art and the performance of the visual art student. These methods range from daily

evaluation to end-of-project critiques to portfolio assessments and evaluation at the end of the semester or year. Both short- and long-term evaluations are included because students grow and stretch in a day and over a period of months. This holistic approach includes evaluating projects completed, processes learned, skills mastered, and students' engagement in the creative process.

A Rationale for Evaluating Art

Two essential questions arise when art educators talk about evaluating art. One is "why" should we evaluate art, and the other is "how?" Sharon McCoubrey (1990) summarizes the outlook of many art educators to these two questions as follows:

Why Should We Evaluate Learning in Art?

1. We evaluate art because we believe that visual arts education is of primary importance to the development of the whole person. Evaluation must be based on a comprehensive art program with clear objectives, goals, standards, and expectations. We evaluate students' art in order to encourage the inquiry process, the creative process. Evaluation of art is one of the most important indicators we have of the health of our society.
2. We should evaluate art because it is a way to know, understand, apply, synthesize, and evaluate the visual world around us. The evaluation process should help students see the interconnectedness between what they perceive, create, and communicate to others. Evaluation is a way to find personal meaning.
3. It is important as a motivational tool to evaluate students' work on a regular basis in order to provide them with feedback, which will enable students to further develop their art skills.
4. Evaluation of art is a way to reinforce the students' endeavors and help them receive as full a notion as possible of what they can do, where they are, and where they can go next in order to extend what they are currently doing.
5. Art is similar to most subjects where concepts and skills are taught. Skills are built on former skills in a loose subsequent order. We must evaluate students' work in order to know what to teach and whether the students are ready to learn the next skill.

How should we evaluate learning in art?

1. Art should be evaluated one-on-one, teacher and student, before, during, and after the creative process. Evaluation must reflect the students' individual growth. Knowledge of the children's stages of artistic development, individual and group objectives, and group discussions are fundamental to the evaluation process.

2. Art evaluation should reflect the process of developing an image from an idea to the execution of a visual statement. Art should be evaluated on a set of criteria that is understood by the student and the teacher. Ideally, these criteria should be based on a set of goals and objectives developed by the student and teacher using curriculum standards as a reference guide to facilitate the various components to develop the student's abilities. This should be done through methods that include information, selection, discussion, and consensus between the teacher and the student. This process should move gradually from teacher-initiated and directed goals and objectives to a more student-initiated program.
3. Since art is a matter of individual taste, it may be evaluated using a wide range of criteria. As art students become more experienced in creating art and looking at art critically, their evaluation of their own work tends to change. The teacher's role can be extremely helpful or detrimental to the students' progress depending on how encouraging and open-minded he or she is.
4. Art should be seen as a process; therefore, many different levels or components should be involved in evaluation. The individual's growth in developing the art learning outcomes as well as the ability to think creatively and critically are the qualities we need to measure. Looking at students' art; hearing them speak about it; having them write about it; and having them document their creative process are all approaches used to evaluate art.
5. Art should never be evaluated on only a subjective level. As teachers of art, we explain various art concepts and give students assignments to develop skills. We therefore should be giving marks according to whether the concept was understood and how well the student applied it in his or her work. Simply put, art skills should also be taught objectively and marked accordingly. A student should always know the criteria for marking the piece. (21-22)

Although some teachers, particularly in the past, have argued that student art work should not be evaluated in any way, the discipline-based approach to art education advocates it (Sabol, 2004). Recently, when asked if student artwork should be evaluated, art teachers strongly agreed (82%) that it should (Sabol, 2004). While teachers will admit that they use the art product as a criterion for determining a grade, they also integrate such things as level of effort, the uniqueness of the concept of the visual product, the classroom behavior, and the care of art materials of the student to determine student progress and success in art (Madeja, 2004).

Key to the evaluation (grading) process is that instructional materials should contain multiple measures to assess what students know and know how to do in the visual arts. These measures should provide evidence of students' progress in meeting the content standards and useful information for planning and modifying instruction to help all students meet or exceed those standards. For example, the California State Board of Education (2004) specifies that strategies and tools should reflect entry-level assessment, progress monitoring, and summative evaluation, multiple measures of individual student progress at regular intervals to assess grade-level mastery of the standards, and guiding questions to monitor student understanding of the arts. In addition, the California Standards encourage methods by which students' work can be compared over time, e.g., portfolios, presentations, sketchbooks.

Methods of Assessment & Evaluation in Middle-level Art Education

In my own middle-level art classroom in Los Angeles, I use the following methods of assessment/evaluation with my students. It represents a relatively comprehensive list of approaches:

1. Student journals or sketchpads — These instruments give the students the opportunity to record their thoughts through drawings, renderings, or simple doodles and notes in response to new concepts that may be covered during instruction, whether through multi-media presentations, readings, museum visits, Webquests, or lectures.
2. Informal teacher observation of student at work — Teacher observation, including providing subtle constructive feedback to the student.
3. Informal teacher-student interviews — During the instructional sequence, the teacher poses open-ended and reflective questions to help the students improve their understanding and overall performance.
4. Student-student small group discussion — Here, students assess their peers, or self-assess their work using a scoring guide or rubric.
5. Art critique as a large group — In a critique, the entire class collaborates with the teacher to evaluate artwork by using a scoring guide. Student-artists provide feedback about their own and others' work.

6. Portfolio assessment — Students maintain a student-work portfolio composed of various pieces of evidence from the students' learning – for example, completed work, work in progress, rough drafts and sketches, and collections of work in a particular theme.

I find these methods to be appropriate for students at the middle-school level because most students feel comfortable to open up to the teacher in an informal one-to-one discussion or small group discussion versus when asked to talk in front of their peers about their process and artwork.

A special component of portfolios – the student's written self-reflection – provides a useful constructivist tool because it shows insight into the students' thinking and inner feelings about their experiences from this instructional sequence. For example, a written reflection from one student's work on a botanical painting stated, "I enjoyed layering and blending because I found that I am really good at it, as you can see in my strawberries." This same student also noted in her self-reflection that she enjoyed drawing from a "live" object, an iris flower instead of a flat source image. She liked it "because it was more challenging and fun instead of [the subject] just being on paper, it was [actually] there and I had a lot of fun." These comments are evidence that self-reflective writing by the student is a valuable tool for gauging impact on student learning.

Another constructivist method that can I employ is the use of public displays of student work on a rotational basis in a display case, on a display board, or in other school site and off-site locations. Essentially, this makes student work "authentic" because it involves demonstration of learning for an audience beyond the classroom. It has proved very effective to incorporate a public display into the curriculum design, for example, having second- or third-year art-class students participate in creating public art, such as murals. Painting murals that the entire school community will see and inadvertently "critique" helps the students set higher standards of performance for themselves. At the more advanced levels, murals or other projects where students are

required to present work to the public incorporates accountability to outside forces, as they are working beyond the confines of the classroom walls. What is interesting in the design of this type of instruction and project development is that students are interdependent, as their success hinges on their achievements as well as that of others. From experience, I have found this method of teaching very effective as it creates a multitude of opportunities for student collaboration in addition to peer and teacher evaluation of the quality of student work in the arts.

Criteria in Assessing Artwork in Middle-level Art

California's standards for assessing student artwork for the middle school level include the following:

1. Visual awareness – the student applies elements and principles of design to analyze; uses the environment as a source of artistic ideas; uses appropriate design language to describe visual experiences.
2. Art production – the student uses a variety of art media and is able to make appropriate choices; develops ideas well, going beyond stereotypes to personal interpretation of a theme; uses an art journal/sketchbook to collect ideas and visual imagery; and shows a variety of problem-solving skills in developing artwork.
3. Art appreciation – the student is able to analyze a work of art in terms of design elements and principles; is able to interpret artwork in a variety of styles and to support interpretations; is able to understand and use formal art criticism; and has some understanding of the social, political, and cultural contexts of art.

(Curriculum Development and Supplemental Materials Commission, 2004)

I incorporate aspects of these standards into all art assessments I conduct in my classroom.

An Example of Art Assessment and Evaluation

As an example of how I accomplish multiple types of assessment and evaluation in my own classroom, the following unit involved my 19 seventh-grade students in the processes for creating contemporary African mudcloth (batik) in the style of Mali's Bamana culture using traditional Adrinkra symbols for life lessons. I chose

this topic because my students live in a section of Los Angeles strongly impacted by African-American culture. The “Mudcloth Unit Overview” (Figure 1) was provided to the students to help them visualize the overall goals and directions of the unit. Assessment was based on a rubric (Figure 2) that incorporated all three of the California standards (visual awareness, art production, and art appreciation). Students self-assessed using the rubric, and I used it as well. Additional evaluation included student self-reflection (Figure 3). A photo (Figure 4) shows me working with the students as they use the rubric to self-assess their finished mudcloth projects.

Figure 1.

Mudcloth Unit Overview

Overarching Art Education Goal: How does the creation of art objects meet basic human needs and how are symbols used to communicate events, beliefs, and values of a culture, particularly in West Africa?

Materials

Burlap (off-white)

Thread

Mud (dirt)

Large, blunt needles

2 buckets (large, one for each of the color choices)

Wax crayons, pencils, large format newsprint, and source materials

Plastic covering for floors and countertops

Single or double burner electric stove and extension cord

Saucepans to melt the wax

Craft brushes and/or droppers

Beeswax

Iron

Recycled paper grocery bags or other heavy-weight paper

Lesson I – Research and Development

Teacher gives intro about Bobolanfini, as a symbol of African culture and heritage, showing examples.

- Originated by the women of Mali’s Bamana culture centuries ago.

Figure 1., cont.

- Contemporary hand-dyed cloth incorporating symbols (Adinkra) that speak of many types of wealth, cultural concepts, and environmental knowledge.
- Money earned in sales.
- Human connections formed as the cloth moves from local to international markets.

Lesson 1 Activity:

1. Students in rotation go to “Technology station” and use computer to research mudcloth.
2. Create a “virtual mudcloth” to become familiar with the art-making process
3. Research and develop design concept through books and handouts of traditional Adinkra symbols
4. Select designs and sketch them on paper (approx. size of fabric)

Lessons 2, 3, 4 – Cloth preparation

5. Sew strips together
6. Transfer design to the entire piece of fabric using water-resistant wax crayon
7. Paint the design at the wax application station

Lessons 5, 6, 7 – Finishing the mudcloth

8. Go to the dye station and place fabric in the dye bath of choice (blue or purple), stir frequently until desired color saturation is reached (may be overnight).
9. Rinse excess.
10. Hang or place on plastic-covered countertops to dry.
11. Go to wax removal station and iron out wax using heavy-weight paper bags.
12. Assess artwork using scoring guide and complete self-reflection handout.

Figure 2.

Scoring Rubric for Mali Mudcloth

Category	4 (or A)	3 (or B)	2 (or C)	1 (or D)
Drawing on Paper	<ul style="list-style-type: none"> All symbols drawn in an original design using principle of art <i>repetition</i> Symbols are authentic Adinkra Symbols composed to be interesting, harmonious, and has an element of <i>balance</i> 	<ul style="list-style-type: none"> Most symbols drawn in an original design using principle of art <i>repetition</i> Most symbols are authentic Adinkra Symbols composed to be interesting, harmonious, and has an element of <i>balance</i> 	<ul style="list-style-type: none"> Some symbols drawn in an original design using principle of art <i>repetition</i> Some symbols are authentic Adinkra Symbols composed to be somewhat interesting, harmonious, and has an element of <i>balance</i> 	<ul style="list-style-type: none"> A few symbols drawn in an original design using principle of art <i>repetition</i> A few symbols are authentic Adinkra Symbols barely composed to be interesting, harmonious, and has an element of <i>balance</i>
Sewing	<ul style="list-style-type: none"> All stitching neat and clean Stitches sewn uniformly row to row All knots and ends tied off; fabric free of loose strings 	<ul style="list-style-type: none"> Stitching mostly neat and clean Most stitches sewn uniformly row to row Most knots and ends tied off; fabric free of loose strings 	<ul style="list-style-type: none"> Stitching somewhat neat and clean Some stitches sewn uniformly row to row Some knots and ends tied off; fabric free of loose strings 	<ul style="list-style-type: none"> Stitching barely neat and clean A few stitches sewn uniformly row to row A few knots and ends tied off; fabric free of loose strings
Design onto Fabric	<ul style="list-style-type: none"> Original design drawn neat and clean Design consistent with original Adinkra drawing (or improved) Symbols drawn clearly 	<ul style="list-style-type: none"> Original design drawn neat and clean Design mostly consistent with original Adinkra drawing (or improved) Symbols drawn mostly clearly 	<ul style="list-style-type: none"> Original design drawn neat and clean Design somewhat consistent with original Adinkra drawing (or improved) Symbols drawn somewhat clearly 	<ul style="list-style-type: none"> Original design drawn neat and clean Design barely consistent with original Adinkra drawing (or improved) Symbols drawn barely clearly
Wax Application	<ul style="list-style-type: none"> Wax applied neatly w/o drips or excess around symbols Wax applied evenly and thoroughly through the back of the fabric 	<ul style="list-style-type: none"> Wax applied mostly neatly w/o drips or excess around symbols Wax applied mostly evenly and thoroughly through the back of the fabric 	<ul style="list-style-type: none"> Wax applied somewhat neatly w/o drips or excess around symbols Wax applied somewhat evenly and thoroughly through the back of the fabric 	<ul style="list-style-type: none"> Wax barely applied neatly w/o drips or excess around symbols Wax barely applied evenly and thoroughly through the back of the fabric
Dyebath (Color)	<ul style="list-style-type: none"> Stitching intact after dye process and rinse Color even and solid throughout fabric 90% of dirt is rinsed out in the final rinse 	<ul style="list-style-type: none"> Stitching mostly intact after dye process and rinse Color mostly even and solid throughout fabric 80% of dirt is rinsed out in the final rinse 	<ul style="list-style-type: none"> Stitching somewhat intact after dye process and rinse Color somewhat even and solid throughout fabric 70% of dirt is rinsed out in the final rinse 	<ul style="list-style-type: none"> Stitching barely intact after dye process and rinse Color barely even and solid throughout fabric 70% of dirt is rinsed out in the final rinse
Removal of Wax	<ul style="list-style-type: none"> Wax removed carefully without burning onto the fabric No trace of wax remaining on fabric Overall mudcloth neat and clean 	<ul style="list-style-type: none"> Wax somewhat removed without burning onto the fabric Few traces of wax remaining on fabric Overall mudcloth somewhat neat and clean 	<ul style="list-style-type: none"> Wax somewhat removed carefully without burning onto the fabric Some traces of wax remaining on fabric Overall mudcloth neat and clean 	<ul style="list-style-type: none"> Wax barely removed carefully without burning onto the fabric Wax is barely removed from fabric Overall mudcloth barely neat and clean

Figure 4.

Art Students Using Rubrics to Self-Assess their Mudcloth Projects



Conclusions

Arts assessment and evaluation are more than measurement, scoring guides, and grades. They require a complex, holistic approach and focus on learning. In my experience as an art educator, I see the need for both daily assessment as well as assessment based on culminating art products, and a summative evaluation which in turn becomes the grade given for the report card, either as progress or final semester record. In keeping with the constructivist model, what is key as a goal for the students is self-reflection through ample opportunities to learn how to pre-assess and post-

assess their own work as a habit. This routine entails specific and consistent training by the art teacher with the students regularly, and it yields powerful results for the students. The practice of self-reflection and introspection before, during, and after the creative process facilitates a deeper level of lifelong learning and study skills imperative for today's world. Students should be motivated to compare the results of their earlier assignments with subsequent ones, thus problem-solving and reflection will become natural. Starting this practice at the middle school level is critical, for middle school students are interested in technical concerns, scientific wonders, and, in general, how things work (Stokrocki, 2005). Using constructivist practices can help motivate students at this level to enhance their own learning, not only in art but in many other subject areas.

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