NATIONAL ART EDUCATION ASSOCIATION

Assessment PAPERS for ART EDUCATION

SECTION IV

Analyzing, Interpreting, and Reporting Art Education Assessments

A Snapshot of Portfolio Assessment

Amanda Galbraith and Bryna Bobick

"Digital portfolios… help in managing large quantities of work that need to be stored over time, and they allow teachers ways to access both their individual artistic growth and success of the art program. "

As states are continuing to refine teacher evaluation models, there are opportunities for student learning in the arts to be documented and connected with teacher evaluation. The Tennessee Portfolio of Student Growth in the Arts ("the Portfolio") has provided a new perspective on documenting the relationship between student growth and teacher evaluation in the fine arts. It also offers a reliable and rigorous process for art educators to generate an individual growth score and engage in data-driven reflective teaching practice.

Statutes concerned with the methods and purposes of assessment in art education classrooms differ between states. Charles Dorn, Robert Madeja, and Robert Sabol (2004) pointed out that a lack of an established purpose for formal and informal assessments paired with a lack of understanding about interpreting the assessment by art educators resulted in poorly structured and uncoordinated assessments with meaningless results. Dorn (2002) wrote that teachers, when they connected assessment directly to the content being taught, felt they were no longer required to perform according to someone else's rules. With those ideas in mind, this paper spotlights ways the portfolio assessment process in elementary art education is playing a vital role in the contemporary art education curricula in an elementary school near Memphis, Tennessee.

Tennessee's Department of Education (2017) teacher evaluation policy categorizes the fine arts as a non-tested academic subject and therefore prior to the portfolio, art educators were assigned a school-wide score generated from tested subjects as part of their teacher evaluation rating. The Portfolio allows fine arts educators to document and reflect on the work that students do in a way that previously did not exist. This documentation generates an individual growth score that replaces the previous school-wide growth measure. The Portfolio uses a purposeful collection of authentic student

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work artifacts that are grouped into four collections representative of the course load of the educator, based on the state's academic standards, and differentiated based on student proficiency. The art educator constructs each collection using authentic student work; scores each collection for growth using a state-approved, standards-based scoring guide; and then submits the collections using a blind review process to be scored against the same state-approved, standards-based scoring guide by a state-certified peer reviewer. Peer reviewers are art educators who are selected through an application process to participate in an annual certification training. Once the scoring process is completed, art educators receive a growth score for each collection as well as a summative score for the Portfolio.

Thomas Brewer (2011) pointed out that credibly assessing learning in the visual arts can be elusive and confusing. The same can be said for assessing and evaluating visual arts educators. Tracey Hunter-Doniger (2013) explained that a one-size-fits-all method of teacher evaluation is not the answer, especially for subjects like the visual arts. Also, art educators should not be grouped with other teachers for evaluations because their teaching curricula and circumstances are different. Portfolio assessment is one way to track an educator's progress and student achievement. It is important for all participants to have a clear understanding of the purpose, guidelines, and time to support the portfolio process. Administrators need to provide structured class time devoted to art education as part of the school day, so art teachers can teach and develop a portfolio of student work that can be used as a meaningful and valid assessment tool.

Strengths and Challenges

The Rise of Student Growth Models in Tennessee, a report released by the Tennessee Department of Education's Division of Data and Research (2017), found that the scores educators earned on their portfolio submissions aligned with their classroom observation scores. Approximately half of educators who used a portfolio received a higher growth score than they would have if they had used the school-wide growth measure. Further, educators who used a portfolio had slightly higher observation scores than their peers, and educators who used a portfolio did not demonstrate significantly different perceptions of the overall teacher evaluation process than teachers who were eligible but did not use a portfolio.

The Portfolio addresses the need for an individualized evaluation for art educators; however, the process faced challenges during implementation that required flexibility and new learning from educators and administrators who use the Portfolio. These challenges included (a) the adoption of a new online platform for the submission and scoring process after eight years with the original platform, (b) the revision of the scoring guide in preparation for the implementation of the revised Academic Standards for Fine Art, and (c) the delay in reporting of scores in the past since it is a priority in Tennessee that teachers with individual student growth data receive the scores within an aligned time frame. Despite these challenges, the Portfolio has continued to be a valuable tool for informing and impacting teaching practices in the fine arts.

Defining Portfolio

Fred Genesee and John Upshur (1996) and Ricky Lam (2017) noted that portfolio assessment is generally defined as a body of work kept by the individual to document their efforts, growth, and achievements in a continued process. Portfolios allow for individual interpretations and reflections and can be open-ended. In addition, Ayhan Dikici (2009) pointed out that portfolios are purposeful collections of student works reflecting the efforts, development, and successes of each learner. Portfolios provide opportunities for teachers to be evaluated through a process, not through standardized tests, which is often the case for other subjects.

In terms of digital portfolios, they allow for the documents to be assembled in any format as an alternative to a collection of actual artworks (Fitzsimmons, 2008). More educators are using digital portfolios because they help in managing large quantities of work that need to be stored over time, and they allow teachers ways to access both their individual artistic growth and success of the art program. Also, teachers find digital portfolios provide for easier, less time-consuming assessments and ways to track student, and in our case, teacher progress (Dorn & Sabol, 2006).

Student Growth Portfolios in Practice: A Snapshot of an Art Educator's Point of View

The Portfolio is broad enough to capture evidence of student learning across all fine arts content but specific enough to inform individual classroom practice. Constructing the Portfolio requires effort, time, and space to think reflectively about teaching and learning. This model relies heavily on teacher planning and reflective practice because it is grounded in student growth. Therefore, art educators must be intentional through all processes, including planning, classroom practice, assessing learning, and communicating with others about student learning in the arts.

From the point of view of an individual elementary art educator, using the Portfolio has most impacted the practice of this paper's co-author, Amanda Galbraith, in the areas of instructional planning and the organization of the classroom. Before using the Portfolio, this author often relied on a teacher-centered view of success without consideration to how successful the student artist felt when completing their work. The Portfolio has influenced this author to listen to student artists as they gain awareness of their own growth. Once more emphasis was placed on listening to the students reflecting on their work, the educator heard affirming statements such as this one from a 2nd-grade student: "I used to not know how to draw that much things but when I started doing that I got better and better."

Furthermore, there has been a shift in the ways this author structures class time to facilitate student ownership of learning. Considering that most elementary student artists have less than 20 hours of instruction per year before the portfolio deadline, it is vital that the art educator plan backward and begin with the end in mind (McTighe & Wiggins, 2012). This author focuses time thinking strategically and talking with other teachers and administrators about how to structure curriculum so that student artists in class

have opportunities to grow in the ways of creating, presenting, responding, connecting, and applying the studio habits. Additionally, this author intentionally examines the design of the student workspace and regularly incorporates flexible seating. This includes incorporating standing work areas, which allow space for students to work in smaller groups. This design facilitates more opportunities for students to engage more deeply with content across the standards' domains of create, present, respond, and connect.

Encouraging Dialogue: Art Educators as Leaders in Developing Portfolio Models

Given our combined focus of teacher reflection and researching portfolios to inform practice, we find that the Portfolio creates additional opportunities to engage in conversations with both school and district administrators. Conversations between educators and administrators can occur throughout the process as portfolios are constructed and scores are received. Less than half of the districts in Tennessee that use the Portfolio for fine arts educators have fine arts administrators, which leaves most portfolio guidance conversations to school administrators, non-arts district administrators, and peer art educators. Resources such as an administrator guidance for portfolios document, a crosswalk between the Tennessee Educator Acceleration Model (TEAM) evaluation system and the Portfolio, and a needs assessment have been developed through educator, administrator, and state collaboration.

As Tennessee educators implement the revised Academic Standards for Visual Arts (Tennessee Department of Education, 2019), there will be more opportunities for alignment between the Portfolio and the Model Cornerstone Assessments (MCAs) (National Core Arts Standards, 2019). A parallel between the two models is the emphasis on standards-based assessments that are embedded in instruction. The Portfolio allows teachers to design and implement assessments that measure student progress toward mastery of the standards. Unlike the MCAs, the teacher designs the standards-based assessments, evidence is collected at two points in time to demonstrate growth within a grade level or course, and evidence is collected for a small number of students using purposeful sampling rather than each individual student. Future research could further evaluate the impact of growth model portfolios and MCAs on educators' instructional design processes and student achievement of the standards.

In closing, this White Paper provides a snapshot of a portfolio assessment model and serves as a model for other states and regions to integrate what we have learned from the Tennessee Portfolio of Student Growth in the Arts. Through our research, we have learned that is important that all stakeholders maintain open lines of communication and keep abreast of current trends involving portfolio development. We are optimistic other states will involve art educators as leaders in developing portfolio models to assess and to facilitate student growth in the arts. ■

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SECTION IV

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The Untold Power of Internationale Baccalaureate Portfolio Assessment in the Visual Arts

Roger D. Tomhave

"The untold power of portfolio assessment strategies can be found in the collaborative discussion between students and teachers."

Resurgence of Portfolio Assessments

Educators in the visual arts and other disciplines have long been advocates for portfolio development and assessment strategies that showcase advanced high school students' highest levels of achievement as well as their longitudinal growth in authentic ways. We have employed portfolio assessment strategies that increase expectations for student artistic achievement through clearly articulated formative and summative portfolio assessments (Arter & Spandel, 1991; Guzik, 2016; McTighe, 1997; Meisels & Steele, 1991; Pett, 1990; Sweeney, 2014; Tomhave, 1999).

Before the implementation of No Child Left Behind (NCLB) (2002) legislation, and the Every Student Succeeds Act of 2015, I undertook a quasi-experimental research study comparing assessment strategies for two well-known and highly accepted visual arts college-preparatory portfolio assessments: Advanced Placement Studio Art (AP) and Internationale Baccalaureate (IB) Art/Design (Tomhave, 1999). As the art supervisor for a school system with 25 high schools—12 offering AP Studio Art as an elective course, 12 offering an IB program, and one offering both—I estimated that AP assessment was more product-oriented and summative than the IB program, with limited external criteria and feedback for students along the way before images of student work were sent to the College Board. IB assessment strategies were more process-oriented and formative with recurring feedback in preparation for outside adjudicators viewing portfolios and research workbooks, and interviewing students (College Entrance Examination Board, 1993; Blaikie, 1994). I was curious to know what the results might be if one were to provide an experimental group of AP-enrolled students with IB

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instruction and portfolio assessments for an entire year and then enter these portfolios for AP assessment by College Board adjudicators. How would their scores compare with AP control group students and portfolios? Would there be discernible differences? I was also curious about teacher and student interactions over the course of the year in relation to the developing portfolios. How might these interactions affect the resulting portfolios? The study included three high schools that offer AP courses, three art teachers teaching these courses, and 12 of their students in the experimental group that received IB treatment for an entire school year. Six control group high schools that offer AP courses operated as usual. From the results of this study I am convinced that the untold power of the visual arts portfolio derives from mutually constructed teacher and student interactions.

This educational assessment story remained untold. My attention to portfolios had dramatically shifted while NCLB was in effect and I took on a broader role to oversee all arts programs in my district. The national focus on standardized testing reduced emphasis on portfolio and authentic assessments across all disciplines, and also impacted the visual arts (Chapman, 2004, 2005; Tomhave, 2014). Prior to NCLB, authentic assessments were highly valued and constructivist philosophies embraced. I continue to agree with Lori Shepard (1989):

> The notion that learning comes about by the accretion of little bits is outmoded learning theory. Current models of learning based on cognitive psychology contend that learners gain understanding when they construct their own knowledge and develop their own cognitive maps of the interconnections among facts and concepts… Real learning cannot be spoon-fed one skill at a time. (pp. 5-6)

In the visual arts we have long contended that our students need to be prepared for a world in which there are many shades of gray between correct and incorrect responses, and that there can be many correct responses depending on best fit, circumstances, and contexts. Responses may be personal, or broadly societal, but most importantly, students need to "find new ways of thinking and working through uncertainty" (Heath, 2014, p. 361).

Portfolios as Models of Authentic Assessments

Many educators have emphasized that children's learning must be demonstrated by "authentic" assessments that evaluate what children can do in actual or simulated applied situations. They oppose standardized test assessments that measure only how many bits of knowledge children can recall (Harris, 2014; McTighe, 1997; Potter, Ernst, & Glennie, 2017). The term authentic assessment refers to the practice of involving students in realistic evaluation of their own achievements. By definition, these assessments are performance-based, realistic, and instructionally appropriate (Pett, 1990). The portfolio is a record of the students' processes of learning: what students have learned and how they learned it; how they think, question, analyze, synthesize, produce, and create; and how they interact—intellectually, emotionally, and socially—with others. Portfolio assessments measure students' understanding of their ability to apply knowledge, skills, and concepts appropriately in new situations.

McTighe (1997) stated that like authentic problems, authentic assessments rarely have single, correct answers. Therefore, evaluations of student work must be based upon judgments guided by criteria. These criteria are typically followed by scoring tools such as rubrics, rating scales, or performance lists. These criteria should point to the evidence educators are willing to accept that shows students know, understand, or can do what was expected of them. The criteria also establishes that teachers can recognize the evidence when they see it.

Thoughtful assessment criteria and rubrics can be the key to student success in authentic formative and summative assessments. Determining the criteria that really matter in artmaking—including critical/creative thinking, skillful visual expression, historical knowledge, thoughtful analysis, synthesis of learning, artist statements, oral presentations—and then determining the descriptive rubric statements under each criterion matched to student skill development, knowledge, and performance, is a start to providing specific evidence of student levels of achievement. Longitudinal use of such collections will provide ample evidence of growth over time.

Regular Teacher and Student Interactions

My own study indicates that assessment criteria and scoring rubrics—provided prior to instruction and used routinely—seemed to lead to clearer student understanding of expectations when teacher and student negotiated the language of both criteria and rubric statements. Once negotiated, student achievement rose dramatically because the students and teachers understood each other. The consistent use of descriptive rubrics, defining levels of performance for specific artistic criteria in both formative and summative assessments seems critical.

For purposes of this research project, Internationale Baccalaureate assessment criterion and accompanying 5-point scoring rubrics were reformatted to allow for student self-assessment scoring with justifying comments, and teacher scoring with response comments for each criterion of assessment (Tomhave, 1999). The assessments were delivered by the art teacher at the end of each quarter of the course. Criterion assessed were Imaginative and Creative Thinking and Expression, Persistence in Research, Technical Skill, Understanding of the Characteristics and Functions of the Chosen Media, Understanding of the Fundamentals of Design, and Evaluation of Growth and Development (Internationale Baccalaureate, 1985).

At the time of this research study, AP art teachers in the three experimental schools were trained in the delivery of the IB Art/Design program, parents and students consented to IB treatment, IB curricula and evaluation criteria and scoring rubrics were delivered up front, and the use of IB criteria and rubrics was required throughout the yearlong process of portfolio development. Data from student self-assessment and teacher assessments were collected at the end of each quarter. In this way, the IB assessments were employed as formative and summative assessments.

The following are examples from the study of student comments and teacher responses for specific criterion in relation to scoring of the levels of achievement ranked 1-5. Written evidence in the student comments and teacher responses indicate that during the first and second quarters, students and teachers were trying to gain an understanding of what was meant by each criterion and rubric description.

Quarter 1 Student C1 (4) Comment:

I think that each one of my pieces has something good about it. I tried to use different mediums for my pieces, and I think I am getting pretty skilled with some of those media, especially colored pencils, and duct tape.

Quarter 1 Teacher C (3) Response:

(Note: The teacher circled research at the top of the page) "Research" refers to the study and observation of art by artists from history as well as other cultures. It is important to find your own "place in the world of art."

Quarter 1 Student C3 (4) Comment:

Let's hope I can do this stuff by now. [Another art teacher] taught everything to me first in Art 1, and you've been drilling in our heads ever since in Art 2, 3, 4, and AP. So geez, I hope I'm at least on the right track and semi-successful too.

Quarter 1 Teacher C (4) Response:

Make a conscious attempt to consider design AS YOU CREATE EACH PIECE, not just at the end.

Quarter 2 Student C4 (4.5) Comment:

I think that my brush strokes are confident and I knew what I was doing with these works.

Quarter 2 Teacher B (3) Response:

Reread this. I think that they are asking about a level of knowledge that enables you to make the selections of media for the purpose of a particular piece.

These student comments and teacher responses represent only a few examples of students and teachers negotiating how the rubrics will be applied for each of the criterion. Comparatively, later statements, such as those below, indicate student and teacher arriving at agreement.

Quarter 3 Student C1 (3) Comment:

I think that it is obvious when I have spent time on a piece, because the work I spend lots of time on has good technical skill. I definitely have the ability to create works with technical skill, but I don't always use that potential.

Quarter 3 Teacher C (3) Response:

I agree.

Quarter 3 Student C2 (5) Comment:

This quarter I tended to use media that I was comfortable with and thus I believe I was successful in understanding the dynamics of the media.

Quarter 3 Teacher C (5) Response:

This is a good assessment; set yourself a goal to work out of your comfort zone in at least one medium.

Quarter 3 Student C2 (5) Comment:

Having been in your class for 3.75 years, I feel it would be safe to say that I can produce work with good compositional qualities on a consistent basis.

Quarter 3 Teacher C (5) Response:

Thank you—it is nice to know the message got through.

Quarter 3 Student C5 (3) Comment:

I need to plan ahead and add finishing touches.

Quarter 3 Teacher C (3) Response:

I agree… really give "craftsmanship" the importance it is due.

Through four quarters of interactions, both student and teacher negotiate their understanding of the student work in relation to criteria and rubric descriptions. A less obvious piece of evidence for the developing agreement between student and teacher is present in the volume of writing that took place during the first and second quarters as opposed to the number of times that no comment or response seemed necessary in the third and fourth quarters. Though only a few examples are provided here, all data and discussion with the teachers indicated growing agreement between students and teachers in their interpretation of rubric statements. Also, the teachers stated that as the year proceeded, more discussion occurred verbally and informally than in writing. There was a marked convergence between student self-assessment and teacher assessment, as depicted in Figure 1, a graphic representation of quarterly assessments comparing total student self-assessment scores to total teacher assessment scores.

> **" The portfolio is a record of the students' processes of learning: what students have learned and how they learned it; how they think, question, analyze, synthesize, produce, and create; and how they interact… with others."**

It was telling to monitor student justifications and teacher responses each quarter as the rubric descriptors became clearer to the students. By the third quarter reality had set in—students and teachers were on the same page, and teachers reported high levels of achievement during the fourth quarter. This study indicated that these assessment methods not only led to authentic evidence of growth over time, but also led to higher levels of teacher scores on student achievement through better understanding of teacher expectations and negotiated interpretation of rubrics. The bar had been raised for student performance. Other study results indicated no significant difference in scores achieved between experimental and control group when reported by College Board adjudication, and no correlation between course grades given by teachers and College Board scores. Refer to Tomhave (1999) for full results of the study.

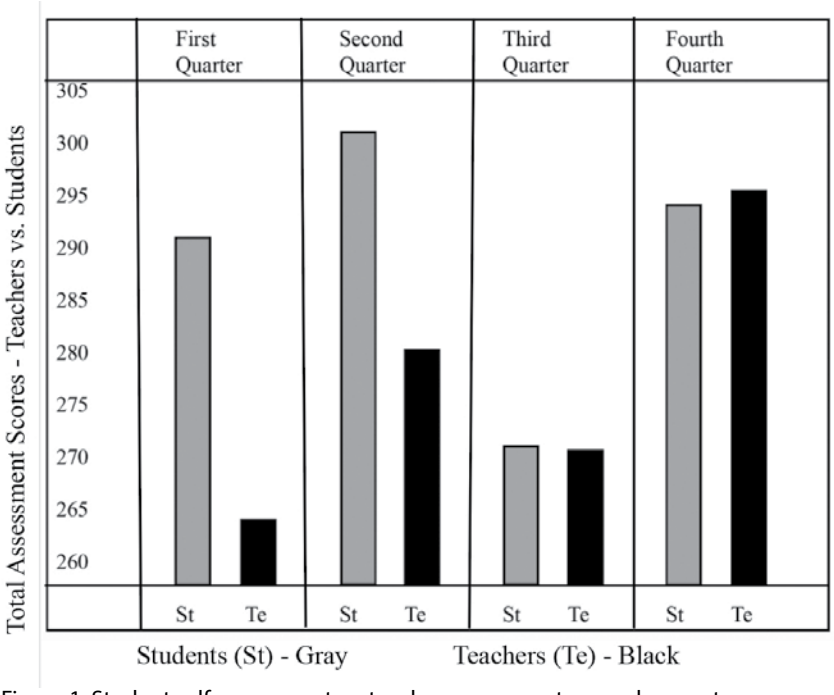

Figure 1. Student self-assessment vs. teacher assessment scores by quarter. Total of all student and teacher scores for each quarter (Tomhave, 1999).

Conclusion

In my estimation, the routine use of portfolio assessments in the visual arts results in authentic measures of longitudinal growth and the highest levels of achievement. In our renewed push toward authentic assessments, we should seize the opportunity to set in motion the kinds of portfolio assessment practices within our school systems that we know "assess student learning" (Gude in Sweeny, 2014, p. 10) and promote processes over products. The untold power of portfolio assessment strategies can be found in the collaborative discussion between students and teachers. Current student portfolios may represent many ways of working, media, themes, intentions, and visual expressions in both two-dimensional and three-dimensional form, but IB criteria cited here are recommended for encouraging high school students to develop authentic knowledge, skills, and dispositions relevant to the world of the working artist. ■

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SECTION IV

Analyzing, Interpreting, and Reporting Art Education Assessments

Components for Gathering and Using Assessment Data to Inform Instruction

Cris Guenter

"Our preservice teachers were doing well, but there was room for improvement, particularly in assessment and reflection of teaching practices."

The teaching performance expectations and assignments that preservice art teachers currently address in field experiences and in their coursework are designed to help them meet the expectations of being a quality art educator in the 21st century (California Commission on Teacher Credentialing, 2009). These assignments may be very different from the assignments that art educators had in their preservice programs just a decade ago. Using tasks from a current preservice assignment, this White Paper will present information and how-to steps that provide essential understandings and relevancy about gathering and using assessment data and assessment procedures in a manner that is clear and supports practical perspectives for art educators.

Art educators in the 21st century need to be thoughtful in their curriculum planning, savvy in delivering highly engaging lessons, and cognizant of best practices in assessment. According to the Partnership for 21st Century Learning (2007), "[The] skills, knowledge, and expertise students should master to succeed in work and life in the 21st century include content knowledge, learning and innovation skills, information, media and technology skills, and life and career skills" (p. 1). Furthermore, assessments of 21st-century skills are noted as part of the critical support system to make sure students achieve these skills. Twenty-first century educators, including art educators, are characterized as being adaptive, lifelong learners, tech savvy, collaborators, forward thinking, and advocates (Cox, 2016).

Current preservice art teachers are being groomed to do and be these very things in their teaching. They are being asked to address assessment, its results, and next steps in their teaching performance assessments (TPAs) that lead to state licensure. When the initial push for TPAs began on my campus almost 15 years ago, the early results indicated

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that our preservice teachers were doing well, but there was room for improvement, particularly in assessment and reflection of teaching practices. This insight triggered a need to redesign some instruction for better preservice teacher understanding and better state results. This effort over time led to six components that would help preservice teachers grasp how initial planning of a lesson and its instruction is directly connected to assessment and how that assessment can, in turn, influence further instruction and learning.

The Six Components

The six components are as follows:

1. Aligning lesson objectives and lesson assessment
2. Constructing strong rubrics
3. Collecting assessment data
4. Visualizing data
5. Analyzing data
6. Reflecting on next steps

Aligning Lesson Objectives and Lesson Assessment

The preservice teachers learn quickly and early on in the credential program that specific action verbs used in lesson objectives help them target what is being assessed and how they might collect the assessment data—formative and summative. Fisher and Frey (2011) explained this connection well when they asserted, "The key is to ensure that the assessments align with the purpose of the lesson" (p. 128). The idea here is that the selected assessment should provide information that helps to determine if the lesson objective has been met. An art critique assessment may provide information for a completed piece of art but would not necessarily serve to assess an art journal assignment.

Constructing Strong Rubrics

As a class, preservice teachers look at both holistic and analytic rubric examples and several ways to make the rubrics strong—including clarity in expectations and weighting priorities. They are challenged to answer what they will minimally accept for meeting each objective. If they know the answer to that, they can then build their rubrics starting with what they will accept. If student work is less than acceptable, then there will be gaps and the scoring column on the rubric is labeled something less than acceptable, perhaps "Needs Work." If student work provides more than the expectations for acceptable, then there will be enhancements and more details in the rubric column labeled with a term such as "Good" or "Strong." There may be additional columns in the rubric depending on the lesson objectives and expectations for mastery. Discussions and examples address the notion of including the students in the construction of the rubric and using the rubric for peer reviews, group reviews, and teacher feedback.

Collecting Assessment Data

Preservice teachers have already formed an initial understanding for formative (ongoing) and summative (culminating) assessments in a prerequisite course. However, there is great value in having them remind each other about the differences and how together these assessment approaches can help inform teachers about the ways in which teaching and learning are occurring.

Depending on the objectives, the collected data can "provide direct evidence of student learning" (Maki, 2002, p. 1) and can be in multiple forms. For example, spoken or written words, portfolios that demonstrate and monitor student growth over time, portfolios that showcase student development at a given point in time, course-embedded assignments, sections or requested prompts in an art journal, observations of student behavior and abilities, and visual demonstrations of techniques are all ways to gather assessment data.

> **"Their reflections on lesson assessment have expanded beyond daily notes about what occurred to include what will be done next to support and improve instruction for their students."**

Visualizing Data

What do preservice teachers do with data once they have it? In this area, they needed some guidance. Therefore, after the presentation, review, and discussion of different rubric structures, the preservice teachers are given an in-class exercise of two lesson objectives and assessment data for those objectives. They are shown how to create a bar or column chart in Word. Inserting a chart in a Word document automatically opens an Excel window into which the preservice teachers put assessment data for one of the two objectives. As they enter data into the appropriate spreadsheet cells, they can see how the data change the chart's display of the results in Word. (Refer to the step-by-step directions in the How to Visualize and Analyze Your Data section at the end of this paper. This approach also works with Google Docs/Sheets and Pages/Numbers.) Once the assessment data are in chart form, with proper labels, the preservice teachers have a much easier time reading and subsequently analyzing the data. Some preservice teachers are already aware of how to create a chart in Word with the use of Excel, but for the majority this exercise produces an "aha moment." Completing the chart takes only a few minutes, but it makes a huge difference in being able to interpret the data. By providing easy, clear steps for creating a chart in Word, preservice teachers have a straightforward way to produce a visual representation of the assessment data they have collected.

Analyzing Data

Using their newly created charts, preservice teachers are asked to analyze the data and provide written comments of the analysis. Their charts offer effective ways to tell the story of the data. They are asked to briefly discuss what the numbers tell them as an educator. What appears to be a strength? What are areas that need work? Are there any instructional concerns emerging?

Reflecting on Next Steps

Based on their written analysis, the preservice teachers are then asked to offer suggestions for what might be done to change or improve the lesson to support student learning. What could be added, rearranged, eliminated, or adapted in the lesson and its delivery? Marzano (2007) challenged educators to consider tracking student progress and provided two important questions to support this: "Will students be provided feedback (e.g., a quiz, test, or informal assessment) on an academic learning goal? Will students be asked to record or reflect on their progress on learning goals?" (p. 182). After working independently on their responses, the preservice teachers are put into small groups and asked to share their results and suggestions.

Converting their assessment data from lesson objectives into a chart gives preservice teachers a visual point of reference for thinking and reflecting on the strengths and areas of need for their students. The chart sparks responses that lead to thoughtful reflection about how to adjust their instruction. "The teacher's responsibility is connecting content, process, and product. Students respond to learning based on readiness, interests, and learning profile" (McCarthy, 2014, para. 3). Being able to adjust, realign, or redesign the learning as needed becomes part of the total process of teaching for these preservice teachers and directly aligns with the NAEA Position Statement on Instruction, Assessment, and Student Learning in the Visual Arts (2015) and the NAEA Position Statement on Pre-service Education and its Relationship to Higher Education (2014).

Since the introduction of the data assessment exercise assignment, the preservice art teachers demonstrate a better understanding of assessment. Their reflections on lesson assessment have expanded beyond daily notes about what occurred to include what will be done next to support and improve instruction for their students. The data assessment exercise may also have contributed, in part, to increasing the preservice teachers' scores on state teaching performance assessments for licensure.

Current preservice art teachers are already well into the 21st century. Considering 21st-century educators, Gasoi and Hoffman (2017) asserted that "teaching and assessing skills gained through the arts, as well as other creative processes across other disciplines, will become the norm" (p. 1). This notion is not new. Robinson (2005) and Pink (2006) both emphasized the importance of our students having the ability to be creative and flexible; work with a variety of tools, including digital media; think globally; and collaborate well with others. The norm is here. ■

Assessment Data Exercises

Note: The following exercises are aligned with content standards found in Curriculum Development and Supplemental Materials Commission. (2004). Visual and performing arts framework for California public schools, kindergarten through grade twelve. *Sacramento, CA: California Department of Education. (Standards, current when this paper was originally written, have since been updated, but the process remains the same.)*

Visual Arts

Objective 1: Principles of Design

Artistic Perception: Each student will be able to accurately **locate** and then **explain** verbally at least three of the seven principles in a selected work of art (1.1, 1.2). Quantitative components.

Assessment, Objective 1: Assessed using selected image and written online responses via Google Classroom.

Class size: 27 students

Assessment Data Results, Objective 1: Basic Explanations Written Work

1. Locate
   Needs work–14, Acceptable–10, Strong–3
2. Verbally Explain
   Needs work–17, Acceptable–8, Strong–2

Visual Arts

Objective 2: Painting

Creative Expression: Each student will be able to **demonstrate** skillful **use of line, shape, and color** in an original acrylic painting (2.1). Qualitative components.

Assessment, Objective 2: Assessed with an analytic rubric addressing the skill levels demonstrated for line, shape, and color in an acrylic painting.

Class size: 21 students

Assessment Data Results, Objective 2: Studio Art Assignment Rubric

1. Use of Line
   Needs work–5, Acceptable–9, Strong–7
2. Use of Shape
   Needs work–8, Acceptable–8, Strong–5
3. Use of Color
   Needs work–11, Acceptable–7, Strong–3

(continued)

How to Visualize and Analyze Your Data

Task: Create a chart in Word (which opens an Excel spreadsheet) and replace the sample words and data in the Excel spreadsheet with the assessment information from the provided lesson objectives. As these changes are made they will automatically show up on the chart in the Word document. Use the sample lesson objectives and assessment data for either Objective 1 (Obj. 1) or Objective 2 (Obj. 2) and do the following:

1. Create a chart that depicts the findings of the data for the given objective. In your Word document, place your cursor where you want the chart to appear.
2. Word ⟶ Insert ⟶ Chart ⟶ Column (defaults to column chart)

   Note: The chart template can be changed later, if desired.

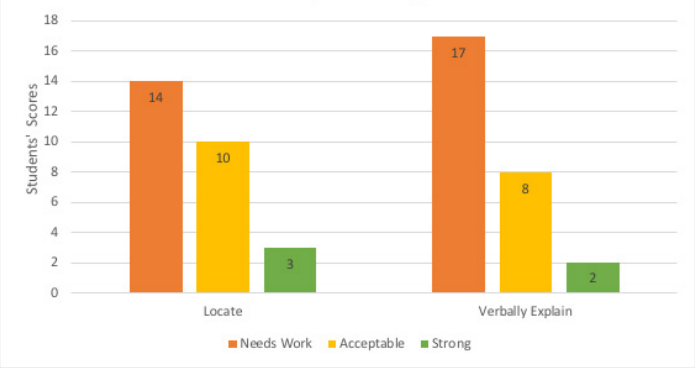
   An Excel window will automatically open. Both Word and Excel are open.

   The chart is in Word and its data connection is in Excel.

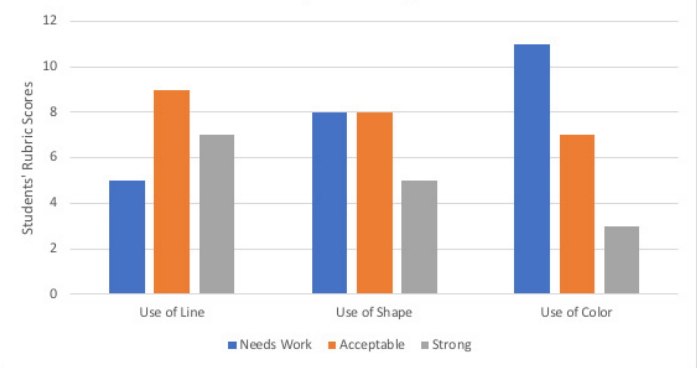
   a. Delete Category 4 row.
   b. Replace Series 1, Series 2, and Series 3 with Needs Work, Acceptable, Strong
   c. Replace Category 1 with Locate (Obj. 1) or Use of Line (Obj. 2). Replace Category 2 with Verbally Explain (Obj. 1) or Use of Shape (Obj. 2). Replace Category 3 with Use of Color (Obj. 2).
   d. Insert the correct data numbers below.
   e. Your chart will automatically update in your Word doc as you make changes in Excel.
   f. Add a chart title (for Obj. 1, use Principles of Design 1; for Obj. 2, use Painting Line, Shape, & Color).
3. Analyze the data. Briefly discuss what the numbers are telling you as an educator. What are students' strengths? Which areas need work? What are your instructional concerns? What, if any, changes are necessary?
4. Based on your analysis, reflect and offer suggestions for what might be done to change or improve the lesson. What could be added, rearranged, eliminated, adapted, or considered for further options in student choices?

In the space below the chart, respond to questions 3 and 4 with at least one thoughtful, well-written paragraph. Then, if working in a group, pair share with your group when instructed.

Completed Sample Charts



Sample column chart for Objective 1: Principles of Design



Sample column chart for Objective 2: Acrylic Painting

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SECTION IV

Analyzing, Interpreting, and Reporting Art Education Assessments

A Participatory Model for Assessing Teacher Candidate Dispositions

Leslie Gates

"If I believed dispositions were important, then I needed to offer students opportunities to grow in this area—based on assessment and feedback—throughout the program."

This paper provides a brief literature review related to dispositions and offers an assessment model that engages art teacher candidates in collecting and analyzing evidence of their professional dispositions. Engaging teacher candidates in *assessment as learning* simultaneously serves as one model for assessing studio habits and/or other dispositions of preK-12 students.

Dispositions

Arthur Costa and Bena Kallick (2008) promoted habits of mind as perhaps the most important skills students will take from classrooms into the 21st century. Additional lists of dispositions (e.g., Pink, 2005; Tough, 2012; Wagner, 2012) have become abundant in educational literature. The most useful definition of dispositions I have found is "a cluster of preferences, attitudes, and intentions, plus a set of capabilities that allow the preferences to be realized in a particular way" (Salomon, 1994, as cited in Costa & Kallick, 2014, p. 19). Words commonly used synonymously with dispositions include *habit*, *tendency*, *capability*, *mind-set*, and *aptness*.

There are various types of dispositions. Some dispositions/habits, such as the habits of mind (Costa & Kallick, 2008), are "thinking dispositions," while others are "habits of the heart" (Lines & White, 2013) or "professional dispositions" of respective fields (Council for the Accreditation of Educator Preparation, 2013). Some lists, such as the Studio Habits of Mind (Hetland, Winner, Veenema, & Sheridan, 2013), are thinking dispositions that relate strongly (although not exclusively) to specific content areas.

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Beyond articulating dispositions, these scholars strongly emphasize their value. For instance, Hetland et al. (2013) stated that although the Studio Habits of Mind were not explicitly being taught and thus part of the "hidden curriculum" in art classes, these "important kinds of cognitive and attitudinal dispositions" are the "real curriculum," significant to continuous learning in the arts and in other subjects (2013, pp. 6-7). In 2014, Costa and Kallick argued that there was agreement in the field of education on the essential nature of dispositions in teaching and learning, yet a large gap remained between that belief and an explicit focus on dispositions within curriculum, instruction, and student assessment.

Background

A few years ago, I realized this gap existed in the teacher education program I coordinate. Despite my personal belief in the importance of dispositions, the content of the art education methods courses I taught ignored dispositions almost entirely.

I knew dispositions were important because when tasked with writing student recommendation letters, I found myself relying heavily on evidence of student dispositions. A student's commitment to producing high-quality work, for instance, might set them apart from classmates more than grades, knowledge, or technical skills. In the world beyond college, wanting to work with a person seems just as important as being able to do the work. Recommendation letters are perhaps the most important (and typically final) assessment about each future teacher I work with. I consider these letters assessments because in them I cite evidence and make professional judgments about a student's abilities. I offer this type of evidence based on an assumption that their future employer or school believes "intelligent action in the world is what counts most" (Costa & Kallick, 2014, p. 2).

However, throughout their courses, students were not receiving feedback about their dispositions/habits with the regularity that they received feedback about their knowledge and technical skills related to both their teaching and artistic practice. This was especially true for students who displayed positive professional dispositions and thus raised no concerns among the faculty or cooperating teachers who worked with them. Typically, I attended to a student's dispositions only if they exhibited undesirable ones. Even then, such conversations were often difficult, in part because the dispositional expectations for our program were not formalized. Without clearly stated dispositional expectations, students were more likely to feel that the meeting was a personal attack based on my opinions rather than an educative conversation about areas of focus for professional growth. If I believed dispositions were important, then I needed to offer students opportunities to grow in this area—based on assessment and feedback—throughout the program.

Rationale

I was interested in attending more systemically to student dispositions, aligned with the university's accreditation effort. However, I was convinced there was value in changing my practice for reasons beyond the Council for the Accreditation of Educator Preparation (CAEP) requirement to assess candidates' professional dispositions.[1] I wanted to (1) articulate more clearly to the students the dispositional expectations I have, (2) assist students in identifying and collecting evidence of such dispositions, and (3) engage students in analyzing their growth, including setting disposition-related goals. Moreover, I wanted this process to happen over time rather than as an episodic assignment that might have fulfilled the accreditation requirement but would likely have lacked the transformative nature possible if students were to engage in this work repeatedly.

Therefore, I decided that engaging students in assessment as learning would be well-matched to fostering the desired dispositions of teacher candidates. Assessment as learning "occurs when students reflect on and monitor their progress to inform their future learning goals" (Department of Education and Training, 2013, para. 2). This model was designed so that students' participation in the assessment was educative; my role was to engage them in the process, not to declare a final assessment of student dispositions and then reward or penalize students with a grade.

A Model for Assessing Dispositions/Habits

I knew I had to clearly articulate the desired dispositions of teacher candidates in the art education program. Even if your student population does not include teacher candidates, you can still consider the dispositions you desire of your students. The dispositions may already exist (such as the Studio Habits of Mind) or you may need to engage in a process of articulating others. I began by collaborating with a university administrator to review an existing university document that listed professional dispositions for teacher education candidates. I then incorporated minor revisions to make the list more specific to the art education program. Following a rally of White supremacists in Charlottesville, Virginia, in 2017 (and similar events throughout the country that promoted discrimination), I made one major revision to the list by adding language about students respecting the diversity and civil rights of others. This language was present in the state's Code of Professional Practice and Conduct for Educators (Commonwealth of Pennsylvania, 1992) but was missing from the university's document at that time.

As a result, I authored the document "Professional Habits of Millersville University Art Education Students" that outlined five major dispositions/habits, each of which was supported with numerous examples of related actions. What follows are examples of each disposition and a related illustrative action.

Art educators communicate effectively.

- Example: We communicate individual needs and requests early to respect one another's time.

Art educators have a commitment to learning.

- Example: We exhibit curiosity about art and the profession of education.

[1] The Council for the Accreditation of Educator Preparation (CAEP) requires teacher education programs to "ensure that candidates use research and evidence to develop an understanding of the teaching profession and… measure… their own professional practice" (Council for the Accreditation of Educator Preparation, Standard 1, Component 1.2).

Art education students fulfill their professional responsibilities.

- Example: We fulfill commitments to our peers during collaborative tasks/assignments.

Art education students produce high-quality work.

- Example: We present our work with both confidence and humility, knowing we have worked hard toward specific goals and that experience and feedback will allow our ideas to evolve and grow.

Art education students respect the diversity and civil rights of others.

- Example: We are not silent; we take action when we identify institutional policies that perpetuate systemic injustice.

Next, I designed a way for students to engage in an ongoing assessment of their dispositions. In order for students to assess their own professional dispositions, they would need evidence. I decided that although I had some evidence based on my observations of the students in class and in the field, students had additional evidence. Engaging them in the process of collecting and documenting the evidence not only mirrored what would be required of them as teachers (collecting and documenting evidence of student learning), but allowed for a fuller understanding of their dispositions beyond what I could directly observe. As a result, I designed the following task:

Collect evidence of these habits-in-action and turn in a Collection of Evidence folder at multiple points throughout the semester.

1. Consider appropriate evidence. For each habit, ask, "How do I know it when I see it?" in order to identify what might constitute sufficient evidence of the various habits.
2. Collect documentation of the habits. Documenting the habits may require that you journal thoughts or write about experiences you have had. Other habits may require you to photocopy sketchbook pages, print emails, etc.
3. Organize and analyze your documentation. Use the five professional habits as an organizational tool to present the documentation. Analyze the documentation for strengths and areas of growth.
4. Reflect. Submit a brief reflection (one to two pages) on your professional habits and identify goals/areas for growth.

In this model, students curated collections of evidence (Figure 1) of their professional dispositions and then analyzed and reflected on whether and how the evidence demonstrated various professional dispositions. The students used this analysis to set professional goals. Depending on the student population you serve and the desired dispositions, the type of evidence will vary widely (e.g., recorded critiques, sketchbook pages, work that was abandoned). The process, however, is the same: Students analyze this evidence in relationship to the desired dispositions and use their analysis to set personal goals.

While students were collecting evidence, I also documented student dispositions by writing notes to myself in class. I designated a notebook in which I would quickly scribe things of note or quotes from students. I documented, for instance, "Ari wasn't afraid to

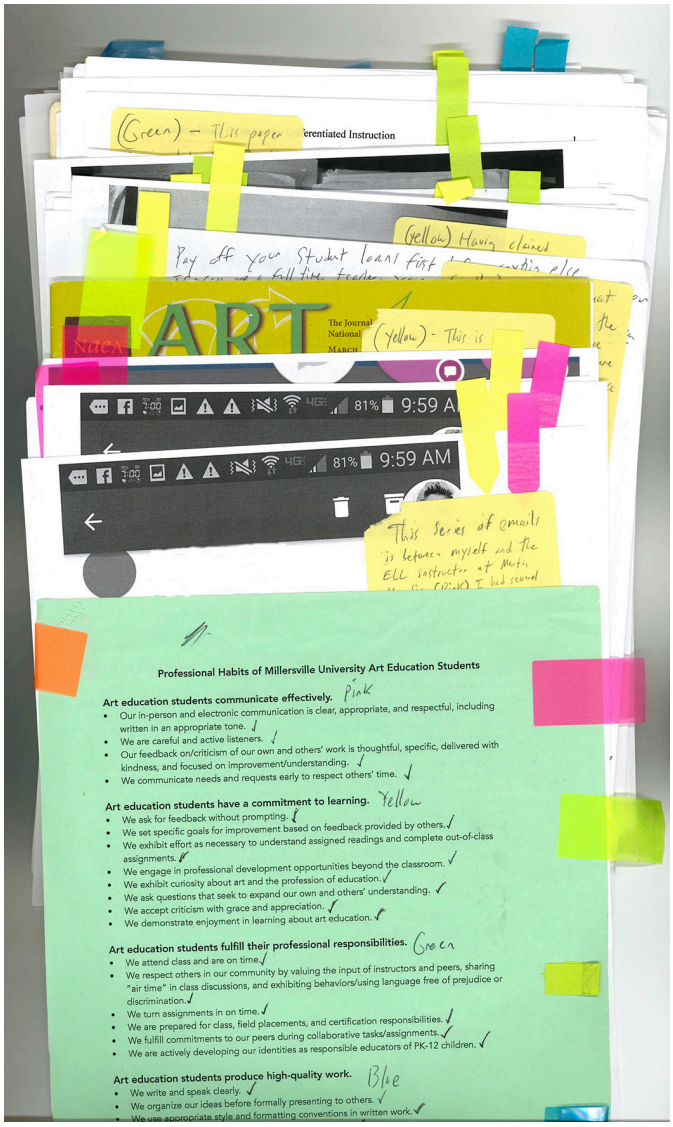

Figure 1. Collection of evidence. An example of evidence that one student collected, organized using colored tags, and annotated using sticky notes.

voice her opinion even when it disagreed with her classmates" and "Sarah seemed to demonstrate comfort with ambiguity and commitment to continuous learning when she suggested to another classmate, 'I don't think it's a bad thing to not have all the answers.'"

At multiple points during the semester, students submitted their growing collections of evidence and reflection statements and goals. In return, I added to their collection by offering my observations and responded to their goal statements. This created a continuous feedback loop between the students and me.

Assessment as Learning

In my experience, students who struggle to complete this assignment do so for one of two reasons. First, some students have difficulty determining acceptable evidence of habits. We lean into this challenge by thinking about the Studio Habits of Mind and working together to answer the questions "How do you know (the habit) when you see it?" and "How might you document that?" Students then apply

that thinking by asking the same questions about their professional dispositions. Using the Studio Habits of Mind provides a conceptual bridge for students and gives them practical assessment strategies for their future classrooms.

The second struggle occurs when students acknowledge the absence of these dispositions and/or the presence of less desirable dispositions. In one student's case, I previously struggled to communicate my concern about her spotty attendance, late work, and minimal engagement with assignments. When I rolled out this assessment process, something clicked for her. She wrote:

> This has been one of the hardest, yet most thought-provoking assignments I have had to date. While trying to gather evidence, I found it extremely hard to try and find physical sources for many of the categories. However, I went on to journal and write about many of the categories. In doing so, I raised and answered questions about myself that I have never thought of before. These questions are necessary for growth as a professional and an artist when asked at this point in my career; however, some of the answers to these questions were not in my favor if answered honestly. This assignment gave me an in-depth and honest look at my own habits, both good and bad, and it has opened up a pathway for improvement and further personal and professional growth.

This assessment as learning process contributed to substantial professional learning for this student and many others. Explicitly stated dispositions, students' participation in collecting and analyzing evidence of those dispositions, and continuous feedback have closed the gap between my belief in the importance of dispositions and the fostering them of dispositions in practice. ■

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