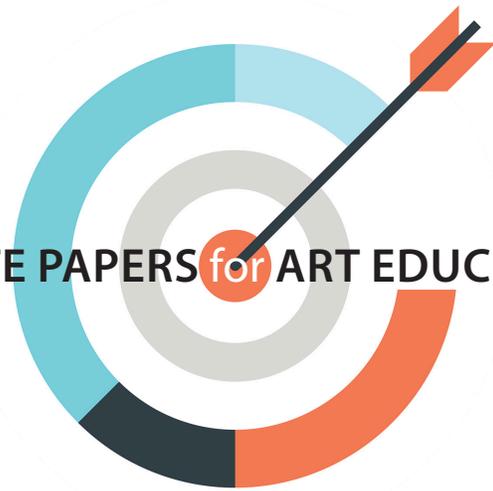




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SECTION III Planning and Implementing Visual Arts Assessments

Some Guiding Principles for Conducting Assessments in Visual Arts Education

F. Robert Sabol

“Assessment results... provide indicators for measuring the quality of curriculum, instruction, and assessments, and offer opportunities for teachers to evaluate effectiveness of the curriculum and its impact on student learning.”

This White Paper provides a selection of some general principles of assessment or overarching ideas that may guide educators in selecting, developing, and implementing assessments of students' learning at all instructional levels or educational settings in which they are used. These principles represent a framework for understanding the nature of assessment and for building comprehensive assessments and assessment programming. Using them is fundamental in creating assessments that reflect and measure the various learning outcomes and program goals in visual arts education.

The Assessment Context in Art Education

Assessment of learning has become commonplace in the field of art education and in art education programs across the United States (Sabol, 2009). Legislative mandates, public policies, and best practices in education dictate the inclusion of assessment as a means for measuring student achievement in all subject disciplines (Center for Educational Policy, 2007; Council for the Accreditation of Educator Preparation, 2013; Council of Chief State School Officers, 2017; Falk, 2000; Marzano, 2017; McMillan, 2001; National Art Education Association, 2013, 2015, 2016a, 2016b; Sabol, 2010; Stiggins, 2017; United States Department of Education, 2015a, 2015b). Art educators have become knowledgeable about various procedures and means of assessment necessary for measuring student learning (Armstrong, 1994; Beattie, 1997; Dorn, Madeja, & Sabol, 2004; Hafeli, 2009; Sabol, 2006). They have developed skills and proficiencies in the uses of various assessment tools and processes. However, acquisition of assessment knowledge and skills continues to be erratic and varies widely among art educators (Cawelti, 2006; Eisner, 2002; Hafeli, 2009; McMillan, 2001;

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Sabol, 2006; Tileston, 2004; Wiggins & McTighe, 2005). In addition, ongoing assessment-related professional development needs persist among art educators and in preservice art education programs (Eisner, 2002; Sabol, 2006; Shuler, Brophy, Sabol, McGreevy-Nichols, & Schuttler, 2016).

Assessment of learning in visual arts education includes unique challenges and opportunities not commonly addressed in other disciplines (Beattie, 1997; Dorn et al., 2004; Eisner, 2002; Hafeli, 2009; Shuler et al., 2016). As a result, art educators are challenged with identifying the means and procedures that will provide evidence of student achievement; this evidence is not commonly required in other disciplines. In selecting and designing assessments, art educators should be guided by accepted assessment standards (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 2014) and by overarching principles and practices commonly accepted for educational assessment (Hopkins, Stanley, & Hopkins, 1990; Kline, 2005; McMillan, 2001; Stiggins, 2017; Tileston, 2004).

Some Guiding Principles of Assessment

For assessments to comprehensively and effectively measure students' learning, art educators need to understand and apply a number of fundamental principles when measuring student achievement. These principles should guide, focus, and direct assessments of students' knowledge, skills, and dispositions. They act to support instruction and the design of assessment programs in art education. These principles may be thought of as a framework for selecting and designing assessments and assessment programs. They also function as a model through which individual assessments and assessment programs can be evaluated. The following selection of assessment principles can be used by art educators in guiding the assessment of student learning in art education programs.

Principle 1. Assessments must measure what was taught and be linked to the educational objectives or outcomes. (Validity)

When assessments measure what was taught, this principle is called validity. Among the most important considerations in assessment (McMillan, 2017), validity is the measure of how well the assessment measures what it is intended to measure (Hopkins et al., 1990; Kline, 2005; Mathison, 2005; Sabol, 1997; Tileston, 2004). If assessments are intended to measure what was learned, then it follows that the assessments must match what was taught. Assessments should include a match between the knowledge, skills, and processes students are expected to know and be able to demonstrate (Popham, 2003). In addition, valid assessments provide evidence of the degrees to which students have met the identified academic standards, objectives, and learning outcomes of instruction.

Validity of assessments also should be aligned with the mission or vision, goals, and purposes of the school and art education program (Haney, 1991; Hetland, Winner, Veenema, & Sheridan, 2007; Stiggins, 2017; Tileston, 2004; Wiggins & McTighe, 2005). By maintaining a focus on this principle, assessments can provide supportive evidence that indicates how well the program is functioning with regard to achieving its mission, goals, and purposes.

Curriculum, instruction, and assessment are directly linked. Assessments should be considered simultaneously with academic standards, curriculum content, processes and skills, and methods used for instruction (Falk, 2000; Marzano, 2017; McMillan, 2001; Tileston, 2004). When designing curriculum and selecting instructional methods, consideration must be given to how, when, and through which means student learning will be assessed. Assessments should provide evidence that the identified educational objectives have been met. In selecting effective instructional methodologies, equal consideration should be given to how assessments can produce evidence of the effectiveness of the instruction provided.

Assessments should be authentic. They should be performance-based and assess a range of students' learning and capacities. Assessments must match the content, knowledge, processes, dispositions, and skills included in the curriculum and what was taught (McMillan, 2001; Sabol, 2004a, 2004b; Stiggins, 2017). The more closely an assessment reflects curriculum content, the higher the validity rating of the assessment or the more accurately the assessment measures student achievement (Sabol, 1997).

Principle 2. Assessments must be repeatable within and among various groups of learners. (Reliability)

In order to track student achievement with individual students and among groups and over time, assessments must provide consistent products or demonstrations of student achievement (Marzano, 2017; Wilson, 2005). Assessments must be reliable. Their reliability is an indicator of test or assessment consistency or stability (Falk, 2000; McMillan, 2001; Popham, 2003). It indicates an estimate of how well the results of an assessment would match if the assessment was repeatedly given to the same student or groups of students under the same conditions (Tileston, 2004). Reliability refers to the consistency of scores, rather than the reliability of the instrument (McMillan, 2001; Tileston, 2004). The principle of reliability primarily focuses on evaluating consistency of assessment scores over time (test/ retest), stability of item scores across items (internal consistency), or uniformity of ratings across judges or raters of a person, object, event, and so on (interrater reliability) (Kline, 2005). Enhancing assessment reliability requires that assessment products and performances must be evaluated with fair, consistent, and stable assessment standards and criteria (Hopkins et al., 1990; Kline, 2005; Sabol, 2004a, 2004b; Wiggins, 1998; Wiggins & McTighe, 2005). Criteria must remain constant and should reflect the most important demonstrations of learning being measured.

Principle 3. Assessments must be fair. (Fairness)

No assessment is perfect, and educators must understand that errors occur in all assessments. However, when properly designed and used, assessments can contribute to furthering fairness and equality (Joint Committee on Standards for Educational Evaluation, 2003; McMillan, 2001). In selecting and designing assessments, art educators must pay particular attention to identifying biases the assessments may contain (Joint Committee on Standards for Educational Evaluation, 2003; Stiggins, 2017). Diligence in examining whether social, cultural, racial, ethnic, economic, political, age, and gender biases may be embedded in assessments has a direct relationship to the degrees of fairness

any assessment provides (Popham, 2003). Fairness in implementation of assessments, training of assessors, equitable treatment of all examinees, and interpersonal relationships between examiners and examinees may directly influence evaluations of assessment data, reporting of assessment findings, and professional inferences made from assessment findings (McMillan, 2001; Stiggins, 2017).

Principle 4. Assessments must be ongoing. (Sustainability)

Just as educators expect student learning to be ongoing and continuous, so too should assessment of learning be ongoing and continuous. Frequent recurring assessment provides a basis for understanding students' growth and learning over time, compared with single assessments that take place at the end of the academic year or grading period (Marzano, 2006; Wiggins & McTighe, 2005). The frequency of assessment should be determined by the degree of certainty the teacher has about students' knowledge on a given topic (Marzano, 2006). The less certain the teacher is about students' learning, the more frequently assessments should be done. Profiles of assessment results can support teachers' understanding of students' achievements by demonstrating the trajectory of learning or growth, as well as aid in identifying areas needing remedial support.

The use of formative and summative assessments has proven to provide meaningful contributions to learning (Greenstein, 2010; Marzano, 2006; 2017; Shuler, et al., 2016). Formative assessment, or assessing students' works while in progress, enables teachers to diagnose how well students are progressing toward meeting the objectives of instruction and to plan future instruction. Formative assessment further provides teachers with opportunities to redirect or instruct students as they participate in the assessment. Summative assessments, those conducted at the end of the learning cycle, are of value in documenting the culmination of what students have learned.

Principle 5. Students must have time to learn what is being assessed. (Opportunity to Learn)

Students need sufficient time, materials, curriculum content, and formal instruction for optimal opportunities to learn. Students must not only be given time to learn what was taught, but also time to refine their understanding of what was taught and to develop skills needed to demonstrate their levels of achievement. The principle of fairness is directly related to the opportunity to learn. Sufficient time must be provided in the curriculum as well as in the classroom to maximize student learning (National Art Education Association, 2014). To accomplish this objective, Wiggins (1998) noted that assessments should provide feedback (formative assessment) and opportunities for students to revise and improve their work. Black and Wiliam (1998) demonstrated that when student self-assessment skills are learned and regularly applied—and when students have time to experiment and refine their ideas and work—student motivation, engagement, and achievement are enhanced (Dean, Hubbell, Pitler, & Stone, 2012).

Principle 6. Assessments must allow students to demonstrate what they have learned in numbers of ways. (Comprehensiveness)

Assessments should include various methods and means through which students can show what they have learned and can do. Their design should be structured so that students can use their preferred

individual learning styles to demonstrate their understanding of what was taught and the degrees of skills they have developed (McMillan, 2001). Assessment prompts and activities should encourage varieties of responses and creative or unique interpretations. To guide learning and to support unique student demonstrations of learning, teachers should create easily understood rubrics and give these rubrics to students before demonstrations of learning begin (Tileston, 2004). Rubric criteria should provide the basis for making evaluations that are clear and defensible (Joint Committee on Standards for Educational Evaluation, 2003; Sabol 2004a, 2004b). Criteria should capture the most significant aspects of what was taught and what students must demonstrate in their assessment responses (Sabol 2004a, 2004b). Rubrics, checklists, or other means of evaluating student performances should allow for a range of responses and demonstrations of learning and include differentiated means through which students may respond.

Principle 7. Assessments must be easy for students to understand and for teachers to administer. (Understandability)

Quality assessments have clearly stated procedures, directions, and expectations. Assessments must provide students with sufficient guidance and specificity that enable them to focus their demonstrations of learning on targeted outcomes and instructional objectives (Sabol, 2009; Stiggins, 2017). Students should fully understand expectations and in what form their demonstrations of learning should be produced before they begin assessments (Popham, 2003; Sabol, 2009). Teachers should be able to administer assessments easily and with little need to redirect or clarify tasks after the assessment begins. Storage of student products and other data should be easily accessible and manageable so that teachers can analyze and report assessment findings.

Principle 8. Assessment data and results should be used to inform students and to guide curriculum development, teaching performances, and assessment evaluation. (Diagnostic Capability)

Assessment results must provide clear indisputable indications of student achievement. Students should receive their results in a timely and efficient manner (Dean et al., 2012; Marzano, 2006, 2017). Assessment feedback should be constructive and clearly communicate the following: (1) areas in which students achieved acceptable performances so that strengths can be built upon and (2) areas needing improvement so that problems can be addressed. Feedback should enable students to better understand areas in which they need improvement with suggestions for improving learning (Dean et al., 2012; Marzano, 2006). Assessment results also should be used for determining the collective or aggregated performances of groups of students or classes and for comparing individual or group performances.

Assessment results should be used for diagnostic purposes. They provide indicators for measuring the quality of curriculum, instruction, and assessments, and offer opportunities for teachers to evaluate effectiveness of the curriculum and its impact on student learning. Assessment results also deliver indicators of the quality of instruction teachers provided and present opportunities for changes, if necessary (Marzano, 2017). In addition, results should be used to evaluate the

effectiveness of the assessments. They yield data that can be helpful in evaluating the strengths, weaknesses, and appropriateness of the assessment methods, instruments, and processes used. Teachers can use assessment results to support decisions about whether curriculum, instruction, or assessments should be revised, continue to be used as implemented, or be discontinued (Marzano, 2017; Sabol, 2004a, 2004b, 2009; Wiggins & McTighe, 2005).

Principle 9. Assessment methods and tools should vary. (Variability)

One crucial assessment decision art educators make is in their selection of assessment methods or tools through which students' learning will be measured. Teachers need to know the attributes of various assessment methods when determining which assessment is appropriate and best for measuring what was taught (Dorn et al., 2004; Marzano, 2017). Numerous assessment methods and tools, such as traditional pencil-and-paper tests, may be used to measure a narrow or specific range of knowledge, and may successfully provide baseline evidence of artistic knowledge and rudimentary thinking skills that demonstrate initial learning in the visual arts.

Contemporary assessments have shifted to having students complete a performance task, rather than selecting from among provided responses (Montgomery, 2001). Authentic assessments require students to demonstrate knowledge, skills, and processes normally used by artists and other art professionals working in real-world conditions to solve problems (Burke, 2005). Timing of assessments should reflect an ongoing plan to identify students' progress toward meeting curriculum goals and objectives. Assessments should be conducted during learning activities (formative) as well as at the conclusion of learning activities (summative) to gain perspectives about the scope and levels of students' learning and acquisition of knowledge, skills, and processes. Using numerous methods of assessment can offer a more comprehensive understanding of the ranges and depths of student learning.

Principle 10. Students have rights and responsibilities as participants in assessments. (Accountability)

Students should be treated with respect in all aspects of the assessment process so that confidentiality and privacy are protected and opportunities for educational development are enhanced (Joint Committee on Standards for Educational Evaluation, 2003). Students' individual and personal needs should be taken into account during all stages of assessment, regardless of individual characteristics or special group status, to ensure that any educational need is being met. Students have a right to be assessed by means that meet or exceed standards of technical quality, fairness of administration, and accuracy in reporting results. Students should receive in advance explanations about the nature of the assessment, the intended uses of assessment results, and the confidentiality of their assessment results (Dorn et al., 2004). The greater the consequences are for assessment results, the greater the importance of insuring that the student is fully informed and voluntarily agrees to participate (American Educational Research Association, et al., 2014). Students have a right to understand assessments and to easily access their results (Dean et al., 2012). They also have the responsibility to participate in assessments with ethical, honest, and sincere actions. Students must be informed that divulging confidential assessment content, arranging for someone else to take the assessments for them, or cheating in any form is inappropriate and will result in sanctions or negative consequences.

Conclusion

The assessment principles discussed here are not comprehensive or exhaustive. Additional principles and subcategories of principles exist and should be explored as assessment programs undergo revision and development. These principles are intended to provide general frames of reference for art educators to consider as they create and develop assessment programs for their schools and classrooms. No single principle outweighs another, and the order in which principles are discussed does not reflect a priority. When consistently and collectively used, these principles provide a foundation for objectively assessing students' learning and performances in art education programs. ■

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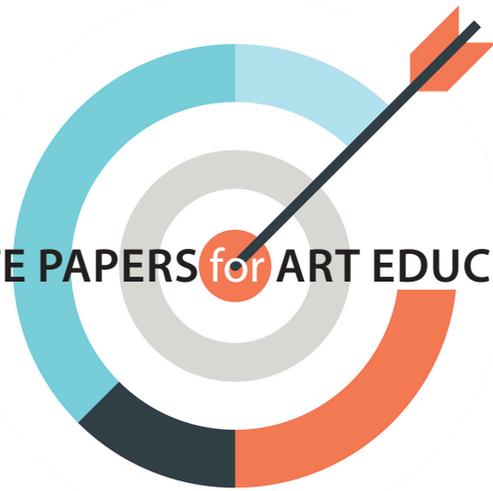




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SECTION III Planning and Implementing Visual Arts Assessments

Aligning Learning Objectives and Assessment Methods in the Visual Arts

Leslie Gates

“By considering how specific types of learning are demonstrated, teachers can create formalized assessment methods that are valid indicators of student achievement.”

This White Paper offers a framework for art educators to evaluate the alignment of their assessment methods and goals/objectives for student learning. This effort is an attempt to develop “understandable guidelines” for classroom assessment (Gruber & Hobbs, 2002, p. 16), specifically attending to the issue of validity. Assessments are valid insofar as they produce the evidence required to evaluate whether and/or to what degree a student has met the intended learning goal; in other words, the assessment measures what it is supposed to measure.

Background

In 1966, Elliot Eisner observed that measuring students’ progress based on a set of educational objectives was commonplace in education but uncommon in art education. He stated that if this type of evaluation were employed in the teaching of art, “it would require first a clear formulation of objectives for each activity included in the art curriculum” and for those objectives to “be so clearly stated that they would be useful in determining if the objectives have or have not been achieved” (pp. 384-385). A decade later, Eisner observed how a desire for accountability and efficiency required a more adequate conception of evaluation in the arts and called for assessments that were “suited to the purposes [they are] intended to serve. No one procedure or type of data is good for everything” (1974, p. 5). The assessment work required of the field at that time—from creating valid assessments of an individual child’s growth over time to creating valid large-scale assessments of learning in the arts—was significant given that informal assessment practices were the norm in most art classrooms.

What transpired in the two decades that followed was a national movement toward standards, objectives, and large-scale assessments. In 1994, President Bill Clinton signed the Goals 2000: Educate America Act that, in part, established the importance of the arts as a discipline of study alongside subjects such as math, language arts, and science. This policy context served as a catalyst for the development of the National Standards for Arts Education and, shortly thereafter, the National Assessment of Educational Progress (NAEP) Assessment of Arts Education. Jerome Hausman (1994) observed that art teachers' informal evaluations of students with "no paperwork or record keeping" would need to be formalized, noting, "Attitudes toward evaluation are undergoing dramatic change" (p. 9).

Compared with other subjects, art education has done little in publishing work specifically related to assessment (cf. Gruber & Hobbs, 2002). Art education scholars who have attended to assessment appear to have focused primarily on large-scale assessments. When Elliot Eisner and Michael Day released *The Handbook of Research and Policy in Art Education* in 2004, the assessment chapters dealt almost exclusively with large-scale assessments. However, in Eisner's own words, "While such tests might be useful for comparing large groups, they are of little use for evaluating individual achievement. And it is the individual child and not the statistic abstraction that the teacher faces" (1966, p. 385).

Rationale

We are now in an era in which teachers are required to formulate clear objectives and to design assessments to determine if and to what degree students have achieved those objectives. The following segments of this White Paper provide practical suggestions for increasing the validity of assessments in the visual arts by employing a variety of assessments that are well-aligned to learning objectives.

There are two situations that have repeated themselves enough times in my career for me to consider this topic of alignment worthy of special attention. One situation occurs when I read lesson plans with diverse and worthwhile learning objectives and discover they have a sole assessment method of the teacher assigning a final grade to an artwork. This is problematic because final products are only able to serve as evidence for certain types of learning objectives and leave teachers with insufficient evidence for assessing student achievement on the diverse and worthwhile learning objectives that appear in lesson plans (Willis Fisher, 1994, p. 33). The second situation occurs when teachers, overwhelmed by the nature of assessing learning in the arts yet required to produce quantitative data for reporting purposes, start to privilege aspects of learning in the arts that can be counted (Gates, 2017). Hausman identified one consequence of such action: Learning is reduced to activities "that bear little or no resemblance to art" (1994, pp. 14-15). For instance, basing a grade on how many sketches the student created or how many colors the student used may indicate more about whether the student followed (the teacher's) directions than it does about the quality of the work the student produced. An explicit consideration of learning goals and related methods for collecting evidence of student achievement can provide teachers with a renewed sense of purpose in their instruction and assessment practices.

Learning Objectives

A worthwhile starting point for aligning learning objectives and assessment methods is identifying the type of learning that needs to be assessed. Some objectives may be mandated in academic standards and/or curricula, while others are written unilaterally by teachers or constructed by/with students. Learning objectives, regardless of whether they will be applied in AP Art History, a painting unit for elementary students, a choice-based middle school classroom, or a field trip to a museum, can be categorized into one of four types of learning: knowledge, reasoning, skill, and product. Table 1 provides an explanation and example for each type of learning objective, taken from a 4th-grade unit about abstraction. The example objectives are written as "I can" statements that students can read and understand.

Table 1. Types of Learning Objectives

Learning Objective Type and Key Words	Explanation	Example
Knowledge Know, list, identify, understand, explain	Knowledge targets represent the factual information, procedural knowledge, and conceptual understandings that underpin each discipline or content area.	I can define the words "abstract" and "nonobjective."
Reasoning Predict, infer, summarize, compare, analyze, classify	Reasoning involves thinking and applying—using knowledge to solve a problem, make a decision, etc.	I can summarize reasons why some artists might work abstractly.
Skill Demonstrate, pronounce, perform	Skill targets are those where a demonstration or a physical skill-based performance is at the heart of learning.	I can show you at least three ways to take a realistic picture and make it more abstract.
Product Create, design, write, draw, make	Product targets describe learning in terms of artifacts where creation of a product is the focus of the learning target.	I can draw an object six times with different degrees of abstraction. This means some of the drawings are more abstract than others.

Note: Adapted from Chappuis, Stiggins, Chappuis, and Arter (2012).

Classifying learning objectives by type may seem meaningless. However, I believe there are at least two valuable reasons for doing so. First, classifying our learning objectives allows us to assess and improve the diversity of the learning we expect of our students within a unit of study and/or over a course of study or period of time. Second, classifying our objectives helps us identify which assessment methods are the most valid and efficient for collecting/documenting evidence of student achievement.

Aligned Assessment Methods

Learning in the arts is rich and complex, and as a result, “no single kind of assessment can provide a representative and accurate measure of student learning in art” (Gruber & Hobbs, 2002, p. 16). Richard Stiggins (2005) proposed that assessment methods can fall into four categories: selected response, extended written response, performance, and personal communication. Table 2 shows Stiggins’s analysis of whether each type of assessment provides suitable evidence for the four types of learning outcomes outlined in the previous segment. The information in Table 2 can inform which types of assessments are appropriate for collecting evidence of whether students had met the various learning objective examples in Table 1. For instance, the most efficient assessment for the knowledge objective “I can define the words ‘abstract’ and ‘nonobjective’” would be a selected response measure, perhaps in the form of a short written quiz, a quick ticket out the door, or a technology-based assessment tool such as Kahoot. In these instances, students select the correct definition for each word and the teacher would have evidence of whether each student achieved the learning goal. In contrast, the reasoning objective “I can summarize reasons why some artists might work abstractly” would require an extended written response or personal communication with specific lines of questioning. By considering how specific types of learning are demonstrated, teachers can create formalized assessment methods that are valid indicators of student achievement.

Table 2. Links Among Achievement Targets and Assessment Methods

Target To Be Assessed	Assessment Method			
	Selected Response	Extended Written Response	Performance	Personal Communication
Knowledge Mastery	Good match for assessing mastery of elements of knowledge.	Good match for tapping understanding of relationships among elements of knowledge.	Not a good match. Too time-consuming to cover everything.	Can ask questions, evaluate answers and infer mastery. However, a time-consuming option.
Reasoning Proficiency	Good match only for assessing understanding of some patterns of reasoning.	Written descriptions of complex problem solutions can provide a window into reasoning proficiency.	Can watch students solve some problems and infer reasoning proficiency.	Can ask student to “think aloud” or can ask follow-up questions to probe reasoning.
Skills	Not a good match. Can assess mastery of the knowledge prerequisites to skillful performance, but cannot rely on these to tap the skill itself.		Good match. Can observe and evaluate skills as they are being performed.	Strong match when skill is oral communication proficiency. Not a good match otherwise.
Ability to Create Products	Not a good match. Can assess mastery of knowledge prerequisite to the ability to create quality products, but cannot use to assess the quality of the products themselves.	Strong match when the product is written. Not a good match when the product is not written.	Good match. Can assess the attributes of the product itself.	Not a good match.

Note: Adapted from Stiggins (2005, p. 69).

Balancing Quantitative and Qualitative Assessment Methods

This White Paper exists in a section of papers tasked with balancing quantitative and qualitative assessment methods. Examples of each include the numeric results of surveys or tests (quantitative) and observations of students at work or interviews with students about their artwork (qualitative). I contend that the most logical way to balance these approaches is to (1) seek a diversity of learning outcomes that represent the complex and sophisticated nature of learning in the arts and (2) employ a diversity of assessments aligned to those outcomes. A multiplicity of assessment methods occurs naturally when they are aligned to diverse learning objectives.

Selected response items produce data that are typically quantitative in nature, while extended written responses, performance assessments, and personal communication typically produce qualitative data. However, if quantitative data are required for reporting purposes, descriptive statistics are one way to report qualitative data that are generated from much of the assessment of learning used in the arts (cf. Gates, 2017, for specific examples).

Conclusion

Categorizing learning objectives and aligning them to appropriate assessment methods may initially seem antithetical to the creative and emergent nature of learning in the arts. However, clarity of purpose does not necessitate rigidity. “Clarity of purpose is more likely to be useful in the selection of activities designed to reach certain ends than purposes which are diffuse. Clarity of purpose and efficiency in means are desired in the academic areas; it seems reasonable to aspire for no less in the teaching of art” (Eisner, 1966, p. 385). This White Paper gives art educators who aspire to engage in meaningful and valid assessment practices a starting point: examining the alignment of their learning objectives and the methods they use to assess student achievement of those objectives. ■

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