



AUTHENTIC ASSESSMENT in the CLASSROOM... and the LIBRARY MEDIA CENTER

Are your students information literate? How do you know? How could you find out? You could administer a multiple-choice test that assesses students' knowledge of relevant terminology, their ability to identify appropriate sources of information for different questions, and their awareness of the need to evaluate the accuracy, currency, relevancy, and authenticity of information found in different sources.

Or, you could administer an authentic assessment that requires students to select appropriate sources for a specific question, then find, access, and evaluate those sources of information to be integrated into an answer to the question (e.g., a research paper).

What would each type of assessment tell you? A well-designed, multiple-choice test could tell if your students possess the knowledge and the skills required to complete a research task. You could then attempt to infer that the students could effectively apply that knowledge to real-world tasks requiring those skills. Yet, would a filled-in circle on a Scantron sheet give you such confidence?

On the other hand, what if students successfully completed an assessment in which they were required to formulate a question (or, perhaps, start with one), find appropriate sources of information for the question, access information from the sources, evaluate the quality of the information, and, finally, determine when they had sufficient information to answer the question? Would you be more confident that the students were information literate?

Educators are struggling with such assessment questions, from mathematics departments to social science teachers to special education classrooms, from Head Start to high school, from individual teachers to state boards of education. Clearly, calls for accountability are on the rise from the No Child Left Behind Act and other state and national efforts to measure student progress. But,



By Jon Mueller

aside from these more formal efforts at accountability, there is considerable value in knowing how well students are meeting the goals we have set for them, including information literacy goals.

Assessment should not just serve as a vehicle for assigning grades or comparing schools and districts. Gathering meaningful information about student performance allows us to identify strengths and weaknesses. Such information can help pinpoint specific areas that have improved or need improvement. Similarly, assessment data can inform educators about need for change in instruction to better address learning goals.

We also recognize that an overreliance on traditional assessments, such as multiple-choice tests, limits the type and quality of information we can gather (Wiggins, 1998). It is understandable if a teacher has 150 students and very little time to grade final assignments at the end of a quarter or semester that the teacher will look for assessments that can be quickly scored. But, we have to ask what we are missing by relying so heavily on tests composed of multiple-choice, true-false, and matching questions. To answer that question, we need to better understand an alternative—authentic assessment.

What Is Authentic Assessment?

Authentic assessment is a form of assessment in which students perform real-world tasks that demonstrate meaningful application of essential knowledge and skills. Or, as Grant Wiggins (1993) describes it, authentic measures are “engaging and worthy problems or questions of importance, in which students must use knowledge to fashion performances effectively and creatively. The tasks are either replicas of or analogous

to the kinds of problems faced by adult citizens and consumers or professionals in the field.” Authentic tasks include analyzing a political cartoon, making observations of the natural world, computing the amount of paint needed to cover a particular room, and performing in a chorale.

Similarly, authentic tasks can range from elaborate projects spanning several weeks to brief activities. Many teachers have mistakenly equated authentic assessment with extensive assignments requiring considerable investment of time and effort for teacher and student alike. Yet, adults often face many simpler and briefer tasks in their work or life. For example, I send my introductory psychology students to a Web page I created, <http://jonathan.mueller.faculty.noctrl.edu/100/correlation_or_causation.htm>, which lists headlines taken from scientific news stories reported in the media. If students click on the headline, it will take them to the story. I can use such a resource in a variety of ways to capture brief activities adults engage in on a regular basis. For example, I ask students to determine if a headline (e.g., “Low self-esteem ‘shrinks brains’”) is causal or correlational in nature. Then, I ask them to determine if the research described in the article actually justifies such a claim. (Fortunately, the research in the self-esteem article was not consistent with the headline’s claim!)

All of these tasks replicate real-world challenges, and student performance on all of them can be assessed. Multiple-choice questions can be designed to capture some ability to apply or analyze concepts, but filling in the corresponding circle on a Scantron sheet does not begin to have the face validity of asking students to complete engaging tasks that replicate real-world ones. Of course, capturing a more authentic performance does not ensure validity.

Measures of Validity

A measure cannot be valid if it does not effectively address the

learning goals it was designed to assess. Thus, as described in Figure 1, the development of good assessments of any type begins with the development of meaningful goals and standards. Learning goals and standards are statements of what students should know and be able to do at some time (e.g., the end of 3rd grade or the end of a course on music theory). For a given standard, an educator would ask, “What indicates students have met these standards?” which would lead to the development or selection of a relevant authentic task. Next, the teacher would ask, “What does good performance on this task look like?” Those characteristics become the criteria by which one would judge student performance. Finally, the

educator would identify likely levels of performance along which he or she could judge student performance for those criteria. The criteria and accompanying levels of performance are then usually combined into a rubric, a scoring scale for the assessment. (Elaboration of the four steps of developing an authentic assessment I just outlined, along with more examples of authentic assessments, can be found at my Authentic Assessment Toolbox Web site at <<http://jonathan.mueller.faculty.noctrl.edu/toolbox>>.

Why Do It? Authentic Assessments Are Direct Measures

We do not just want students to know the content of the disciplines when they graduate. We, of course,

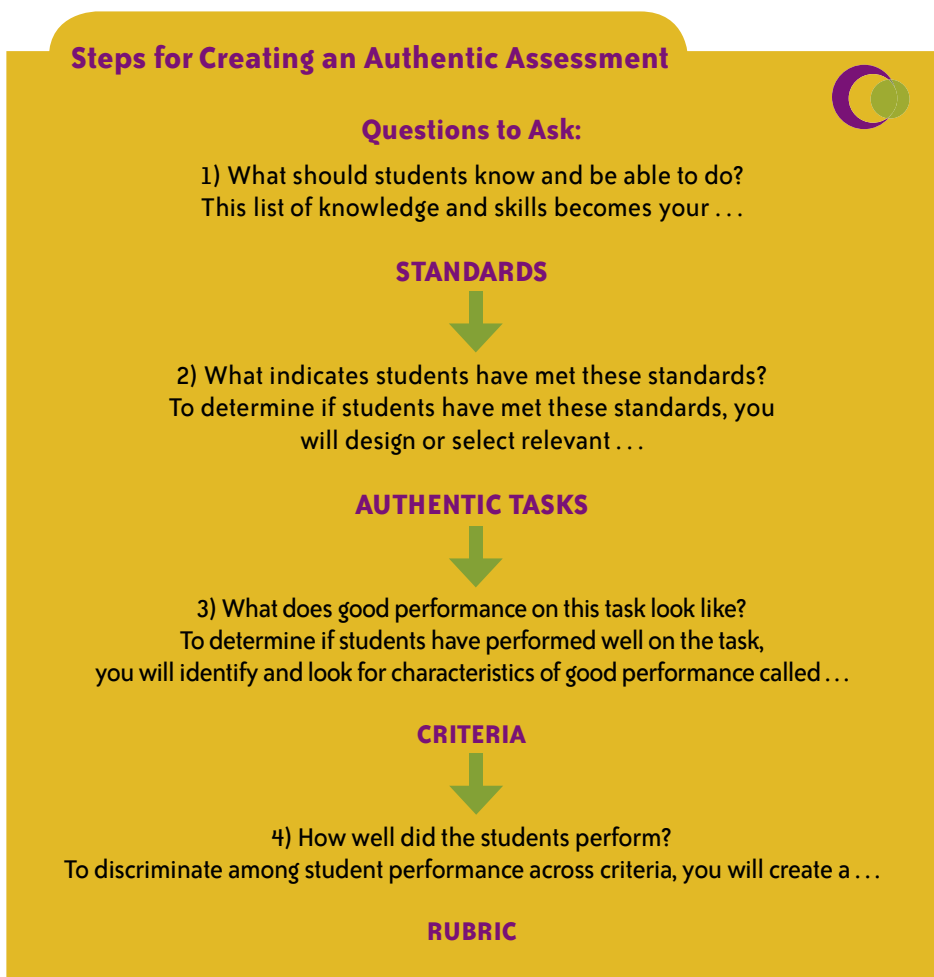


Figure 1. Steps for Creating an Authentic Assessment (Mueller, 2004)

want them to be able to use the acquired knowledge and skills in the real world. So, our assessments have to also tell us if students can apply what they have learned in authentic situations. If a student does well on a test of knowledge, we might infer that the student could also apply that knowledge. But that is indirect evidence. I could more directly check for the ability to apply by asking the student to use what he or she has learned in some meaningful way. If I taught someone to play golf, I would not check what he or she learned with just a written test. I would want to see more direct,

meaning about what they have been taught. Furthermore, students must be given the opportunity to engage in the construction of meaning. Authentic tasks not only serve as assessments, but also as vehicles for such learning.

Authentic Assessments Provide Multiple Paths to Demonstration of Learning

We all have different strengths and weaknesses in how we learn. Similarly, we are different in how we can best *demonstrate* what we have learned. Regarding the traditional assessment model, answering

measures that allows you to see them apply what they have learned in different ways and from different perspectives. Typically, you will be more confident in the students' grasp of the material if they can do so. But some variety of assessment can also be accomplished *within* a single measure. Authentic tasks tend to give the students more freedom in how they will demonstrate what they have learned. By carefully identifying the criteria of good performance on the authentic task ahead of time, the teacher can still make comparable judgments of student performance even though student performance might be expressed quite differently from student to student. For example, the products students create to demonstrate authentic learning on the same task might take different forms (e.g., posters, oral presentations, videos, Web sites). Or, even though students might be required to produce the same authentic product, there can be room within the product for different modes of expression. For example, writing a good persuasive essay requires a common set of skills from students, but there is still room for variation in how that essay is constructed.

What Roles Can Library Media Center Staff Play in Assessment Development?

Work with Classroom Teachers

Because library media specialists are educators in schools, they should be involved in the development of a school's or district's learning goals and standards. At the very least, they should be familiar with the goals and standards teachers are supposed to be teaching and assessing. This enables staff to ask good questions of teachers regarding the assignments they are using. For example, teachers are being asked more and more to integrate technology into their instruction and assignments they give to their students. A good

authentic evidence. I would put my student out on a golf course to play. Similarly, if we want to know if our students can interpret literature, calculate potential savings on sale items, test a hypothesis, develop a fitness plan, converse in a foreign language, or find useful information, then authentic assessments will provide the most direct evidence.

Authentic Assessments Capture the Constructive Nature of Learning

A considerable body of research on learning has found that we cannot simply be fed knowledge. We need to construct our own meaning of the world, using information we have gathered and were taught and our own experiences with the world. Thus, assessments cannot just ask students to repeat back information they have received. Students must also be asked to demonstrate they have accurately constructed

multiple-choice questions does not allow for much variability in how students demonstrate the knowledge and skills they have acquired. On the one hand, that is a strength of tests because it makes sure everyone is being compared on the same domains in the same manner, which increases the consistency and comparability of the measure. On the other hand, testing favors those who are better test-takers and does not give students any choice in how they believe they can best demonstrate what they have learned.

Thus, it is recommended that multiple and varied assessments be used so that 1) a sufficient number of samples are obtained (multiple), and 2) a sufficient variety of measures are used (varied). Variety of measurement can be accomplished by assessing the students through different

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consequence of that practice is that teachers frequently turn to library media center personnel who often have greater expertise in the use of information technology. Consequently, the staff members have an excellent opportunity to ask meaningful questions such as:

- Is the assignment designed (or, how can the assignment be designed) to meet one or more of your standards?
- Does it capture truly meaningful learning?
- Will students' behavior on the task be clearly observable and measurable? That is, what will be the indicators (criteria) of good performance on the task?
- Does the use of library media center tools required in the task reflect authentic and meaningful uses of those tools? For example, are students merely locating and printing out lots of pages somehow related to the topic, or are they appropriately identifying and evaluating which material is relevant?
- Does the rubric capture these essential behaviors? Students will more likely address critical skills if they know what they are and that they will be assessed on them.

Develop Resources and Assessment Tasks for Classroom Teachers

As mentioned above, assignments do not need to be long, elaborate tasks to capture authentic learning. Teachers would appreciate ideas for shorter assignments that are quicker to assess, but still capture meaningful application of knowledge and skills. I believe this provides an excellent opportunity for library media specialists to assist classroom teachers in developing student learning in the content areas while promoting critical information literacy skills.

For example, through the simple Web page I described previously listing accurate and misleading headlines, I can assign numerous

brief, meaningful tasks requiring the application of scientific literacy and critical thinking. Similarly, library media specialists could generate small, content-specific print or electronic resources that are aligned with particular learning goals and standards of a school, team,

or department. Teachers could then design meaningful tasks for students around these resources. Or, library media specialists could go a step further and suggest a few specific tasks students could complete with these resources that would also require some element of information literacy. A further step

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would be to develop a simple rubric for the task that would permit the teacher to quickly assess student performance on it. Yes, I know, “free time” is not often in the library media specialist’s vocabulary. But, as I suggest with most tasks—start small. Ask a particular teacher if there might be such a resource that would be helpful. Of course, many library media specialists are already providing such resources. If you are, take it a step further by connecting it to the assessment process.

Design Your Own Assessments

Library media specialists and library media center staff should have their own goals for student learning, particularly related to information literacy. If a goal is worth pursuing, it is worth measuring. So, design your own assessments of such skills to inform you, the students, and the other school faculty and administrators of the strengths and weaknesses of the students and the progress being made on these skills.

Information literacy skills are obviously not the sole province of library media specialists. Students should develop such skills across the curriculum and in the context of learning the content of the disciplines. However, it is not always easy to convince teachers that a) students need information literacy skills, b) these skills are best taught in the context of learning the content, c) these skills can be assessed, d) these skills can be assessed alongside the disciplinary knowledge and skills, and e) data acquired from such assessments can assist teachers and library media specialists in planning future teaching and learning.

For example, I recently consulted with the Media Information Services Department (composed of library media center staff and the information technology specialist) at a local high school. Administrators in the district wisely brought these staff members

into the process of developing goals, standards, and assessments. The library media center staff identified information literacy as the target of their efforts. They were well aware that many teachers were struggling with the issues I just mentioned. So, after identifying the specific skills they wanted to address, they began creating assessments to measure them.

First, the staff developed a traditional assessment to determine the current knowledge base of students related to information literacy. A brief, multiple-choice test was administered to all freshmen at the beginning of the year in a required course, and then administered again at the end of the year. Most of the results confirmed staff beliefs about student knowledge, but there were a few surprises. For example, it was startling to see how few students knew what the term periodical meant.

Assessment of such knowledge was not just for the benefit of the library media center staff. The staff shared the results with the entire school so that everyone was aware of the gaps in student knowledge. This encouraged a conversation between the library media center staff and the classroom teachers about creating a collaborative effort to increase information literacy.

Second, to complement the assessment of knowledge, the staff wanted to develop a more authentic measure of information literacy to better capture the application of this knowledge. So, we worked on a meaningful and manageable task that the library media center staff could administer. Randomly sampling students who came to the library media center to work on a research paper, library media center staff completed an observational assessment that tracked a few students through the research process. The staff applied a fairly detailed rubric to each of the key steps. Now, the staff is

collecting data that can also be shared with the other teachers and administrators in the building to further the development of information literate students.

Such locally developed and administered authentic assessments can guide meaningful review and improvement of teaching and learning. As Popham (1999, 2001) has so effectively argued, standardized tests created by some external agency cannot adequately measure the quality of student learning in local classrooms, particularly authentic learning. Local assessments need to be developed, and all educators in the school can and should contribute to that critical mission of improving teaching, learning, and assessment.

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