

The Role of Assessment by Lois Moseley

The last decade has witnessed significant changes in educational assessment practices. These changes are reflected in both large-scale, standardized tests and in individual classroom assessment practices. At least four factors have contributed to assessment reforms: the introduction of standards-based education; the importance of alignment of curriculum, instruction, assessment and professional development; the flexibility of technology in data analysis; and accountability.

The Center for Assessment and Research Studies defines assessment as “The systematic process of determining educational objectives, gathering, using, and analyzing information about student learning outcomes to make decisions about programs, individual student progress, or accountability” (Erwin, 1991). This definition implies that assessment should be more than merely a test at the end of instruction to see how students perform under special conditions; rather, it should be an integral part of instruction that informs and guides teachers as they make instructional decisions.

What are some of the purposes of assessment?

According to Kellough and Kellough (1999), there are seven purposes for assessment:

1. To assist student learning
2. To identify student’s strengths and weaknesses
3. To assess the effectiveness of a particular instructional strategy
4. To assess and improve the effectiveness if curriculum programs
5. To provide data that can assist in decision making
6. To communicate with and involve parents.

In order to build tests that can achieve all of these purposes in the limited time the typical teacher has to devote to the task, a teacher needs to know at least the rudimentary principles of test construction and interpretation of results. Teachers should also be aware of different technologies that are available for assessment purposes. Assessment technologies are useful in a variety of situations. These technologies can help teachers in planning the test, constructing the test, scoring the test and analyzing the results.

What are some types of student assessment?

Standardized Some of the purposes for testing may be achieved through the administration of standardized tests which are usually designed by a commercial test publisher to give a common measure of student performance and to remain constant in administration and scoring procedures. Standardized tests are used for comparing data across classes, schools, school districts, and states. Many standardized tests have norms and are formal assessments of students' progress.

Norm-referenced measures are very similar to typical grading practices. They communicate where a student stands with respect to their immediate peers or some known group, not what the student can do in terms of the curriculum to which they have been exposed. Test items are selected that provide a wide range of scores. This is done by eliminating those items that all students are likely to answer correctly and by favoring items at the 50 per cent level of difficulty. These items tend to maximize differences in performance and provide the most reliable ranking of students.

Criterion-referenced measures report where a student stands in terms of specific measures of attainment at each stage of the curriculum. Criterion-referenced interpretations enable teachers to describe what a student knows and can do, without reference to the performance of others. Test items are selected on the basis of how well they reflect the specific learning tasks being measured.

The worth of a standardized test rests first on how carefully the characteristics of both the test and the need were aligned and ultimately on how the test information is used in the school to meet the need. When instructional sequences and methods are relatively fixed and basic changes are not contemplated, achievement tests may be used as predictors of future school success. However, potential for success under radically different kinds of instructional conditions and curricula may not be based on prior school learning and standardized achievement tests may not be the tool of choice.

Some examples of standardized achievement tests are: the California Achievement Tests (CAT), the Stanford Achievement Test, the Iowa Test of Basic Skills (ITBS), and the Terra Nova.

Alternative Assessment Some of the purposes of assessment may also be achieved through the administration of alternative assessments popularized by Grant Wiggins (1989). Often called *performance or authentic assessments*, these assessments often occur over time and require students to generate a product or demonstrate an observable performance rather than respond to objective-type formats such as multiple-choice or true-false questions. Performance-based assessment is based on recent research into brain function, and the implications of this research for education. Performance-based research focuses not only on the manner in which students demonstrate proficiency in knowledge and skills but on the manner in which students gain knowledge and skills.

Performance assessments employ a rubric evaluation that provides specific descriptions of what a performance or a product looks like at several different levels of quality. The rubric acts as a guide providing direction to the teacher and the student.

Some examples of alternative assessment are: essays, journals, tasks, group projects, portfolios, teacher observations, interviews, teacher created test/examinations, peer and self evaluations, and class presentations.

When should we assess students?

Both ongoing formative assessments and summative assessments are essential to monitor, enhance, and evaluate instruction. For assessment to be effective, it must occur before, during, and after instruction.

Formative assessments are done during instruction to provide feedback to the teacher about the progress of student mastery towards a skill. It is characterized by timely and immediate feedback to enhance student learning. This type of assessment allows teachers to respond to ongoing learning needs by modifying their instructional approaches (Black and Williams, 1998).

The summative assessment is a test that summarizes student learning and the effectiveness of the instructional program. It is usually given at the end of a unit, the end of a course, and/or at the end of the year (Brookhart, 1999). A judgment is then made about the learning the student has attained by giving a grade, or by giving a score on the test. Summative assessments are also often used as a means of accountability by judging the effectiveness of teachers. A standardized test is one type of summative assessment.

Before Instruction: In the Planning Phase The time to plan a test is before teaching the material the test is to measure. This is the time to think carefully about the standard/s, criteria, benchmark/s, and/or objectives that the student will know or be able to do as a result of the lesson. Alignment of assessment to the standard should be the focus. Item level of difficulty and level of thinking are important considerations. These two ways of looking at test items will help strengthen the alignment.

During Instruction: In the Instructional Phase The full power of assessment is its use in providing feedback to students during instruction. To provide quality feedback, teachers watch students perform and listen to students' responses. Students reveal their level of understanding through the responses they provide and/or the questions they ask. The teacher evaluates the progress of the student toward the standard and modifies the instructional content and/or process as necessary. The teacher also makes the students aware of how they will meet the established standards. When assessment criteria and standards are clear and have been communicated to students there is evidence that students set up definite goals as they approach the tasks and they begin to take ownership of their learning.

After Instruction: In the Evaluation Phase The assessment, whether constructed by the teacher or by a publisher, is a basic evaluation tool in many classrooms. The assessment is used to determine the student's proficiency at reaching the standard/s, criteria, benchmark/s, and/or objective/s. The assessment approach should be completely congruent with the instructional goals, both in content and process.

There is a considerable movement at present to provide teachers with access to assessment technologies that can be used in planning the test, constructing the test, scoring the test, and analyzing the results. These technologies provide timely reports that will allow the teacher to make thoughtful and accurate assessment of a lesson's effectiveness and the extent to which the lesson achieved its goal. These technologies also provide a system for maintaining information on student progress in learning and in many instances students participate in the maintenance of their own records.

What should we assess?

Throughout the nation, educational standards determine what students should understand, know, and be able to do. Teachers design their curriculum, implement instructional strategies, develop assessment practices and select professional development activities to best meet these standards. In “A Policy-Maker’s Guide to Standards-Based Assessment” from a *No Child Left Behind* Issue Brief (2002) it is stated that “standards must be specific enough to enable everyone (students, parents, educators, policy makers and the public) to understand what students need to learn. They also must be precise enough to permit a fair and accurate judgment of whether the standards have been met.”

Standards provide targets for teaching and learning at the national, state, district and school level. They are sometimes categorized as Content Standards or Learning Standards. Content standards are those that refer to knowledge and skills belonging to a particular discipline. Learning Standards are the process and skills not specific to any content area because they can be used in many disciplines and situations. Standards identify the most important knowledge and skills from the various disciplines and often require new and/or different forms of assessments.

What is the standard I am teaching?

In 1989 the National Council of Teachers of Mathematics released the Curriculum and Evaluation Standards for School Mathematics. Since that time other disciplines have followed suit. Across the nation school districts are developing standards-based curriculum and states are designing standards-based assessments. To support the implementation of a standards-based curriculum, professional development may be needed to study the organization and structure of the standards. This study may include: “unpacking” the standard, analyzing the components, identifying prerequisite skills, awareness of related standards at other grade levels, and generating exemplars and/or clarifying activities.

Special consideration should be given to the level of thinking required in the standard as instructional strategies are being selected. Benjamin Bloom’s taxonomy for categorizing levels of abstraction of questions commonly provides a useful structure for communicating the level of thinking required for achievement of standards. This taxonomy can give direction for the selection of resources and activities. While standards do not mandate a particular curriculum, resource or instructional approach, they make clear what is expected of students as the result of instruction.

What is the “big idea” that I want to convey?

A coherent instructional unit has a well-defined structure. Big ideas and focal points in the disciplines serve as organizers for clusters of standards and facilitate the development of integrated units of study. Standards-based units are sometimes designed around these “big ideas”. This concept allows students to explore a subject from many different perspectives and understand the relationship of the parts to the whole.

What is the best way for students to demonstrate their mastery of the standard?

What we know about learning indicates that assessment and learning are closely linked. Assessment can be standardized or alternative depending on how the test is administered and scored. The assessment can be summative or formative depending on the time of year or where in the course or unit the test is given. The assessment can also be formal or informal depending on to whom or what the student will be compared. Norm referenced and criterion referenced assessments are types of formal assessments.

Formal assessments assume a single set of expectations for all students. They are defined by prescribed criteria for scoring and interpretation. Formal assessments take place at set times. During a formal assessment, all students in a class are evaluated in the same manner. Their examination involves the same content, format, and testing conditions. Results are reported as a grade or a score and are used to determine individual students’ abilities in a specific area of learning.

During informal assessment, a teacher evaluates students’ progress while they are participating in a learning activity in the classroom. Results are used to make decisions about what to do next. Informal assessments take place on an ongoing basis. Observations, checklists, student portfolios, teacher/student conference notes, learning logs, journals, projects, oral presentations, reports and discussion groups are types of informal assessments.

The broad array of content and learning standards gives direction to the variety and types of assessment instruments. A good assessment is one that is aligned to a standard, both in content/process, level of difficulty, and level of thinking. The test has distracters that are plausible and based on common error patterns. In short, it is important to select the type of assessment that is best aligned to the standard and best fits the purpose of the assessment. Teachers should select the method of assessment that will best demonstrate the student’s ability to meet the standard.

How do we pull it all together?

Standard-based curriculum and assessment has great potential for improving student achievement and accountability. The achievement of this end will depend on educators' ability to obtain the resources and expertise to help students meet the expectations of the standards. In summary, well-implemented standards-based assessments serve as a safety net to catch any student before he or she is left behind.

References

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