Research Brief

Formative Assessment

Questions: What should educators know about formative assessments?
How frequently should they be used?
How do you develop a quality formative assessment?
How should the data from the assessments be used?

Summary of Findings:

In a Nutshell

There are many kinds of classroom assessment---from informal observation of students to more formal exams and standardized tests. Two categories have been identified--- formative assessments and summative assessments.

Formative assessments are used by teachers to provide feedback to students and to guide improvement of instruction. For example, if a teacher notices that some students did not learn a concept, she or he can try a different instructional strategy or re-teach the content. Formative assessments also allow students to monitor their progress. Formative assessment is often used to make decisions about instructional practices.

Summative assessments evaluate the effectiveness of instructional programs and services and occur at the end of an academic year or other pre-determined time. A summative assessment is used to determine student competency at an identified point in time. For example, most states require a standardized test at certain grades. They are useful in determining if students have mastered certain content and to identify curricular areas needing more attention.

Assessing student learning is routine in schools. Recently, the effectiveness of many long-standing practices has been questioned. According to Marzano (2000), assessment is the "Vehicle(s) for gathering information about students' achievement or behavior" (p. 12). Stiggins stated that assessment has two purposes: "To inform instructional decisions and to motivate students to try to learn" (2005). Wiggins suggested that educators often think of assessment as "…something one does after teaching and learning are over instead of seeing assessments as central to learning," but we have come to appreciate that quality assessments can be used to help improve student performance (2004). As a result of the pressure on schools to make Adequate Yearly Progress by scoring well on high stakes tests, there is growing concern that the focus on summative assessment has distracted teachers and principals from the importance of high-quality formative assessments. What needs to be in place in order for formative assessment to be meaningful for the students and teachers?

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Summative Assessment

A summative assessment "…documents how much learning has occurred at a point in time; its purpose is to measure the level of student, school, or program success" as well as determine progress toward meeting standards and predicting future performance (Chappuis & Chappuis, 2007/2008). This form of assessment most often takes the form of state and national tests and end of unit and final exams. Garrison and Ehringhaus stated that summative assessment is used "…as a means to gauge, at a particular point in time, student learning relative to content standards." Summative assessment can provide information on effectiveness of programs, curriculum alignment and possibly student placement. Some of the major problems with this form of assessment is that often the information is not reported in a timely manner, so the students have moved on in their academic careers without the benefit of knowing how well they did on this assessment; it does not provide descriptive feedback; and it is difficult to make specific instructional adjustments because the test reports cumulative data (Chappuis & Chappuis, 2007/2008; Coffey, 2009; Garrison and Ehringhaus).

Formative Assessment

Chappuis and Chappuis (2007/2008) stated that formative assessment guides day-to-day instruction and determines the next steps in the instructional process. According to Wiggins (2004) this form of assessment is on going and provides useful feedback to the student and teacher so that it is "educative" for all. Boston suggested that "assessment becomes formative when the information is used to adapt teaching and learning to meet student needs" (2002), while Jackson said that it provides "real time" feedback to students during the learning process (2009).

Designing and using formative assessment

When you begin to design and use formative assessments there are several things you should consider. They include:

1. Examine the record of prior assessments. Is there a balance among formative and summative? What types of formal and informal assessments have been given? How did these assessments inform and modify the instructional program?
2. What are the standards and goals for the assessment?
3. What information will be helpful to the teacher and students?
4. What information about their learning will be motivational for the students?
5. What is the developmental level of the students?
6. How will the students analyze and use the assessment results to effect growth (Boston, 2002; Chappuis, & Chappuis, 2007/200; National Center for Fair and Open Testing, 2007; Wiggins, 2004; Zimmaro, 2004)?

Developing a formative assessment

As you develop a formative assessment you will want to examine the content to be assessed and assure that the assessment measures the learning, provides helpful information and promotes continued student learning. The following steps may be useful.

1. List the content to be assessed
2. Indicate key ideas
3. Prioritize key ideas
4. Determine the specific type of assessment it will be. Vary it so that students are forced to develop new skills as well as shine.
5. When designing the assessment:

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a. aim each item toward a standard/goal that will be measured
b. make certain the assessment is aligned with what you want students to know and be able to demonstrate
6. Develop assessments that will make the students stretch and apply their knowledge, but do not try to trick them.
7. Identify and share with students the standards for student success (rubrics, exemplars)
8. Develop a process for sharing assessment information with students. Gain comfort comparing individual student work to the standards and provide information so that students can "trouble shoot" their own performance.
9. Determine the most effective type of feedback that students can use for personal growth and improvement by comparing student work with specific standards.
(Brookhart, 2008; Study guides and strategies, n.d.).

Assessment completed, now what?
One of the significant differences between formative and summative assessment is the importance of using the information you gather from the assessment. It should guide adjustments in teaching and help students improve their learning.
1. Determine the best method to provide feedback to the students. Some examples of this are one-on-one conversation, written, and a small group lesson.
2. Provide feedback to students as soon as possible and describe their work with no personal comments about an individual student. Link feedback to standards so that students can make improve their learning.
3. Teach students how to analyze their work in the areas of the knowledge and skills they developed, how they demonstrated those skills, how close they are to the goals/standards, and what they need to do next. Then require students to analyze their assessment.
4. If possible, provide students with opportunities to take the feedback and do something with it, such as a revising and resubmitting, applying the information to a new situation, etc.
5. Re-teach concept(s) as appropriate and necessary
(Brookhart, 2008; Gagnon, 2001; Jackson, 2009; Stiggins, 2005).

Examples of formative assessment
Formative assessments take many forms but the emphasis is often on the students' ability to perform a task, to demonstrate their learning, and to apply their learning to a new situation. Here are some examples of commonly used formative assessments.

• exhibitions	• observations
• portfolios	• written reports
• role play	• simulations
• debate	• journals
• essays	• games developed by students
• making and supporting	and/or teacher
predictions	• short and frequent tests/quizzes
• anecdotal records	• diagrams/drawings
• journaling	• graphic organizers

(Boston, 2002; Coffey , 2009; Fisher & Frey, 2007; Minneapolis Public Schools, n.d.; Taos School District, n.d.)

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Online Resources:

- Alabama Professional Development Modules. (n.d.). Developing multiple-choice questions. Retrieved online from http://web.utk.edu/~mccay/apdm/mchoice/mc_b.htm
A full description of how to construct a multiple-choice exam is provided along with numerous samples.

- Alabama Professional Development Modules. (n.d.). Writing true-false questions and evaluating responses. Retrieved online from http://web.utk.edu/~mccay/apdm/t_false/t-f_b.htm
A complete explanation of the components for developing a true/false test is provided in this piece along with many examples.

- Boston, C. (2002). The concept of formative assessment. Retrieved online from http://pareonline.net/getvn.asp?v=8&n=9

- Chappuis, S. & Chappuis, J. (2007/2008). The best value in formative assessment. Retrieved online http://www.ascd.org/publications/educational_leadership/dec07/vol65/num04/The_Best_Value_in_Formative_Assessment.aspx
This article explores the differences between formative and summative assessment.

- Classroom assessment (n.d.) Retrieved online from http://fcit.usf.edu/assessment/basic/basica.html
Although brief, this site has three parts with examples on assessment-formative and summative assessment, setting targets and writing objectives, and reliability and validity.

- Coffey, H. (2009). Summative assessments. Retrieved online from http://www.learnnc.org/lp/pages/5233
A very short article that lists the typical types of summative assessments.

- Formative assessment strategies. (n.d.) Retrieved online from http://www.lincoln.k12.or.us/Files/Formative%20Assessment%20Strategies.pdf
This is a section taken from a guide for student teachers that provides examples of formative assessment strategies.

- Garrison, C., & Ehringhaus, M. (n.d.) Formative and summative assessments in the classroom. Retrieved online from http://www.nmsa.org/portals/0/pdf/publications/Web_Exclusive/Formative_Summative_Assessment.pdf
This piece provides clear and specific definitions and examples of formative and summative assessments.

- Iowa Department of Education. (n.d.). Summative assessment. Retrieved online from http://www.iowa.gov/educate/index.php?option=com_content&view=article&id=1044&Itemid=1487

This webpage gives a brief definition of summative assessment and provides tips on ways to create reliable summative assessments.

- Instructional Assessment Resources. (2007). Short answer questions. Retrieved online from http://www.utexas.edu/academic/diia/assessment/iar/students/plan/method/exams-shortanswer.php
A succinct description and examples are given for designing short answer test questions.

- Minneapolis Public Schools. (n.d.). Formative assessment ideas. Retrieved online from http://aaa.mpls.k12.mn.us/formative.html
A brief list of formative assessment activities are given in this piece.

- National Center for Fair and Open Testing. (2007). The value of formative assessment. Retrieved online from http://www.fairtest.org/value-formative-assessment-pdf
A brief description of formative assessment is provided in this piece.

- Stiggins, R. (2005). Assessment for learning defined. Retrieved online from http://www.assessmentinst.com/wp-content/uploads/2009/05/afldefined.pdf
This article describes the differences between assessment for learning and assessment for monitoring student learning.

- Study guides and strategies. (n.d.) Constructing multiple-choice tests. Retrieved online from http://www.studygs.net/tsttak3a.htm
A brief piece with suggestions and strategies for developing multiple-choice tests.

- Taos School District. (n.d.) Types of formative assessment. Retrieved online from http://taosschools.org/THS/School%20Improvement/CIEDipTTModule7TypesofFormativeAssessment.pdf
A list with descriptions of formative assessment ideas is provided.

- Wiggins, G. (2004). Assessment as feedback. Retrieved online from http://www.newhorizons.org/strategies/assess/wiggins.htm
This piece describes the differences between providing feedback and giving assessment.

- Zimmaro, D. (2004). Writing good multiple-choice exams. Retrieved online from http://www.utexas.edu/academic/mec/research/pdf/writingmcexamshandout.pdf
This is a highly descriptive paper on considerations for developing a high quality and reliable multiple-choice test. It includes numerous examples of different structures of questions.

Print Resources
- Brookhart, S. M. (2008). *How to give effective feedback to your students*. Alexandria, VA: Association for Supervision and Curriculum Development.
This book offers strong examples of many ways to provide effective feedback to students on their work and assessments.

- Fisher, D. & Frey, N. (2007*). Checking for understanding*. Alexandria, VA: Association for Supervision and Curriculum Development.

A myriad of strategies and suggestions for helping teachers and students check assessments for understanding are provided in this book.

- Gagnon, G. W. & Collay, M. (2001). *Designing for learning*. Thousand Oaks, CA: Corwin Press.
  Chapter 7 specifically describes different types of formative assessments.

- Jackson, R. R. (2009). *Never work harder than your students*. Alexandria, VA: Association for Supervision and Curriculum Development.
  Several chapters in this book provide ideas for ways to provide meaningful feedback to students on their work.

- Marzano, R. J. (2000). *Transforming classroom grading*. Alexandria, VA: Association for Supervision and Curriculum Development.
  This is an examination of grading practices and ways in which to bring substantive meaning to grades for student growth.

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