

ATTRIBUTES OF EFFECTIVE FORMATIVE ASSESSMENT

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Paper prepared for the Formative Assessment for Teachers and Students (FAST) State Collaborative on Assessment and Student Standards (SCASS) of the Council of Chief State School Officers (CCSSO)



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Background of a Definition

There has been substantial interest in *formative assessment* among U.S. educators during recent years. Increasing numbers of educators regard formative assessment as a way not only to improve student learning, but also to increase student scores on significant achievement examinations. To promote the use of formative assessment, the Council of Chief State School Officers (CCSSO) created a national initiative. The initiative formally began in January 2006, when CCSSO formed the Formative Assessment (FA) Advisory Group consisting of measurement and education researchers including Jim Popham, Lorrie Shepard, Rick Stiggins, and Dylan Wiliam and state agency leaders from across the nation. (A complete list of FA Advisory Group members is at end of document.)

CCSSO also formed a new State Collaborative on Assessment and Student Standards (SCASS) to implement the vision of the FA Advisory Group. The first challenge for the Formative Assessment for Students and Teachers (FAST) SCASS was to work with the FA Advisory Group to review the various definitions of formative assessment and related research. The FA Advisory Group and FAST SCASS devoted substantial effort to clarify the meaning of “formative assessment,” based on current literature, and determine how formative assessment may best be used by the nation’s educators.

In October 2006, FAST SCASS educators representing approximately 25 states agreed on the definition of formative assessment presented in this document and it was subsequently approved by the FA Advisory Group. In the year following, the FAST SCASS and FA Advisory Group isolated the attributes that, based on the research and current literature, would render formative assessment most effective. This document presents the definition of formative assessment and identifies and explains the five attributes of effective formative assessment.

The Definition of Formative Assessment

During the October 2006, inaugural FAST SCASS meeting in Austin, Texas, the following definition of formative assessment was adopted, without dissent:

Formative assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students’ achievement of intended instructional outcomes.

A Closer Look at the Definition

The primary purpose of the formative assessment process, as conceived in this definition, is to provide evidence that is used by teachers and students to inform instruction and learning during the teaching/learning process. Effective formative assessment involves collecting evidence about how student learning is progressing during the course of instruction so that necessary instructional adjustments can be made to close the gap between students’ current understanding and the desired goals. Formative assessment is not an adjunct to teaching but, rather, integrated into instruction and learning with teachers and students receiving frequent feedback.

One key feature of this definition is its requirement that formative assessment be regarded as *a process* rather than a particular kind of assessment. In other words, there is no such thing as “a formative test.” Instead, there are a number of formative assessment strategies that can be implemented during classroom instruction. These range from informal observations and conversations to purposefully planned instructionally embedded techniques designed to elicit evidence of student learning to inform and adjust instruction.

A second important part of the definition is its unequivocal requirement that the formative assessment process involve both teachers *and* students. The students must be actively involved in the systematic process intended to improve their learning. The process requires the teacher to share learning goals with students and provide opportunities for students to monitor their ongoing progress.

Attributes

There are five attributes that have been identified from the literature as critical features of effective formative assessment. No one of the following attributes should be regarded as a *sine qua non*, that is, an attribute without which the assessment would not be formative.

1.

Learning Progressions: Learning progressions should clearly articulate the sub-goals of the ultimate learning goal.

Learning progressions describe how concepts and skills build in a domain, and show the trajectory of learning along which students are expected to progress. From a learning progression teachers have the big picture of what students need to learn, as well as sufficient detail for planning instruction to meet short-term goals. They are able to connect formative assessment opportunities to the short-term goals to keep track of how well their students' learning is moving forward.

For example, at the earliest stages of a progression for historical inquiry students must learn how to investigate the past from a range of sources of information, (e.g., stories, eyewitness accounts, pictures, photographs, artifacts, historic buildings, museums, galleries, and technology-based sources). Students build on this learning in later stages of the progression to develop an understanding that people represent and interpret the past in different ways (e.g., through pictures, plays, films, reconstructions, museum displays, and fiction and nonfiction accounts), and that the interpretations reflect the intentions of those who make them (e.g., writers, archaeologists, historians, and filmmakers). A goal for students at each level of the progression would be to investigate a set of artifacts in increasingly sophisticated ways to extract information about a particular period or event in history. Not only would such investigations support the students' development of historical reasoning, they would also provide evidence of the students' ability to reason in increasingly complex ways. This involves moving from the early stages of reasoning based on simple observation to the more complex stages based on indirect observation and the synthesis of multiple sources of information. Using the evidence elicited from such tasks connected to the goals of the progression, a teacher could identify the "just right gap" – a growth point in learning that involves a step that is neither too large nor too small – and make adjustments to instruction accordingly.

2.

Learning Goals and Criteria for Success: Learning goals and criteria for success should be clearly identified and communicated to students.

Because the formative assessment process helps students achieve intended learning outcomes based on explicit learning progressions, teachers must first identify and then communicate the instructional goal to students. In addition to communicating the nature of the instructional goal, teachers must provide the criteria by which learning will be

assessed so that students will know whether they are successfully progressing toward the goal. This information should be communicated using language readily understood by students, and may be accompanied by realistic examples of those that meet and do not meet the criteria.

For example, suppose the goal of a social studies instructional unit was to have students "prepare a written critique of the quality of arguments in political essays in a local newspaper's editorial pages." The teacher might first offer students a paraphrased version of that goal such as, "You will be able to judge the strengths and weaknesses of arguments in the editorials you find in our daily newspapers." The teacher would discuss the criteria for evaluating arguments and then provide several examples of critiques of political essays. This will provide students with a reasonably clear idea of the analytic skills they are to develop and also provide them with the tools required to assess their own written analyses.

3.

Descriptive Feedback: Students should be provided with evidence-based feedback that is linked to the intended instructional outcomes and criteria for success.

Descriptive feedback should be about the particular qualities of student learning with discussion or suggestions about what the student can do to improve. It should avoid comparisons with other pupils. Specific, timely feedback should be based on the learning goal and criteria for success. It should help the student answer three basic questions: Where am I going? Where am I now? How can I close the gap?

For example, in an eighth grade writing class the students are learning how to construct an argument. They are focusing specifically on speech-writing and have examined several effective speeches, both from prominent speech-makers in history and from previous years' eighth grade students. In this particular lesson, students have been asked to write an opening paragraph to their speech with the success criteria of introducing their topic in a way that engages the audience. The feedback the teacher gives to one student is, "The opening paragraph does not capture the audience's attention because it does not clearly state what the speech is about. However, the opening sentence of the second paragraph states your position with an effective contrast. What can you do to improve or strengthen your opening paragraph?" With this kind of descriptive feedback and collaboration, the teacher clarifies the goal for the student, provides specific information about where the student is in relation to meeting the criteria, and offers enough substantive information to allow the student an opportunity to identify ways to move learning forward.

Similarly, in a sixth grade math class students working in groups have been asked to review an example of the steps

a student from a previous year took to solve a problem. They must decide if the work is correct or incorrect and provide an explanation for their view. The success criterion that the teacher gives them is, “Include any properties or rules that may apply in your explanation.” When the groups report back after their discussions, the teacher listens for the rules or properties in the explanations, and this becomes the focus of her feedback. To one group she says, “Your explanation shows me that you understand that the steps the student took to solve the problem were incorrect. Remember the success criterion. You must also relate your explanation to one of the properties we have been discussing in class to indicate the reason the steps were incorrect.” Again, the students know the goal, where their response differed from the criteria, and how they can improve their explanations.

4.

Self- and Peer-Assessment: Both self- and peer-assessment are important for providing students an opportunity to think meta-cognitively about their learning.

Formative assessment is a process that directly engages both teachers and students. In addition to teacher feedback, when students and their peers are involved there are many more opportunities to share and receive feedback. Helping students think meta-cognitively about their own learning fosters the idea that learning is their responsibility and that they can take an active role in planning, monitoring, and evaluating their own progress. To support both self- and peer-assessment, the teacher must provide structure and support so students learn to be reflective of their own work and that of their peers, allowing them to provide meaningful and constructive feedback.

In self-assessment, students reflect on and monitor their learning using clearly explicated criteria for success. In peer-assessment, students analyze each others’ work using guidelines or rubrics and provide descriptive feedback that supports continued improvement. For example, students can work in pairs to review each other’s work to give feedback. A teacher needs to have modeled good feedback with students and talked about what acceptable and unacceptable comments look like in order to have created a safe learning environment. Students can use a rubric to provide feedback to a peer by articulating reasons why a piece of work is at one level and discussing how it could be improved to move it to the next level. Alternatively, feedback could be given using a format such as “two stars and a wish,” which provides a structure for a student to identify two aspects of the work that are particularly strong (stars) and one aspect the peer might improve (a wish). Students then need time to reflect on the feedback they have received to make changes or improvements. In addition, students can be encouraged to be self-reflective by thinking about their own work based on what they learned from giving feedback to others. A further benefit of providing feedback to a peer is that it can help deepen the student’s own learning. However, student- and peer-assessment should not be used in the formal grading process.

5.

Collaboration: A classroom culture in which teachers and students are partners in learning should be established.

Sharing learning goals and criteria for success with students, supporting students as they monitor and take responsibility for their own learning, helping students to provide constructive feedback to each other, and involving students in decisions about how to move learning forward are illustrations of students and teachers working together in the teaching and learning process.

However, for students to be actively and successfully involved in their own learning, they must feel that they are bona fide partners in the learning process. This feeling is dependent on a classroom culture characterized by a sense of trust between and among students and their teachers; by norms of respect, transparency, and appreciation of differences; and by a non-threatening environment. Creating such a culture requires teachers to model these behaviors during interactions with students, to actively teach the classroom norms, and to build the students’ skills in constructive self- and peer-assessment. In this type of classroom culture, students will more likely feel they are collaborators with their teacher and peers in the learning process.

While evidence exists in varying degrees to support the five attributes presented, there is clearly no one best way to carry out formative assessment. The way these attributes are implemented depends on the particular instructional context, the individual teacher, and—perhaps most importantly—the individual students.

For examples on how to incorporate the five attributes into practice refer to the document *Formative Assessment: Examples of Practice*.²

Suggested Readings

Heritage, M. (February, 2008). *Learning Progressions: Supporting Instruction and Formative Assessment*. Council of Chief State School Officers: Washington DC.

² *Formative Assessment: Examples of Practice*. Council of Chief State School Officers: Washington, DC 2008. A work product initiated and led by E. Caroline Wylie, ETS, for the *Formative Assessment for Students and Teachers (FAST) Collaborative*.

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³ *The CCSSO Formative Assessment Advisory Group was formed in March 2006. This is a list of the original members who were responsible for developing and approving the definition and attributes of effective formative assessment.*