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**Defining Formative Assessment: (taken from ISSUES&ANSWERS
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Formative assessment policies, programs, and practices in the Southwest
Region

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What is formative assessment? A definition recently adopted by the Council of Chief State School Officers was used to guide the collection of formative assessment data for each state: *An assessment is formative to the extent that information from the assessment is used, during the instructional segment in which the assessment occurred, to adjust instruction with the intent of better meeting the needs of the students assessed (Popham, 2006).*

As the definition suggests, formative assessments are intended to support learning and help target instruction through feedback that informs teachers about student progress toward valued learning goals (Sadler, 1989). Such assessments can help educators measure learning outcomes or detect learning gains over short periods of time, rather than just after a year of instruction (Black and Wiliam, 1998, 2002, 2006; Commission on Instructionally Supportive Assessment, 2001; National Research Council, 2001a; Wiliam, 2007). They can be used both to describe student learning and to evaluate instructional methods. Since formative assessments aim to improve instruction, they tend to target specific, finely grained learning goals rather than broad academic standards (Shepard et al., 2005). Although some locally designed interim or benchmark tests may be included in the category, formative assessments should be distinguished from statewide standardized tests of achievement, end-of-course exams, and mini- summative benchmark assessments (practice tests) intended to prepare students for high-stakes accountability tests (Perie, Marion, & Gong, 2007).

According to a seminal article by Black and Wiliam (1998), the term formative assessment does not merely signify how data are used, but also refers to a family of related assessment processes. Most educators today agree (Olson, 2006; Wiliam, 2005, 2007). For the purposes of the present study, a formative assessment is any assessment that is intentionally and purposefully linked to instruction, could yield rich diagnostic information about students, and is not intended for assigning summative or end-of-course grades (Wiggins, 1998).

States have several reasons for developing formative assessment policies and programs and for supporting formative assessment practices. Among them are improving learning outcomes for all students, promoting effective instructional practices across districts, and creating balance in the state's comprehensive assessment system.

Improving learning outcomes for all students

The processes for using data to improve learning outcomes are grounded in cognitive development theory about how learning occurs and competence develops (National Research Council, 2001b). Clear communication of learning goals, with specific criteria for judging progress, ensures that teacher and learner share a consistent message. Then, through an interactive process, teachers build on students' existing knowledge and support, or scaffold, learning in small increments by focusing on key errors and prescribing the corrective steps needed for improvement.

During this process students are engaged and guided in adjusting their conceptual frameworks and learning strategies to received feedback (Pellegrino, 2006; Stiggins, 2002). The feedback reveals gaps between learning goals and the student's current status. When the process is functioning optimally, the student can see where problems arise and how to adjust in order to meet learning goals. The teacher can also use the student's progressive efforts to refine instructional methods (Ramaprasad, 1983; Sadler, 1989). Because both student and teacher share responsibility for learning outcomes, they adapt to narrow the gap between what the student knows and what learning targets still need to be reached.

For two reasons formative assessment processes might be particularly effective for improving learning outcomes for low-performing students.

First, they are associated with a wide range of individualized interventions and instructional modifications that have proven effective for addressing diverse learning needs (Black & Wiliam, 2002, 2006; Bloom, 1984; Crooks, 1988; Fuchs, Fuchs, Mathes, & Simmons, 1997; Natriello, 1987; Nyquist, 2003; Wiliam, 2007). Results used formatively have been useful in guiding curricula or instruction suited to a particular student population (Boston, 2002; Shepard et al., 2005).

Second, formative assessment processes provide specific information about key errors or misconceptions and suggestions for improvement that may prevent students from becoming discouraged (Ames, 1992; Bangert-Drowns, Kulik, Kulik, & Morgan, 1991; Boston, 2002; Elawar & Corno, 1985; Vispoel & Austin, 1995). Students have the opportunity to acknowledge their limitations through candid self-appraisal without punitive consequences. This process facilitates the development of metacognitive skills that foster self-evaluation, enabling students at almost any level to develop a tool box of strategies for achieving target goals

and transferring what is learned to new contexts (Assessment Reform Group, 2002; Shepard et al., 2005). Promoting effective instructional practices across all districts within a state. By adapting instructional strategies, formative assessment processes can be used to transform test results into meaningful learning activities (Fuchs et al., 1997; Shepard, 2000a; Shepard et al., 2005). They encourage teachers to develop instructional practices supported by research in cognitive science, measurement theory, and instructional technology (Chudowsky & Pellegrino, 2003; Stiggins, 2002) and by the principles endorsed by the Commission on Instructionally Supportive Assessment (2001). In addition, depending on the context, formative assessments could serve different instructional purposes, including:

- Describing a student's academic strengths and limitations. Estimating a group's knowledge level prior to instruction
- Checking for misconceptions following instruction.
- Providing evidence of progress toward learning goals at key intervals during instruction.
- Differentiating instruction.
- Catalyzing curricular reform.
- Evaluating the effectiveness of an instructional strategy.

Educators have used results from formative assessments to measure, detect, diagnose, grade, prescribe, treat, observe, identify, and correct. Formative assessments can be administered at different times in the instructional cycle (collected continually, periodically, or at key intervals throughout a course of instruction), using different modes of administration (paper-based, computer-based, or performance-based) or formats (multiple-choice, open-ended, computer-adaptive, self-evaluation, journal, portfolio, or project; Commission on Instructionally Supportive Assessment, 2001; National Research Council, 2001a).

Because formative assessments can serve different roles in the states, different models compete for educators' attention (Black and William, 1998, 2006; Olson, 2006; Shepard et al., 2005). Tests described as formative include curriculum-based assessment (Council of Chief State School Officers, 2001), instructionally supportive assessment (Commission on Instructionally Supportive Assessment, 2001), instructionally sensitive assessment (Shepard, 2000b), assessment for learning (Stiggins, 2002), and diagnostic assessment. Targeted research to facilitate decisionmaking about the most effective formative assessment practices is lacking. But findings from research in related areas (such as school reform, see Darling-Hammond & McLaughlin, 1995; and accountability reform, see Goodwin, Englert, & Cicchinelli, 2003) suggest that access to key structures and resources is likely to better position state decisionmakers to weigh the tradeoffs of each formative assessment option in relation to state goals for instruction. Specifically, targeted support for the following stakeholder groups has been shown to enable decision making about

instructional improvement through formative assessment:

- Teachers, who need professional growth opportunities to ensure development of content knowledge and specialized pedagogical skills that have been linked to effective instructional practices (Elmore, 2002; Shepard et al., 2005; Stiggins, 2002).
- District and school administrators, who need the support of data management systems that facilitate documentation of assessment processes and appropriate reporting and use of results (Heritage, Lee, Chen, & LaTorre, 2005; Reeves, 2004).
- State policymakers, who need empirical data to defend decisions about assessment policies, programs, and practices (Pellegrino, 2006; Wiliam, 2005, 2007).

Attention to these types of support can help ensure, across all districts, that formative assessment practices are consistent with state goals for effective instruction.