

AERO GLOSSARY

Assessment : Techniques to analyze student learning against specific criteria. Includes paper-pencil tests, exhibits, interviews, surveys and observations. Good assessment requires a balance of techniques.

Authentic assessment: An assessment presenting tasks that reflect the kind of mastery demonstrated by experts. Authentic assessment of a student's ability to solve problems, for example, would assess how effectively a student solves a real problem.

Authentic task: School assignment that has a real-world application. Such tasks bear a strong resemblance to tasks performed in non-school settings (such as the home, an organization, or the workplace) and require students to apply a broad range of knowledge and skills. Often, they fill a genuine need for the students and result in a tangible end product.

B

Backward design: Process of developing a curriculum or unit by beginning with the end in mind and designing toward that end. The process starts with the desired results and then identifies the evidence necessary to determine that the results have been achieved—the assessments. With the results and assessments clearly specified, knowledge, skills, teaching strategies and materials are then developed.

Benchmark: Statement that provides a description of student knowledge expected at specific grades, ages, or developmental levels. Benchmarks often are used in conjunction with standards.

Benchmark assessments - Reliable and valid, standards-based assessments administered to a whole-group or individual at regular intervals. The assessment results can be used to determine student growth and student performance relative to grade-level achievement expectations. Benchmark Assessments can be used to guide classroom instruction and identify individual student needs for re-teaching, intervention and/or acceleration. In addition, Benchmark Assessments provide periodic evaluation of program effectiveness and guide professional development efforts.

C

Coaching: An instructional method in which one teaches, directs, and supports another person via encouragement and advice.

Cognitive science: A science investigating *how* people learn rather than *what* they learn. Prior knowledge and out-of-classroom experience help form the foundation on which teachers build effective instruction. Also referred to as the *study of the mind*.

Cognitively guided instruction: An instructional strategy in which a teacher assesses what students already know about a subject and then builds on students' prior knowledge. Students typically are asked to suggest a way to represent a real problem posed by the teacher. Guided questions, encouragement and suggestions further encourage students to devise solutions and share the outcome with the class.

Collaborative learning or cooperative learning: An instructional approach in which students of varying abilities and interests work together in small groups to solve a problem, complete a project, or achieve a common goal.

Common assessment: An assessment agreed to collaboratively by a team of teachers responsible for the same grade level or course and given to all students in that course or grade level.

Constructivism: Theory suggesting that students learn by constructing their own knowledge, especially through hands-on exploration. It emphasizes that the context in which an idea is presented, as well as student attitude and behavior, affects learning. Students learn by incorporating new information into what they already know.

Criterion-referenced assessment: An assessment that measures what a student understands, knows, or can accomplish in relation to specific performance objectives. It is used to identify a student's specific strengths and weaknesses in relation to skills defined as the goals of the instruction, but it does not compare students to other students.

Critical thinking: Logical thinking that draws conclusions from facts and evidence.

Curriculum (plural *curricula*): A plan of instruction that details what students are to know, how they are to learn it, what the teacher's role is, and the context in which learning and teaching will take place.

Curriculum alignment: The process of linking assessments, instructional materials and units to standards and benchmarks for the purpose of assuring what is taught in the school matches the standards and that there is alignment between the written curriculum and the taught curriculum. Curriculum alignment occurs after the data has been “mapped” about the operational curriculum.

Curriculum frameworks - Curriculum Frameworks are the what of teaching. They set a standard for what students must be exposed to and expected to master.

Curriculum mapping: A process of collecting data for the purpose of identifying the operational or taught curriculum at each grade level/course. The identification includes the actual time it takes to implement the curriculum. It includes organizing and recording information about the curriculum for a visual display. The data generally provide information that enables teachers to identify and address gaps and repetitions.

D

E

Enduring understanding: The important ideas or core processes that have lasting value beyond the classroom. Such understandings are generally abstract in nature, so they require examination through sustained inquiry. To determine enduring understandings for a unit or course, teachers are encouraged to ask, “What do we want students to understand and be able to use several years from now, after they have forgotten the details?”

Essential question: A provocative questions designed to engage student interest and guide inquiry into the important ideas in a field of study. Rather than yielding pat answers, essential questions are intended to stimulate discussion and rethinking over time.

Equity: The state of educational impartiality and fairness in which all children—minorities and non-minorities, males and females, successful students and those who fall behind, students with special needs and students who have been denied access in the past—receive a high-quality education and have equal access to the services they need in order to benefit from that education.

Evaluation: The process of making a decision in relationship to the results of assessments. Evaluations are based on multiple sources of information.

Exhibition of mastery: A type of assessment in which students display their grasp of knowledge and skills using methods such as skits, video presentations, posters, oral presentations, or portfolios.

F

Facilitator: A role for classroom teachers that allows students to take a more active role in learning. Teachers assist students in making connections between classroom instruction and students' own knowledge and experiences by encouraging students to create new solutions, by challenging their assumptions, and by asking probing questions.

Formative assessment- formative assessment occurs when teachers feed information back to students in ways that enable the student to learn better, or when students can engage in a similar, self-reflective process.

G

H

"Hands-on/minds-on" activities: Activities that engage students' physical as well as mental skills to solve problems. Students devise a solution strategy, predict outcomes,

activate or perform the strategy, reflect on results, and compare end results with predictions.

Heterogeneous grouping: Grouping together students of varying abilities, interests, or ages.

Higher-order questions: Questions that require thinking and reflection rather than single-solution responses.

Higher-order thinking skills: Understanding complex concepts and applying sometimes conflicting information to solve a problem, which may have more than one correct answer.

Holistic scoring: Using a scoring guide or anchor papers to assign a single overall score to a performance

I

Informal knowledge: Knowledge about a topic that children learn through experience outside of the classroom.

Inquiry: A process in which students investigate a problem, devise and work through a plan to solve the problem, and propose a solution to the problem.

Instructional frameworks - Instructional Frameworks are the how of teaching. They set a standard for what teachers are expected to do in order to prepare for, connect with, meaningfully engage and accurately assess the wide variety of learners that sit in every classroom.

Interdisciplinary curriculum: A curriculum that consciously applies the methodology and language from more than one discipline to examine a central theme, issue, problem, topic, or experience.

J

K

L

Learner-centered classroom: Classroom in which students are encouraged to choose their own learning goals and projects. This approach is based on the belief that students have a natural inclination to learn, learn better when they work on real or authentic tasks, benefit from interacting with diverse groups of people, and learn best when teachers understand and value the difference in how each student learns.

"Less is more": A principle built on the idea that quality is of higher importance than quantity. It is reflected in instruction that guides students to focus on fewer topics investigated in greater depth, with teachers performing the task of prioritizing subjects as well as specific skills within those subjects.

M

Manipulative: Any physical object (e.g., blocks, toothpicks, coins) that can be used to represent or model a problem situation or develop a mathematical concept.

Matrix sampling: An assessment method in which no student completes the entire assessment but each completes a portion of the assessment. Portions are allotted to different, representative samples of students. Group (rather than individual) scores are obtained for an analysis of school or district performance.

Metacognition: The process of considering and regulating one's own learning. Activities include assessing or reviewing one's current and previous knowledge, identifying gaps in that knowledge, planning gap-filling strategies, determining the relevance of new information, and potentially revising beliefs on the subject.

Modeling: Demonstrating to the learner how to do a task, with the expectation that the learner can copy the model. Modeling often involves thinking aloud or talking about how to work through a task

N

O

Open-ended question: A question that has many avenues of access and allows students to respond in a variety of ways. Such questions have more than one correct answer.

Open-ended task: A performance task in which students are required to generate a solution or response to a problem when there is no single correct answer.

Open-response task: A performance task in which students are required to generate an answer rather than select an answer from among several possible answers, but there is a single correct response.

Outcome-based education: An integrated system of educational programs that aligns specific student outcomes, instructional methods, and assessment.

P

Performance assessment: Systematic and direct observation of a student performance or examples of student performances and ranking according to preestablished performance

criteria. Students are assessed on the result as well as the process engaged in a complex task or creation of a product.

Performance criteria: A description of the characteristics to be assessed for a given task. Performance criteria may be general, specific, analytical trait, or holistic. They may be expressed as a scoring rubric or scoring guide.

Performance indicators - A criterion or measure for monitoring or evaluating the efficiency or effectiveness of a system or service that may be used to demonstrate accountability and to identify areas for improvement.

Performance standards -. Explicit definitions of what students must do to demonstrate proficiency at a specific level on the content standards; performance standards contain performance indicators, common assessments, student work, and teacher commentary.

Performance task: An assessment exercise that is goal directed. The exercise is developed to elicit students' application of a wide range of skills and knowledge to solve a complex problem.

Portfolio assessment: An assessment process that is based on the collection of student work (such as written assignments, drafts, artwork, and presentations) that represents competencies, exemplary work, or the student's developmental progress.

Prior knowledge: The total of an individual's knowledge at any given time.

Problem solving: A method of learning in which students evaluate their thinking and progress while solving problems. The process includes strategy discussion--determining solution strategies to similar problems and pinpointing additional problems within the context of their investigation.

Q

R

Reliability: An indicator of score consistency over time or across multiple evaluators. Reliable assessment is one in which the same answers receive the same score regardless of who performs the scoring or how or where the scoring takes place. The same person is likely to get approximately the same score across multiple test administrations.

Restructuring: See systemic reform.

Rubrics: Specific criteria or guidelines used to evaluate student work

S

Scaffolding: An instructional technique in which the teacher breaks a complex task into smaller tasks, models the desired learning strategy or task, provides support as students learn to do the task, and then gradually shifts responsibility to the students. In this manner, a teacher enables students to accomplish as much of a task as possible without adult assistance.

Scale: The range of scores possible for the student to achieve on a test or an assessment. Performance assessments typically use a 4- to 6-point scale, compared to a scale of 100 or more with traditional multiple-choice tests.

Scientific knowledge: Knowledge that provides people with the conceptual and technological tools to explain and describe how the world works.

Scoring guide: A set of guidelines for rating student work. A scoring guide describes what is being assessed, provides a scoring scale, and helps the teacher or rater correctly place work on the scale.

Standardized tests: Assessments that are administered and scored in exactly the same way for all students. Traditional standardized tests are typically mass-produced and machine-scored; they are designed to measure skills and knowledge that are thought to be taught to all students in a fairly standardized way. Performance assessments also can be standardized if they are administered and scored in the same way for all students.

Standards: Statements of what students should know and be able to demonstrate at the end of a given period, most are written for grade 12

Summative assessment - Summative assessment is the attempt to summarize student learning at some point in time, for example the end of a unit or course. Most standardized tests are summative. They are not designed to provide the immediate, contextualized feedback useful for helping teacher and student during the learning process

Systemic reform: Change that occurs in all aspects and levels of the educational process and that impacts all stakeholders within the process—students, teachers, parents, administrators, and community members—with implications for all components, including curriculum, assessment, professional development, instruction, and compensation.

T

Teaching for understanding: A teaching method that focuses on the process of understanding as the goal of learning rather than simply the development of specific skills. It focuses on forming connections and seeing relationships among facts, procedures, concepts, and principles, and between prior and new knowledge.

Technology: In education, a branch of knowledge based on the development and implementation of computers, software, and other technical tools, and the assessment and evaluation of students' educational outcomes resulting from their use of technology tools.

Traditional assessment: An assessment in which students select responses from a multiple-choice list, a true/false list, or a matching list

U

V

Validity: An indication that an assessment instrument consistently measures what it is designed to measure, excluding extraneous features from such measurement.

W

X

Y

Z

Zone of proximal development: A level or range in which a student can perform a task with help