Advantages and Disadvantages of Formative and Summative Assessments for Students and Teachers

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Rationale

Every classroom, just like Cambodia, is full of wonder. Teachers wonder if their students are learning what they are teaching, students wonder if what is being taught will be on the test, and if what they are supposed to learn will ever really matter in their lives. There are two basic types of assessments, summative and formative. Classic forms of summative assessments present themselves in the form of tests and quizzes taken after the lesson has been presented, after learning has supposedly taken place. However, learning assessments need to be completed during the learning process in order to remove road blocks to learning before they become lifelong barriers. Formative assessments are the best tool for both teachers and students to end the wondering and start working together to make the classroom learning experience smoother and more effective. Formative assessments tell students that the teacher cares about their learning experience and values their opinions about what is being taught and how it's being presented. No two classrooms are the same. Each will have a different variety of students bringing different backgrounds and experiences to the learning environment. This is why it is important for educators to be aware of and to practice with a variety of different formative and summative assessment techniques because every classroom of students will bring a new mix of learning challenges and student needs. The intuitive feelings a teacher has about the students in his or her classroom can be reinforced or corrected with the proper application of assessments. The feedback received from these assessments will help the teacher fine tune teaching strategies and help students fine tune their learning strategies. Regularly using a mixture of formative and summative assessments makes both the teacher and the student better learners.

Key Definitions in Educational Assessment

Abilities: demonstrable behaviors – both innate and learned – that result in an observable outcome (Paholsky, 2011).

Accountability: the idea or belief that schools and teachers must take responsibility for measurable student learning (Rose & Meyer, 2002).

Assess: to gather information about a learner from a variety of tasks and sources to determine abilities and knowledge for the purpose of making educational decisions (Rose & Meyer, 2002).

Assessment: the systematic collection and analysis of information to improve student learning (Stassen, Doherty, & Poe, 2001).

Authentic assessment: assessment strategies that require students to directly reveal their ability to think critically and to apply and synthesize their knowledge (Carleton College, 2006).

Classroom assessment: assessments conducted continuously in college classrooms by discipline-based teachers to determine what students are learning in that class (Harwood & Cohen, 1999).

Curriculum: the overall plan for instruction, and the materials, methods, and assessments to carry out the plan. Curriculum is comprised of four main components:

1. Goals and milestones for instruction (often in the form of a scope and sequence)

2. Media and materials to be used by students;

3. Specific instructional methods (often described in a teache 's edition), and

4. Means of assessment to measure student progress. (Rose & Meyer, 2002).

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Evaluation: an organized procedure for collecting and using information in order to make a decision or judgment on the effectiveness of either a person or a process. It can be composed of single or multiple assessments or sources (Paholsky, 2011).

Feedback: an evaluative response about the result of a process or activity. In writing, a response from receivers of a written communication to its sender, intended to helps the sender improve his written communication skills (Rose & Meyer, 2002).

Formative assessment: a type of classroom assessment used by teachers to help guide instruction by highlighting a student's academic strengths and weaknesses. Formative assessment is referred to as "assessment for learning" rather than "assessment of learning" (Oregon Department of Education, 2010).

Learning Objective: a statement in specific and measurable terms that describes what the learner will know or be able to do as a result of engaging in a learning activity (Ohio University, n.d.).

Portfolio: a systematic collection of a variety of teacher observations and student work, collected over time, that monitor growth of the student's knowledge, skills, and attitudes in a specific subject area. Portfolios can be print based or digital (Rose & Meyer, 2002).

Rubric: a standardized scoring tool that supports authentic assessment by delineating specific performance criteria arranged in levels to indicate to what degree a standard has been reached. Rubrics can be integrated into the ongoing learning process to help students and teachers evaluate progress and make adjustments (Rose & Meyer, 2002).

Self-monitor: to keep track of, or obtain an intermittent awareness of, how one is doing relative to one's purpose (Rose & Meyer, 2002).

Self-assessment journal: a record kept by a student consisting of a stated learning goal or goals (decided upon with the teacher) and the student's self- evaluation of his/her progress toward achieving these goals based on a portfolio of work produced. See also self-monitor (Rose & Meyer, 2002).

Standards: established and documented norms or requirements of the assessment, course, program or professional criteria for performance (Rose & Meyer, 2002).

Standards-based: curriculum and instruction that targets required student knowledge and skills as reflected in local, state, national, international or industry standards (Oregon Department of Education, 2010).

Standardized test: a measure of student learning (or other ability) that has been widely used with other students. Standardized scores (e.g., mean, standard deviation, percentiles) have been developed so that a student taking the test can compare his or her score to the historical data. These are also sometimes called achievement tests. Examples are the SAT, GRE, GMAT, LSAT, MCAT, etc. (California State University Long Beach, n.d.).

Summative assessment: evaluation at the conclusion of a unit or units of instruction, or an activity or plan to determine or judge student skills and knowledge. Also is an evaluation of the effectiveness of a plan or activity (Carleton College, 2006).

Test: an organized process for measuring knowledge, skills or abilities; frequently used interchangeably with the word assessment (Paholsky, 2011).

Validity: the degree to which an assessment can be considered accurate; includes elements of non-bias and consistency (Paholsky, 2011).

Advantages and Values

The following chart shows the advantages of formative and summative assessment for both the student and the instructor.

Advantages of Assessment		
	Student	**Instructor**
Formative	● Can better connect with the course content and the learning process. Students can see the areas in which they have improved and areas of strength and weakness (Haugen, 1999) which can lead to a personal understanding of how on learns and can best study (Enerson, et.al 2007) ● Clarify to student the expectations of the instructor prior to being graded (Stassen, et.al, 2001) ● Feels more connected to the class, that the instructor cares about his or her success (Haugen, 1999) ● Fosters an attitude that values understanding and leads to long-term retention of material the more times students are asked to recall or use information (Haugen, 1999) ● Opportunity to apply acquired knowledge and use critical thinking skills (Stassen, et.al, 2001) ● Fosters an attitude that learning and teaching are continually evolving and require full participation from both parties (Haugen, 1999)	● Provide daily feedback that can be applied immediately (Haugen, 1999). If the instructor has clear learning objectives to achieve in the classroom, he or she can regularly check in to see if the objectives are being met by students (Alber, 2012) ● The information instructors get can guide where instruction should go in the future (Alber, 2012), assisting in learner-centered lesson-planning (Enerson, et.al, 2007) ● Avoids surprises at the end of the term if some students do not understand the material early on (Alber, 2012). The instructor can immediately address misconceptions or a lack of understanding to keep the entire class on track (Haugen, 1999). ● Less time-consuming than summative assessment (preparing tests or grading essays) (Haugen, 1999) ● Classroom Assessment Techniques make informal evaluation more systematic and focused, which make them more useful for instructors (Angelo & Cross, 1993)
Summative	● Opportunity to apply acquired knowledge and use critical thinking skills (Stassen, et.al, 2001) ● Can better connect with the course content and the learning process. They can see the areas in which they have improved (Haugen, 1999)	● Provides a way for teachers to formally evaluate the student ● The information instructors get can help them improve their teaching (seeing areas that students did poorly on can drive instructors to change how they taught a particular subject) (Walvoord, 2009)

Disadvantages and Limitations

The following chart shows that both formative and summative forms of assessment also present limitations and disadvantages to the student and instructor.

Disadvantages of Assessment		
	Student	**Instructor**
Formative	• Informal Assessment activities fall short in meeting requirements for program accountability. Informal instruments may be valid within a program, but the data does not translate across programs (Askov, et.al, 2007).	• Informal assessments are often teacher constructed and can be time consuming to put together (Askov, et.al., 2007). • Assessments that target multiple intelligences are not universally accepted by institutions and may not be considered an acceptable form of assessment (Brown, 2004). • With activities such as a back-ground knowledge probe, the discovery of your students' back-ground and preparation may be at odds with your expectations can throw even the best-planned les-son or syllabus off-track (Enerson, et.al, 2007)
Summative	• For many adult learners, test anxiety is based on past experi-ences. They may have a history of repeated school failure (either real/perceived) (Askov, et.al., 2007). • Many adult learners may have nev-er learned specific test-taking stra - egies to ease their anxieties. Some or all of these factors combine to create an unrealistic perception of the testing situation (Askov, et.al., 2007). • Many institutions (and instructors) still use traditional, one-shot stan-dardized testing with decontextual-ized test items and allow scores to speak for feedback (Brown, 2004). • Some ESL students may have had little formal education in their native countries and may be unfamiliar with the testing situation itself (Askov, et.al., 2007).	• Students may learn the material for the assessment with the atti-tude that they will be able to forget about it after the test is taken, making it less likely to produce the learning outcomes desired by the instructor (Brown, 2004). • There is often the (incorrect) assumption that standardized tests correctly assess all learners equally well (Brown, 2004). • With standardized testing, there is pressure on teachers engage in test driven teaching (Brown, 2004).

Conclusions

The advantages and disadvantages of formative and summative assessments are undoubtedly varied. Formative assessments allow students to better connect to the course content and they can lead to a classroom environment of long term retention. These assessments also allow instructors to better gauge the learning pace which in turn can lead to lowered instructor stress. The disadvantages, however, are that they are more also informal and can be difficult to measure. Summative assessments, on the other hand, can be more formal and allow both the student and instructor to get a good measure on learning and test-taking abilities. However, these summative assessments can be more stressful for students and can focus too much on standardized testing which will lead to cramming for a test instead of actually learning the content. This focus on standardized testing can also be detrimental to instructor planning because the instructors might focus too much on test driven teaching. Taking everything into account, an ideal classroom will have both formative and summative assessments periodically throughout the course term, but will not focus too much on summative assessments. Formative assessments Doing this, students and instructors can accurately and precisely measure the level of learning thus leading all parties to educational success.

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