

Summative Assessment

Revised March 2021

Introduction

A discussion about balanced assessment is incomplete without describing the role of summative assessment in classroom learning. When considering summative assessment, three common questions are raised:

- What is summative assessment?
- How is summative assessment different from formative assessment?
- How can educators craft better summative assessments?

Key Findings

What is summative assessment?

Assessment is the process of gathering evidence of learning [1]. It is generally divided into two categories: *assessment for learning* and *assessment of learning*. **Assessment for learning** is synonymous with formative assessment (FA). In contrast, **assessment of learning**, under which summative assessment falls, is used “to determine a learner’s achievement, attainment, and/or progress” [3].

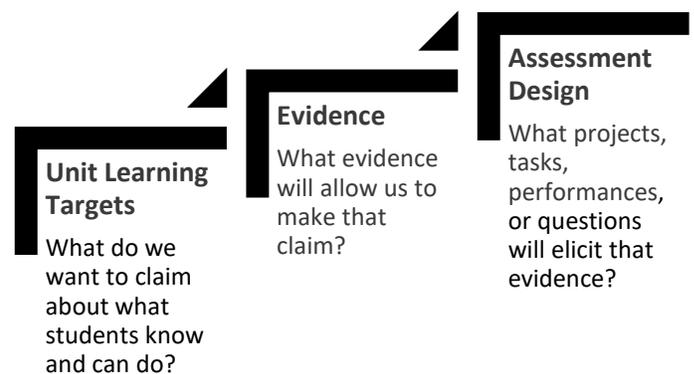
Summative assessments (SAs) are given at the conclusion of instruction [4] and help educators define what students know at a specific point in time. Classroom SAs can be used for grades, instructional alignment, and eligibility for special programming [5]. Examples include capstone projects and end-of-unit tests.

How is summative assessment different from formative assessment?

Classroom assessments are used to make inferences about students. The primary difference between summative and formative assessments are the types of inferences drawn. If the inferences relate to the status of a student, then the assessment is being used summatively. In contrast, if the inferences are about the actions that would help a student best learn the material, then the assessment is functioning formatively [6].

How can educators craft better summative assessments?

SAs should have an **evidence-focused design**. The Center for Assessment describes a three-step process (Figure 1) for planning SAs [7].



Unit Learning Targets

Designing a better SA starts at the beginning of a unit when learning targets are crafted.

Learning targets (LTs) are statements that express what students should achieve by the end of a unit [8]. They should be specific and derived from state standards.

Evidence

After writing clear LTs, the next step is determining what type(s) of evidence would appropriately demonstrate student mastery of them. At this stage, it is helpful to look at the action verb(s) used in the LTs. For example, if an LT asks students to “Use Boyle’s law to explain an observation,” then students should be “using” and “explaining” the law as part of their assessment.

Assessment Design

What and how teachers assess sends a message to students about what content has value and how they are expected to learn it [9]. Solid assessment design includes considerations for validity, reliability, and fairness.

Validity

Validity tells whether or not an assessment measures what it intends to measure [10], [11]. For example, a valid use of an intelligence assessment is to measure intelligence – not achievement. This means teachers need to align their assessment formats (selected response, essay, etc.) with the stated LTs [9].

Reliability

Reliability reflects consistency of measurement [12]. For example, an assessment could be considered reliable if two teachers give the exact same assessment to the exact student (without any additional instruction or support) and obtain very similar scores. Many teachers improve the reliability of their assessments by using a formal procedure for scoring [8], [13]. However, the best thing teachers can do is construct assessments with care [12].

Fairness

Fairness ensures “assessments are free of elements that would offend or unfairly penalize

students on the basis of gender, ethnicity, etc.” [12]. To ensure assessments are fair, teachers go through their assessments and improve any items that are biased or unfairly disadvantage certain sub-groups of students. They can also confirm their assessments meet accessibility standards.

A Few Additional Tips

Teachers are often tempted to mix judgments of academic work with judgements of work habits. These two elements should be assessed separately so that assessments are a valid indicator of student performance [14], [9].

Educators should also use multiple measures to gauge student attainment and should situate summative assessment appropriately within a balanced assessment system. Far more time should be spent on FA than SA [11]. Students should be involved at every step of the assessment process – beginning with the FAs.

Finally, the best assessments are evaluated for rigor. Educators should think about the cognitive complexity of their assessment questions, covering a wide range of lower-level and higher-level thinking skills [8].

Conclusion

Well-crafted SAs help to accurately measure student mastery, making them an essential part of a balanced assessment system. Care should be taken to design these assessments well.

What does this mean for schools?

- Ensure all units begin with clear LTs that are aligned to state standards.
- Construct summative assessments with care, making sure assessments are valid, reliable, and fair.
- When possible, use multiple measures to gauge student mastery.
- Involve students in the assessment process so they can develop ownership of their own learning.

Resources

- [1] P. Black, "Formative and summative aspects of assessment: Theoretical and research foundations in the context of pedagogy," in *SAGE Handbook of Research on Classroom Assessment*, J. H. McMillan, Ed. Thousand Oaks, CA: SAGE Publications, Inc., 2013, pp. 167–178.
- [2] Michigan Assessment Consortium, "Assessment FOR learning," *Michigan Assessment Consortium*. <https://www.michiganassessmentconsortium.org/assessment-resources/assessment-for-learning/> (accessed Oct. 20, 2020).
- [3] Michigan Assessment Consortium, "Assessment OF learning," *Michigan Assessment Consortium*. <https://www.michiganassessmentconsortium.org/assessment-resources/assessment-of-learning/> (accessed Oct. 21, 2020).
- [4] "What are summative assessments?" Accessed: Oct. 21, 2020. [Online]. Available: https://www.michiganassessmentconsortium.org/wp-content/uploads/2019_May_WHAT-ARE-SUMMATIVE-ASSESSMENTS3.pdf.
- [5] D. D. Dixson and F. C. Worrell, "Formative and summative assessment in the classroom," *Theory Pract.*, vol. 55, no. 2, pp. 153–159, Apr. 2016, doi: 10.1080/00405841.2016.1148989.
- [6] P. Black and D. Wiliam, "Classroom assessment and pedagogy," *Assess. Educ. Princ. Policy Pract.*, vol. 25, no. 6, pp. 551–575, Nov. 2018, doi: 10.1080/0969594X.2018.1441807.
- [7] C. M. Evans and J. Thompson, "Summative Classroom Assessment," *Google Slides*, Jun. 19, 2020. www.nciea.org/classroom-assessment-learning-modules (accessed Oct. 20, 2020).
- [8] S. M. Brookhart and A. J. Nitko, *Educational assessment of students*, 8th Edition. Pearson, 2018.
- [9] C. M. Moss, "Research on classroom summative assessment," in *SAGE Handbook of Research on Classroom Assessment*, J. H. McMillan, Ed. Thousand Oaks, CA: SAGE Publications, Inc., 2013, pp. 235–255.
- [10] W. J. Popham, *Assessment literacy for educators in a hurry*, Illustrated Edition. Alexandria, VA: ACSD, 2018.
- [11] L. Darling-Hammond *et al.*, "Criteria for high-quality assessment," Stanford Center for Opportunity Policy in Education, Stanford, CA, Jun. 2013.
- [12] W. J. Popham, *Classroom assessment: What teachers need to know*, 7th Edition. Pearson, 2013.
- [13] C. Campbell, "Research on teacher competency in classroom assessment," in *SAGE Handbook of Research on Classroom Assessment*, J.H McMillan, Ed. Thousand Oaks, CA: SAGE Publications, Inc., 2013, pp. 71–84.
- [14] S. M. Brookhart, "The use of teacher judgement for summative assessment in the USA," *Assess. Educ. Princ. Policy Pract.*, vol. 20, no. 1, pp. 69–90, Feb. 2013, doi: 10.1080/0969594X.2012.703170.

