

Rethinking formative and summative assessment

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It's a popular idea – educational assessments are either 'summative' assessments *of* learning or 'formative' assessments *for* learning. But just how fundamental is this distinction? And is it truly useful?

Establishing where students are in their learning

An alternative is to recognise that the essential purpose of assessment in education is to establish and understand where students are in an aspect of their learning at the time of assessment. This usually means inferring what they know, understand and can do from observations of their performances and work.

The question of what students know, understand and can do can be asked before, during or after teaching – or without reference to a course of instruction at all.

The question also can be addressed at differing levels of diagnostic detail. For example, assessments can be used to establish overall levels of student achievement in a subject such as Physics; mastery of particular topics such as energy and mechanics; or the ability to apply Newton's First Law to explain the relationship between force and motion in practical situations. These assessments provide information about increasingly narrow and specific areas of learning, but they differ in degree, not kind. They share the same underlying purpose: to establish and understand where students are in their learning.

Use in planning future action

Information about where students are in their learning can be used to plan future action. This is true whether assessment information is collected as part of a teacher's day-to-day work and used to guide next steps in teaching and learning, or through international programs such as the Programme for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS), and used by education systems to guide future policies and programs.

Information about where students are in their learning clarifies the current situation and assists in identifying starting points for action.

The use of assessment information to guide future action might be described as the 'formative' use of assessment. Because learning is potentially ongoing, most, and perhaps all, assessments in education could be used 'formatively'. The important point is that the term 'formative' best describes a particular *use* of assessment information – not a separate class of assessment instruments or processes.

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In the same vein, when assessments are used to guide future action, the ultimate intention is to promote learning. This is true whether assessments are used to guide the work of teachers, students, school leaders or education systems. The use of assessment to guide future action is, ultimately, assessment *for* improved learning outcomes.

Use in evaluating past progress

Information about where students are in their learning also can be used to evaluate *past* progress. Has a student's reading level improved, and by how much? Are average levels of achievement in a school better than they used to be? Has the national performance of a particular subgroup of the student population improved over time? Questions of these kinds are retrospective rather than prospective. They focus on growth or progress over time and might be described as evaluations *of* the learning or improvement that has occurred. The answers to such questions are required to evaluate the effectiveness of teaching strategies, interventions and educational programs, making the assessment *of* learning a vital element of every educator's work.

Assessments to establish the points students have reached in their learning by the end of a course are sometimes described as 'summative'. But again, summative assessments are not a fundamentally different class of assessments. They are simply assessments undertaken at a specific time in students' potentially ongoing learning. Because they generally provide information about the full range of course objectives, and are not designed primarily to identify starting points for further teaching and learning, such assessments typically provide coarse rather than fine diagnostic detail.

Reflection

There is no consistent definition of the terms 'formative' and 'summative' in the assessment literature. Some writers make this distinction in terms of timing alone: summative assessments occur at the end of a course; formative assessments are undertaken while the course is in progress. But the time at which an assessment is made is hardly a basis for a fundamental distinction.

Others define this distinction in terms of intended use: formative to inform future teaching and learning; summative to describe and evaluate past learning. But in other areas of life, we do not measure constructs differently depending on whether we intend to use the results prospectively or retrospectively (although we may seek more detailed information when planning future action).

Still others see the distinction in terms of who does the assessing: formative assessments are undertaken by teachers; summative assessments are externally developed. But some externally developed tests provide detailed diagnostic information to guide classroom teaching and learning, and some teachers construct end-of-course examinations.

And the more recent terms 'assessment *of* learning' and 'assessment *for* learning' suffer from a similar lack of clarity. For example, evaluations of learning progress are essential *for* effective teaching and learning.

Perhaps the time has come to ask whether our attempt to categorise educational assessments as either 'formative' or 'summative' is serving us well. A more unified theory of assessment might begin by observing that the fundamental purpose of assessment in education is to establish and understand the points that students (either as individuals or groups) have reached in their learning at the time of assessment, and that there are then different ways to use this information.

Read more

Read [Assessment: Getting to the essence](#), a background paper by Geoff Masters.

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