

Assessment is it a...Necessary Evil in the Curriculum?

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Assessment is defined as the processes and instruments applied to measure the learner's achievements. The word "assess" comes from the Latin word "assidere" meaning "to sit with." In assessment, one is supposed to sit with the learner. This implies that it is something we do "with" and "for" students and not "to" students (Green, 1999).

Medical school	Is the money worth spending? Are we teaching the right things? Are we teaching in the right way?	Program justification Curricular modifications Curricular improvement
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WHY WE DO AN ASSESSMENT?

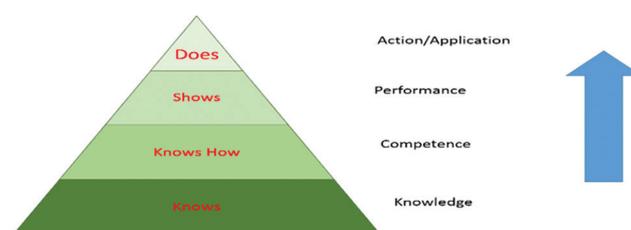
- To determine whether the learning objectives that are set *a priori* are met.
- To support student learning.
- Certification and judgment of competency.
- Development and evaluation of teaching programs.
- Understanding the learning process.
- Predicting future performance.

Stake Holders

It is important to consider the needs of all the stakeholders involved. Stakeholders, or persons involved with or invested in the testing process, include test takers, administrators, parents, teachers, instructors, and many others. It may not be possible to meet the needs of all stakeholders. However, it is important to plan with these groups in mind and to find a test that fits best. By taking the time to consider the impact of the test for multiple stakeholders, you may avoid or reduce any negative consequences and promote positive ones. Tests can be high-stakes or low-stakes depending on how the test will affect the examinee or other stakeholders. There are times when one test can be high-stakes for one person, but low-stakes for another.

Stakeholders	Questions	Interest
Medical student	Have I achieved knowledge and competence? How can I do better?	Competency judgment Support for learning
Medical teacher	How successful was my teaching? How can I do better?	Program validation Program improvement
Professional body and public (consumer)	Are we producing safe doctors?	Certification and licensing

WHAT TO ASSESS?



Teaching requires assessment, i.e., the evaluation of student understanding in light of the goals of a lesson or a course. This is a broad definition, and indeed, there are many forms of assessment, and all of them involve student work. That work can be graded or ungraded. It can take a few minutes (as with the 1-min paper) or it can take weeks (as with the group project). It can ask students to demonstrate understanding or skills acquisition through writing, the creation of a product or presentation, or the ability to successfully accomplish some task. It can ask students to demonstrate their understanding as individuals or as members of a group.

Student learning outcomes articulate what a student should know or can do after completing a course or program. The assessment of student learning outcomes provides information that puts student learning at the forefront of academic planning processes. No matter their form, assessments should reflect and be determined by the learning goals of a lesson or a course. However, linking goals to assessment can be tricky. If your goal is for students to understand a concept, do you mean that they should be able to recall facts? Summarize information? Apply information or predict consequences? Analyze or compare phenomena? Generate models? Evaluate and justify arguments? Perhaps, you want your students to be able to demonstrate their

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understanding by doing a combination of these things. You should ask yourself whether or not your assessments are related to the goals of the lesson or the course, for example, are the assessments measuring whether students have met the learning goals?

WHAT ARE THE TYPES OF ASSESSMENT?

Formative Assessment

Formative assessment is an integral part of teaching and learning. It does not contribute to the final mark given for the module; instead, it contributes to learning through providing feedback. It should indicate what is good about a piece of work and why this is good; it should also indicate what is not so good and how the work could be improved. Effective formative feedback will affect what the student and the teacher do next.

Summative Assessment

Summative assessment demonstrates the extent of a learner's success in meeting the assessment criteria used to gauge the intended learning outcomes of a module or program, which contributes to the final mark given for the module. It is normally, though not always, used at the end of a unit of teaching. Summative assessment is used to quantify achievement, to reward achievement, and to provide data for selection (to the next stage in education or to employment). For all these reasons, the validity and reliability of summative assessment are of the greatest importance. Summative assessment can provide information that has formative/diagnostic value.

“Authentic” or Work-integrated Assessment

“Authentic” or work-integrated assessment is an assessment where the tasks and conditions are more closely aligned to what you would experience within employment. This form of assessment is designed to develop students' skills and competencies alongside academic development. The collaborate project at Exeter developed a set of tools to support academic staff in the design of authentic assessments.

Diagnostic Assessment

Like formative assessment, diagnostic assessment is intended to improve the learner's experience and their level of achievement. However, diagnostic assessment looks backward rather than forward. It assesses what the learner already knows and/or the nature of difficulties that the learner might have, which, if undiagnosed, might limit their engagement in new learning. It is often used before teaching or when a problem arises.

Dynamic Assessment

Dynamic assessment measures what the student achieves when given some teaching in an unfamiliar topic or field. It can be useful to assess the potential for specific learning in the absence of relevant prior attainment or to assess general learning potential for students who have a particularly disadvantaged background. It is often used in advance of the main body of teaching.

Synoptic Assessment

Synoptic assessment encourages students to combine elements of their learning from different parts of a program and to show their accumulated knowledge and understanding of a topic or subject area. A synoptic assessment normally enables students to show their ability to integrate and apply their skills, knowledge, and understanding with breadth and depth in the subject. It can help to test a student's capability of applying the knowledge and understanding gained in one part of a program to increase their understanding in other parts of the program, or across the program as a whole. Synoptic assessment can be part of other forms of assessment.

Criterion-referenced Assessment

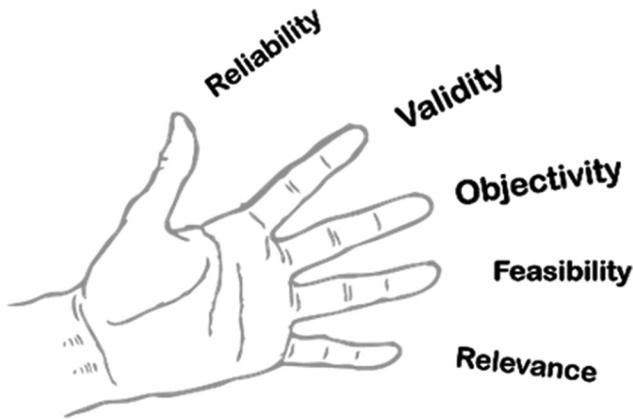
Each student's achievement is judged against specific criteria. In principle, no account is taken of how other students have performed. In practice, normative thinking can affect judgments of whether or not a specific criterion has been met. Reliability and validity should be assured through processes such as moderation, trial marking, and the collation of exemplars.

Ipsative Assessment

This is assessment against the student's own previous standards. It can measure how well a particular task has been undertaken against the student's average attainment, against their best work, or against their most recent piece of work. Ipsative assessment tends to correlate with effort, to promote effort-based attributions of success, and to enhance motivation to learn.

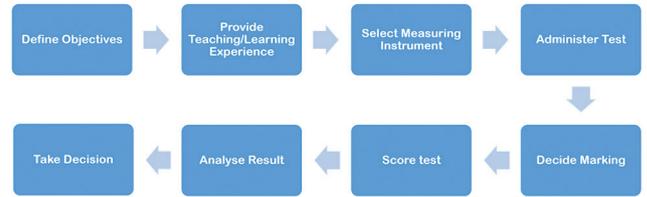
CHARACTERISTICS OF ASSESSMENT

Assessment involves understanding how assessments are made, what type of assessments answer what questions, and how the data from assessments can be used to help teachers, students, parents, and other stakeholders make decisions about teaching and learning. Assessment designers strive to create assessments that show a high degree of fidelity to the following five traits.



Affective Observation Rating scales, checklists, questionnaires, diary, logbook, group discussion

STEPS OF EVALUATION



As said by George Miller, no single assessment method can provide all the data required for judgment of anything so complex as the delivery of professional services by a successful physician.

Assessment should be:

- Designed prospectively along with learning outcomes
- Must provide valid and usable, reliable, and generalizable data
- Should be driven by the purpose, targeting all levels in Miller’s pyramid.
- Content validity should be established by a proper blueprint of learning outcomes
- Students need to be tested with multiple cases and scenarios to achieve an acceptable degree of reliability.

REFERENCES

1. Practical Guide to Medical Student Assessment Zubair Amin. National University of Singapore
2. Epstein RM. Assessment in medical education. N Engl J Med 2007;356:387-96.

Assessment Tools

- Written examination
- Assessment by supervising clinicians
- Direct observation or video review
- Clinical simulations
- Multisource assessment
- Portfolios.

Domain-wise matrix of evaluation methods		
Domain	Method	Instrument
Cognitive	Written	Essays
		Short answer and very short answer questions
		Short structured questions
		Modified essay questions
		Objective item supply and selection type
		Simulated patient management problems
		Assignments
Orals	Questions	
Psychomotor	Observation	Practicals, clinicals, OSCE, OSPE