

Diagnostic/Formative/Summative Assessment

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Introduction

- Why assessment?
 - helping students meet certain standards
 - using the assessment data to identify strengths and weaknesses in student performance, and to improve the quality of teaching and learning
 - 3 types of assessments:
 - diagnostic,
 - formative, and
 - summative

The Purpose of Assessment

Seven purposes of assessment:

- To assist student learning.
- To identify students' strengths and weaknesses.
- To assess the effectiveness of a particular instructional strategy.
- To assess and improve the effectiveness of curriculum programs.
- To assess and improve teaching effectiveness.
- To provide data that assist in decision making
- To communicate with and involve COI.

[Swearingen, 2002]

Assessment VS Evaluation

ASSESSMENT

- Gather
- Summarize
- Interpret
- Use data to ***decide direction for action***

EVALUATION

- Gather
- Summarize
- Interpret
- Use data to ***determine the extent to which an action was successful***

Evaluation Types: Levels and Uses

Formative

Evaluation of an individual learner used to help individual improve performance;

- Identification of areas for improvement
- Specific suggestions for improvement.

Diagnostic assessment

A distinct form of measurement. Its purpose is to ascertain, prior to instruction, each student's strengths, weaknesses, knowledge, and skills.

Establishing these permits the instructor to remediate students and adjust the curriculum to meet each learner's unique needs.

Summative

Evaluation of an individual learner used for judgments or decisions about the individual

- Verification of achievement for individual
- Motivation of individual to maintain or improve performance
- Certification of performance
- Grades
- Promotion

- Summative assessment: summary assessments of student performance – including tests, examinations & end-of-year marks.
 - SA of individual students may be used for promotion, certification or admission to higher levels of education.
 - Formative assessment, by contrast, draws on information gathered in the assessment process to identify learning needs and adjust teaching.
 - **Summative assessment is sometimes referred to as assessment of learning, and**
 - **Formative assessment, as assessment for learning.**
- [OECD 2011]

Formative assessment

- Formative assessment is now seen as an integral part of the teaching and learning process.
- It encompasses classroom interactions, questioning, structured classroom activities, and feedback aimed at helping students to close learning gaps.
- Students are also actively involved in the assessment process through self- and peer-assessment.
- Information from external sources may also be used formatively to identify learning needs and adjust teaching strategies.
- The crucial distinction is that the assessment is formative if and only if it shapes subsequent learning (Black and Wiliam, 1998; Wiliam, 2006).

– [OECD 2011]

- Classroom-based “formative assessment” has taken on an increasingly important role in education policy in recent years [OECD, 2011].
- Formative assessment refers to the frequent, interactive assessment of student progress to identify learning needs and shape teaching (OECD, 2005).
- Studies established that formative assessment methods and techniques produce significant learning gains [OECD, 2011].

- Formative assessment incorporates tests *within study units, for example, when students had finished working on a specific learning activity, in order to allow teachers to diagnose learning needs and adjust teaching at that point.*
- ***Classroom cultures are important to effective formative assessment practice.***

Summative Assessment

- A high-stakes type of assessment for the purpose of making final judgments about student achievement and instructional effectiveness.
- By the time it occurs, students have typically exited the learning mode.
- Summative assessment forms an end point that sums up the performance or learning level of achievement.
- The evaluation of summative assessments provides a look at student performance as well as an opportunity to evaluate instructional practices.
- Examples of summative assessment include but are not limited to:
 - Chapter/Unit tests
 - Projects
 - Performances
 - Final copies

Four Levels of Evaluation

- attitudes, reactions and feelings
- learning (perceptions or knowledge)
- skills (applying learning to practice)
- effectiveness (improved performance)

Tools for Measuring Learning Outcomes

Writing skills	Essay questions; term papers; take home exams
Team work	Group projects
Ethical reasoning	Case study analysis
Lifelong learning	Attendance of public lectures; Working with faculty on projects

Student Evaluation: Theory

- Examinations, quizzes.
- Term papers.
- Group projects.
- Class participation.
- Oral presentations.
- Course assignments.

Student Evaluation: Lab/Clinical/Field work [practicum]

- Anecdotes; Critical incidents
- Clinical conferences.
- Simulations: Case studies; Mini-Clinical Exam (Mini-CEX); Objective Structured Clinical Exam (OSCE).
- Written assignments: care plans, clinical logs, reflective writing, nursing notes, teaching plan.
- Checklists.
- Competency measurement.

Evaluation methods practicum

- Observation:
 - Two components:
 - Behaviors observed (data)
 - Observer's interpretation
 - Difficulties of method:
 - Teacher variables (influence interpretation)
 - Focus of observation (if exact behaviors not stated)
 - Behaviors sampled may not be representative of student usual performance

Important for Evaluation

- Clearly defined objectives/outcomes
- Clearly defined evaluation criteria
- Authenticity
 - Assessment that is aligned with the classroom objectives and that reflects real-world applications is called authentic assessment.
- Variety
 - Another method of insuring quality assessment is to use a variety of assessment techniques.
- Volume
- Validity
- Reliability