



## The importance of student assessment in medical school

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### ABSTRACT

Assessment is one of the significant components of teaching and learning cycle; it is the considerable enhancements of students' learning. And uses in the universities to obtain evidence to determine whether students have met the learning outcomes and program objectives.

The importance of assessment include a significant role in the process of medical education, in the life of medical students, and in society by certifying expert physicians who can take care of the people, Evaluate the teaching methods used, The assessment program making goals and objectives clear and in structuring training and learning, fosters teaching and learning, enhances student's capacity for education and engagement with the curriculum, Addresses student progress, Identifying any areas in need of intervention.

**Keywords:** *Student assessment, Medical school, The importance.*

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### Introduction:

Assessment is one of the significant components of teaching and learning cycle; it is the considerable enhancements of students' learning [1]. And uses in the universities to obtain evidence to determine whether students have met the learning outcomes and program objectives [2]. Assessment is one of the most important influences on a student's experience of education and improving evaluation has a massive impact on the quality of learning. And gives us truthful information; it tells us what our students have indeed learned [3].

### The importance of assessment:

- 1) Assessment plays a significant role in the process of medical education, in the life of medical students, and in society by certifying expert physicians who can take care of the people.
- 2) Evaluate the teaching methods used.
- 3) The assessment program making goals and objectives clear and in structuring training and learning.
- 4) The assessment fosters teaching and learning.
- 5) The assessment enhances student's capacity for education and engagement with the curriculum.
- 6) Addresses student progress.
- 7) Identifying any areas in need of intervention.
- 8) Ensuring that the educational process is on track.
- 9) Enable students and teachers to provide and use feedback efficiently, reflect and improve their teaching and learning [3,4].

### The principle of good assessment:

- 1) Alignment between objectives and the students' anticipated learning outcomes.
- 2) The assessment of student learning begins with educational values.
- 3) Be reliable (consistent).
- 4) Be valid (accurate; should measure what it's supposed to measure).
- 5) Be guided by clearly defined rubrics, criteria, and standards.
- 6) Be fair; free from any biases and distortions.
- 7) The assessments permit a Comprehensive rather than a fragmented approach.
- 8) Assessment should reinforce the direction of education.
- 9) All assessment should be meaningful to learning and should reflect the learner's development.
- 10) Assessment should ideally be based in a practice context in which students will find themselves in the future [5,6].

### Relation between Assessment and Learning Outcome:

Plan of assessment must support the curriculum and permit to the students to evidence that they have achieved the curriculum outcomes [3,4]. When students get close to graduating, their attitudes, knowledge, skills, and behavior must be thoroughly assessed to determine their competence to practice as pre-registration house officers [4].

#### **Method for Setting Standards and Making Decisions about Student Performance:**

- 1) Existence about a clear indication of how individual assessments and examinations share in the overall assessment of the curriculum outcomes.
- 2) When they design own assessments, there is a visible indication of how the targeted curriculum outcomes have been met.
- 3) Clear guidelines for examiners for marking estimates, which indicate how performance against focused curriculum outcomes should be rewarded.
- 4) The students have clear guidance about what is predictable of them in any evaluation.
- 5) Create systems to determine the pass mark [4].

#### **Assessment Methods and standard Used in Student's Evaluation:**

The methods used for assessment of students are a balance between formative and summative assessment. And the balance between different types of examinations, written and oral. The use of normative and criterion-referenced judgments, and particular kinds of tests, like objective structured clinical examinations (OSCE), also include systems to detect and prevent plagiarism [3].

#### **The main methods of students' Competencies assessment in the pre-clinical and clinical years are:**

##### ***Cognitive domain:***

- a) Oral examination.
- b) Multiple Choice Questions.
- c) Structured Answer Questions.
- d) Long Essay Questions.
- e) Tutorials.
- f) Seminars [3].

##### ***Psychomotor domain:***

- a) Direct observation of clinical skills (Short and long cases).
- b) Objectively Structured Performance Evaluation (OSPE).
- c) Objective Structured Clinical Evaluation (OSCE).
- d) Practical examination [3].

##### ***Affective domain:***

- a) Interviews.
- b) Direct observation of communication skill and behavior [3].

#### **Examination Assessment Tools:**

##### ***Some Assessment Policy in the medical school includes:***

- 1) Written.
- 2) Clinical.
- 3) Oral.

##### ***1-Written:***

Written tests can assess knowledge acquisition and reasoning ability. They cannot so easily measure skills.

- a) Multiple choice questions:

MCQS can test thoroughly in the cognitive domain at all levels.

Guidelines for writing MCQs in the medical school include:

- 1- Every item should consider the specific content and a single particular mental behavior.
- 2- The content of each element independent of the content of other questions on the test.
- 3-Avoid the opinion-based items.
- 4-Avoid the trick items.
- 5- Use the simple vocabulary for the group of students being tested.
- 6- Ensure that the directions in the stem are apparent.
- 7- Ensure that only one of these choices is the right answer.
- 8-Vary the location of the correct solution according to the number of options.
- 9- Place decisions in logical or numerical order.

- 10- Ensure the decisions independently; choices should not be overlapping.
- 11-Ensure the choices homogeneous in content and grammatical structure.
- 12- Keep the length of options about equal [1].

b) Modified Essay Questions (MEQ):

Features of the (MEQ):

- 1- Hypothesis testing.
- 2-Apply skills to the new situation.
- 3-Problem-solving.
- 4-Lateral thinking.
- 5-Costly.
- 6-Time-consuming.
- 7-Reliability is limited [7].

c) Short answer" Open-ended:

Features of the Short answer:

- 1-More flexible.
- 2-Test issues that require.
- 3-Good for problem-solving.
- 4-Lower reliability.
- 5-Time-consuming [8].

**2-Clinical:**

Assessments validated with external standards because the external examiners participate in all the clinical examinations, and they validate the estimates.

a) Short cases:

-Use real' patients.

b) Long cases:

-Use real' patients.

The advantages of using `real' patients:

- 1-They can demonstrate abnormal findings.
- 2-They require no additional resources and minimum organizational support.
- 3-They are readily available in many situations.
- 4-They offer a high level of acceptability to staff and students [9].

c) Simulated Clinics:

-Use the simulated patients

Simulated patients:

- Individuals trained to play about the role of patients [9].

d) Patient substitutes:

- Including video or sound representations, plastic models, and computer simulations [9].

e) Lab Data Interpretation.

f) OSCE:

The OSCE is an assessment agent based on the principles of objectivity and standardization, which allows the assessment of candidates' performance against standardized scoring schemes by trained assessors [10].

A well-designed OSCE can drive learning, and therefore, can have a positive educational impact. The OSCE is most appropriately used, besides other assessment methods [10].

**3-Oral:**

a) Traditional Oral.

b) Structural Oral.

c) Multiple Interview.

**Portfolio Records of Performance:**

*What is the portfolio?*

A portfolio is a summation of a student's work, which supplies the evidence of the achievement of skills, knowledge, proper attitudes and growth through a process of self-reflection over a period [6,11].

**Features of Portfolios:**

- 1- Student progression towards the learning outcomes.
- 2-The provision of evidence of performance.
- 3-Reflective learning process.
- 4-Summative & formative assessment [6,11].

**Key Features of Student Assessment Methods Quality standards in the medical school:**

**Include:**

1-Validity:

- a) Assessment tools are selected according to the type of learning objectives.
- b) The questions are constructed according to sound educational principles.
- c) The examination covers all areas of the course [3,4,12].

2-Reliability:

- a) The consistency of test scores over time, under different testing status.
- b) Use reliable tests.
- c) More than one examiner [3,4,12].

3- Feasibility and Practicability:

- a) Overall ease of construction, scoring, administration, and reporting of an assessment instrument.
- b) OSCE exam improves feasibility, students could be examined on, videos and photos. When patients conditions do not permit clinical examination [3,4,12].

4-Objectivity:

- a)-The degree by which examiners agree to the correct answer (accurately and fairly, free of examiners' bias).
- b)-Use of external examiners may increase fairness, quality, and transparency of assessment [3].

5-Acceptability:

- The responsiveness of faculty and students to the assessment [3].

6-Value and Educational impact:

- The utility of the test results in producing meaningful conclusions about the educational process [3,4].

**Discussion:**

**The assessment of the student in medical school lead to:**

1-Monitoring the quality of the assessment policy:

To monitoring the quality of the assessment policy by the use of reliable and valid methods of data collection and analysis for the purpose of demonstrating the qualities of the educational assessment about the mission and the intended educational outcomes [3].

Monitoring the assessment would imply the routine collection of data about key aspects of the assessment for the purpose of ensuring that the educational process is on track and for identifying any areas in need of intervention [3]. Periodically evaluate the assessment by comprehensively addressing the context of the educational process [3].

2-Equal opportunities assessment for students:

**Guideline about equal opportunities assessment of students in the medical school include:**

- 1-Provide all students with a fair opportunity to demonstrate the extent of their learning.
- 2-Achieving fairness throughout the assessment of students involves considerations about workload; timing and complexity of the task.
- 3-The teaching and learning activities must provide students with sufficient exposure and practice in the work before the assessment.
- 4-The timing of feedback is also essential. Feedback must be delivered early enough for students to be able to do something with it.
- 5- Consensus moderation processes need to be used to maintain every student will have their learning assessed equally.
- 6-Assessment must take into consideration issues surrounding access, equity, and diversity [13].

**The recommendations to improve the assessment process include:**

- 1- Establishing assessment unit.
- 2- Establishing multi years and yearly assessment plans.
- 3- A clear indication of how the scheme of assessment deals with all the curricular outcomes.
- 4- Examiners are trained to carry out the role and to apply the medical school's assessment criteria consistently.
- 5- External examiners are employed to make sure that standards are met.
- 6- Continually review how well the policy is working and show how it fits the international standards.
- 7- Adding the Portfolio to assessment of the student performance.
- 8- Uses of the Blueprints to specify all the elements of performance relevant to the assessment so that appropriate samples of activity and methods can be selected according to their relative importance to the overall assessment process.
- 9- Assessment should Foster domain-independent skills, competencies like teamwork, communication, presentation, science orientation, professional leadership behavior.
- 10- Create opportunities for the student to collaborate, produce polished products and to practice generic problem-solving and professional skills.
- 11- Ask student to establish goals and to self-evaluate during the experience.
- 12- Review student's evaluation and timelines from the academic training program.
- 13- Developing the tools to be life-long learners and creating, maintaining high standards of excellence.
- 14- The assessment process should be dealing with real-life.

### Conclusions:

This article emphasizes the importance and effect student assessment in medical education. The Assessment Foster domain-independent skills, competencies like teamwork, communication, presentation, science orientation, professional leadership behavior and dealing with real-life.

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