

## Editorial

### Understanding the curriculum and aligning the assessment

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The curriculum represents the expression of educational ideas in practice. The word curriculum has its roots in the Latin word for track or race course. A curriculum is defined more broadly than syllabus or course of study as it covers more than content to be studied. As early as in 1949, Ralph Tyler published the core principles on curriculum development that was organized around four questions, which forms the basis of curriculum development even today:

1. Defining goals - What educational purposes should the school seek to attain?
2. Establishing corresponding learning experiences - How can learning experiences that are likely to be useful in attaining these objectives be selected?
3. Organizing learning experiences to have a cumulative effect - How can learning experiences be organized for effective instruction?
4. Evaluating outcomes - How can the effectiveness of learning experiences be evaluated?

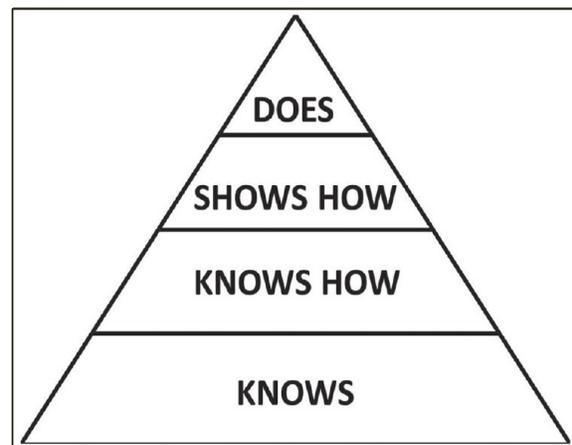
The curriculum thus exists at three levels: what is planned for the students, what is delivered to the students, and what the students experience. The process of defining and organizing the 4 important elements of curriculum: content; teaching and learning strategies; assessment processes; and evaluation processes into a logical pattern is known as curriculum design. It consists of a series of planned educational activities a student is to go through with the assistance of teachers. The integration of curriculum is the coordination of different teaching/learning activities to ensure the harmonious functioning of the educational process for more effective training. Curriculum can thus be defined as a planned educational experience. It's broader than syllabus because in addition to content, it contains organizational sequence of having goals, implementing and evaluating the outcomes.

- a. David Fern's model provides an approach to curriculum design which consists of the following 6 steps:

- b. General needs assessment of society
- c. Targeted needs assessment by SWOT analysis
- d. Establishing goals, objectives and competencies
- e. Developing educational strategies to achieve those objectives
- f. Implementation of the above
- g. Evaluation of outcomes

#### Alignment of Assessments

With revision in curriculum, it becomes imperative to have assessments that are aligned to the competencies or outcomes defined in the curriculum. Assessment should be consistent with curriculum. The ultimate goal of medical education curriculum is to produce a basic, competent doctor. Clinical competence is defined as the "capability to perform acceptably those duties directly related to patient care". In 1990, George Miller proposed a frame work of assessment methods for measuring clinical competence. He proposed a conceptual framework, in the form of a pyramid for methods of assessment in medical education. 'Knows' ( knowledge ) is at the lowest level of the pyramid followed by 'knows how ', 'shows how' (performance), and. 'does' (action). Assessment methods aimed at skills and performance generally fall into the 'shows how' and 'does' level.



### **Performance Based assessments**

The format of the assessment should be driven by purpose. It is important to employ methods of evaluation that specifically assess students' achievement of the skills and behavior they need to learn to practice medicine. The role of Performance Based Assessment (PBA) assumes significance in this context. PBA are designed to measure skills required for competency in psychomotor and affective domain (behavioral skills e.g professional behavior, communication skills). The curriculum in medical education now being predominantly competency based, choosing appropriate assessment methods that accurately assess these clearly defined learning outcomes is the need of the hour. Performance based assessments are basically aimed at assessing clinical competencies in students. Clinical competence is defined as "the ability to gather data from the patient by history and physical examination, integrate this information into a diagnostic formulation, select appropriate investigations to confirm the diagnosis, and institute efficacious management" (Norman, 1981).

led to the formation of new modalities namely performance based assessment (PBA). The goals of PBA are directed (a) toward evidence-based locally developed assessments, (b) toward an understanding of educational outcomes and non cognitive assessment factors, and (c) toward more student-driven assessments. If we remember Miller's pyramid the assessment methods of the "shows how" level which assess skills (psychomotor and communication skills) of medical students are called performance based assessments. They are also called skill based assessment and authentic assessment. The topmost level (does) is skill demonstrated by physicians in practice and this type of PBA is called work based assessment. The purpose of PBA is to certify a level of achievement, provide feedback to students about their clinical skills, or provide faculty with information about curriculum effectiveness. This method of assessment has a powerful impact on learning as it has an effect on how and what students learn.

(Remember Miller's quote: Assessment drives learning)

Clinical competence is an extremely complex construct and one that requires multiple, mixed, and higher order methods of assessment to support valid interpretations. Although medical students are one of the most frequently tested groups in higher education, the methods of assessment are still primarily focused on low-level skills. If we expect excellence of our future physicians, we must begin to ensure competence in high-level skill areas. This begins with the use of more authentic clinical performance assessments.

### **Assessment of competence**

The assessment of clinical competence is becoming increasingly complex, patient centered, and student driven. Traditionally, clinical evaluation methods consisted primarily of faculty observations, oral examinations and multiple-choice tests. Increased faculty workload, discontent with traditional methods of clinical skill assessment and developments in the fields of psychology and education have

The development of optimal performance assessments, at a local or national level, is complex—requiring time, commitment, resources, and substantial efforts. However, this is the price to pay if we are to ensure clinical competence and protect the quality of patient care. Since the 1950s, there has been rapid and extensive change in the way assessment is conducted in medical education. Several new methods of assessment have been developed

and implemented over this time and they have focused on clinical skills (taking a history from a patient and performing a physical examination), communication skills, procedural skills, and professionalism. Adopted assessment methods must reflect the agreed learning outcomes and should inform as to whether a student has or has not achieved the stated outcomes.

### **Training the Assessors**

Teachers are faced with the need to develop non-traditional teaching and assessment techniques which capture both the learning and performance of broad abilities. With clearer definition of learning outcomes, assessment process may be more effectively planned and implemented. Faculty development programs are the need of the hour to train faculty in conducting assessments that evaluate competencies and medical education units of each institution have a significant role to play in this regard which will determine the success of implementing revision in curriculum.

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