

Engaging the Learner: Alternative Learning Strategies

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The long case has been the mainstay of teaching and assessing medical students (and postgraduates) over many decades. It has the advantage of familiarity, tests the students in a real life setting on a real patient, and presents realistic challenges to the students. However, it has several limitations that compromise its utility. It is well recognized that there is a lot of task and context specificity in clinical competence, meaning thereby that a good performance in a certain context or case does not necessarily imply an equally good performance in another context; *e.g.* it is often erroneously presumed that if a student can perform well in a complicated central nervous system (CNS) case, he/she can also perform equally well in an anemia case. Hence, generalizability of long case assessment becomes a problem [1]. The only way to overcome this is by increasing the number and variety of cases being assessed per student, which becomes non-feasible given the time-consuming nature of the unstructured discussion that takes place. Further, the student is not actually observed while interacting with the patient or performing the physical examination – though sometimes, the assessors may ask the students to demonstrate one or more physical signs. The student-assessor interaction is thus restricted to presentation skills rather than to various aspects of clinical competence. This induces at best, construct underrepresentation, and at worst, construct irrelevance, raising questions on the validity of such assessment [2]. The authenticity of assessment is therefore compromised, and it is not surprising that we hear about the ‘death of the long case’ [3].

The Mini-Clinical Evaluation Exercise (m-CEX) was developed to address some of these issues. It is a simple modification of the traditional long case, using direct observation and focused feedback as important means to teach and assess clinical competence. An assessor observes the student taking history and performing physical examination, using a structured format. The student then provides a diagnosis and a treatment plan. The assessor then provides educational feedback to the

student, based on his observation. Each encounter takes about 15-20 minutes, and 6-8 encounters a year provide sufficient degree of reliability [4]. Assessment on multiple cases, ‘subjective’ assessment, and multiplicity of assessors of all levels is considered strength of this method. Unlike Objective Structured Clinical Examination (OSCE), it assesses the student on a complete task and in authentic settings. A structured framework of observation and feedback in a short time makes it feasible in inpatient as well as outpatient settings, and also a powerful formative assessment tool.

There are very few reports of use of this modality from India, the first one of its use in Pediatrics from India being in 2010 [5]. This issue of the journal carries a paper on m-CEX [6]. The authors have reported a good acceptability. This is likely to improve further as teachers gain experience in providing useful feedback, and as students find this feedback improving their learning. It will be interesting to see the use of this tool in other medical schools too.

Teaching in the outpatient setting is a critical input in physician training. However, a shortage of time due to clinical workload limits the teaching in this setting. Also, a relative lack of challenging opportunities to the students for using their prior knowledge for constructing new knowledge, limits its utility. Based on cognitive psychology, many models of one-on-one clinical teaching within a short time available to clinicians have been developed and tested. These models are learner-centric, and primarily depend on learner motivation for their success. One minute preceptor (OMP) [7] and SNAPPS [8] are some examples. SNAPPS is an acronym for Summarize the history and findings, Narrow the differential, Analyze the differential, Probe the teacher, Plan management and Select issue related to the case for self-study. Unlike m-CEX, which is applicable mainly for the senior students and postgraduates, SNAPPS can be used for even junior medical students. There have been many reports indicating its acceptability and utility. Students generated more differentials and were able to

justify them better; they expressed uncertainties better and sought clarifications in addition to identifying areas requiring further study. Another paper in this issue of *Indian Pediatrics* explores this model in terms of its educational utility [9].

Physicians need training in gathering evidence and then evaluating their own patient care practices. This concept of practice-based learning and improvement (PBLI) is now recognized as an important competency [10]. The learners need to be provided opportunities to reflect identify their learning needs, and then engage in developing those needs. There is evidence to suggest that PBLI results in better healthcare outcomes and patient safety. A concept paper on PBLI in this issue of the journal elaborates further on the teaching and assessment methods for developing PBLI [11].

Tweaking the existing teaching-learning and assessment methods in the light of cognitive psychology is an important exercise. The closer we bring learning and assessment to reality, and more we actively engage the learner, more authentic and long-lasting the learning is going to be.

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