

Medical Education

Internal assessment revisited

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INTRODUCTION

In 1997, the Medical Council of India (MCI) made an announcement regarding the assessment pattern of medical graduates. In a major departure from earlier regulations, the 1997 MCI regulations on Graduate Medical Education (GME)¹ made it mandatory for undergraduate students to pass their internal assessment (IA) before they could appear for their final university examinations.

These MCI regulations¹ specify that IA shall be based on day-to-day assessment, evaluation of assignments, preparation for seminars, clinical case presentations, and so on. They go on to say that 'periodical examinations shall be conducted throughout the course'. The number of examinations to be held has been left to the institution concerned. The ways in which a student participates in the learning process during the semesters should also be evaluated. Further, the IA should take into account a student's performance in clinical case study/problem-solving exercises, participation in projects for community healthcare, and proficiency in carrying out practicals and skills required for small research projects. The student's performance in multiple-choice question tests on the completion of the teaching programme of an organ system should also be considered.

A perusal of these guidelines makes it clear that the intention was to have a system of assessment that does not focus primarily on knowledge, but on the manner in which knowledge is acquired. IA is not viewed as another type of examination in which external examiners are not used. Instead, it is designed to look at a different set of competencies. The emphasis on day-to-day observations, in contrast to snapshot observations, is important because it brings into focus the process and final product of learning.

It has been over 10 years since this change was effected. However, IA has not been implemented in the way it seems to have been visualized. Further, as the MCI guidelines are only suggestive and not prescriptive, there is much variation in the pattern of IA followed by various universities, especially with regard to the competencies assessed. The only areas of consensus seem to be the weightage given to IA and the cut-off criteria. Worse, IA is frequently viewed as an examination without external regulation and, therefore, prone to abuse. A number of academic frauds specifically related to IA have been reported, both in the media as well as in the scientific literature.^{2,3}

Even in the best of settings, the conventional final summative

examination (with external examiners) has a number of limitations. These include the following:

1. It limits the assessment process to only the 'end of the course' setting, with chance and 'luck' of the student playing major roles. A great deal depends on the marking of the examiner, especially when it comes to essay-type questions. It has been reported that even when the same examiner marks the same script twice, there can be a variation of 6 to 15 marks.⁴
2. Clever students can bluff examiners into believing that they know the subject matter, even when they do not.⁵
3. The emphasis is on the product of learning. Such an examination fails to make any distinction between a student who is very studious and regular and one who studies only a month before the examination.
4. Practical skills such as giving an injection and inserting a nasogastric tube cannot be evaluated for want of time, material and other logistics.
5. There is no emphasis on the assessment of attitudes, communication skills, ethics and interpersonal skills. Even when these are assessed, the setting is very artificial and there is no way of determining whether the students are merely putting up a show.

Internal assessment can compensate for many of the drawbacks of the year-end examination and enrich the assessment process. The reluctance to exploit the potential of IA is related largely to ignorance regarding its various facets.

We take a closer look at some of the myths surrounding the mechanics of IA and suggest that this form of assessment can be used to improve learning. We have already dwelt on the implications of the MCI guidelines in this context. We hope that the following helps to initiate a discussion and evolve a consensus on the dynamics and implementation of IA.

INTERNAL ASSESSMENT

Formative or summative?

A number of teachers get entangled in the formative or summative debate. A strict textbook definition would suggest that IA is summative because the results are used to decide whether the student passes or fails. However, it should be considered formative, for its essence is to effect improvement in learning. It is argued that since IA is a part of the summative examination, the results should not be made known to the student before the final declaration of results. This argument overlooks the formative value of IA and its potential to promote deeper learning.⁶ The contemporary thinking in evaluation advocates a blurring of the boundary between formative and summative

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tests. There is no reason why a test cannot be used for the twin purpose of providing feedback as well as assigning grades for a final pass–fail decision.⁷ Therefore, there is little substance in the argument that IA cannot be used for formative purposes and that the results should be kept confidential till the final declaration of results.

Another pre-university examination?

Internal assessment is a continuous process rather than a snapshot observation. Its key features are its ongoing nature and the use of multiple examiners; both help to minimize subjectivity in the assessment procedure. Preferably, the entire faculty of a department should be involved in the process so as to include observations by many observers. This is essential for eliminating subjectivity. The process should be transparent, i.e. the results should be made known to the students to help them improve their performance.

To ensure that the process is fair and is seen as fair by the students as well as the teachers, meticulous record-keeping is mandatory (Fig. 1). A model for IA has been proposed earlier.⁸ All the teachers in a department should be involved in the assessment and the results should be shared with the students as soon as possible. Students should be provided an opportunity to discuss their results with the faculty and head of department. This discussion should focus both on their strengths and weaknesses, so that they can foster their strengths and improve their performance in the weaker areas.⁹ Encouragement and constructive criticism can always improve performance.

Emphasis on a wide range of competencies

While the acquisition of knowledge and skills is an important focus of IA, it also encompasses other competencies and

qualities that are difficult to assess through a year-end examination. These include regularity, participation in learning activities, preparation for seminars, skills in case presentation, and performance in community projects, research projects (e.g. short term Indian Council of Medical Research projects) and quiz programmes. Importance is also given to communication skills, professionalism, ethics, academic honesty and interpersonal skills. None of these lends itself to assessment by the term-end examination.¹¹ While there may be some concerns regarding the objectivity of such assessments, the multiplicity of examiners and observations takes care of the element of bias. It is also important to remember that most learning is test-driven and what is not assessed is often not learnt. By providing weightage, howsoever small, to the skills mentioned above, a subtle message is conveyed to students about the importance of these abilities.

Reliability

The belief that IA is not reliable often stems from confusion between the terms ‘objectivity’ and ‘reliability’. Objectivity refers to the consistency of marking between different examiners and is, therefore, a measurement issue. Reliability, on the other hand, refers to the confidence that we can place in the judgements we make and is, therefore, a decision-making issue. Medical educators are placing increasing emphasis on reliability, even though it may be less objective, as the essential attribute of assessment tools. Even for objective structured clinical examination, the current thinking is more in favour of a global rating than a detailed checklist.¹² For various reasons, notably, the longitudinal nature of observations, IA is a more reliable way of predicting the future performance of the student as a clinician. In fact, IA tries to make the process of classifying

INTERNAL ASSESSMENT SHEET

Name

Roll No.

SEMESTER-I

Theory	Max. marks	T1	T2	T3	T4	T5	T6	Average
(a) Interest in subject	10							
(b) Active participation	10							
(c) Scientific attitude	10							
(d) Interpersonal skills	10							
Attitudes	40							
Theory tests	60							TM
Practicals	80							
Record book	20							PM

Attendance	Actual	Percentage
Theory		
Practicals		

Signature of head of department		Date
Signature of student		Date

T teacher TM theory marks PM practical marks

FIG 1. An illustrative record-keeping sheet (adapted from Singh *et al.*¹⁰)

students as good or poor evidence-based rather than hunch-based. Interestingly, a correlation has been reported between the IA scores and the term-end examination scores.¹³ The IA scores, however, tend to be higher.¹⁴ It is not fair to underestimate the utility of IA, especially when we accept the results of year-end examinations, which usually have more problems in terms of validity and reliability.

Validity

Validity relates to the relation between what we intend to measure and what is actually measured. We need to identify the competencies that we wish to assess during IA and then use appropriate tools to assess them. The MCI guidelines provide a detailed description of the competencies (in addition to the knowledge) which should be evaluated. However, it would be worthwhile for all subject experts to explicitly define the list of practical skills and professional behaviours to be taken into account, so that a uniform pattern could be followed.¹⁵

Internal assessment and promotion of learning

All course work need not be graded to generate learning. Periodic peer assessments and other forms of engaging the learner have been shown to be as effective in promoting learning as is the practice of assigning marks.¹⁶ A meta-analysis of meta-analytic studies indicates that feedback is the single most important factor in promoting learning.¹⁷ Another review¹⁸ enumerates a number of studies that demonstrate the utility of feedback in the process of learning. Feedback should be available to students while they still have the time to improve upon their performance by acting on that feedback.¹⁷ It has been aptly argued that the primary concern, especially of formative assessment, should be enhancement of the quality and quantity of learning, rather than better measurement of limited learning.¹⁷ Students have been reported to be more receptive to feedback in the absence of marks.¹⁹ 'Grade-less' assessment is an accepted practice at many institutions.¹⁷ More important than the product of assessment is the framework that the task of assessment provides for structured learning.

CONCLUSION

The successful use of IA as a tool for promoting learning entails the following:

1. IA has to be based on day-to-day observation of the student.
2. It should focus on the process of learning as much as on the amount of learning.
3. It should evaluate competencies which are difficult to assess through term-end examinations.
4. All teachers of the department should be involved in the assessment process to make for greater reliability.
5. The results should be used not only to document the student's progress, but also to provide feedback while the student still has time to improve on the basis of the feedback.
6. Meticulous record-keeping is essential for the efficacy and credibility of the process.

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