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**Original Research Article**

# Evaluation of student assessment practices in a medical college

**Omer A. Elfaki*, Abdulaziz A. Alamri**

Department of Medical Education, College of Medicine, King Khalid University, KSA

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***Correspondence:**
Dr. Omer A Elfaki,
E-mail: elfaroog@gmail.com



## ABSTRACT

**Background:** The importance of students' assessment and its role in driving students learning are well recognized. Guidelines for good assessment practice have been developed. The GMC issued important recommendations related to assessment of students' performance to be followed by medical schools in UK. The Liaison Committee on Medical Education (LCME) developed standards emphasizing the importance of documenting students' performance. The utility concept of an assessment tool had been proposed by Van der Vleuten stating a number of weighted criteria. Assessment of clinical competence was proposed to be well covered by the model of Miller. No single method of assessment can be recommended to be appropriate for all assessment purposes and all domains of competence. Therefore, multiple methods of assessment are required.
**Methods:** There are 35 courses included in the MBBS program in the college of medicine, KKU. these are taught over five years in addition to a preparatory year and the internship year. the curriculum can still be described as discipline based. a survey was planned to study the current assessment situation. this is a cross-sectional descriptive study. the data collection methods used were survey and study of the documents of the courses. an online questionnaire was developed. the responses were analyzed using descriptive statistics to determine frequencies, averages and percentages. the study was conducted during the period January-May 2014.
**Results:** Twenty course coordinators responded to the survey (57%). Eleven of the courses covered were basic and nine were clinical. Multiple tests as well as multiple methods of continuous assessment were used in the courses studied. Some of the methods used for summative assessment are no longer recommended in current assessment practices in medical education. Real OSCE was used only in one clinical course. Standard setting methods were not used and a fixed pass mark was used instead.
**Conclusions:** Important shortcomings in student assessment system in many of the courses studied were identified. Less educationally desirable assessment methods and practices are still used in some courses such as unattended single long case examination. More attention should be given to technical aspects of assessment.

**Keywords:** Assessment, Course, Practices

## INTRODUCTION

The importance of assessment in the educational process is well emphasized in medical education.[1] As had been described by Van Der Vouleten, assessment drives students learning through its content, format, what is asked and its timing, frequency and repeated examinations.[2] It has been also proposed that assessment plays an important role in lifelong learning. Proper planning and implementation of assessment is therefore essential for achievement of the expected positive effect on students learning.[3] However, this effect of assessment is not limited to students but extends to other stakeholders. A number of criteria for good assessment are defined and guidelines for good assessment practice developed.[4] The General Medical Council (GMC) issued

important recommendations related to assessment of students' performance specially its principles and procedures.[5] The Liaison Committee on Medical Education (LCME) standards emphasized the importance of documenting students' performance and the use of data on assessment to evaluate the quality of programs.[6] The utility concept of an assessment tool had been proposed by Van der Vleuten.[7] This was based on a number of weighted criteria, namely, validity, reliability, acceptability and cost. Assessment of clinical competence was proposed to be well covered by the model of Miller.[8] This is a hierarchical model that begins with the assessment of cognition and ends with assessment of behavior in real life. No single method of assessment can be recommended to be appropriate for all assessment purposes and all domains of competence. Therefore, multiple methods of assessment are required. One of the important recommendations in assessment is using a defensible method for standard setting rather than using a fixed pass mark.[9-11] After a recent establishment of a central assessment office as part of the medical education department in the college of medicine KKU, this study was done with the objective of evaluating the quality of the current student assessment in the college.

## METHODS

The college of medicine, KKU was established in 1980 as the fourth medical college in the Kingdom and the first one in the southern region. The total number of courses included in the MBBS program in the college is 35. These are taught over five years excluding the preparatory year and the internship year. In spite of the efforts made to improve the teaching and assessment methods, the program can still be described as discipline based. A survey was planned to study the current assessment situation of the 35 courses. This is a cross-sectional descriptive study.

The data collection methods used were survey and study of the documents of the courses. An online questionnaire was developed. This was composed of short description of each course, teaching and learning methods adopted, assessment plan, assessment methods and scoring system. The items on assessment were based on the principles of assessment in medical education. The survey link was send to each course coordinator of the 35 courses. A reminder was send twice a month one and two. The course specification document for each course was consulted for additional information.

This document is an official document of a course which is kept in the relevant department and is updated regularly each time the course is taught. An annual report was attached to the course specification document containing specially the assessment used and the results. The responses were analyzed using descriptive statistics to determine frequencies, averages and percentages. The study was conducted during the period January-May 2014.

## RESULTS

Twenty course coordinators responded to the survey (57%). Eleven of the courses covered were basic and nine were clinical (Figure 1).

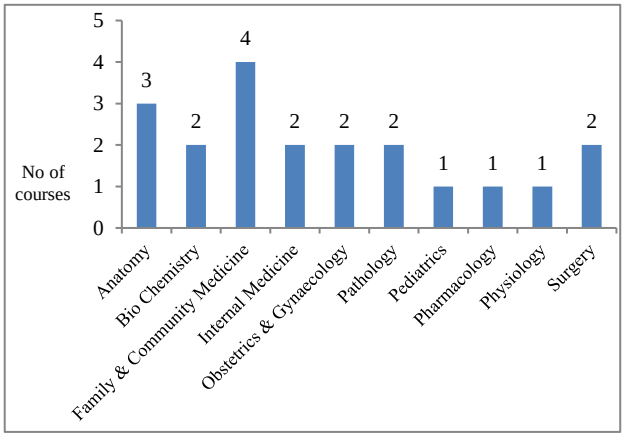


**Figure 1: Distribution of courses among the departments.**

In most of the courses, no blueprint was produced to plan the assessment which might affect the reliability and validity of the assessment. Multiple tests as well as multiple methods of continuous assessment were used in the courses studied (Figure 2).

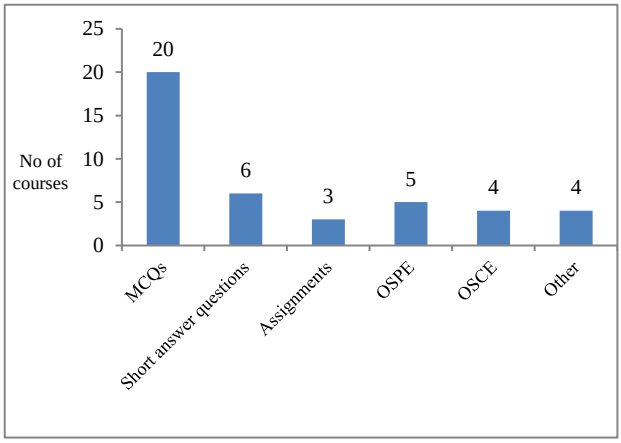


**Figure 2: Methods of summative assessment.**

However, the results of these tests were not used regularly for feedback to students. Some of the methods used for summative assessment are no longer recommended in current assessment practices in medical education. One of these was the unattended one long case examination which was used as the main tool for clinical summative assessment for final students in one of the major clinical courses. Real OSCE was used only in one clinical course for 4th year students. Review of the questions and item analysis were regularly done for most of the courses studied but the real benefit of these for more improvement in the future tests seemed to be very little. Standard setting methods were not used except in

only one course where Angoff method was tried. All courses used the fixed pass mark specified in the university regulations. All courses studied used lectures as a main method of instruction (Table 1).

**Table 1: Methods of teaching.**

| Method of teaching | No. of courses |
|---|---|
| Lectures | 20 |
| Tutorials | 10 |
| Lab practical | 10 |
| Bedside teaching | 5 |
| Seminars | 4 |
| E learning | 2 |
| Skill lab | 2 |

## DISCUSSION

This is the first study on the overall student assessment practices in the college. Although the response rate is relatively low, the major clinical courses were covered. The study clearly indicated that some of the important principles and guidelines of good practice of students' assessment were not followed. One of the important reasons for this deficiency could be the mainly departmental control of assessment. It is recommended that medical students' assessment in the whole curriculum should be supervised by assessment experts with adequate psychometric support and the necessary authority within the governance systems of the institute.[5] If this is not followed, the institute's ability to monitor students' progression and to ensure that outcomes are appropriately assessed will be compromised.[5] Only recently a new assessment policy has been adopted and an assessment office started. Other reasons for the identified deficiencies might include the discipline based curriculum and the common use of large group method of instruction (Table 1). It is important in this context to mention that efforts had been made by the college to improve this situation and a department of medical education was established. In fact, an improvement of the current curriculum to an integrated one is being developed. MCQs were used for summative assessment by all the courses studied. Although it is known that MCQs allow for test reliability and validity, a major disadvantage of them is that they test for recall of facts rather than application if not well constructed.[12,13] However, developing well written MCQs is not easy and could be very challenging to staff and needs regular training.[14] In our context, this might need more measures to be taken to motivate the staff.

Although a structured scoring sheet was used to evaluate students in the long case, this did not guarantee acceptable reliability. The interaction of the student with the patient was not attended by the assessors. This method of assessment is not recommended.[15] Reliability of the long case can be improved by increasing the number of cases per student.[16,17] We thought that the lack of a university hospital, scarcity of suitable cases and refusal of patients might be real causes behind adopting the single long case examination.

## CONCLUSION

Important shortcomings in student assessment system in many of the courses studied were identified. Less educationally desirable assessment methods and practices are still used in some courses such as unattended single long case examination. More use of OSCE and other authenticated assessment methods should be encouraged. More attention should be given to technical aspects of assessment, namely, planning of the assessment (blueprint), standard setting, and use of item analysis for evaluation of assessment and student feedback.

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