

Original article

Comparison between traditional & objective assessment of written examination- A Pilot Study

Dr. Kshitija Umesh Patkar, Dr. Umesh Suresh Patkar

Department of Physiology, Seth G S Medical College, Parel , Mumbai-12, Maharashtra, India.

Corresponding author- Dr. Kshitija U. Patkar

Abstract

Objectives -The aim of this study was to improve the assessment system in the subject of Physiology for first M.B. B.S. students. For this, objective was, to develop marking scheme for each structured component of long answer questions and short notes in the written examination for easy correction and increasing reliability of assessment.

Methods - We considered a hypothesis that, there is no significant difference in the marking of long answer questions and short notes when the marking scheme was used (objective method) and when it was not used (traditional subjective method). We considered objective method of assessment of written examination as more reliable method. We corrected answer papers of 110 students by abovementioned two methods of assessment. We checked whether there is any significant difference in the marking done by two methods by applying student's t test. We also checked for what is that difference by analyzing mark lists. We took feedback from examiners to find out whether this objective method was helpful for easy correction & increasing reliability of assessment.

Results -When we considered total marks, there is significant difference in the marking done by two methods of assessment with t value 3.338 with p value < 0.005. Also there is change in the list of topper students and the list of failure.

Conclusion – The objective method of assessment of written examination should be implemented in practice to increase reliability of assessment and easy correction.

Keywords – Assessment, traditional assessment, objective assessment, written examination.

Introduction

The methods for student assessment in medical education have changed over past 50 years. We have moved from a standard pen and paper tests of knowledge & facts towards a more complex system of evaluation. (1). Medical students are tested on knowledge, attitude, & skills across multiple settings & methods, which are often triangulated to reach summative decision. Current educational & education strategies include problem based learning; computer simulation faculty global rating & checklists, standardized patients & team based learning (2). But written exam is yet neglected part of overall assessment and that is our concerned point.

The medical knowledge & clinical skills of doctors is often assessed by written & oral examination. The oral exam (viva voce) typically requires the students to go subject bedside, gather information & then present the diagnosis & treatment plan to assessors who ask questions & make judgments about the performance. The written examination is usually composed of open ended questions of one type or another which are graded by hand.

Basically for examination (written or oral) there are two types of assessment methods. The first one is objective assessment. It is a form of questioning which has a single correct answer. Another is subjective assessment. It is a form of questioning, which may have more than one correct answer. There are various types of objective & subjective questions. Objective question types include true/false answers, multiple choice questions, multiple responses & matching question. Subjective question include extended response questions and essays. Objective assessment is also well suited to the increasingly popular computerized & online assessment format.

Now a day there is well awareness about objective structured clinical & practical examination, but written exam assessment has remained still neglected. So, the aim of the study is to emphasize the importance of objective assessment of written exam. Even though it is a well known fact that, objective assessment of written exam is reliable, still it is not implemented in practice. So we want to point out how much traditional method is affecting our students' life.

In this study, we considered objective method of assessment of written exam as more reliable. We evaluated the assessment system for the written examination for first MBBS students, in the subject of physiology by structuring of questions & preparing marking scheme. We checked whether there is any significant difference in marks obtained by two methods of assessment and we also checked for what is that difference. We took feedback from examiners to find out whether this objective method was helpful for easy correction & increasing reliability of assessment.

Materials and Methods

- 1] Ethics committee permission was sought for.
- 2] Then proper structuring of the questions (short notes and full questions) in first M.B.B.S. Preliminary theory question paper was done. The marking scheme was prepared for the answers to the questions.
- 3] The answer papers (N=110) of first M.B.B.S. students appearing for Preliminary examination were first corrected by teachers without using marking scheme. (*Traditional / subjective method*).
- 4] Then these answer papers were corrected by the same teachers using marking scheme (*Objective method*)

Statistical methods

Marks of the above mentioned assessments were compared by applying 'student's t test'

Also the analysis of mark lists obtained by two different methods of assessment was done to find out,

1. Top 5 students by 2 methods
2. Whether there is any change in the list of the students who failed

Results & Observation

Table I- Comparison of total marks, obtained after assessment by traditional and objective method (N=110)

Parameter	Mean	t-value	P-value
(Traditional method) Total marks	22.17	3.338	0.001*
(Objective method) Total marks	21.09		

According to Table-I when we considered total marks there is *significant difference in the marking done by traditional and objective method with t value 3.338 with p value < 0.005

Table II-Comparison of marks of short notes, obtained after assessment by traditional and objective method (N=110)

Parameter	Mean	t-value	P-value
(Traditional method) Marks	12.9	4.974	<0.001*
(Objective method) Marks	11.8		

According to Table-II when we considered short notes there is *significant difference in the marking done by traditional and objective method with t value 4.974 & p value < 0.005

Table III –Comparison of marks of full questions, obtained after assessment by traditional and objective method (N=110)

Parameter	Mean	t-value	P-value
(Traditional method) Marks	9.2	0.214	0.831
(Objective method) Marks	9.2		

According to table III when we considered marks of full question there is no significant difference in the marking done by traditional and objective method with t value 0.214 & p value 0.831

Twenty eight students failed according to traditional method of correction, out of which 5 students passed according to objective method of correction.

Thirty six students failed according to objective method of correction. Out of them 13 students passed according to traditional method.

Discussion-

In this study there is significant difference in the total marks and marks of short notes obtained by students by two methods of assessment. The students who are failing by one method of assessment are passing by other method or vice versa. . Noteworthy point is that 36 students failed according to objective method of correction. Out of them 13 students passed according to traditional method. This may suggest human tendency of examiners to favor students and this may be very harmful to the society to which we are providing medical service. Also the list of top 5 students changes. This shows that our traditional method of paper correction is affecting significantly life of our students. It depends on mood and nature of the examiner, whether traditional method is advantage or disadvantage to student. Also when two students

compare their papers and marks, they may find it is injustice to one student because same content of the answer may fetch them different score of marks. So it may be discouraging for those students and may create disinterest in studies. Overall scenario is that after studying so hard result of their academic performance depends on their luck factor. We want to eliminate this factor from our assessment. Students should score the marks according to how much they deserve. By the objective method they will come to know where they stand and will get proper guidance for their further progress. So that it will be rewarding, encouraging to the students and create interest in studies. From the feedback of the examiners, it is re-emphasized that objective method makes answer book correction easier and more reliable. Though initially it may be little bit time consuming for structuring questions and developing marking scheme.

Conclusion

Objective method of assessment for written examination is considered reliable till date. In our study there is significant difference in the result of written exam assessed by objectives & traditional method. So it is necessary to implement objective method of assessment for written examination in practice, by developing marking scheme for each question to increase reliability of assessment and easy correction.

References

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