

Student Perception About Difference Between Structured Essay Question And Conventional Long Answer Questions As A Tool For Written Assessment In MBBS Exams

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Abstract: Introduction & Background: Long essay questions are unstructured and are used for assessment of complex learning which cannot be assessed by other means like writing skills, ability to critically explain and present arguments and to assess student's understanding of subject- matter. Essay questions provide a lot of scope for student creativity and individuality in the approach; however, it leaves a room for subjectivity in assessment. SEQs or structured essay questions test the knowledge as well as the capacities of analysis and reasoning yet minimizes examiner subjectivity and increases answer specificity, owing to its structured format. Methods: Prospective Interventional study conducted on 1 year second semester MBBS students in Department of Physiology, SVNGMC, Yavatmal. Data was collected by administering 2 Structured Essay Questions (SEQ) to test group formed by dividing the total number of students(out of 150) present at the time of data collection, into 2 equal groups; one test group with all the students having odd roll number and other control group with even roll numbers. The control group was administered 2 conventional long answer questions on a same topic in physiology. This was repeated 3 times by switching the groups. All the students were assigned feedback forms to know their perception about the formats of questions. Observations & Results: There were 148 students who participated in the study. Students scored significantly better when evaluated using SEQs than by LAQs. 35% of the students felt that SEQs are less time consuming followed by 29% students opining that SEQs are structured & precise. Conclusions: The result of the study is encouraging and points towards student inclination towards SEQs. However further wide studies should be undertaken as to substantiate the results to the point when SEQs eventually replace conventional LAQs in university exams in India. [Shilpa G NJIRM 2017; 8(5):82-85]

Key Words: SEQ, LAQ, Preference

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Introduction: Medical education, the art and science behind medical learning and teaching has progressed remarkably. It has always had challenges with respect to assessment methods. The written/theory assessment is done with the use of multiple choice questions (MCQ) and descriptive open-ended questions. For testing of higher-order of interpretation skills and thought process, open-ended, descriptive/essay, structured questions are considered useful. These descriptive questions may be in the form of conventional long essay questions (LEQs), modified essay questions (MEQs) and structured essay questions (SEQs). Long essay questions are unstructured and are used for assessment of complex learning which cannot be arguments, and to assess student's understanding of subject- matter.¹Essay questions provide a lot of scope for student creativity and individuality in the approach; however, it leaves a room for subjectivity in assessment.²

Subjectivity and inter-examiner variation and bias have been the highlight of most such examinations. There have been attempts to improve and increase the objectivity of written examination by the

introduction of structured essay questions (SEQs) by very few institutes.³

The scores obtained by the student usually reflect the overall performance of the student in the theory examination as per the perception of evaluator about weightage of subtopics within a SEQ and is not based on demonstration of individual skill competency of the student in elaborating about subheadings of a topic and their description.⁴

It is with this view in mind that educationists have been trying to devise ways by which writing & interpretational skills can be evaluated using an objective tool.⁵

Aim: To study the Impact of structured essay question as a tool for written assessment in MBBS exams.

Objectives:

- To assess the difference in scores of students administered with SEQs and
- conventional LAQs

- To obtain students perception about qualities of SEQs
- To recommend inclusion of SEQs In university exams as a routine, instead of LAQs

Methods: This is a prospective, cross-over, Interventional study conducted on I year, second semester MBBS students in Department of Physiology, SVN GMC, Yavatmal after necessary approvals from institutional ethical committee.

Amongst 150 students of I MBBS, those present on the days of data collection and willing to participate in the study were included in the study. The students were divided into two equal groups using their roll numbers and administered either LAQ & SEQ tests, randomly by use of toss. The control group was administered 2 conventional long answer questions on the same topic in physiology. This process was repeated 3 times with different sets of questions to minimise error in assessment of the answers after switching the groups using cross over design. All the students were assigned feedback forms to know their perception about the formats of questions.

The data was assessed by comparing the performances of students in test and control groups according to the scores obtained by them in answering the questions. Three assessors evaluated the same tests papers and average of scores was calculated and compared according to two formats of questions. A validated feedback form was given to the students, comprising of open and close ended questions with five scoring points on Likert's scale.⁶

The mean scores of all students for test and control groups as assessed by both assessors obtained in 3 cycles was averaged and comparison of mean of means was done using standard error of difference between two means. After finding the commonalities in the student feedbacks, the responses were grouped and were analysed using percentages. The data was presented in tabulated form, pie charts and bar diagrams.

Table No I: Test-wise Distribution of Present Students

Test No.	Number of Students Present		
	LAQ	SEQ	Total
Test 1(T1)	68	68	136
Test 2 (T2)	71	68	139
Test 3 (T3)	67	71	138

Table No. 2: Examiner & Test-wise Marks of students

Test Type	Examiner & Test wise Marks*									
	T1E1	T1E2	T1E3	T2E1	T2E2	T2E3	T3E1	T3E2	T3E3	Mean
LAQ	11.3	11.39	11.75	9.1	9.45	9.09	8.6	9.83	9.57	10.01
SEQ	15.16	14.68	13.42	11.17	12.38	13.01	9.24	11.7	11.6	11.82

* T=Test & E = Examiner; SD-LAQ=1.14, SEQ= 1.96; S.E of difference between 2 means= 0.756

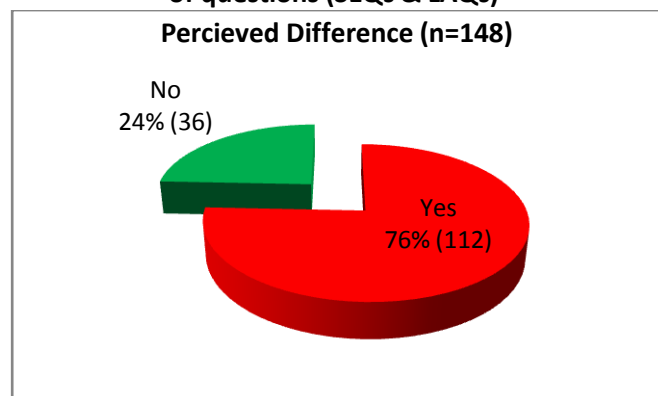
Observation & Results: Table number 1 shows that the students for different tests were different. Therefore the total number of students who participated in the study were 148 out of 150.

Table number 2 shows that the mean scores of all students for test and control groups as assessed by 3 examiners in 3 test cycles were averaged and comparison of mean of means was done by calculating standard error of difference between two means, which was 0.756 and was found to be significant. Thus, according to the result, students scored

significantly better when evaluated using SEQs than by LAQs.

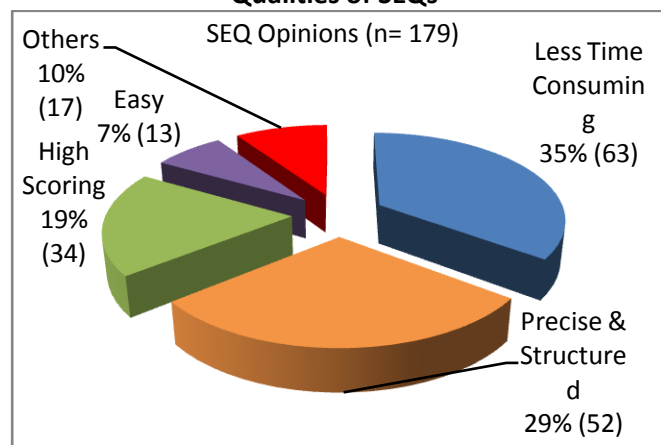
Similar results were found in a study done on 205 students in a medical college in Telangana state in 2016; in which 47.8% of students with unstructured essay question, scored less than 10 marks(out of 20) (74.63%) and only 15.61% of students scored 16 and above marks. In structured essay question (SEQs), higher percentage the students scored more than 10 marks (73.17%) & more than 38% of students scored 16 and above marks in this group.⁷

Graph No.1: Perceived difference between two types of questions (SEQs & LAQs)



Graph no. 1 shows that out of the total 148 student feedbacks, 112(76%) students felt that SEQs were different from LAQs.

Graph No. 2: Perceived Opinion of Students about Qualities of SEQs



Graph no. 2 shows that out of the total 112 students who felt that SEQs are different from LAQs, many gave more than one opinion about the qualities of SEQs; therefore total 179 opinions were given by the students, which were grouped in 5 categories, based on commonalities. About 1/3rd students felt that SEQs are less time consuming followed by 29% students opining that SEQs are structured & precise. 19% students felt that SEQs are good for high scoring, which is confirmed by increase in student marks significantly with SEQs. About 7% students felt that SEQs are easier than LAQs while 10% of them had other opinions that SEQs cover more topic, LAQs are better as they assess depth and application of knowledge, SEQs decrease subjectivity in assessment & offers variety in the covered topic.

Similar results were seen in a study done to know student opinion about different types of questions

(LAQ, SEQ, MEQ) used in written assessment, in a medical college in Tamil Nadu, almost 98% (50/51) students felt that SEQs are less time consuming and 79.5% (62/78) felt that SEQs are easier. (1)In study in Telangana, the authors opined that SEQs cover most of the syllabus and at the same time valuation of the answer sheets is easy and time saving when compared to unstructured LAQ.

Conclusions: According to the test results, the students scored significantly better when evaluated using SEQs than by LAQs. They also found it easier and time saving, precise and structured and thus convenient as they knew the exact marks distribution within the question; which was not the case with LAQs. However, further wide based studies should be undertaken to confirm the results of this study, so that eventually SEQs replace conventional LAQs in all levels of examinations.

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