

An Insight into the answering pattern of physiology theory papers by 1st MBBS students

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Abstract:

Introduction : The professional MBBS degree examination is aimed at assessing the knowledge of students, by written examinations mainly. Long essay, short essay and short answers are the three types of questions used for knowledge assessment. The practical examination helps assessing the skill along with knowledge whereas the viva voce also tests the quality of the student to communicate with the knowledge he has gained. Assessment of knowledge of a medical student by written examination appears to be subjective in long questions & short essay. This study analyzes the various answering patterns of students in physiology formative assessment.

Methodology: A total of 142 First MBBS answer sheets in physiology were analyzed. These answer sheets belonged to 2nd formative assessment, the maximum marks being 60. A descriptive analysis was carried out noting the type of questions first attempted, legibility, score obtained and pass percentage.

Results: Overall pass percentage was 42% of which 61% were girls. 43.66% students attempted short essay first, 30% short answer and only 27% students wrote the answer for long essay first. Short Essay was the question answered first by 48% of students. Both girls and boys had the tendency of answering the short essays first (51% and 50% respectively).

Conclusion: Performance of students who started with short answers first (30%) was better, their pass percentage being 60%. This probably indicates the inadequacy of knowledge of students to write long essay and short essay which tests higher cognitive domain, as compared to short answers, where most questions are at recall level and thus could be easily remembered. There is a need to replace traditional teaching methods with problem based learning to improve student learning & understanding of the subject.

Keywords: Long Essay, Short Essay, Short Answer, Physiology

Introduction :

Imparting knowledge and methods of assessment are the two most important aspects of education. In addition to updating and reforming the curriculum and syllabus, it is also important to scrutinize the tools for evaluation.¹

Especially in a field like medical education, assessment should be multi-dimensional. A perfect combination of subjective and objective method should be adopted in assessment. While subjective questions like Long Questions (LQ) and Short Essays (SE) aim at assessing the depth of knowledge, objective questions like Short Answers (SA) and Multiple Choice Questions (MCQ's) aim at assessing the width of knowledge.²

Here, we have tried to analyze the way Ist MBBS students try to answer physiology in the examination.

Methodology :

A total of 142 First MBBS answer sheets in physiology were analyzed. These answer sheets belonged to 2nd formative assessment, for a maximum marks of 60. A descriptive analysis was carried out noting the type of questions first attempted, legibility, score obtained and pass percentage.

Results :

The overall pass percentage was 42% (59 pass, 83 failures). The girls fared better (36 out of 74 ie. 48.6%), as compared to the boys (23 out of 68, ie.33.8%).

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TABLE 1: Preferences of attempting questions first by Ist MBBS students

No of Subjects	No of students attempting LE/LQ first	No of Students attempting SE first	No of Students attempting SA first	No of boys	No of girls	Passed Candidate	Failed Candidates
142	38	62	42	68	74	59	83

TABLE 2: Number of boys and girls among the subjects

No of Subjects	No of boys	No of girls	Passed Candidate	Failed Candidates
142	68	74	59	83

TABLE 3: Students attempting LQ as first preference

No of Students Writing LQ First	Boys	Girls	Passed Students	Failed Students	Among Passed Student Boys	Among Passed Student Girls	Among Failed Student Boys	Among Failed Student Girls
38	17	21	14	24	07	07	13	11

TABLE 4: Students attempting SE as first preference

No of Students attempting Short Essay first	Boys	Girls	Passed Students	Failed Students	Among Passed Student Boys	Among Passed Student Girls	Among Failed Student Boys	Among Failed Student Girls
62	29	33	20	42	09	11	26	16

TABLE 5: Showing students attempting SA as first preference

No of Students attempting Short Answers first	Boys	Girls	Passed Students	Failed Students	Among Passed Student Boys	Among Passed Student Girls	Among Failed Student Boys	Among Failed Student Girls
42	17	25	25	17	09	16	10	07

If we take a closer look at the answering patterns a certain analysis can be done. 38 students (27%) started with long question out of which only 14 (36%) passed. Boys and girls fared equally well in this category.

A large member of students 62 (43.66%) decided to attempt the short essays first. However, they did not fare so well. 20 students (32.2%) cleared the paper with > 50% marks. Equal number of boys and girls were seen in this category.

Coming to students who decided it was best to start with short answers; we find that only 42 students (30%) were in this category. However they performed much better with a passing percentage of 60% (25) which was almost 1.5 to 2 times the performance seen in the other two categories. In this group, girls performed almost twice as well as boys with a ratio of 1.7: 1.

The general tendency of both boys and girls was to start with the short essay question (51% and 50% respectively).

Of 142 answer scripts, legibility showed a progressive deterioration in 141, whereas in only one answer sheet it was uniform throughout.

Discussion :

The above mentioned results could be attributed to one of the three reasons.

Firstly, For attempting LQ students need to be more confident, which needs plenty of reading on a subject and requires a good planning in answering.²

Secondly, SA are concise, easy to write and are thus more recording; which ultimately leads to the better outcome of the student.

Thirdly, it could also be attributed to the psycho-social trait shown by most people, called the “halo effect”.³ It is more than reasonably possible that the examiner while evaluating the answer sheet would subconsciously attach positivity when he/she finds the answers to be more

concise, precise and credible. It is possible that short answers create an impression that the student is indeed knowledgeable in the subject even though the other answers may or may not be up to the same standards as the prior ones.

Study done on 1st MBBS students based on performance in SEQs and MCQs showed that students performed MCQs better than SEQs which was because of inadequate knowledge of physiology and inability to present information in a logical sequence.⁴

Conclusion

Performance of students who answered short answers first (30%) was better since their pass percentage was 60. This probably indicates the inadequacy of knowledge of students to write long essay and short essay which tests higher cognitive domain, as compared to short answers, where most questions are at recall level and thus could be easily remembered. There is a need to replace traditional teaching methods with problem based learning to improve student learning & understanding of the subject.

Keeping these things in mind, it is essential that we devise a questionnaire which suits all types of students and that there is a scope to differentiate the weaker students, who might needs special assistance or help. Only then, is the purpose of education fulfilled.

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