



Comparison Between Effectiveness of Didactic Versus Interactive Lectures Taken in Department of Pathology for second MBBS students

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ABSTRACT

Background: This study was conducted in view of decrease in academic performance of second MBBS students in Pathology. This can be attributed to the quality and type of lectures taken in the department. Students will have lesser capabilities to do clinicopathological correlation of various diseases and may become more prone to order unnecessary tests for diagnosis. This study is done to find out if a newer and different method of taking a lecture improves the outcome of knowledge and its application.

Methods: According to the ongoing timetable of lectures allotted for the Second MBBS students, two topics were selected. According to the ongoing timetable of lectures allotted for the Second MBBS students, two topics were selected. Students were made aware of the study and the consent was taken. Students were randomly divided into two groups and were taught in two patterns i.e. didactic and interactive. All the students were exposed to both types of lectures. Students were given pre and post tests in both the lectures. A separate questionnaire was given to students regarding classroom culture followed by students during the lectures.

Result: It was determined that the students fared better in both the post tests taken after didactic as well as interactive lectures. The results also revealed that the post test scores of interactive lectures are in fact lower than the didactic lectures post score.

Conclusion: With this study, as per the results obtained, we can conclude that the didactic lectures taken in our department are as good and even better than the interactive lectures in terms of knowledge imparted to the students.

Keywords: Didactic, interactive lectures, CBME, Indian Medical Graduate.

Introduction

This study was conducted in view of decrease in academic performance of second MBBS students in Pathology. This can be attributed to the quality and type of lectures taken in the department. The long-term impact of not learning Pathological basis of various diseases is crucial. Students may not become competent enough to do clinicopathological correlation of various diseases and may become more prone to order unnecessary tests for diagnosis. This poor knowledge may have impact on their clinical skills too. Lecture is a discourse given to an audience for the purpose of imparting information^[1]. It is one of the most widely used instructing strategies in Medical Education. Lectures have proved to be a reasonably effective method for large group teaching. However, some might argue its importance and utility in the new curriculum^[2]. It does have its merits as a large group teaching tool. Looking at the sizes of batches of medical students entering every year in various medical colleges all over our country, it will be a daunting task to teach everyone in smaller groups. Lecture also has its demerits. It keeps learner in passive mode and does not cater to individual learner needs. There is no way to make sure that learners have acquired the large amount

of information imparted. Has limited role in teaching application of knowledge^[3]. Hence, it can be ascertained that there is an urgent need to change patterns of our lectures to make them more inclusive with more stress on application of information provided. This is also the base of our new curriculum. There are many types of lecturing tools to make a lecture interactive that have been developed by educationists. This study uses the questioning technique. In this type of lecture, the teacher asks questions pertaining to the topic at regular intervals. This breaks the monotony of lecture and also gives active feedback to the teacher about the level of understanding and involvement of students in the learning process. This study is done to find out if a newer and different method of taking a lecture improves the outcome of knowledge and its application. Many times, teachers are not satisfied by the behavior of students during a class. A questionnaire was made to analyze the classroom culture of students.

Materials and Methods

The project was designed and submitted to the ethics committee and approval taken. According to the ongoing timetable of lectures allotted for the Second MBBS

students, two topics were selected. The material to be taught in all the lectures was discussed in advance to maintain the uniformity of information imparted. The students were made aware of the project and assured of confidentiality. They were requested to participate in the study and consent forms were signed and obtained from them. For each of the two lectures, students were divided into two groups randomly according to their roll numbers. The two groups were separated. A pretest was given on the topic in the form of pre validated MCQs to test knowledge and its application to each student. The answer sheets were collected. Then the lecture was delivered. Two separated groups of students were exposed to two different patterns of lectures at the same time i.e. didactic and interactive lectures. In the interactive lectures' active participation by the students in form of questions and discussion was ensured. A post-test was also given after the lecture and answer sheets were collected from the students. This same process was repeated in the next consecutive lecture too. A feedback questionnaire was also given to the students with pre-validated questions regarding student's attitude and behavior during lectures. All the answer sheets were evaluated and the results were entered in excel sheet and given to statistician for analysis.

Result

The results obtained were analyzed statistically by applying Wilcoxon signed rank test. It was determined that

the students fared better in both the post tests taken after didactic as well as interactive lectures. Both the modalities showed statistically significant p values i.e. at 0.001% level, P value <0.001 indicating improvement in post test results.

The results also showed that in pretest of didactic lectures, overall score of students was 49.5% and in post-test the score increased to 78.4%. However, overall score of students in interactive lectures pretest was 48% and post test score was 75.7 %. This result shows that the post test scores of interactive lectures is in fact lower than the didactic lectures post score. Figure 1

- Some of the results of feedback taken from students are as follows.
- 90.6% students agreed that adequate subject information is imparted during lectures.
- 89% students agree that they follow good mannerisms during lectures.
- 40.96% students agreed that they attend lectures for the sake of attendance only.
- 79.5% students find teachers approachable.

Suggestions by the students:

- Shorter lectures.
- MCQs to be given after every lecture.
- More lectures to become interactive.
- Attendance to be taken prior to the lectures

Table 1: Didactic Lecture Method

Didactic Questions	Max Mean Score	Pre-Test			Post-Test		
		Mean	Stdev	Median	Mean	Stdev	Median
Q1	1	0.59	0.49	1.0	0.86	0.35	1.0
Q2	1	0.29	0.46	0.0	0.62	0.49	1.0
Q3	1	0.45	0.50	0.0	0.88	0.33	1.0
Q4	1	0.28	0.45	0.0	0.62	0.49	1.0
Q5	1	0.87	0.34	1.0	0.95	0.22	1.0
Overall	5	2.47	1.06	3.0	3.92	1.08	4.0

Didactic	Wilcoxon Signed rank Test	P-value	Significant at 5% level
Q1	4.082**	<0.001	Yes
Q2	4.110**	<0.001	Yes
Q3	5.425**	<0.001	Yes
Q4	4.111**	<0.001	Yes
Q5	1.897	0.058	No
Overall	6.394**	<0.001	Yes

**Statistically highly Significant at 0.001% level i.e., $P < 0.001$.

Table 2: Interactive Lecture Method.

Interactive Questions	Max Mean Score	Pre-Test			Post-Test		
		Mean	Stdev	Median	Mean	Stdev	Median
Q1	1	0.58	0.50	1.0	0.82	0.39	1.0
Q2	1	0.33	0.48	0.0	0.60	0.49	1.0
Q3	1	0.35	0.48	0.0	0.73	0.45	1.0
Q4	1	0.32	0.47	0.0	0.67	0.48	1.0
Q5	1	0.82	0.39	1.0	0.97	0.18	1.0
Overall	5	2.40	1.28	2.0	3.78	1.15	4.0

Interactive	Wilcoxon Signed rank Test	P-value	Significant at 5% level
Q1	2.985	0.003	Yes
Q2	3.024	0.002	Yes
Q3	4.271**	<0.001	Yes
Q4	3.772**	<0.001	Yes
Q5	2.714	0.007	Yes
Overall	5.440**	<0.001	Yes

**Statistically highly Significant at 0.001% level i.e., $P < 0.001$.

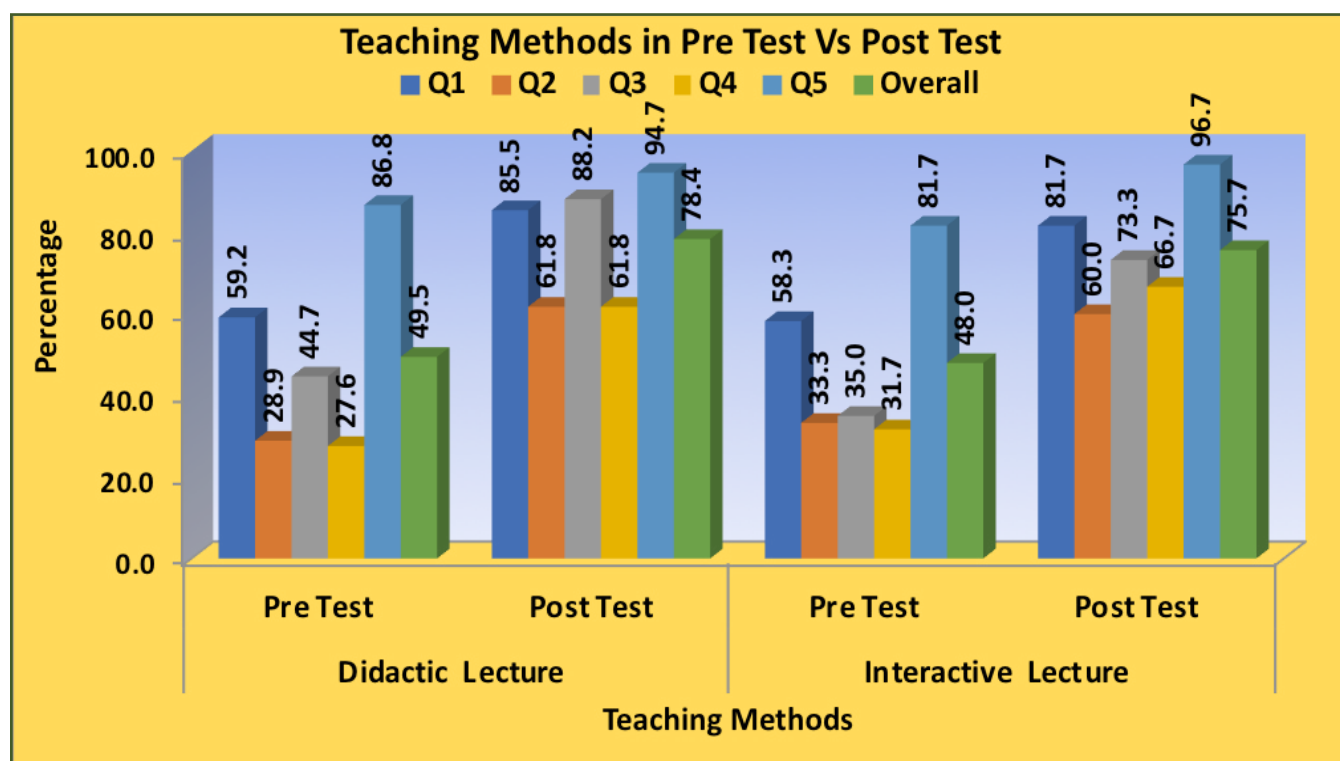


Fig. 1: Comparative results of both types of lectures.

Discussion

Since a few years, it has become obvious that the quality of our medical graduates is not up to global standards. This is reflected by the untoward incidents happening with doctors in practice as well as in teaching hospitals. This reflects on the quality of education being imparted to the medical students. As a result, MCI has devised various training modules for the teaching faculty of medical colleges all over India. And presently, we are in the process of a significant change in our curriculum and its implementation. This study, however small is done to determine if the newer teaching method, i.e. interactive lectures is better than the older didactic pattern of taking the lectures. The results do not show so. But if more lectures are taken in this format, maybe the students will be more interested in attending and will be more attentive. This in turn will improve their knowledge and its application in practice. The need of the hour for our teaching methods is to refine them to become more student centric with whatever tools and facilities that are available. Long term results are yet to be obtained. But we can all rest assured that we are moving in the right direction in a positive fashion.

Conclusion

With this study, as per the results obtained, we can conclude that the didactic lectures taken in our department are as good and even better than the interactive lectures

in terms of knowledge imparted to the students. This may also be due to the skills of the teacher imparting the lecture. However, more lectures need to be studied to confirm this. There is positive response by the students about the interactive lectures. Their enthusiasm was obvious as well as their involvement in the learning process.

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Competing Interests

None

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