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RESEARCH ARTICLE

Perception of students and teachers of a good lecture: A questionnaire-based cross-sectional study in a tertiary care teaching hospital

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ABSTRACT

Background: Lecture is still a common method for mass instruction amidst the multiple new ways, but there is a paucity of data regarding what constitutes a good lecture. **Aims and Objectives:** The study was conducted to obtain the viewpoints of both the students and the teachers about lectures and find ways of improvement. **Materials and Methods:** A questionnaire-based cross-sectional study was conducted involving 50 2nd year MBBS students and 50 teachers. The questionnaire consisted of 17 questions which covered various aspects of a lecture. **Results:** Almost three-fourth of students and teachers thought that lecture program be displayed 1 month prior. Most participants wanted the lectures to be conducted between 8 am and 12 pm, and a number of lectures should be restricted to 3 per day. About 86% of students and 96% of teachers agreed that there should be emphasis on basics of the subject. 90% of students and 72% of teachers said that MCQs be included in the lecture. According to the majority, PowerPoint should be used for lecture, duration of which should be 45 min and overextension should be avoided. The level of understanding can be judged by directly asking questions to students, as suggested by 62% of students and 78% of teachers. The majority felt that lecture should start with a revision of previous topic and end with a summary. **Conclusion:** Expectations of students about lecture should be taken into account while preparing to make it more effective teaching tool.

KEY WORDS: Feedback; Medical Education; Didactic Teaching; PowerPoint

INTRODUCTION

Teachers use various methods to direct their knowledge and skills toward the students. One of the most common methods that is used in mass instruction, which is teaching or training of relatively large groups or classes, is conducting a lecture. The word lecture is derived from the Latin word "legō" which means "I recite.[1]" A didactic lecture is a consistent oral presentation of facts with organized thoughts and ideas by a person who is qualified enough to know the nuances of the subject. It is perhaps the oldest method of teaching and remains the most common method for the same.[2] The lectures are usually within the context of a teacher or institution-centered course. Lecturing as a medium of teaching has been criticized several times mainly 'because of its passive nature, but it has managed to survive in most of the renowned institutions of education.[3-5] Despite a plethora of other teaching methods, the face-to-face talk or "lecture" still holds a central position at many levels of education and will undoubtedly continue to do so for substantial time to come.

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Literature does describe a good "lecturer" as one who performs multiple tasks such as providing the course outline, assessing the students, and giving them advice whenever necessary.[6] However, the problem with defining what constitutes a "good

lecture" is exceedingly difficult, and there is a paucity of literature which describes the same.

There is no doubt that lectures are useful because the size of the class is large and there is direct communication of the lecturers with his audience at one time. They are also considered good for transmitting vast amounts of information in a short time and hence prove to be an economical way of teaching. However, with the emergence of various methods of teaching, the lecture is losing its importance. The advent of the internet revolution has also given the students much easier options to learn about any subject, as and when needed by their comfort. The lecturers have also started getting discouraged due to the faltering interests of the students in being attentive in lectures. It is important for teachers and academicians alike to seek ways of improving its effectiveness rather than bemoaning the deficiencies of lecture.

An extensive literature search revealed that there have been no studies published which investigate the viewpoints of the students and the teachers regarding their idea of a good lecture. There are multiple studies which have evaluated various types of teaching and learning methods from traditional to latest computer-assisted e-learning in medical education.[7-10] However, only a few have studied the requirements of an ideal lecture by taking into consideration different aspects related to it from the perspective of students as well as teachers. One meta-analysis which included data of 76 studies on internet-based education in the medical professions found that there was not much of difference between traditional and internet-based methods as far as their effectiveness is concerned.[11]

Many teachers, especially younger and inexperienced ones, who join immediately after completing their postgraduation may not be trained enough for taking didactic lectures. Students and teachers of diverse background come to medical college, so it is essential to take their expectations regarding a good lecture.

Therefore, we thought of conducting this study to find the viewpoints of both the students and the teachers about the lectures and find ways in bridging this gap between the two, if there is any. This questionnaire-based study was done with the purpose of developing an approach to make a lecture interesting both for the students as well as for the lecturers so that every second spent in a lecture be utilized maximally for the benefit of the students, without wasting the time of the lecturers.

MATERIALS AND METHODS

The study was a questionnaire-based cross-sectional study, conducted at Seth GS Medical College and KEM hospital in Mumbai. The study was done using two groups, one containing the students and the other comprising of the teachers. In Group I, 50 2nd year MBBS students of Seth GS Medical College and KEM hospital who had completed 1 year of their clinical postings were included in the study. Group II included 50 teachers from various departments, both clinical and non-clinical, from the same college. The following subjects were excluded from the study: Subjects not willing to be participated in the study, 2nd year MBBS students who have not completed their 1 year clinical postings, and teachers involved in the study.

The study was initiated only after attaining the permission of the respected dean of the medical college as well as the Institutional Ethics Committee. Written informed consent was obtained from the participants after complete explanation of the study and after satisfying his/her doubts.

The questionnaire was prepared with the contribution of a ten 2nd year MBBS students and then validated by five teaching staff members. The questionnaire consisted of 17 questions which covered various aspects of a lecture so that a broad idea of the viewpoints of enrolled students and faculty members can be obtained. This questionnaire was then handed over to the subjects of both groups independently. Anonymity was maintained at all times of the study. Necessary clarifications were made regarding the questions, if required. Each subject was given ample time to think over the questions and answer them. Questionnaire was then collected, and data were interpreted later after analysis. The whole study was conducted over 1 month from January to February 2007. The data were analyzed using Microsoft Excel 2013. Descriptive statistics were used in the study, and the results were expressed in the form of percentages.

RESULTS

A total of 50 2nd year MBBS students and 50 teachers participated in the study. According to most of them, that is 78% of students and 74% of teachers, the lecture program should be displayed at least 1 month prior. 86% of the students and 96% of the teachers agreed that there should be more emphasis on the basics rather than on recent developments. A whopping majority (90%) of students said that MCQs should be included in the lecture. 72% of teachers thought that MCQ discussion helps in highlighting important aspects of the lecture at the end and also to gain a rough idea about students' understanding of the topic. The level of understanding can also be judged by directly asking questions to students, and it should be incorporated as a part of the lecture as suggested by 62% of students and 78% of teachers.

More than 90% of both students and teachers thought that the lecture should end with summary. 66% of students and 90% of teachers thought that if the lecture is not completed in the allotted time, it should be stopped without delaying the next lecture. Home assignments can be helpful and

should be given at the end according to 68% of students and 60% of teachers. The above results have been summarized in Table 1.

One of the questions was based on the preferable time slots to conduct lectures. 94% of teachers and 72% of students wanted the lectures to be conducted between 8 am and 12 pm time slots. It was notable that not a single teacher and only 3 students were ready for lecture beyond 4 pm. Most preferred method of taking lecture was PowerPoint which offers better features such as good visibility, colored images, videos, and animations. However, 38% of teachers and 20% of students felt chalk and talk is a better alternative, especially in small group teaching. 54% of students agreed that before the lecture, handouts containing salient points should be provided. In contrast, 44% of teachers thought that the handouts were unnecessary, opposite to what the students thought. 52% of students and 58% of teachers thought that the summary of the previous lecture should be given by teachers, if it was related with the current one. 72% of teachers and 62% of students were of the opinion that the lectures should be of 45 min duration. When asked about the number of lectures that should be conducted per day, 52% of students opined that it should be limited to 2 per day. However, the majority of the teachers (52%) thought that three lectures should be conducted per day. 84% of the students were of the opinion that a copy of the PowerPoint slides containing lecture notes should be provided to them. However, 46% of teachers thought that the lecture notes should not be provided while 48% of teachers supported the idea of providing PowerPoint notes. The result of this paragraph has been summarized in Table 2.

One of the questions was pertaining to the minimum attendance required for the lecture. 70% of the students felt that at least 25% attendance should be there for the lecture for it to go ahead as per the schedule. In contrast, the attendance for most of the teachers was immaterial. [Figure 1].

As seen in Figure 2, 80% of teachers thought that asking questions to students is a great way to break the monotony of a lecture but only 28% of students agreed with this method. 32% of students thought cracking jokes will help break the monotony, to which only 4% of teachers agreed.

Figure 3 shows that teachers and students opinion differs regarding the best time for solving doubts. 54% of teachers thought that doubts should be solved only at the end of lecture, while 62% of students thought that doubt solving should be allowed anytime during the lecture.

DISCUSSION

A total of 100 participants, comprising of 50 medical students and 50 faculty members, were included in the study. Almost three-fourth of students and teachers were of the opinion that lecture program be displayed 1 month prior. Most of the participants wanted the lectures to be conducted between the time slot of 8 am–12 pm and the number of lectures should be restricted to 3 per day. 86% of students and 96% of teachers agreed that there should be emphasis on basics of the subject. 90% of students and 72% of teachers said that MCQs should be a part of the lecture. According to the majority participants, PowerPoint should be used for lecture duration of which should be 45 min and overextension should be avoided. The level of understanding can be judged by directly asking

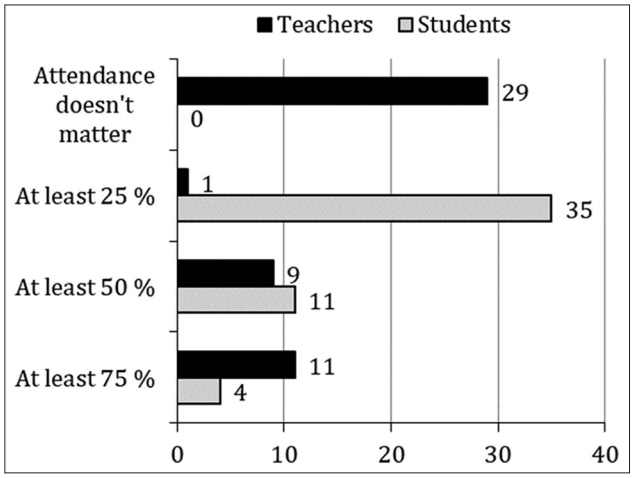

Figure 1: Opinion regarding minimum attendance for starting lecture (*n*=50)

Table 1: Responses of students and teachers to the questionnaire (Part 1)

Questions to study participants	Student's opinion (*n*=50)		Teacher's opinion (*n*=50)	
	Agree	Disagree	Agree	Disagree
Lecture schedule should be displayed at least 1 month prior	39 (78)	11 (22)	37 (74)	13 (26)
Teacher should give more emphasis on basics rather than recent developments and not vice versa	43 (86)	7 (14)	48 (96)	2 (4)
MCQs related to the topic should be included in the lecture	45 (90)	5 (10)	36 (72)	14 (28)
Teacher should summarize the topic at the end	46 (92)	4 (8)	45 (90)	5 (10)
At the end of the lecture, teacher should ask questions pertaining to the topic	31 (62)	19 (39)	39 (88)	11 (22)
If the lecture is not finished in allotted time, it should be stopped	33 (66)	17 (34)	45 (90)	5 (10)
Home assignments should be given	34 (68)	16 (32)	30 (60)	20 (40)

The brackets contain the percentages of the participants who agreed or disagreed

Table 2: Responses of students and teachers to the questionnaire (Part 2)

Questions to study participants	Student's opinion (*n*=50)	Teacher's opinion (*n*=50)
Preferable time slot for lecture?		
8 am–12 pm	36 (72)	47 (94)
12 pm–4 pm	11 (22)	3 (6)
After 4 pm	3 (6)	0 (0)
Preferable method for lecture?		
Chalk and talk	10 (20)	19 (38)
Power point	37 (74)	27 (54)
Over-head projector	3 (6)	4 (8)
Before lecture, handout containing salient points should be provided		
Always	27 (54)	8 (16)
Sometimes	14 (28)	20 (40)
Not necessary	9 (18)	22 (44)
If the topic is related then summary of previous lecture should be		
Done by teacher	26 (52)	29 (58)
Done by students	17 (34)	19 (38)
Not required	7 (14)	2 (4)
Ideal duration of a lecture?		
Half an hour	2 (4)	1 (2)
45 min	31 (62)	36 (72)
1 h	16 (32)	12 (24)
1½ h	1 (2)	1 (2)
How many lectures should be conducted in a day?		
1	15 (30)	6 (12)
2	26 (52)	14 (28)
3	8 (16)	26 (52)
4	1 (2)	4 (8)
Notes in the lecture should be		
Dictated by teacher	1 (2)	3 (6)
Given as copy of PowerPoint slides	42 (84)	24 (48)
Not be given	7 (14)	23 (46)

The brackets contain the percentages of the participants who agreed or disagreed

questions to students, as suggested by 62% of students and 78% of teachers. The majority felt that lecture should start with a revision of previous topic and end with a summary.

Lectures still remain the most common way of dispensing knowledge in educational institutions. In the recent past, computer-based teaching has gained momentum as an alternative, but it requires a substantial amount of resources, a complex plan of implementation as well as monitoring of the method.[12] Many research studies regarding recently introduced asynchronous, computer-based learning which

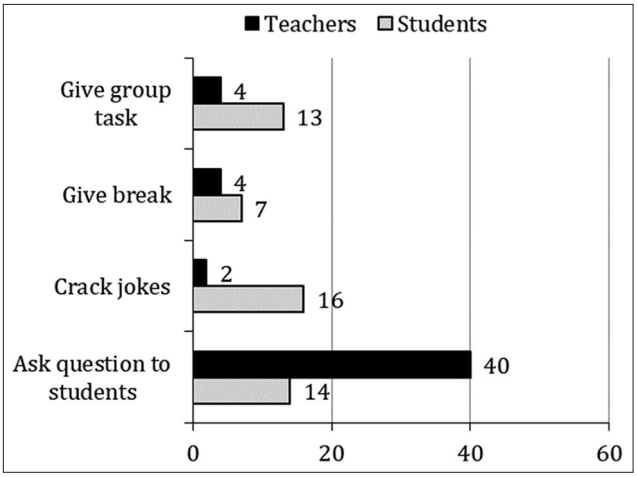

Figure 2: Best way for breaking monotony of a lecture (*n*=50)

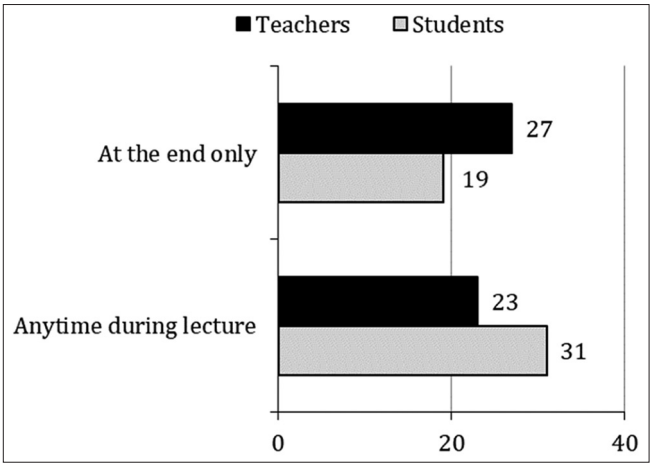

Figure 3: Opinion about timing of doubt solving (*n*=50)

claims to offer advantage of being flexible, student-centered and improved utilization of resources, have failed to find any significant advantage over traditional classroom-based teaching.[13,14] Hence, didactic lectures still remain popular mode of teaching. It is associated with some weaknesses too, like lack of thought stimulation in large groups.[15] Many times, flaws of lectures as a method of teaching are due lack of proper preparation, presentation, and organization of particular lecture, and it cannot be blamed on the method *per se*.[5] Literature or published articles have nowhere given a definition of a "good lecture." Therefore, in this study, an attempt was made to know the perception of a good lecture, from the point of view of both students as well as teachers. The idea of taking students' feedback is an effective tool for evaluating the performance of teachers, which can also help in the development of faculty by letting them know their strengths as well as weaknesses.[16] Lectures as a medium of instruction consist of various features, including in-depth understanding of the course, clarity of presentation, communication with students, teaching creativity, doubt solving, and class activity, as well as suitable lecture notes.[17] We included all these important aspects in our questionnaire-based study involving 50

medical students and 50 teachers. Many a times, lack of attendance in lectures is an important reason for their cancellations. Majority of students thought that at least 25% attendance should be there in the lecture for it to go ahead. In contrast, the attendance for most of the teachers was immaterial, probably because they have to finish the relatively big syllabus in limited time as per the rules of university, so they need to follow the schedule strictly [Figure 1]. According to three-fourth of both students and teachers, the lecture program should be on display at least 1 month before, which was probably because they thought that it would give them a chance to prepare well for the lecture. Post-graduation and other entrance examinations in India are being conducted in the MCQ pattern. Thus, it was not a surprise that 90% of students were of the opinion that MCQs should be included in lectures. Lectures are considered a didactic way of interaction and so 78% of teachers probably thought that asking questions to students can help in judging the level of understanding. Many lectures may be long, intermixed with a plethora of facts. Hence, it is important to summarize a lecture in the end which was underlined by 90% of students and teachers. Majority of students and teachers thought that lectures which are started late or overshoot the allotted time may delay the succeeding schedule. Majority of the participants thought that home assignments are important, as they may be helpful in revising lectures and keeping the students' minds stimulated [Table 1]. 94% of teachers and 72% of students wanted the lectures to be conducted in the morning hours before 12 pm, probably because they are fresh in the morning with good grasping power. None of the teachers opted for a time slot after 4 pm, saying the importance of pre-lunch sessions. On the other hand, practicals which also involve physical activity should be preferably kept in post-lunch sessions. Three methods which are commonly followed in most of the medical colleges in India for lecture delivery are chalk and board, PowerPoint presentations, and transparencies with an overhead projector (OHP). According to a study by Seth *et al*., the subjective assessment of lectures revealed that majority of the students preferred PowerPoint teaching, but it has few disadvantages like sometimes slides contained too much material, and the lectures were delivered too fast, making students just passive observers.[18] This result was in synchronization with our study, though 38% of teachers and one-fifth of students preferred chalkboard as a better alternative probably because it is the most commonly followed teaching method in schools and they are familiar to it. Newly joined medical students tend to prefer chalk and board method for subjects such as biochemistry and physiology.[19] Furthermore, in this method, teacher has to take natural pauses and breaks for writing/ rubbing the board which allow students to follow and grasp the content in better manner.[18] Kumar *et al*. found that students performed significantly better in post-lecture test with chalk and board when compared to PowerPoint or OHP methods.[2] However, at the same time, in many studies, students have opined that combination of power point and chalk and board is a far better than using any of the method used alone.[20-22] In our study, majority of the students felt that PowerPoint slides of lecture should be provided to them. More than half the students also thought that handout summarizing the salient features of the lectures if given at the beginning can help them by making notes taking an easier task. The ideal duration of lectures has always been a matter of debate. Long lectures may be found boring by students and the teachers will find them difficult to prepare. On the other hand, short lectures may not be enough to cover a particular topic, both from the point of view of teachers and students. Majority of students and teachers in our study opined that lectures should ideally be of 45 min duration. However, most teachers and students had contrasting opinions on the number of lectures per day, with the former saying three and the latter opining two [Table 2]. Lectures, especially of longer duration or multiple lectures placed consecutively, may become boring and monotonous for students by decreasing their concentration, and hence, it is important to recapture their attention from time to time, by a change of pace.[23] The most important thing which brings about active learning is mental engagement of students. It can be done simply by catching their attention or making them involved in the lecture process. Eliminating unnecessary details from lecture and using the time saved for active learning exercises, allowing students to take notes because writing down few words also helps them to stay engaged, and giving real-life examples that students are likely to encounter in reality may be helpful. Breaking the monotony of lecturing after every 20 min or so can also be done by doing simple things like telling the students to stand and do stretching exercise or by giving them few active learning exercises or even by showing one or two vacation slides. Hence, changing pace within a lecture helps students to recapture their attention and gets them reengaged.[23] In our study, the students and the teachers had different opinions on the best way to break monotony. Majority teachers thought that asking questions will help in breaking the dreariness, while most of the students thought that cracking jokes will be a better way of doing it [Figure 2]. There was opposite opinion as far as timing of doubt solving was concerned, majority of students wanted doubt to be solved at any time during the lecture, but majority of teachers wanted it at the end of the lecture to avoid extending it beyond given time and also to prevent giving excessive time to points which may not be as important [Figure 3].

A major limitation of the study is that responses of the participants were limited to the options offered to them; hence, they can be best interpreted within the framework of the questionnaire given to them. Extra space was provided for giving reasons to overcome above limitation. The study involved 2nd year students and teachers of only one medical college in relatively small numbers, so the results may not be generalized to other colleges, especially those belonging to different fields.

CONCLUSION

From our research, we can conclude multiple points which may help in improving the quality of didactic lectures. Our study asserts that lecture schedule must be displayed much in advance and preferably conducting most of them in before-noon session. PowerPoint is a popular mode among students and should be adopted by the teachers.

Our study emphasizes that summarization of previous lecture if done at the beginning of lecture can be quite helpful in improving understanding by maintaining the continuity. MCQ be an integral part of a lecture, with a few minutes can be spared for a question-answer session at the end of the class to reinforce important points. Most participants in our study thought that ideally 2–3 lectures be conducted per day, with each having a standard duration of 45 min. Lectures stretching beyond time can lead to loss of interest, and special care should be taken by teachers to break the monotony.

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