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Original Research Article

Effect Of Digital Teaching Versus Black board Teaching Perception Among Under graduate Medical Students :A Comparative Study in a Teaching Hospital India

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Abstract

Introduction:

Medical education is one of the most challenging, demanding, and stressful fields of study, among other fields of education. Hence MBBS students are expected to acquire diverse competencies such as academic, clinical, and interpersonal skills.The survey-based study was conducted to know the opinion of MBBS students regarding the teaching practices in medical college.**Objectives:** To Study and compare the Effectiveness Of Digital Teaching Versus Blackboard teaching Perception Undergraduate Medical Students**Methods:** A comparative study was conducted at Government Medical College, Suryapet, Telangana. Two hundred

medical students (n = 200) were divided into two groups.**Results:** In our study results shows highly significant, P value is less than 0.0001 by conventional criteria, this difference is considered to be extremely statistically significant. **Conclusion:**From the results it can be concluded that students are much interested in digital learning (power point presentation).Hence we can conclude that computer based learning is a new and important tool for a medical teacher for better delivery of the lecture.

Key words: Digital Teaching, MBBS students, Learning, Feedback,Skills

Introduction: Medical education is one of the most challenging, demanding, and stressful fields of study, among other fields of education. Hence MBBS students are expected to acquire diverse competencies such as academic, clinical, and interpersonal skills[1,2,3]. Some specific changes in teaching-learning methodology could be tried because it is very difficult to mend student perception with traditional methods of teaching, though such attempts have been made all over India to make the teaching of medical subjects more interesting and relevant[4,5,6] .The teaching in medical college of India has evolved from mere didactic lectures to audio-visual aid based lectures and digital computer based learning.[7,8,9,10]. Evolution of teaching methods is an on-going process and it needs proper feedback from the medical students regarding their opinion on what is satisfactory and what needs improvement.[11]

It is very significant to include students opinion as input in medical education. Medical students opinion is considered as a key component of processes used to monitor the quality of academic programs.[12] Effective screening provides valuable information, which contributes to both student and course success. Medical education system is capable of teaching students the required proficiency in their respective fields.[13] The efficacy of education can be determined by observing the extent to which the provided instruction fulfills its intended purposes and objectives.[14]
Problem based teaching gives the clinical application of knowledge acquired and makes the student to write a rational prescription for a particular case and helps solving problems in real therapeutic situations[15].

Methodology:
A comparative study was conducted at Government Medical College,Suryapet. Two hundred members of MBBS medical students (n = 200) were divided into two groups. Group A included students of first year and group B with second year students,

The questionnaire was derived and inspired from previous studies done in this field and was modified according to the current relevance. The survey was conducted after lectures in the lecture gallery and was deemed optional for the participating students. The data was collected and tabulated in an anonymous fashion to avoid any conflicts and bias. Pre tested objective type

questionnaire consisting of 6 questions each having one mark was given for evaluation in both pre and post test.

There after two didactic lecture classes were taken for the students on treatment of diabetes mellitus, before teaching of therapeutic problem. While assessing on problem based learning, all students were dealt together and all faculty members helped as facilitators. A similar pre and post test was conducted for evaluation by giving 7 similar questions to all students. At the end, the students were given one separate question for giving their choice on different modules by grading them in 6 categories and result analyzed. suggestions were asked about the qualities of good teacher, modifications in teaching methodology and scope of subjects. During the session, there was discussion between the students and the teacher on the topic and how to write the answers to the questions. Difficulties of students were also solved during the session. Along with thorough discussion on the topic and difficulty solving, answers to question in question bank were also discussed. The feedback was taken on clarity of objectives, interesting or not, explanation of procedure, research orientation, retaining capacity and correlation with theory knowledge, each on likert's scale.

Statistical Analysis: Descriptive statistics were employed for evaluation of the data. Frequency of data was expressed as percentage wherever applicable. SPSS 17 and Graph pad prism 4 version were utilized in the statistical analysis of the data.

Results: Opinion about attending classes being interesting before the study was 45% & after 70% .Order of preferences as most interesting teaching methods are Tutorials, Lectures, Demonstrations, Experiments, Case study and Seminars.

Table 1: Comparision& assessment of pre and post test scores of Therapeutic problem (Practical based learning) in the chalk&board group

	N (sample size)	M (Mean)	SD (Standard deviation)	P value
Pretest score	100	0.59	0.21	<0.0001
Posttest score	100	3.6	1.2	

Table 1 shows the P value and statistical significance, the two-tailed P value is less than 0.0001 by conventional criteria, this difference is considered to be extremely statistically significant.

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Table 2: Comparision& assessment of pre and post test scores of therapeutic problem (Practical based learning) in PPT group

	N (sample size)	M (Mean)	SD (Standard deviation)	P value
Pretest score	100	0.47	0.20	<0.0001
Posttest score	100	4.1	0.8	

Table 2 shows the P value and statistical significance,the two-tailed P value is less than 0.0001 by conventional criteria, this difference is considered to be extremely statistically significant.

Table 3: Comparision& assessment of post test PPT score and pre test of Therapeutic problem (Practical based learning) score.

	N (sample size)	M (Mean)	SD (Standard deviation)	P value
Posttest score of PPT	100	4.5	1.26	<0.0001
Pretest score of Therapeutic problem	100	0.53	0.18	

Table 3 shows the P value and statistical significance the two-tailed P value is less than 0.0001 by conventional criteria, this difference is considered to be extremely statistically significant.

Discussion:

Although lecturing is one of the most widely used teaching methods in undergraduate teaching of pharmacology and seems to be appropriate method for providing information, it does not promote thinking and deep learning Banning M. et al[16] The didactic lecture method has been immensely criticised by various researchers in the past and has prompted many innovations in teaching pharmacology at different medical schools. In the present study, all the students from the class got opportunity to attend the lectures of clinical conditions included in the study. After the lecture, they were exposed to other methods in small groups.Study correlated Draper SW et al, shows that to gain knowledge, interactive lecturesi.e. tutorial & group discussions were more useful . Students accepted & preferred interactivelectures.[17]

Our students overwhelmingly preferred the hard copy version of books compared to electronic versions (e-books).[18] This indicates that although students have access to newer reading methods, the age old trusted method of hard copy text book reading still holds true in the majority of the cases. A combination of lectures and notes was the preferred method of study and thus again underlines the importance that lectures hold in the teaching methodology . From our study we also find that a majority of the students regularly studied the subject which highlights the students' awareness regarding the importance of the subject as well the interest it manages to garner from them. Problem based learning(Therapeutic problem)there is no evidence available to evaluate the impact of problem based learning process. In our study all the three types of teaching shows significant improvement in the similar extent. Shulman LS. et al.[19] Power point presentation there is significant improvement in post test scores compared to pretest scores with PPT aiding the lecture which correlates with Henkel CK. et al.[20]

Conclusion: From the results it can be concluded that students are much interested in digital learning (power point presentation).Hence we can conclude that computer based learning is a new and important tool for a medical teacher for better delivery of the lecture. The study recommends use of computer assisted method for teaching. Study also points out need of computer training for the faculty and students as well as availability of more advanced simulators for demonstration and practical for undergraduate students.Though Tutorials ensured understanding as reflected in the test scores, students perceived case scenarios as the most interesting learning mode.

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