

# Chalk and Talk Versus Powerpoint: Perception among Medical Students

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## Abstract

**Introduction:** The emerging technologies made by day changing the techniques of teaching medical education. The teaching technique has changed since the last decade from the old traditional technique of chalk and talk (CNT) to a newer technique of Power-point presentation (PPT) to the video classrooms converting the whole traditional environment of the classrooms. This paper aims to access the perception of the medical students about these two instructional method.

**Materials and Method:** In this study cross-sectional descriptive survey was used. Medical students were selected through non-probability convenient sampling. The data were collected using a questionnaire-based survey about their views and perception of two method of lecture delivery, viz., PPT presentation, and using a chalkboard. For each of the two method, the students were asked to rank twelve comments on a four-point scale: strongly agree, agree, disagree, or strongly disagree. The data was analyzed using SPSS version 16 and the results expressed as proportions.

**Results:** In our study where more than 97% of our study respondents emphasized the value of chalk and talk and declared it as the more effective and useful teaching tool in their learning experience compared to PowerPoint (86%) and recommended it for teaching.

**Conclusion:** Both CNT, as well as PPT, are the effective method for medical education and both can be used in combination for the effective delivery of classroom sessions.

**Keywords:** Teaching method; medical education; classroom techniques.

## Introduction

Lectures have been the most common form of teaching and learning since ancient times.<sup>1</sup> Although discussion method in small groups appear to be a superior method of attaining higher-level intellectual learning.<sup>2</sup>

During the past few decades, the presentation method in the classrooms have changed from the traditional CNT to the modern technique of PPT. The most accepted criterion for measuring good teaching technique, however, is the amount of student learning.

Students often have little expertise in knowing if the technique selected by an individual instructor was the best teaching technique or just 'a technique' or simply the technique with which the teacher was most comfortable.<sup>3</sup>

During a lecture, both the visual and auditory senses are used to absorb information and here assistance in the form of the visual aid is useful.<sup>4</sup> A chalkboard is

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uniquely effective as a medium of classroom instruction and has been used commonly in lectures, while the use of transparencies with an overhead projector (TOHP) is also popular.<sup>5</sup>

In traditional classrooms, a teacher's basic instructional tools for displaying information are chalkboards, multipurpose boards, pegboards, bulletin boards, and flip charts.<sup>6</sup> To project instructional materials, overhead transparencies displayed via an overhead projector are still a commonly used classroom presentation method.<sup>3</sup> Recently the use of electronic presentations has become common and PPT is now the most popular instructional aid.<sup>7</sup>

The impact of technology has led to the increased use of computers for presenting information in many of today's classrooms. PPT hailed as an easy-to-use means of creating professional presentations teachers for creating classroom presentations.<sup>8</sup> A study found PPT to be one of the most widely used software programs in both an area educator preparation program and local public schools.<sup>9</sup> It is seen that "more than 400 million copies of the program are currently in circulation, and somewhere between 20 and 30 million PPT-based presentations are given around the globe each day".<sup>10</sup>

Various studies have been conducted to assess the effectiveness of lectures using PPT or other such media in comparison to lectures using the chalkboard, or the use of TOHP. According to one study, traditional classes with blackboard presentation were the most favoured by students from biomedicine and medicine courses.<sup>11</sup>

Recently the use of electronic presentations has become common and PPT is now the most popular package used out of all electronic presentations.<sup>12</sup>

Therefore, the present study was aimed, to assess the student's perceptions of the impact of PPT presentations in lectures compared with the traditional CNT.

## Materials and Method

This is a cross-sectional descriptive study. Medical students were selected through non-probability convenient sampling. The data were collected during 2017 from the undergraduate medical students at Gauhati Medical College and hospital using a questionnaire-based survey about their views and perception of two method of lecture delivery, viz., PPT presentation, and using a chalkboard. For each of the two method, the students were asked to rank twelve comments on a four-point scale: strongly agree, agree, disagree, or strongly disagree. The data was analyzed using SPSS version 16 and the results expressed as proportions. As this study is on classroom technique and has not revealed the identity of any of the participants, so ethical clearance from the ethics committee is not required. However, informed consent was taken before the collection of the data.

## Results

Distribution of perception of undergraduate medical students regarding the method of the CNT is narrated in **Table 1**.

**Table 1 Distribution of perception of UG medical students regarding the method of chalk and talk**

Sl.No.	Statements regarding perception	Strongly Agree	Agree	Disagree	Strongly disagree
		%	%	%	%
1.	I understand the lecture better when the teacher uses this technique	26	71	2	1
2.	I feel the student interaction is better with the teacher	33	53	12	2
3.	Eye contact between teacher and student is less	14	41	36	9
4.	The lecture advances the understanding	20	67	12	1
5.	This technique helps me to concentrate and remember better	38	50	10	2
6.	The quality and quantity of my lecture notes can't be maintained	12	48	30	10
7.	The delivery of lecture is interesting	26	51	20	3
8.	The content of the lecture informative	19	68	11	2
9.	The lecture is audible	28	65	7	0

Sl.No.	Statements regarding perception	Strongly Agree	Agree	Disagree	Strongly disagree
		%	%	%	%
10.	The lecture content was well organized	30	47	20	3
11.	The teacher remains more professional	25	59	15	1
12.	The teacher needs more preparation for the class	30	50	18	2

The distribution of perception among the undergraduate medical student regarding PPT as a method of teaching is narrated in **Table 2**.

**Table 2 Perception of undergraduate medical students regarding PPT**

Sl.No.	Statements regarding perception	Strongly Agree	Agree	Disagree	Strongly disagree
		%	%	%	%
1.	I understand the lecture better when the teacher uses this technique	30	56	12	2
2.	I feel the student interaction is better with the teacher	29	45	24	2
3.	Eye contact between teacher and student is less	14	47	34	5
4.	The lecture advances the understanding	19	65	16	0
5.	This technique helps me to concentrate and remember better	30	46	21	3
6.	The quality and quantity of my lecture notes can't be maintained	12	48	37	3
7.	The delivery of lecture is interesting	20	58	22	0
8.	The content of the lecture informative	20	71	7	2
9.	The lecture is audible	24	64	12	0
10.	The lecture content was well organized	35	50	10	5
11.	The teacher remains more professional	27	52	20	1
12.	The teacher needs more preparation for the class	31	42	23	4

In the present study, 97% of the participants emphasized the value of chalk and talk and declared it as the more effective and useful teaching tool in their learning experience as compared to PowerPoint (86%) and recommended it for teaching.

### Discussion

Teaching is an art. This study highlights the fact that the favourite technique of lecture delivery for students by different faculties in the classroom can vary so much within the same college.

Different technologies are available in classrooms for teaching in the present day scenario. The use of better teaching technique aid allows students to understand better. This also allows more time for interaction and further understanding. Use of technology can be a very beneficial and time-saving tool for all teachers.

An evaluation by the students can provide the teacher with the best user feedback regarding the best teaching method.

In the present study, medical students favoured a combination of teaching aids rather than single teaching support. Regarding the preference of medical students, the order of priority of combined teaching aids they have opted was PPT+CNT using blackboard.

This preference may probably be because the inherent deficiency of each method is compensated by the other. While CNT using blackboard teaching is deficient in showing the three dimensional (3-D) diagrams, animated videos and real-time sounds. However, the same can be demonstrated using a PPT. Furthermore, PPTs take less time to present the same information as compared to CNT using blackboard teaching. CNT teaching allows the students to take down the notes and diagrams which

is difficult with PPTs as there is a tendency to deliver the lecture fast.<sup>13</sup>

The current results agree with Chaudhary R et al.<sup>14</sup> Here the author revealed that the majority of the students (67.1%) favoured the combined teaching aids. With the CNT using blackboard, the student pointed the drawback, is that it takes time to draw a labelled diagram on the board and during that time teacher's eye contact with the students get interrupted.

SN Baxi et al.,<sup>15</sup> in their study, revealed that an equal number of students preferred CNT and multimedia-based lectures. Seth et al.,<sup>16</sup> also compared the preference for teaching aid between medical students versus dental students. The medical students have preferred PPT whereas the dental students preferred the Chalkboard in their study.

Some participating students opined that the effectiveness of the teaching lecture depends upon the teacher, regardless of the teaching aid used. What is fundamentally important in university teaching is not the quality of the technology but the quality of the teacher as revealed in a study<sup>17</sup> agree the current results. Besides, a good teacher knows to start at a basic point of the course, which students can understand and then lead them gradually through the new and more difficult points.<sup>18</sup>

### Conclusion

In conclusion, combined teaching support is considered as most satisfying teaching support because the inherent deficiency of one aid is compensated by the other. If single teaching assistances is to consider then the blackboard teaching aid is the most pleased by the undergraduate medical students as they can follow the teacher well with a deep understanding of the concept effectively.

The present study, as well as the previous studies, does not bring out the superiority of any single support system of the teaching method. It seems that with the hands of a trained teacher any teaching technique would be suitable and effective. This highlights the need for formal training of the teachers in teaching in the classroom to develop a perfect skill to motivate students.

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