

# The impact of Power Point presentation over blackboard teaching in first year MBBS students

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## Abstract

**Background and Objectives:** To compare the impact of Power Point presentation and chalkboard teaching, by assessing the students on marks obtained. **Methods:** First year MBBS students between 17-19 years of age were selected. One hundred and fifty students were divided into two groups. A selected lecture was delivered to both the groups. For one group lecture was delivered using power point presentation. For second group lecture was delivered using chalk and board method. Single best response multiple choice question paper was used for assessing the knowledge acquired by the students. SPSS version 10 was applied for the statistical analysis. **Result:** The difference between two groups was found to be significant ( $p < 0.05$ ). **Interpretation and Conclusion:** The Power Point presentation was found to be more effective than the traditional chalk and board method.

**Keywords:** Chalkboard, Power Point presentation, MBBS students.

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power point presentation. For second group lecture was delivered using chalk and board method. Single best response multiple choice question paper was used for assessing the knowledge acquired by the students. Students with known history of gross anaemia, headache, insomnia, hearing impairment and visual impairment, and those on any medication were excluded from the study. Students were provided with well ventilated class rooms with pleasant environment. The time allocated for the lecture was in the morning 9 am to 9.45 am. The time duration for the lecture was 45 minutes.

## INTRODUCTION

Teaching and learning are active processes occurring simultaneously on a continuous basis.<sup>1</sup> Teaching is a mean of facilitating and supporting learning and involves contingent functions.<sup>2</sup> The internet is probably the largest revolution in the computer industry in the world. It is the promising technology for disseminating information. It offers new way to learn and to communicate.<sup>3</sup> It is the single largest medical reference resource.<sup>4</sup> Thus teaching using Power Point presentation as a tool is suppose to be a far effective method of learning compared to the traditional ways of using chalk and board. Out of one hundred and fifty students, two groups of 75 students each were made. A selected lecture was delivered to both the groups. For one group lecture was delivered using

## MATERIALS AND METHODS

The present study was conducted in department of physiology. Approval of ethical committee was obtained prior to commencement of the study. First year MBBS students between 17-19 years of age were selected for the study. A single best response multiple choice question paper was given to the students immediately after the lecture. They were instructed to attempt all the questions within stipulated time. Question paper set was prepared by the experts in physiology using a question bank. It was based on the content of the lecture. It was prepared according to the expected knowledge of the undergraduates. The sample was described using mean  $\pm$  SD. The analysis was performed using SPSS software

version 10. A level of statistical significance was applied at a value of  $p < 0.05$ .

### Statistical Analysis

The sample was described using Mean $\pm$ SD for qualitative variables. The statistical analysis was performed using Statistical Package for Social Sciences (SPSS) version 10 program for Windows. A level of statistical significance was established at a value of  $P < 0.05$ . Table II shows the comparison of the marks obtained by the students in first year MBBS who were taught on Power Point and compared to the students who were taught on the chalkboard. Significantly higher marks were obtained by the students who were taught on Power Point presentation compared to the students who were taught on chalk and board teaching alone

## RESULTS

There was no statistically significant difference in the age between group I and group II. Hence they were comparable for the study (Table I).

**Table 1:** Age in Group I and Group II

Parameters	Group I (Power Point)	Group II (Chalk board)	Significance level
Age	17.48 $\pm$ 0.53	17.65 $\pm$ 0.52	NS

The mean marks obtained were 3.32 $\pm$ 0.39 in group I and 2.9 $\pm$ 0.27 in group II. Observation shows Power Point as a better means of teaching compared to chalk and board in Group II (Table II).

**Table 2:** Marks obtained in Power Point and blackboard teaching groups in Group I and Group II respectively

Parameters	Group I (Power Point)	Group II (chalk board)	Level of significance
Marks obtained	3.32 $\pm$ 0.39	2.9 $\pm$ 0.27	$p < 0.05^*$

\* $p < 0.05$ - Significant.

A significant difference was seen in marks obtained by the teaching method using Power Point compared to the black board teaching.

## DISCUSSION

The quality of learning and teaching depends on the way of teaching and methods used for teaching. The conceptual teaching should be capable of increasing cognitive processing in students. There is also a need to consider integrated teaching for better understanding in students.<sup>5</sup> The development of better thinking can be brought about by reducing the traditional ways of chalk and board teaching and memorisation of the contents.<sup>6</sup> Teacher's mere role is not just to deliver a lecture but to help students' learning process and student's role is not just to copy the new information but actively assimilate

the information and interact during lecture.<sup>7</sup> Teaching with Power Point provide better concepts and this is more elaborated when teacher highlights the important contents during the lecture. When contents like the figures and the flow charts were discussed on the Power Point and then elaborated using multimedia, audio and video clips. The diagrams were explained using three dimensional diagrams, it keeps the students engaged and motivated. Their attention remains focused on the subject matter and ultimately related to the subject matter understanding of the core content of the lecture. Power Point presentation is an essential instrument of health professional in teaching. One can personalise the slide according to one's own interest. We can enhance the quality of presentation and make it more interesting and lively by using different font, colour, sound and graphics.<sup>8</sup> The Power Point slides should be ideal according to the rules to make them effective. Some faculties do not prepare their own slides and hence loose the interaction while teaching. Common faults while preparing Power Point slides should be avoided. Things like slides with too many lines, too many words per line, spelling errors distracting animations and poor colour combination should be avoided. David and James, reported that Power Point serves more as a mean of mapping and directing the flow of classroom discussion on a topic than as a means of presenting the topic itself.<sup>9</sup> In traditional methods, the teachers may avoid the writing or drawing a figure, a flowchart on the board. In medical teaching an illustration should be supported by the concepts while teaching a system. Therefore the students may face some difficulty while understanding the concept and ideas. Thus the traditional methods do have its own limitations. In the present study MCQS were designed to measure the knowledge gained by the students. The questions were prepared by the expert faculty in physiology on the core content and understanding by the undergraduates. The questions were related to the contents of the topic and reflected the key learning outcomes. The students were very pleased about the entire exercise.

## CONCLUSION

The results of the present study suggest that both the tools of teaching have some strength and limitations. But the Power Point method of teaching is more effective tool of teaching and learning at undergraduates medical schools.

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