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## To Assess the Effect of Teaching by Blackboard and Powerpoint

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### ABSTRACT

The aim of the study is to assess the effect of teaching by Blackboard and PowerPoint presentation in 1<sup>st</sup> M.B.B.S students and determine the advantage and disadvantage of both the methods. Methods: - A total of 44 students 1<sup>st</sup>-year medical students participated in the study. They were divided into two groups of 22 each. A topic was taught by PPP method to group A, and by blackboard, method to group B. Just after the class they were asked to answer 5 same questions and evaluated by same teacher. Result:-The results were displayed with the help of bar diagrams. The result was analyzed by statistical analysis software. In this study, there was no significant difference between PPP teaching method and blackboard method. However, more subject coverage and demonstration of figures, charts and clinical conditions were better when compared to blackboard method. Further technical problems and erratic electrical supply are negative points for the use of PPP method. Conclusions: - Present study suggests that Blackboard method was as good as PPP teaching. The result of this study also suggests that Blackboard method supplemented by PPT presentation for better understanding seems better method of teaching.



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## INTRODUCTION

Teaching and learning are active and continuous process. They are closely related to each other and dependent on each other <sup>1</sup>. Teaching is an art <sup>2</sup>. Learning is the cognitive process whereby an individual acquires the professional, behavioral and clinical knowledge and skills for professional competence <sup>3</sup>. Ultimately learning leads to permanent change in the behavior and skill of the learner.

Didactic lecture is the most common form of teaching and used since ancient times <sup>4</sup>. This is one way and passive mode of teaching and thought to be less effective teaching method in technical subjects. This is one way and passive mode of teaching and less effective teaching method in technical subjects. Although discussion methods in small groups appear to be a superior method of teaching- a bilateral method Cannon 1988 <sup>5</sup>. Teacher will teach and ask to students and students may also ask to clarify any point. This is also known as Tutorial class. And knowing its importance MCI has made it compulsory in teaching schedule in medical colleges in addition to lecture and practical classes. In our country lecture is must as the number of students in Medical College is very large in comparison to the teaching faculty available. A well-organised lecture remains very effective way of teaching and gives information from multiple sources. A teacher and students need only blackboard and chalk as mode of delivering information in this mode of teaching. As Walton (1972) notes, lecture is very important part of teaching. It should be very effective <sup>6</sup>.

During lecture, auditory and visual senses are used to gain information. Students remain very active during lectures otherwise, they will miss important points. Increase assistance in the form of a visual aid is useful <sup>7</sup>. A blackboard is very effective as a medium of classroom instruction and has been used in lectures. John Dewey stated once that if we teach today as we taught yesterday, we rob the children of the tomorrow.

Science and technology advancements have changed every field of life including teaching <sup>8</sup>. Development of audio-visual aid transparencies with an overhead projector and PowerPoint are the other effective modes of delivering lectures. Transparencies with an overhead projector was introduced in 1960's and was popular, but now seems to be heading for extinction (Prasad *et al.* 2000)<sup>9</sup>. Electronic presentation is becoming very popular in education - in medical education as in other colleges. Microsoft PPT is now the most popular teaching aid. MCI also supports these Audio-visual methods.

## MATERIALS AND METHODS

The study was conducted in the Physiology Department, A. N. M. Medical College, AKU. Gaya, Bihar, India. It is a Govt. medical college recognized by Medical Council of India for annual intake of 100 students. In our college blackboard, lectures are common, overhead projector lectures are used to some extent. In Department of Physiology, the PPT based teaching started in the year 2015. So there is a need to know the impact of this method on knowledge gained by students. Therefore, this study was performed to compare the effect of PPT and blackboard in Physiology teaching by assessing the knowledge of the students.

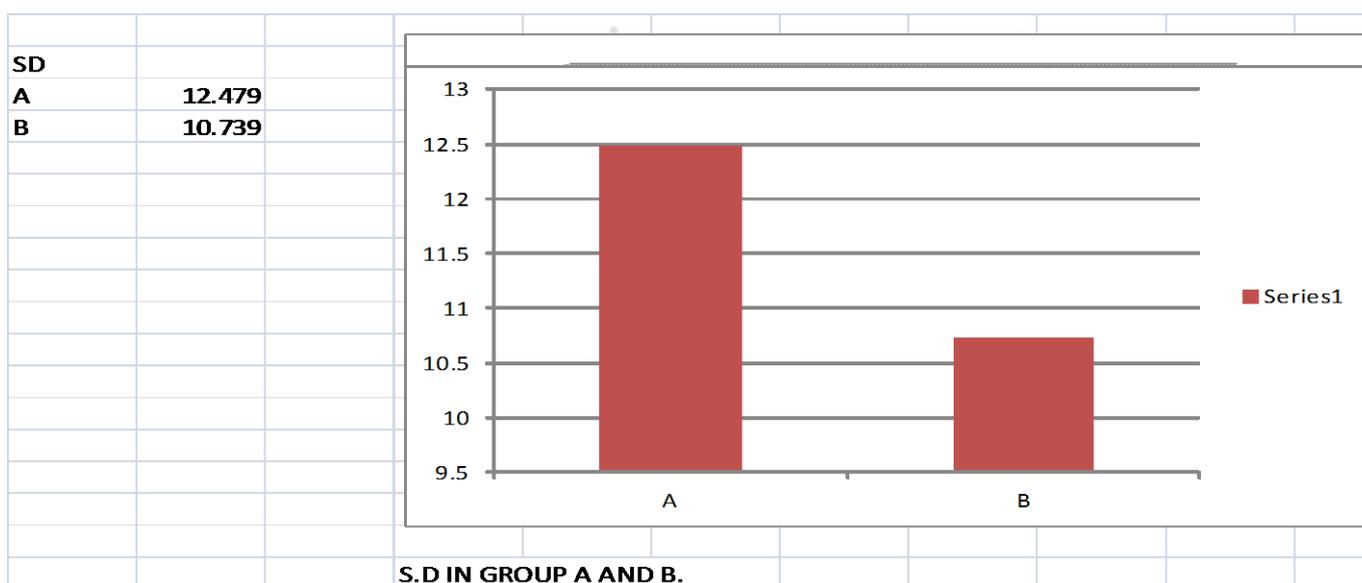
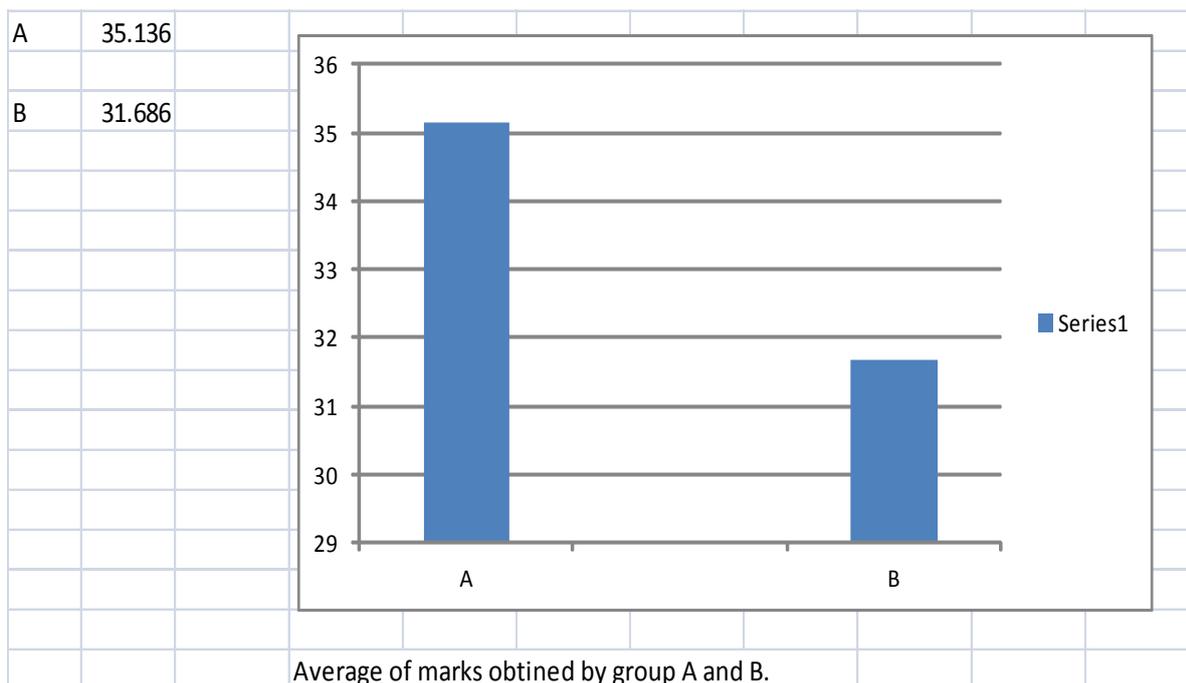
A total of 44, 1<sup>st</sup>-year medical students who were about to complete their 1<sup>st</sup> year M.B.B.S.were included in this study. The students were randomly divided into two groups- The participation in the present study was on the voluntary basis. Students of group A was taught by power point method and students of group B was taught by blackboard method by same teacher for 50 minutes each in different classroom. Immediately after the lecture they were given five questions of 10 marks each and students were asked to attempt all questions. Total mark 50 and asked to answer in 30 minutes. The answer was evaluated and recorded .The data was analyzed by Microsoft Excel software.

## RESULT

Table no 1 shows the comparison of marks obtained by the students using the two teaching methods.

	MEAN	MODE	MEDIA N	Standard deviation	Highest mark	Lowest mark
POWERPOINT 'A'	35.13636	44	41	12.479	48	11
BLACKBOARD 'B'	31.68421	30	32	10.739	48	14

Method Parameters



**DISCUSSION**

Every lecture topic has some specific main points which the teacher wants the students should understand, retain in memory and use it when necessary. Teacher must emphasize these points during the lecture .Use of teaching media plays an important role in this aspect. The type of media used will decide to some extent that how much students pay attention to lecture and how much they will retain. Teachers are divided on the superiority of blackboard teaching or PPP teaching or other methods of teaching like OHP.According to Novelli and

Fernandes (2000)<sup>10</sup>, tradition classes with blackboard were the most favored by students in medical courses and produced many eminent teachers, doctors, and in other fields also. While Rocklin (1998)<sup>11</sup> suggests that the use of PowerPoint is a driving force for teachers to help their students to learn.

Historically teaching is associated with a blackboard. It has some merit and worldwide acceptance due to which it is existing and probably it will remain forever. The blackboard is a very powerful tool for instruction - it allows information to be displayed in a persistent manner, and can give the audience a constant view of far more information than can be held in short and long-term memory<sup>12</sup>. Blackboards encourage note taking and student teacher interaction. This promotes a sense of naturalness, suppleness and cohesiveness in the instructor<sup>13</sup>. Teacher makes natural pause and everything seems natural. Students attention to lecture delivered via blackboard is still encouraging. The presentation is not dependent on a device and power supply. Taking down simply – drawn diagrams is easy and in examination, students can draw such diagrams.

Although a good teacher without audiovisual aids will be better received than the poor teacher with the best audiovisual aids (Prasad *et al.* 2000)<sup>9</sup>. According to some studies learning with audiovisual aids -PPP - seems to have a great impact on students.

While some studies have found that students learn more in traditional blackboard lecture Amare (2006)<sup>14</sup>, many studies have found that ppp teaching has no measurable influence on course performance Hill, *et al*<sup>15</sup>. According to El khoury and Matter (2012)<sup>16</sup> there is no significant difference in both methods of teaching.

The use of a blackboard is neither old fashioned nor nostalgic. Just the opposite they are modern direct, dynamic, intuitive and readily available. Peter Gjersvik opine that a blackboard is crucial for a good lecture. In fact, blackboard teaching means that students must be active and develop a strong relation with teachers.

In India, students are familiar with blackboard teaching before they enter profession colleges and prefer blackboard. The inadequate backup facilities for PP presentation also hamper its benefit. Senior medical college faculties do not want to change their way of teaching as they were taught by blackboard method and were teaching by the same method.

Drawback of this study is data is collected only from 44 students of a single batch of 1<sup>st</sup> MBBS. However, a metacentric study with large number of students would be beneficial to assess the best teaching methods in medical education. Some studies were performed at different medical colleges with different results.

## CONCLUSION

Age old traditional blackboard teaching method is as good as PPP teaching method. However, it can be made more and more effective by combining it with other teaching aid like PPT. It does not bring out the superiority of any lecture delivery method. It seems that in the hands of a devoted and trained teacher any teaching aid would be more effective.

## DISCLOSURE

The authors report no conflicts of interest in this work.

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