

Comparison of Blackboard and PowerPoint Presentation in Teaching Biochemistry for MBBS Students

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Abstract

Background: Blackboard teaching is the traditional method of delivery of lecture for MBBS students. Power point presentation is the popular new tool in teaching the subject for the students. An effective teaching method helps to improve the academic performance of the student and also it is useful to implement the knowledge in the future.

Aims and objectives: The aim of the study was to compare the student's perception of blackboard teaching and power point presentation in learning Biochemistry among MBBS students.

Material and methods: A total of 120 first year MBBS students participated in this study. The study was conducted by asking the students to fill a questionnaire regarding their perception about the blackboard teaching and power point presentation in learning Biochemistry.

Results: In this study, the students preferred blackboard (70%) as the teaching method compared to power point presentation. In blackboard teaching there is better perception of the subject (77%) and there was more involvement in teaching (80%) compared to power point teaching. Whereas power point was preferred by the students to make notes (62%) compared to blackboard teaching.

Conclusion: Blackboard still remains the preferred teaching aid to learn Biochemistry among the MBBS students. Power point presentation is helpful for the students to take down notes.

Keywords: Blackboard, Powerpoint, Biochemistry.

1. Introduction

Teaching and learning is a continuous process of passing knowledge from one generation to another. It exists since ancient times. This applies very well to medical curriculum. There exist different methods of teaching which helps the students to gain knowledge about the subject and apply the concept in the future.

Lectures have been the most common form of teaching and learning. A well organised lecture is one of the most effective ways of transmitting information from various sources [1]. The main aim of the lecture is to make the student understand and retain the concept of the subject taught by the teacher. The quality of the lecture can be enhanced by taking the assistance of audiovisual aids [2]. The blackboard is commonly used tool of teaching from nineteenth century [3]. Newer tools have come now with the advancement of the technology. Overhead projector (OHP)

and Microsoft power point presentation (PPT) are the newer methods of teaching. Recently the PPT is now the popular teaching tool in the delivery of lectures. Power point based lectures are increasingly used in the medical colleges in delivering lectures.

Various studies have been conducted to study the effectiveness of the different methods of teaching. In one study the students preferred the traditional blackboard teaching as the best teaching method [4]. Whereas in another study power point was the considered as the best teaching method by the students [5]. It has been observed that power point is better for the students to take down the notes in the lecture classes [6].

Biochemistry is an important first year MBBS subject which is prescribed in the Medical curriculum. A good and effective method of teaching Biochemistry can

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enhance the student's academic performance. It also helps the students to retain and apply the knowledge gained in the subject for the further course of their career.

This study was undertaken to compare the blackboard teaching with the power point presentation in learning Biochemistry for the first year MBBS students. In this study the student's perceptions and opinion about the two different methods of teaching was studied.

2. Material and methods

The present study was conducted at Sambhram Institute of Medical Sciences and Research, KGF. The study group consisted of 120 first year MBBS students. Ethical committee approval was obtained to carry out the study. The participation of the students in this study was on voluntary basis. The students were asked to fill the questionnaire about the different methods of teaching. No personal identification information was obtained in the study.

3. Results

In the present study the medical students preferred blackboard as the effective teaching aid compared to the power point teaching method. 84 (70%) students preferred blackboard as the teaching tool. 92 (77%) students considered that blackboard helps in better perception of the subject compared to power point presentation. 82 (68%) of the students were of the opinion that blackboard helps to retain the information delivered in the class. 90 (75%) of students could concentrate better if blackboard was used as the teaching aid. Whereas 74(62%) of students preferred power point to take down notes when compared to blackboard. 64 (53%) of students were of the opinion that blackboard generated more interest and. 66 (55%) of the students could take down diagrams better in blackboard teaching. 70 (58%) of students felt that in blackboard teaching the teacher can go deep in the subject 97 (80%) of the students could involve better in the subject when blackboard was the teaching aid when compared to power point.

Table 1: Student's preference for Blackboard teaching and Powerpoint teaching for various questionnaire

Questions	Blackboard teaching	Power point teaching
Most preferred	84 (70%)	36 (30%)
Better perception of subject	92 (77%)	28(23%)
Good retention	82 (68%)	38(32%)
Able to concentrate	90 (75%)	30 (25%)
Make notes	46 (38%)	74 (62%)
Generate interest	64 (53%)	56 (47%)
Take down diagrams	66 (55%)	54 (45%)
Can go in depth of the subject	70 (58%)	50 (42%)
Involvement in teaching	97 (80%)	23(20%)

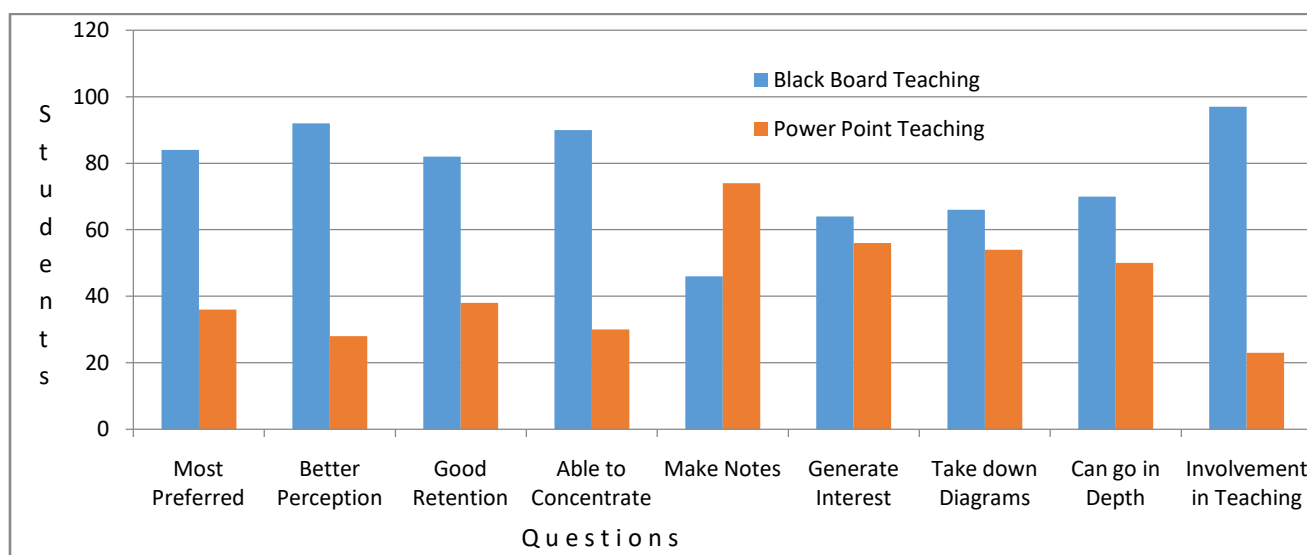


Figure 1: Student's preference for Blackboard teaching and Powerpoint teaching for various questionnaire

4. Discussion

In the present study the student's preference to the teaching aids was studied. 70% students preferred the blackboard as the ideal method of teaching. The blackboard

method of teaching still remains the preferred method of teaching as done by this study. The students can get better involved in the subject and can retain the information given by the teacher. 77% students considered that blackboard

helps in better perception of the subject. The students can understand the subject better and can interpret the results regarding the subject matter. There is scope for better awareness and better analysis of the subject. Our study was similar to the findings of Petimani *et al* who found that blackboard still remains the teaching method of choice among the MBBS students [7].

The blackboard teaching the teacher can present his own ideas and his own knowledge about the subject. The blackboard teaching is simple and easy method of teaching. It doesn't need any expensive material to prepare the topic. The matter and the diagrams can be erased easily by the teacher. The teacher can express his knowledge and can go in depth of the subject rather than concentrating on the power points. 68% of the students considered that blackboard teaching helps in good retention of the subject matter compared to power point teaching. A good skilled teacher with vast knowledge of the subject can pass on the information to the students. This is possible with the blackboard teaching whereas in the PowerPoint teaching, the teacher is concentrating more on the power points in teaching the students. There is more involvement and more depth in chalk and talk teaching.

75% of the students could concentrate better in the class when blackboard was used. There is more involvement in the subject by the students in blackboard teaching. In the present study 62% students preferred power point to take down notes in the class. Our study was similar to the study done by Lalvarmawi *et al* who proposed that the power point is more useful to take down notes compared to blackboard [6]. In power point teaching the teacher prepares the slides and explains the important points regarding the subject. Since the matter is typed and clear the students can take down the notes easily. The notes in the power point are legible and are useful when the class is taken for a large group of students who can easily see the notes on the slides. The handwriting may not be clear sometimes on the board which makes the students difficult to take down notes. In another study it was observed that students preferred power point to blackboard teaching [8,9]. In PowerPoint the teacher can explain the topic with images and videos. In power point presentation the teacher can explain slides with images and videos which is not the case with blackboard teaching.

In this study 53% students were of the opinion that blackboard teaching generates more interest compared to Powerpoint teaching. A skilled teacher can express the ideas in his own words and expressions to help the students understand the subject better. Our study was similar to the Parvin *et al* who observed that the students preferred blackboard to power point in generating interest among the students [10]. Saha *et al* showed that stress on important point can be given in blackboard teaching [11]. Students

considered that the teacher can go in depth of the subject in blackboard teaching.

Ability to take down the diagrams is an important aspect for the students to understand the subject. 55% Students preferred chalk board to take down the figures. Students can take down the diagrams the teacher draws on the board which helps them to learn the subject better than power point. Our study was similar to Shaguphta *et al* who showed the students preference of blackboard in taking down diagrams [12]. It is easier for the students to follow the teacher and copy the diagrams which the teacher draws on the black board. The student can retain these diagrams and correlate with the theory concept.

In the present study 58% students considered that the teacher can go in depth of the subject in blackboard teaching. There is flexibility in the teaching and the teacher presents spontaneously his knowledge which allows him to go deep into the subject. The teacher doesn't have to restrict to the points in the power point. The teacher can quote various examples and present his experience in the teaching. It is proposed that blackboard teaching is more effective where a student learns gradually from basics to the new and difficult point [13].

In this study 80% students felt that there is more involvement of teaching in blackboard teaching. There is better scope of interaction between the teacher and the students in blackboard teaching. The blackboard teaching has better potential to enhanced learning process. It was found that blackboard can generate better interest among the students [14]. A good interaction with the student helps a student to learn better [15]. There is more interaction and involvement in blackboard teaching compared to power point. Moreover blackboard teaching is not affected by the power interruptions. All the above points leads to the students preference towards blackboard teaching.

5. Conclusion

In this study the blackboard teaching was preferred to powerpoint presentation in learning Biochemistry by the MBBS students. In blackboard teaching there is more involvement, more depth in the subject compared to power point teaching. The students can understand better in blackboard teaching and it generates more interest in the subject. Powerpoint presentation is useful for the students to make notes.

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