

# Comparative Effectiveness of Powerpoint Over OHP as an Effective Teaching Learning Tool at R.D. Gardi Medical College Ujjain (M.P)

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## Abstract

**Background:** Since years, a number of initiatives were taken to improve the teaching methodology in Medical education.

**Objective:** The present study was undertaken to emphasize the importance of LCD-based teaching over OHP and to increase teachers' acceptability to LCD.

**Materials and methods:** This study was carried out with 100- 125 students. The study incorporated 50 minutes teaching sessions in the department of physiology with the use of two different teaching tools. Students were divided into two groups. One topic was selected and Roll numbers 1 to 75 were taught by Powerpoint by LCDs & students from roll number 76 to 150 by Transparencies, in the second week they were assessed by written test.

**Results:** Significant difference in marks obtained by the students taught on PPT as compared to OHP ( $P > .001$ ) it was observed that students who scored less after OHP exposure showed improvement after PPT exposure. (Table 1 & 2) 80% of students prefer PPT over OHP and understanding of the subject was more with PPT. Students found OHP good for the text material and insufficient for the applied and diagram part while preferred PPT for 3-D view of diagrams, concepts and applied.

**Conclusion:** In Department of Physiology at our Institute most preferred TL method was found to be by PPT then OHP. As results also indicated improved performance by the students, In view of that Teachers also agreed to the responses by the students, and showed acceptability for PPT.

**Keywords:** Teaching learning method; students; Medical education.

## Introduction

Since years, a number of initiatives were taken to improve the teaching methodology in Medical education. A five-year strategy from 1998/99 to 2002/2003 (Education and Manpower Bureau 1998)

was proposed to promote the use of new teaching technology in regular curricula. In our institution most of the senior faculty still using the conventional method of teaching on OHP on the contrary to young faculties who usually use PowerPoint presentation

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(ppt) as a tool in most teaching-learning methods (TL) with the help of LCD's, where teaching skill is not a prescriptive process, as concerned with medical professional studies teaching method has a great impact on the understanding of the subject, it requires a lot of effort for making the concept palatable. Students In classrooms have mixed reactions to both the tools and found LCD as an improvised tool in facilitating the students and providing a better understanding of the subjects<sup>1-3</sup>. The present study was undertaken to emphasize the importance of LCD-based teaching over OHP and to increase teachers' acceptability to LCD.

### Materials and Methods

**Study setting:** The study was conducted for I MBBS students in the Department of Physiology RDGMC Ujjain for six weeks in college demonstration room & teacher-researchers were involved Sample size & sampling technique:

**Study participants:** This study was carried out with 100- 125 students. The study incorporated 50 minutes teaching sessions in the department of physiology with the use of two different teaching tools.

**Methods:** Students were divided into two groups. One topic was selected and Roll numbers 1 to 75 were taught by Powerpoint by LCD s & students from roll number 76 to 150 by Transparencies, in the second week they were assessed by written test. In the second exposure there was a cross-over application of the T-L media with the different topics) and again were given the test to ensure content validity topics of equal difficulty level were chosen for PPT and OHP Throughout the period of this research the Teacher-researcher kept record of experiences for self-assessment. Senior teachers were also given questionnaires for their preference of the teaching tool.

**Inclusion criteria:** students attended all the sessions of study (80 students appeared for the written test)

**Exclusion criteria:** Chronic absentees from the class and those missing even one session of study A questionnaire was prepared to know the drawbacks and advantages and also the preference for the type of TL tool by 125 regular students attending the class at the end of the test.

**Statistical analysis:** The sample was described by using mean+/-SD for quantitative variables. Statistical analysis was conducted using) paired & unpaired t-test The analysis was performed using the SPSS version 16.0 program for Windows and results were tabulated.

### Results

Significant difference in marks obtained by the students taught on PPT as compared to OHP ( $P > .001$ ) it was observed that students who scored less after OHP exposure showed improvement after PPT exposure. (Table 1 & 2) 80% of students prefer PPT over OHP and understanding of the subject was more with PPT. Students found OHP good for the text material and insufficient for the applied and diagram part while preferred PPT for 3-D view of diagrams, concepts and applied. As we have had open-ended questions 50% of students found bad handwriting as the biggest drawback of OHP While 25% pointed to poor illumination and 18% had a problem with the font size used. On the other hand, 43% of students pointed out that teaching is very fast on PPT Along with 32% were unable to draw the diagram & 16% suggested lot of complex material is projected, and 96% experienced all the above drawbacks. When asked to comment on advantages 45% prefer OHP for simple and easy text, 26% prefer simple diagrams, 34% liked animation used by PPT.

**Table 1: Comparison between marks obtained by the students taught through PPT-2 & OHP -2**

Groups	Mean	Standard Deviation	t	p
PPT A1	17.5500	1.33877	14.53	0.0000
OHP A2	13.1500	1.36907		
PPT A2	17.0250	1.25038	12.439	0.0000
OHP A1	13.1250	1.53902		

**Table 2: For students who scored less their performance was improved with PPT method ( p>0.001)**

Groups	Mean	Standard Deviation	t	p
PPT A1	17.5500	1.33877	16.10	0.0000
OHP A1	13.1250	1.53902		
PPT A2	17.0250	1.25038	13.404	0.0000
OHP A2	13.1500	1.36907		

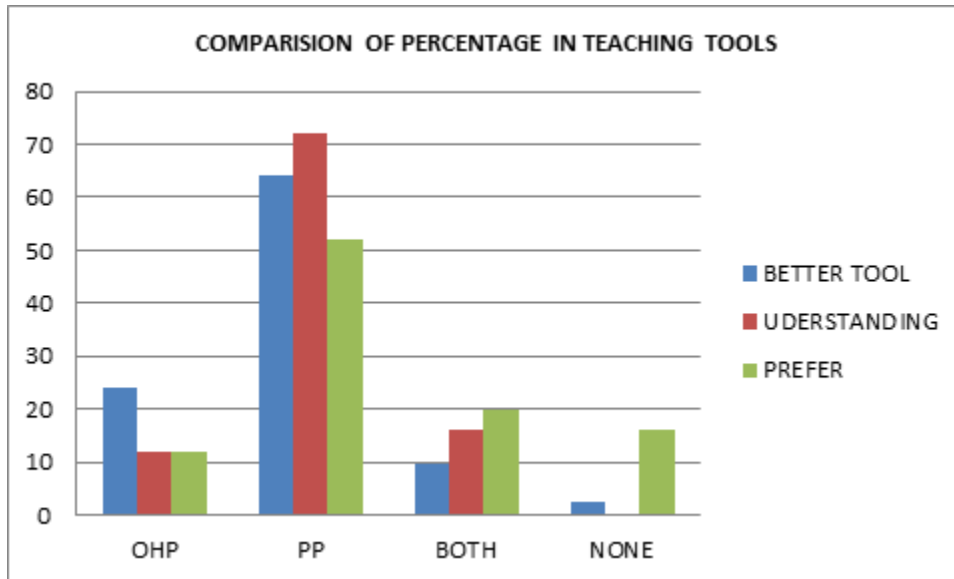


Figure 1: Comparison of percentage in teaching tools

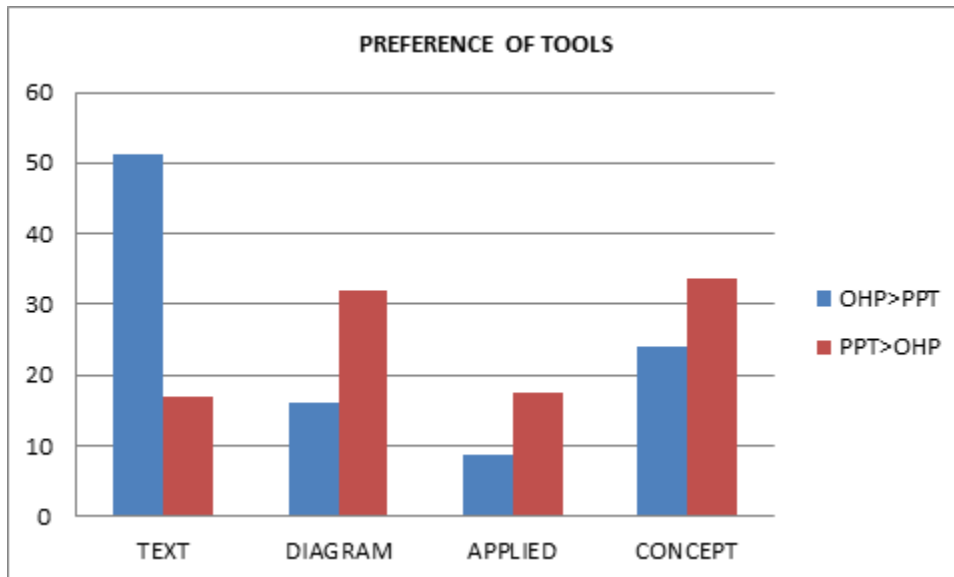


Figure 2: Percentage in teaching tools

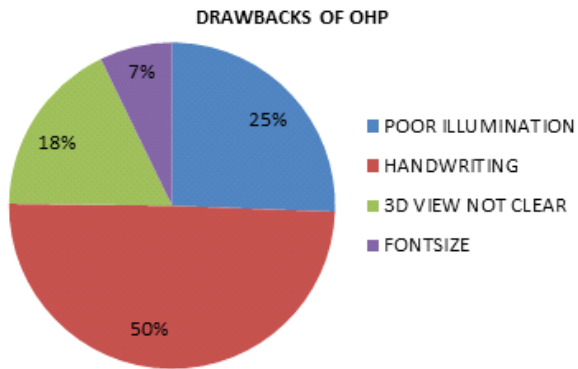


Figure 3: Drawbacks of OHP

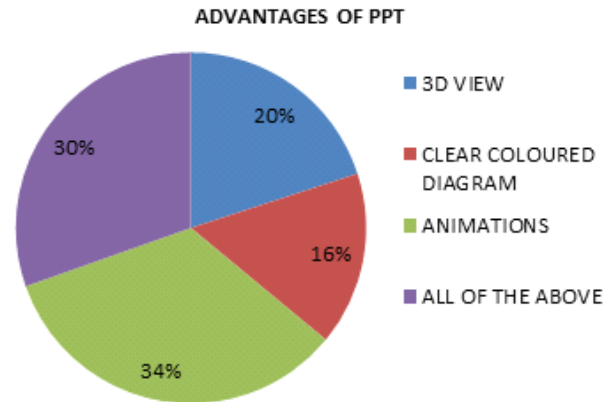


Figure 6: Advantages of PPT

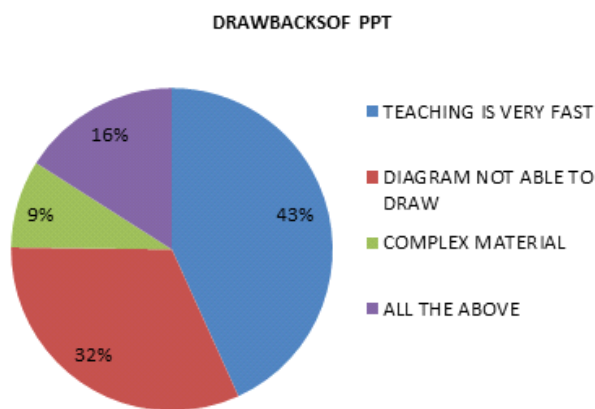


Figure 4: Drawbacks of PPT

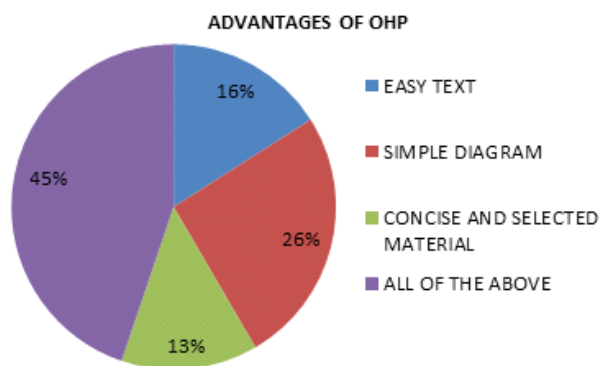


Figure 5: Advantages of OHP

### Discussion

Topic of present study was selected to clarify the problems that are encountered with teaching by both the tools the results of the study shows that majority of students prefer teaching by PPT their performance also improved although 51% students prefer OHP for better text material as that is simple with simplified diagrams which can be drawn but found PPT good for 3Dview, animations understanding of Applied and concept of the subject as lots of application we can make use of it.as 50% of students pointed hand written transparencies im proper use of font size ,poor illumination of the projector become major problem with OHP.43% reported fast teaching , use of complicated figures and diagrams few such problems with PPT. From teachers perspective use of PPT as main tool for teaching ,they found there are more technical difficulties<sup>3,4</sup>also students focus more on technology and overuse of animations can distract the students and lot of experience is required<sup>5</sup>. But also agreed to points like storage of subject material is easy, very easy to modify ,attractive fonts /colors can be used animations can be introduce to make topic more palatable.

## Conclusion

In department of Physiology at our Institute most preferred TL method was found to be by PPT then OHP. As results also indicated improved performance by the students, In view of that Teachers also agreed to the responses by the students, and showed acceptability for PPT

### Implications:

Both methods have some drawbacks and some advantages it is the proper use of the tool which can significantly make the difference in the teaching-learning process.

**Ethical clearance:** The study protocol was approved by the institutional human ethical committee.

**Conflict of interest:** None declared

**Source of funding:** Nil

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