



## Student's Perception of Different Teaching Aids in A Medical College in North India

**Dr. Shweta Sehgal**

Associate Professor, Department of Physiology, Army College of Medical Sciences, Cantt, Delhi

**Dr. Rahul Kapoor**

Consultant, Department of Plastic Surgery, Rajiv Gandhi Cancer Institute and Research Centre, Delhi

### ABSTRACT

**Background :-** The emerging technologies & the technological advances made day by day are changing the methods & techniques of teaching all over around us. Rapid technological advances & information overload in the medical field calls for a redesigning medical curriculum especially in basic sciences. Students can learn better when they are motivated properly through different teaching aids, such as chalk boards & power-point presentations.

**Objectives :-** The present study was designed to analyze students opinion regarding various teaching methodologies in the physiology & to invite suggestions for improvement.

**Methods :-** The study was conducted at Career Institute of Medical Sciences & Hospital, Lucknow, U.P., India. One hundred medical students (67% males & 33% females) of first MBBS voluntary participated in the study. A prevalidated questionnaire was used to find out the opinion of students.

**Result :-** The most preferred teaching method was small group discussion (53%) while practical was least preferred (17%). Most of the students preferred power point presentation better than the overhead projector and chalk and board.

**Conclusion :-** Students preferred power point over blackboard & overhead projector (OHP) among the three methods used for medical teaching. But they preferred a combination of teaching aids when required. So by using various methods appreciated by the students the teaching and learning of physiology can be made effective interesting and enjoyable.

### KEYWORDS

Overhead projectors, power point presentations, teaching aids.

### Introduction

Medical teachers have conventionally been using different teaching methods to educate medical students previously dominated by blackboard and slide projectors. More recently audiovisual aids such as video- tapes and multimedia have been introduced. Critics of multimedia feel that it is expensive, too time consuming, and isn't worth the time and effort. A learner's learning style, whether visual, auditory or kinesthetic, is usually resistant to change. Hence it is likely that mismatches exist between the learning styles of medical students and the teaching styles of medical teachers. Undergraduate teaching in Physiology has been developing with the use of new methods of teaching including use of AV aids and small group teaching seminars etc (1,2).

To make the lectures of physiology more interesting and understanding one has to review the teaching programme at regular intervals. The best way to assess and improve the teaching methodology is through the students feedback. The most expert teachers emerge from years of experience with a variety of teaching methods. Large scale efforts are required with the continuous interventional feedback studies in the highly revolutionizing field of medical teaching and learning (3,4,5).

Till date the most common methods used for teaching physiology in the lecture classes include overhead projector (OHP) and transparencies power-point presentations and traditional chalk and board method. Various studies have been conducted earlier and some of these studies ended inconclusively. Garg et al have observed audiovisual aids should be included along with discussions (6). Seth et al have conclude the traditional chalk and board and power-point better than OHP for better performance (7). So, to improve and modify our teaching methodology we *planned* to conduct this study to evaluate the presently used teaching methods in Physiology.

### Objectives

To find out which teaching approach & aid the first year medical students prefer and least prefer in their Physiology teaching- learning method.

To get suggestions from the students for their preferences regarding teaching learning methods in Physiology.

### Material & Methods

A cross-sectional study was carried out at Career Institute of Medical Sciences & Hospitals Lucknow. A pre-tested, semi-structured questionnaire was provided to the first year medical students after obtaining written informed consents from them. Institutional Ethics Committee (IEC) clearance was obtained from IEC of Career Institute of Medical Sciences & Hospitals Lucknow. All the students were in age group of 18-22 years. They were assured about the anonymity and confidentiality of responses given through questionnaire. The students were briefed about the questionnaire & asked to respond freely and fearlessly. They were informed that the information given by them is for the research and evaluation purpose only and will be confidential.

### Data Analysis

Data were collected and presented in tabular and graphical form. The preferences provided in tabular and graphical form. The preferences provided by students were subjected to percentages technique.

### Observations & Results

One hundred medical students participated in the study. The mean age was 20.2 years. In gender distributed students (67%) were higher than female students (33%). The most likely method of teaching (figure-1) was small group discussion (53%) felt that small group discussion is most helpful for understanding the topic followed by lecture (30%) and prac-

ticals (17%). Students preferred lectures utilizing power-point presentations (30%) as it was rated with the highest over chalk & board (20%) & OHP (5%).

According to (45%) students most effective teaching method was combination of traditional 'Chalk & Board' and power-point presentations whenever necessary e.g. for explaining diagrams, animals, charts & classification.

### Discussion

The study identified some of the areas of current teaching which could be improvised for effective teaching. Our study found that power-point presentations was the most preferred teaching aid followed by chalk and board, these findings were same from the findings of the study conducted by Mohan L et al which found that both the methods were almost equally preferred though mix of aids were the most preferred (8). Whereas, the Pakistan study by Atif Mahmood found that PPT was the most preferred aid with white board being the least favourite (9).

Vikas Seth et al in their study have mentioned that, 65.3% students preferred PPT while 15.16% chalk and board and 19.51% (7) OHP. Roy B reported that 54.83% preferred black board(10). In a study by Savoy students preferred PPT (11). Hitesh Mishra noted that 51.7% opted for ppt, 44.9% for traditional blackboard teaching and 3.4% for OHP (12). Equal preference to chalkboard and PPT was noted in the studies of Baxi et al study, 21.8% preferred a combination of teaching aids whereas in studies done by Bennal AS L et al, combination scored 54.9% respectively (13,14).

OHP was the least preferred teaching aid for all parameters in our study. While using an OHP, it is easy to put much information on one page/slide. When a large volume of information is presented in this manner, the working memory capacity can become over, useful note taking becomes difficult. This could be one of the reasons as to why the students did not prefer the use of an OHP during lectures. Students gave the feedback that in lectures by using an OHP, good illumination is needed for proper visualization and the use of different colours on the plastic transparency sheet and depiction of the main points with good hand writing is beneficial in the elucidation of the topic under discussion. The medical students preferred a combination method of teaching which included chalk-board and power-point presentations incorporating animations. To make power-points more students friendly they should have less text, more of pictures and animations which help students to recollect during their exams. As per the students perspective a combination of teaching methods is required and not the replacement of chalkboard (15).

### Conclusion

Combination Teaching Aid is most satisfied teaching aid as the inherent deficiency of one aid can be compensated by the other. The present study demonstrated that lecture delivered by using mix of audio-visual aids was more appreciated by the students. This provides insights into student's perceptions which will be very useful in identifying their expectations or requirements. This study will be very helpful for further studies to be undertaken on larger scales to develop more understanding of students' opinion towards audio-visual aids used in lecture classes.

### Acknowledgement

The authors are thankful to all first year medical students for their willing participation in this study to make it a valuable for future improvement of using of audio-visual Aids during lecture classes. The authors are also thankful to all the faculty members of physiology department of Career Institute of Medical Sciences, Lucknow for their help to carry out the present work.

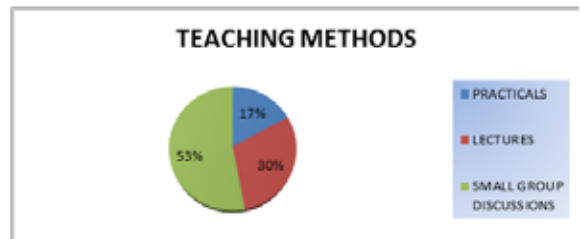


Figure 1- Teaching methods preferred by students

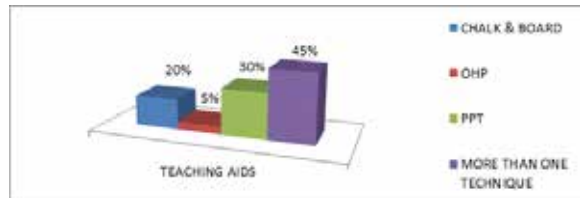


Figure 2- Different teaching aids preferred by students

### Acknowledgement

We pay extreme thanks and regards to the Chairman of Career Institute of Medical Sciences and Hospital, Lucknow for providing facilities to complete present study.

### References

- Kalpana E, Anand KN. Patient oriented problem solving approach and audiovisual aided lectures in teaching pharmacology – a comparative Study. *Indian Journal of Pharmacology*, 30:97-101,(1998).
- Skandhan KP, Dilroop Dileep Abhai Sankar P. Teaching Physiology: Undergraduate perspective. *IOSR Journal of Research Method in Education (IOSR-JRME) Vol-5, Issue-3, (May- June 2015) pp82-85.*
- Hemlatha NR, Samaga MP. Teaching aids- perception of medical students. *Int J Recent Trend Sci Technology* 11:210-213, 2014.
- Khane RS, Tushi AA. A questionnaire based survey from first year MBBS students about teaching learning methods of physiology in a private medical college. *Ind J Res* 3, 223-225,2014.
- Rashmi S and Ujala Verma, Bhuvneshwa Kapoor, V.S. Chopra. Novel Teaching Approaches in Pharmacology. *JK Science*, 6(3):172-173,(2004).
- Garg, PV Rataboli, and KMuchandi, 'Students' opinion on the prevailing teaching methods in pharmacology and changes recommended. *Ind J Phar* 36(3):155-158,(2004).
- Seth, V. Upadhyaya, P Mushtaq Ahmad, et al. PowerPoint or chalk and talk: Perceptions of medical students versus dental students in a medical college in India. *Advances in medical education and practice*. 2010; 1:11 – 16.
- Mohan L. Students views on audio visual aids used during didactic lectures in a medical college. *A J Med Sci* 4:36-40,2013.
- Mahmood A, Khatoon F, Ali M, Ejaz S, Qureshi MA. Perceptions and preference of contemporary teaching methods among university students of Pakistan- A Cross-Sectional Survey. *Journal of Nur and H Sci*. Vol. 1, Issue 1. 2012, PP 06-10.
- Roy B, Banerjee I, Sathian B, Mondal M, Kumar SS, Saha CG. Attitude of basic science medical students towards medicine and surgery post graduation: A questionnaire based. *Nepal J of Epi*. 2010; 1(4):126-134.
- Savoy A, Proctor RW, Salvendy G. Information retention from powerpoint & traditional lectures. *Comput Educ*. 2009;52:858-867.
- Hitesh Mishra, Vipin Kumar, Pankaj Kumar Modi. Comparison of different teaching methodologies in a Medical college in North India. *Ind j of Basic & Applied Med Res*.2013;2(6):464-469.
- Baxi SN, Shah CJ, Parmar RD, Parmar D, Tripathi CB. Students perception towards different teaching aids in a medical college. *African j of Health Professions Education*.2009;1,15-16.
- Amruta Bennal, Vijaynath Itagi, RH Taklikar. Role of audio- visual aids in physiology, *Pharmacy & Pharmacology*.2014;4(2): 102-104.
- Baruah Momi, Patel Lakshmi. Evaluation of different teaching methods used in Physiology Lectures. 2014 Dec. Vol-4, Issue-1, p271-276.