

Students' Perception about Teaching Learning Media in Didactic Lectures

Tanuja Manohar^{1,*}, Amruta Dashputra², Chari Suresh³

¹Associate Professor, Department of Medicine, ²Assistant Professor, Department of Pharmacology,

³Director Research & Medical Education Technology Unit, Professor Department of Biochemistry, NKP Salve Institute of Medical Sciences & Research, Nagpur

Email: tanuja.manohar9@gmail.com

Abstract:

Teaching learning media plays an extremely important role in the learning process of students. With advances in technology, traditional teaching aids like chalk board or Over Head Projector are gradually getting replaced by power point presentations. This study was aimed to assess students' perception of teaching learning medium. This cross-sectional study was carried out at NKPSIMS & RC, Nagpur, India. A questionnaire was given to 354 medical students. Their preference about three commonly used TL media i.e. chalkboard, overhead projector, and power point presentation in didactic lectures were studied. Students preferred PPP as compared to CB and OHP as effective TL media in didactic lectures. Combination of CB + PPP was preferred more as compared to single medium. PPP was rated as a best medium for understanding newer concepts, understanding diagrams, flow charts and algorithms, registration of definitions and new terminologies, understanding clinical knowledge, followed by CB, but very few students preferred OHP as preferred medium. For ease of notes taking however more weight age was given to CB as compared to PPP. Majority of students felt the necessity of fitting speaker mike in lecture hall. PPP is the most preferred medium by the students so every attempt should be done to increase effectiveness of PPP. Smart use of chalkboard will also increase impact of lecture OHP, as was least preferred by students, drastic changes should be made for increasing its effectiveness.

Keywords: Chalkboard, Overhead Projector, Power Point Presentation.

Introduction

Lectures have been most common form of teaching learning method (T-L method) since ages. Although there has been much discussion over different methods to teach medical students, lectures are not likely to stop being used. In spite of advent of many teaching learning methods didactic lecture still plays an extremely important role in education. Teaching learning media which are commonly used in didactic lectures are chalkboard (CB), overhead projector (OHP) and power point presentations (PPP). Each of these media has its merits and demerits.

Teaching learning media (T-L media) play an extremely important role in the learning process of students. They are the means of communicating educational information. Different teaching learning media have been developed to facilitate teaching and learning.¹ Use of T-L media can improve teaching-learning experience both for the teacher as well as for the students.² In lecture both visual and auditory senses are used to absorb information and here assistance in the form of a visual aid is useful.³ CB is undoubtedly an effective medium of classroom, with advances in technology, traditional teaching aids like CB or OHP are gradually getting replaced by PPP. It is worthwhile taking into consideration student's perspective regarding T-L medium before drastically changing it and also to know the reasons for choosing particular T-L Medium.

Objective

To determine medical students' perception of three commonly used teaching learning media (Blackboard, overhead projector, and power point presentation) in didactic lectures.

Methodology

After getting approval from Institute's Ethics Committee, this cross sectional study was carried out at NKPSIMS & RC, Nagpur, India from March 2011 to August 2011. A predesigned, pre-validated questionnaire with 10 close ended and one open ended questions was given to 354 medical students of Ist, IInd and IIIrd (part 1 & part 2) MBBS. Their preference about three commonly used T-L media i.e. chalkboard, overhead projector and power point presentation in different categories like understanding new concepts, ease of notes taking, understanding diagrams, chart and algorithms, clinical knowledge, registration of definitions and new terminologies in didactic lectures was studied. Need for fitting mike system in lecture hall was also enquired and they were asked to give their suggestions to improve use of these T-L media. Results were noted in % method.

Results

In this cross sectional study aimed to find out students' preference about different T-L media in didactic lecture, majority of students preferred PPP (45.5%) and CB (42.7%) as compared to OHP (12.4%)

as effective TL media (Fig. 1). PPP was considered as more effective medium for understanding newer concepts (53.7%) understanding diagrams (48.4%). For understanding flow charts and algorithms also preference was given to PPP (57.5%). Students felt that PPP is the best medium for registration of definitions and new terminologies (46.9%). For understanding clinical knowledge also PPP was preferred (54.8 %). However for ease of notes taking more weightage was given to CB (48.2%) as compared to PPP (39.7%) (Fig. 1). Combination of CB + PPP was preferred more as compared to any other combination (Fig. 2). Students felt that overall impact or effect of lecture is best with combination of CB+PPP as compared to any single medium or combination of other media. (Fig. 3) Majority of students (89.8%) felt the necessity of fitting speaker mike in lecture hall. (Fig. 4) Students also gave many vital suggestions to improve effectiveness of T-L media

Discussion

In present study perception of MBBS students at NKPSIMS & RC, Nagpur, India about teaching learning media in didactic lectures was studied.

The usage of PowerPoint presentations in the classrooms has attracted many researchers from different scientific areas and from several countries. There is considerable research in the literature concerning the effects of the usage of Power Point. Some of these studies tried to measure the effect of power point presentations on the attitudes or behavior of the students, while some of them focused on the success differentials between the lessons given via PowerPoint presentations and via black board. Furthermore some of the researchers studied on the effect of PowerPoint presentations on the short term memory.⁴

In this study overall students preferred PPP followed by CB as an effective T-L media in didactic lectures while only (12.4%) students gave preference to OHP. Results similar to our study were found by Seth, et al, in a study on comparison of perception of medical students verses dental students about the T-L media.³ In this study, majority of medical students (65.33%) preferred PPP while 2nd preference was given to OHP (19.51%) and chalkboard was least preferred (15.16%).

In present study PPP was considered as more effective medium for understanding newer concepts, understanding diagrams, flow charts and algorithm and new terminologies, understanding clinical knowledge. 2nd preference in all these heads was given to CB, but very few students preferred OHP as preferred medium. PPP based lectures are increasingly being delivered in medical colleges as in other colleges.⁵ There is difference of opinion regarding superiority of PPP with respect to the traditional chalk and talk methods. Results of one study reveal that while most students say they preferred PPP, performance scores were higher in

the sections with the traditional lecture format.⁶ Some studies have found that students preferred PPP.⁷⁻⁸ whereas in other study students preferred traditional chalk board teaching to OHP & PPP.⁹ Another study comparing PPP and OHP observed no difference in students performance in test.¹⁰ PowerPoint presentations create more powerful sensory alerts when compared with the traditional education materials (blackboard, overhead projections, etc.) While giving the lessons with PowerPoint presentations, the content of the lesson stays the same, but the form of transmitting the lesson to the student changes.⁴

PPP is the dominant teaching media used in undergraduate medical training.¹¹ Advantage of use of PPP in one study showed that it allows teachers to help their students learn.¹² PPP is a programme which can make a lecture very interesting.¹³ However one study states that classes supported by PPP with no regards to visual sense (font size, style, colour harmoning, alignment etc.) does cause boredom and distraction.¹⁴ Similarly one study argues that use of presentations without paying attention to rules may have negative effect on learning.¹⁵

In present study for ease of notes taking however more preference was given to CB as compared to PPP. One of the disadvantages of PPP seems to be that the student becomes passive observer rather than an active participant.¹⁶ It is also said that although PPP has some positive effects, it does reduce the interactive discussion between teacher and students.¹⁷ A crisp comment is given by an observer that animation in PPP can obscure rather than clarify the point and cartoons can distract rather than convey the message. Too often point deviate from content.¹⁸ In some instances the content of the PPP distract students.⁸ Another critical comment was given by Alan Jones that one of the major problems about PPP is, its current use is frequently limited to an information transmission mode, often with excessive content, a usage that obscures the wider potential for diverse professional and pedagogically-sound presentations.¹⁹

In this study combination of CB and PPP was preferred more as compared to single media. Lecture could be best delivered by combining two or more teaching media. In Didactic Lecture use of CB is simple, easy. CB or white board is commonly available and inexpensive visual aid having advantage of convenient easy to use, even in absence of electricity. Chalk board serves as an excellent medium for developing, building and solving concepts. Problems while using the CB are, teachers loses eye contact with the students and it's proper use necessitates certain writing and drawing skills from the teacher.¹

Overhead projector (OHP) having the advantage over CB that there is no loss of eye contact with students as occurs while writing or drawing on chalk board. As compared to PPP, OHP can be used in day light and darkening of room is not needed.¹ In our

study OHP was least preferred medium. In another study Chalk board was rated highest in allowing interaction and helping recall. OHP was best in providing information point wise, whereas PPP was best in imparting clinical details, but was sleep inducing.¹¹

In present study many students opined that, with CB students remain more connected with teacher as compared to when PPP/OHP is used for lecture delivery. In a study conducted by Seth, et al teacher's opinion was taken on this issue. Majority of the teachers, that is, (48.66%) used chalkboard for teaching, (29.95%) of teachers used OHP and (21.39%) used PPP during lecture. As far as the teachers' preference is concerned, (40.47%) of them preferred chalkboard, (28.43%) of teachers preferred OHP and (31.1%) of teachers preferred using PPP during lecture. Some important comments of the teachers were also recorded on interview. The conclusion of the study was that the dominant form of lecture delivery is still the

chalk and talk approach. However, other teaching aids have their unique advantages and supplementing chalkboard with PPP or OHP enhances the impact of the lecture.²⁰

Majority of students felt the necessity of fitting speaker mike in lecture hall. Also the students gave many vital suggestions for improving effectiveness of all TL media. Many students suggested that videos and clinical photographs should be added to increase effectiveness of lectures. It was also suggested that while doing PPP or OHP slides only points should be written and not theory in paragraphs. Students thought that use of colored chalk while drawing diagrams, mentioning objectives on one side of board will increase effectiveness of chalkboard. Some students suggested that PPP tends to cause lecturers to speed up their delivery, often to the point when it was detrimental and difficult to follow while some students said that with chalkboard teachers tend to take pauses which help them to complete their notes.

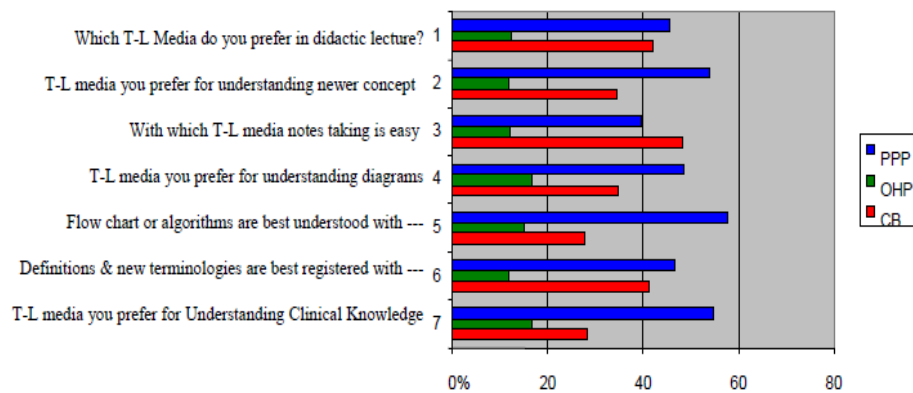


Fig. 1: Students' preference of T-L MEDIA

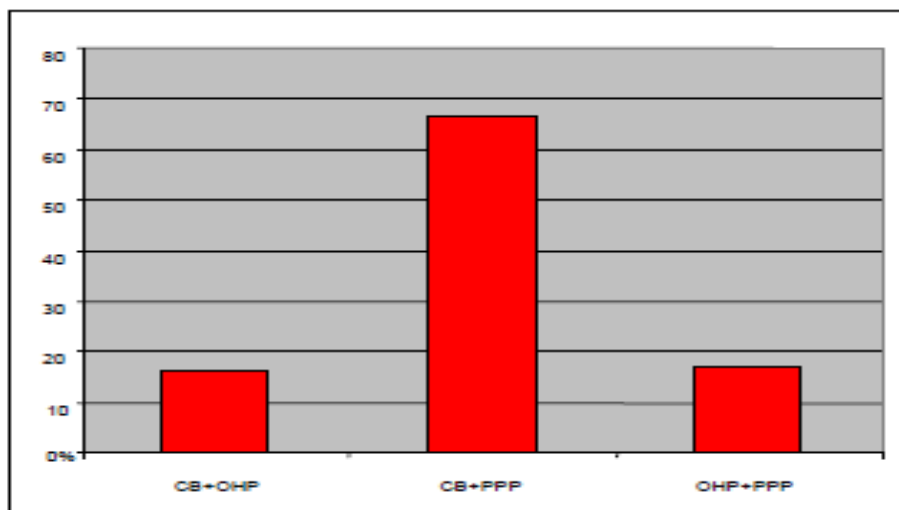


Fig. 2: Students' preference of combination of TL media

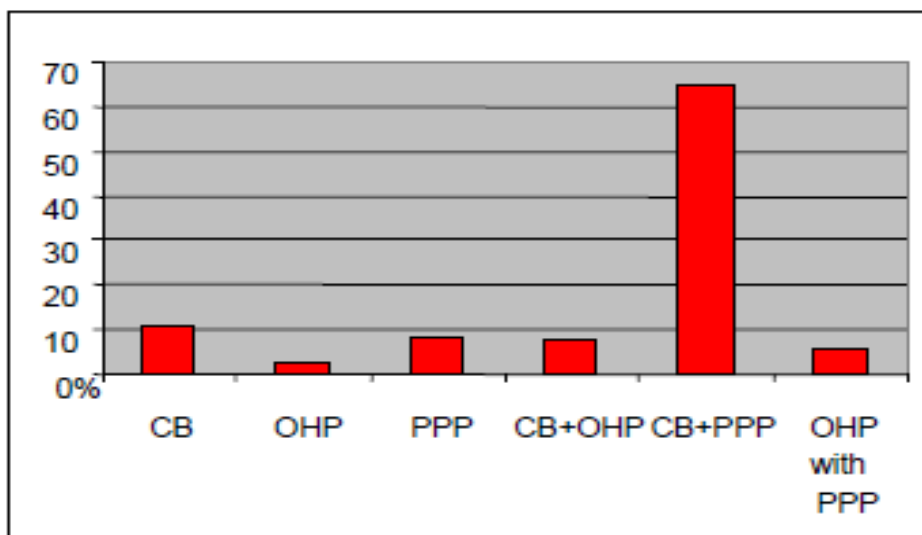


Fig. 3: Overall impact/effectiveness of lecture

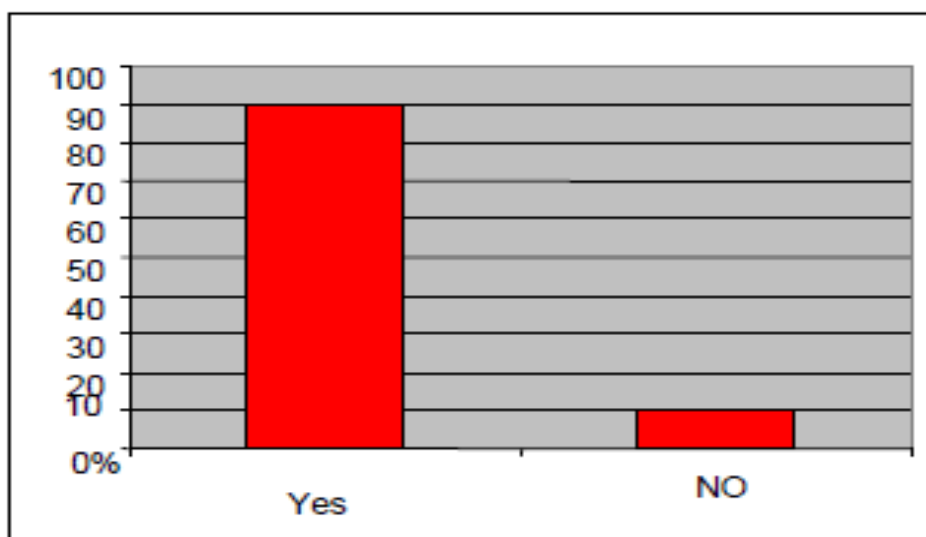


Fig. 4: Fitting of speaker mike in lecture hall

Conclusions and Recommendations

Didactic lecture is the oldest teaching technique and one of the most widely used universally. Teachers always need to use innovative techniques to ensure effectiveness of lectures. One important tool to achieve this goal is optimal and appropriate use of T-L media.

Majority of students preferred PPP as best medium followed by CB while OHP which is commonly used medium was preferred by only few students. PPP is the most preferred medium by the students so every attempt should be done to increase effectiveness of PPP. Smart use of chalkboard will also increase impact of lecture. OHP which was least preferred by students should either be entirely replaced by other media or drastic changes should be made for increasing its effectiveness.

Having concluded that PPP is the best teaching learning medium in didactic lectures, we are planning to assess the variables which could affect this T-L medium. These include teaching style, slide preparation, choice of colors, fonts, use of animation etc. One of the factors which could influence the effect of PPP is the teaching styles, which has been taken as a next project with an intention to improve effectiveness of PPP.

In a nutshell, there is no doubt that a lively teacher may not need any advanced T-L media. But effective use of different media definitely improve effectiveness of lecture and helps students to retain information and strengthen understanding.

Acknowledgement

Authors acknowledge Dr. Meenal Kulkarnii Associate professor Department of Preventive and

Social Medicine and Mr. Jaydeep G Nayase statistician & Assistant professor of Department of Preventive and Social Medicine NKPSIMS Nagpur for solving the statistical hurdle.

References

1. Santosh Kumar. 2000. Teaching-learning media the means to an end. 2nd ed. 2000. In: Ananthkrishnan N, Sethuraman K R, Santosh Kumar. Medical Education. Principles and Practice. Second Edition pp61-71.
2. Mehta, P.R. & Nataraj, G. 2002. Teaching learning Aids. In: P.S. Bhuiyan, N. N. & A. N. Supe. The Art of Teaching Medical Students. 2nd ed. pp133-144.
3. Seth, V., Upadhyay, P., Ahmad, M., Moghe V. 2010a. Power Point or chalk and talk: Perception of medical students versus dental students in a medical college in India. *Advances in Medical Education and Practice*, 1 pp11-16.
4. Seval, K.S. & Aylin P. A. 2009. The effect of power point preferences of students on their performance: A Research In Anadolu University. *Turkish Online Journal of Distance Education*. 10(1) pp 1302-6488.
5. James, K.E., Burke, L.A., Hutchins, H.M., 2006. Powerful or pointless? Faculty versus students' perceptions of Power Point in business education. *Business Communication Quarterly*. 69, pp374-396.
6. Amare, N. 2006. To slide ware or not to slide ware: Students experiences with power point vs lecture. *Journal of Technical writing and Communication*. 36(3), pp 297-308.
7. Savoy, A., Proctor, R.W., Salvendy, G. 2009, Information retention from Power Point and Traditional lectures. *Comput Educ*. 52 pp 858-867.
8. Bartsch, R.A., Cobern, K.M., 2003, Effectiveness of Power Point presentation in lectures. *Computers and Education*. 41: pp77-86.
9. Novelli, E. L. B., Fernandes, A. A. H., 2007. Students preferred teaching techniques for biochemistry in biomedicine courses. *Biochem Mol Biol Educ*. 35:pp263-266.
10. Szabo, A. & Hasting, N. 2000. Using IT in the undergraduate classroom: should we replace the blackboard with Power Point? *Computers & Education*. 35: pp175-187.
11. Dhaliwal, U. 2007. A Prospective Study of medical students 'perspective of teaching- learning media: reiterating the importance of feedback. *Journal of Indian Medical Association*; 105 (11):pp 621-636.
12. Rocklin, T., 1997. PowerPoint is not evil. In: the National Teaching and Learning Forum. New York, NY: Greenwood Publishing Group; [http://www. ntlf/sf/notevil.html](http://www.ntfl/sf/notevil.html).
13. Ruffini, M.F.2009. Creating Animation in PowerPoint to support Student learning and Engagement. *EDUCASE Quarterly magazine*. pp 32:34.
14. Kaharaman, S., Cevika, C., Kodana, H.2011. Investigation of university students' attitude to award the use of power point according to some variable, *Procedia computer science* 3 pp 1341-1347.
15. Cigdem, U.Z., Orhan, F. & Bilgic, G. 2010. Prospective teachers' opinions on the value of PowerPoint presentations in lecturing. *Procedia Social and Behavioral Sciences*, 2(2) pp 2051- 2059.
16. Casanova, J. & Casanova, S. L., 1991. Computers as electronic blackboard: Remodeling the organic chemistry lecture. *Educom Rev*.pp31-34.
17. Garg, A., Rataboli, P.V., Muchandi, K. 2004. Students opinion on the prevailing teaching methods in pharmacology and changes recommended. *Indian Journal of Pharmacol*. 36:pp 155-158.
18. Harden, R.M., 2008. Death by power point- the need for a 'fidget index'. *Medical teacher*.30 pp 833-835.
19. Jones, A.M. 2003. Essay: The use and abuse of PowerPoint in Teaching and Learning in the Life Sciences: A Personal Overview. *BEE-j Volume 2: November 2003* <http://bio.ltsn.ac.uk/journal/vol2/beej-2-3pdf>.
20. Seth, V., Upadhyay, P., Ahmad, M., Moghe V. 2010b. An Assessment of Teachers' Preference for Lecture Delivery Methods in Medical Education: *Educational and Reviews*, 5(9) pp 533-537 Sep 2010.