ASSESSMENT AND COMPARISON OF TEACHING EFFECTIVENESS OF CHALK AND TALK AND MICROSOFT POWERPOINT PRESENTATION

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ABSTRACT

BACKGROUND

Teaching method is a technique or a strategy that serves an important function in achieving a specific function. Different teaching methods can be used for objective oriented activities and flow of information between teacher and students. Effectiveness of these methods needs to be evaluated from a student's point of view.

MATERIALS AND METHODS

We, with the help of questionnaire, assessed the effectiveness of two methods of teaching that is chalk and talk and Microsoft PowerPoint presentation. 100 third MBBS students were given the questionnaire after undergoing teaching by both the methods.

RESULTS

It was found that a well-prepared PowerPoint is a more effective method and improves educative value of the subject. Students preferred PowerPoint teaching as evidenced by the subjective assessment of the students.

CONCLUSION

PowerPoint presentations as a useful AV tool should be used to enhance and complement the lectures. PowerPoint presentation has the ability to integrate the text, pictures and images. It has a great advantage and improves the educative value of the subject if it is prepared keeping target audience in mind.

KEYWORDS

PowerPoint Presentation, Chalk and Talk Method.

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BACKGROUND

Lectures can be traced as far back as the Greeks of the fifth century, and in medieval times lectures were the most common form of teaching (Brown and Atkins, 1988). Therefore, the lecture has its merits, otherwise this form of teaching would have ceased. Recent years have seen revolutionary changes with adoption of new methods of teaching including computer assisted learning, role plays and use of audio-visual aids. With the advent of technology, use of electronic media has become common in medical colleges, as in other colleges and institutions. Currently, the most common ways of lecture delivery include using PowerPoint (PPT) presentations, lecturing by using transparency and overhead projector (TOHP) and the traditional chalk and talk method. PowerPoint is a presentation computer program that is widely used in schools and businesses. It consists of a series of "slides," which are individual pages that the presenter designs.

The design of the slides has a big impact on their effectiveness. PowerPoint uses slides with a horizontal or

"Landscape" orientation. The software was designed as a convenient way to display graphical information that would support the speaker and supplement the presentation.

Cannon (1988)¹ noted that research comparing lecturing with other teaching methods provides insufficient evidence to favour one method over another; however, he also notes that discussion methods in small groups appear to be a superior method of attaining higher-level intellectual learning.

Once students enter university, it is almost inevitable that they will experience lectures, irrespective of the chosen subject. It is often impossible, given the limited number of academics in any university department, to provide small group classes to cover a particular course or module when the number of students attending is very high. Some countries with limited resources, e.g., where perhaps only the lecturer has a textbook, force the wholesale use of lectures as the medium for education.

In recent times, the use of electronic media has become a common place in universities, as well as secondary and primary schools. Recent studies have sought to determine whether using PowerPoint or other such media are superior forms of delivery for lecturing over the traditional 'chalk and talk' or the use of transparencies and an overhead projector (OHP). The study of Bartsch and Cobern (2003)² noted that students preferred PowerPoint over the use of OHP, but in some instances the content of the PowerPoint presentation distracted students and they did not perform well on tests when compared with the control group. Szabo and Hastings (2000)³ carried out an extensive study comparing PowerPoint and OHP and observed no difference in student performance

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in tests; the most important factor was lecture subject difficulty in determining the student's performance in these tests. They concluded that the efficacy of using PowerPoint was case specific rather than universal. The study of Lowry (1999)⁴ saw a marked improvement in examination results when PowerPoint replaced the use of TOHP. Therefore, there is a mixture of views based on recent studies.

PowerPoint presentations are routinely used in medical meetings and conferences by the speaker or lecturer to assemble professional looking slides to deliver the concept. Overuse of PPT, sadly results in unending streams of slides with bullet lists, animations that obscure rather than clarify the point and cartoons that distract rather than convey the message. Too often PowerPoint presentations elevate "format" over concern. Tufte (2003)⁵ argues that PowerPoint corrupts the communication process by focusing on format rather than on context, sometimes with serious consequences. Mayer (2005)⁶ has revealed that in PPT presentations, the basic principles of multimedia learning and instructional design are frequently ignored. Harden (2008)⁷ has pointed out that it is not effective simply to repeat the same words that are written on a text slides – a common mistake with PPT presentations. Also, he comments that the practice of circulating PowerPoint slides as handouts summarising a presentation emphasises the overreliance on the visual element and should be discouraged. The fault almost invariably lies not with PowerPoint but with the presenter. It is not PowerPoint that does a poor job, it is the lecturer or speaker. In a useful book on the topic, "Killer Presentations", Outon (2005)⁸ argues that the problem with PPT lies in how it is used. Transform its use and you will transform its effect.

Black board was invented by James Pillans, Headmaster of Royal High School, Edinburgh, Scotland. He used it with coloured chalk to teach geography. Black boards are the most conventional way of teaching. Use of blackboard can ease the understanding by use of diagrams and flow charts that keep the attention of students gripped and allow easy understanding.

In Chalk and Method

1. Only key words need to be written and long sentences should be avoided.
2. Non-standard abbreviations should not be used.
3. Overwriting should be avoided.

In this study, I investigate student's opinion of the impact of electronic presentations (PowerPoint) in lectures in undergraduate level compared to chalk and talk which is a traditional and non-electronic approach.

Aims and Objectives

1. To prepare the lecture session as per guidelines recommended for large group teaching.
2. To prepare virtual slides as per recommended guidelines.
3. To use chalk and talk and virtual slides (PowerPoint presentation) as teaching methods.
4. To assess teaching effectiveness of chalk and talk and Microsoft PowerPoint presentation from student's perspective.

MATERIALS AND METHODS

The current project was done in the Department of Obstetrics and Gynaecology of a medical college. The current study

project was undertaken as an assignment necessary for the participants who underwent Medical Council of India (MCI) Basic Course Workshop in Medical Education Technology (MET) in March 2015.

The study project involved third year MBBS students in the Dept. of Obstetrics and Gynaecology who had been taught on different topics in the subject of obstetrics and gynaecology by different teachers in the subject by both methods that is some of them employed chalk and talk instructions only and others heavily used computer generated slides (PPT).

Thus, our students experienced technology intensive lectures as well as lectures in which traditional chalk and talk was exclusively used. I first circulated a questionnaire, which was based on the effectiveness of teaching tools like chalk & talk and PowerPoint.

Since my objective is to compare the effectiveness of chalk & talk and PowerPoint, I intentionally removed the option having both the teaching tools in the questionnaire and the students were asked and allowed to select only one option either chalk & talk or PowerPoint.

RESULTS AND DISCUSSION

The following ten Questions were framed in the Questionnaire

Question 1- Is PowerPoint Presentation (PPT) a better and effective tool to explain the subject efficiently when compared to chalk and talk?

Question 2- Does PowerPoint presentation create more interest in the subject?

Question 3- Do you feel that PowerPoint presentation improves public speaking & presentation skills when compared to chalk and talk?

Question 4- Do you feel that PowerPoint presentation should replace chalk and talk?

Question 5- Which teaching tool do you feel is more appropriate and useful for teaching?

Question 6- Which teaching tool according to you has the components "inspire, influence and inform" in a better way with respect to the subject matter?

Question 7- Which teaching tool is relatively boring?

Question 8- Which teaching tool makes you actively participate and involve in the class?

Question 9- Which one of the following teaching tools provides most of the necessary features of teaching?

Question 10- Which teaching tool do you recommend for teaching?

Based on this Survey, Results were as follows:

Out of 100 MBBS III year students,

- 26 voted chalk and talk as better and effective tool to explain the subject efficiently.
- 20 chose chalk and talk as more creative than PowerPoint to create interest in the subject.

- 33 chose chalk and talk as a better teaching tool to improve public speaking and presentation skills than PowerPoint.
- 40 wanted to retain chalk and talk for teaching their subject instead of replacing it with PowerPoint.
- 26 felt chalk and talk as more useful and appropriate tool for teaching than PowerPoint.
- 13 agreed and accepted chalk and talk has the basic teaching components like "inspire, influence and inform" in a better way than PowerPoint.
- 74 felt chalk and talk relatively more boring than PowerPoint.
- 33 experienced more involvement and active participation in the class when chalk and talk is used as the teaching tool.
- Only 16 stated that chalk and talk has most of the features needed for teaching.
- Only 14 recommended chalk and talk to be continued as the teaching tool.

Diagram showing Comparison of the Two Methods of Teaching

In this study, questionnaire based evaluation of lecture delivered by PowerPoint presentation and chalk and talk method was done by the students. Most of the students unanimously agreed that PPT presentations are an appropriate AV aid for teaching, learning process especially to a larger target audience. Students preferred PowerPoint teaching as evidenced by the subjective assessment of the students. Various authors have argued that PPT encourages active learning environment, increases effectiveness of lectures and lend clarity to the subject (Hunt, 1998; Sammons, 1997; Rossen et al., 1997)⁹⁻¹¹ and the use of PowerPoint can help teachers to "help their students learn" (Rocklin, 1998).¹² The present study showed unanimous agreement of students on the quality of PPT slides, prepared according to the standard guidelines for preparation of PPT slides. All the PPT slides were well appreciated by the students and none of them found it difficult to understand. The display of text, images, flowcharts were visually appealing to all students. No spelling error was identified by any student in the entire presentation. Well-prepared PPT is liked because they avoid the issue of poor handwriting and dirty blackboard, a problem commonly encountered with the conventional, chalk and talk method of teaching. A study has pointed out that in PowerPoint, the ability to integrate the text and the pictures and images is a great advantage and improves the educative value of the subject (Mayer and Anderson, 1992).¹³ One disadvantage of

PPT seems to be that the student becomes a passive observer rather than an active participant (Casanova and Casanova, 1991).¹⁴ This can be tackled by making the lecture session more interactive by throwing questions to the audiences.

The audience should also be encouraged to ask questions at the end of the session to clarify their doubts. It is suggested that although PPT has some positive effects, but it reduces the interactive discussion between teacher and students (Garg et al 2004).¹⁵

One of the limitations of my study is that our sample is drawn from one institution only and deals with the experience of one particular group of individuals, namely, undergraduate students.

This could alter survey findings and the scope of my study is restricted in this sense.

CONCLUSION

Well-prepared PPT is liked because they avoid the issue of poor handwriting and dirty blackboard, a problem commonly encountered with the conventional, chalk and talk method of teaching. PowerPoint presentation should be used to enhance and complement the lectures as it is a useful AV tool. PowerPoint presentation has the ability to integrate the text, pictures and images. It has a great advantage and improves the educative value of the subject if it is prepared keeping target audience in mind.

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