



## CHALK & TALK VERSUS POWER POINT PRESENTATION - PERCEPTION OF UNDERGRADUATE STUDENTS -A STUDY CONDUCTED IN SCB MEDICAL COLLEGE CUTTACK

### Medical Education

**Dr. Mohua Biswas** Associate Professor, Department of Community Medicine.

**Dr. Sushanta Kumar Jena** Associate Professor, Department of Hepatology.

**Dr. Minakshi Mohanty\*** Associate Professor, Department of Community Medicine. \*Corresponding Author

### ABSTRACT

Chalk and Talk is an age-old method of teaching in the medical college. Gradually it is being replaced by new technology in the form of power point presentation. Students are also gradually adapting to new methods but there is always a debate over the most effective method of lecture delivery. **AIM:** The aim of this study was to find out the perception of under graduate students of chalk and talk method of teaching and PowerPoint presentation method of teaching as a lecture delivering method for teaching. **METHODS:** 160 undergraduate students were taken as the sample and after appraising them about the study a pre-designed and pre-tested questionnaire was administered. The results were analyzed to see if there was any preference of students for any particular method. **RESULTS:** Most of the students i.e. 66% prefer the teaching tool as C & T and only 34% students prefer class if lecture is taken by PPT. **CONCLUSION:** Most of the students preferred and accepted the use of chalk and board, as compared to PowerPoint presentation for lecture delivery method.

### KEYWORDS

Lecture delivery methods, PowerPoint presentations (PPT), chalk and board.

### INTRODUCTION

The most common of form of teaching and learning have been the 'lectures'. Chalk and talk method is the age old method used as teaching aids. Power point is used as a modern-day teaching tool. Both the teaching tools has its own advantages & disadvantages. There is a mixture of views based on the studies and it is not clear whether a particular lecture delivery method is superior to others. This study will not only throw light on Perception of undergraduate students in our institution regarding chalk & talk Versus power point as a teaching tool but will also give an idea as to which is the most preferred method in our setting.

### OBJECTIVES

1. To study the perception of undergraduate students' regarding chalks & talks versus power point as a teaching tool.
2. To find out the most preferred method as per student's perception.

### METHODOLOGY

- Place of study- Conducted at SCB Medical College Cuttack, Odisha.
- Period of study- 1st May 2017 - 30th June 2017
- Type of study- Cross-Sectional
- Study subjects- Sampled Number of MBBS students were selected by stratified random sampling method.

### Sampling

- 20% of UG student from 2<sup>nd</sup>, 5<sup>th</sup>, 7<sup>th</sup> and 9<sup>th</sup> semester were taken. 50 each from 2<sup>nd</sup> & 5<sup>th</sup> semester and 30 each from 7<sup>th</sup> and 9<sup>th</sup> semester.
- Total study subjects - 160.
- The purpose of the study was first explained to each batch of semester students separately in different setting and the required number of students were selected from each batch by systematic random sampling.

### Study instrument – Predesigned pretested self-administered questionnaire

Questionnaire  
Semester 2<sup>nd</sup>/5<sup>th</sup>/7<sup>th</sup>/9<sup>th</sup>

1. Which teaching tool do you think is better Power point Presentation (PPT) or chalk & talk? Why?
2. Do you feel that PPT should replace chalk and talk? Yes / No
3. Likert - scale was used

### Likert – scale

- Strongly Disagree - 1
- Disagree - 2
- Neutral - 3
- Agree - 4

- Strongly Agree - 5

**Strongly Disagree (1), Disagree (2) Neutral (3) Agree (4), Strongly Agree (5)**

| Sl. no | Perception on C&T Lecture- Use any one of the code above to reply                                  | code |
|--------|----------------------------------------------------------------------------------------------------|------|
| 1      | I prefer classes where the lecture is delivered by PPT                                             |      |
| 2      | I feel the lecture is more structured and organized when delivered by PPT                          |      |
| 3      | The lecture is more likely to capture my attention if delivered by PPT                             |      |
| 4      | I am more likely to pay attention longer when the lecture is delivered by PPT                      |      |
| 5      | I feel I understand the information better when lecture is delivered by PPT                        |      |
| 6      | I feel I retain more information when the lecture is delivered by PPT                              |      |
| 7      | I find it easier to study the lecture when is delivered by PPT                                     |      |
| 8      | I feel the lecture is moving too fast when is delivered by PPT                                     |      |
| 9      | I feel Clarity of new terms and spelling is better when lecture is delivered by PPT                |      |
| 10     | I prefer the teacher writing down everything step by step                                          |      |
| 11     | I feel I am able to take my notes/diagrams more easily if lecture is delivered by PPT              |      |
| 12     | I feel that my public speaking & presentation skills will improve when lecture is delivered by PPT |      |
| 13     | I feel lecture is relatively boring when is delivered by PPT                                       |      |
| 14     | I feel that the teacher is more well prepared when lecture is delivered by PPT                     |      |

**Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5)**

| Sl. no | Perception of Power Point Lecture- Use any one of the codes above to reply    | code |
|--------|-------------------------------------------------------------------------------|------|
| 1      | I prefer classes where the lecture is delivered by PPT                        |      |
| 2      | I feel the lecture is more structured and organized when delivered by PPT     |      |
| 3      | The lecture is more likely to capture my attention if delivered by PPT        |      |
| 4      | I am more likely to pay attention longer when the lecture is delivered by PPT |      |
| 5      | I feel I understand the information better when lecture is delivered by PPT   |      |

|    |                                                                                                    |  |
|----|----------------------------------------------------------------------------------------------------|--|
| 6  | I feel I retain more information when the lecture is delivered by PPT                              |  |
| 7  | I find it easier to study the lecture when is delivered by PPT                                     |  |
| 8  | I feel the lecture is moving too fast when is delivered by PPT                                     |  |
| 9  | I feel Clarity of new terms and spelling is better when lecture is delivered by PPT                |  |
| 10 | I prefer the information appear on the slide                                                       |  |
| 11 | I feel I am able to take my notes/diagrams more easily if lecture is delivered by PPT              |  |
| 12 | I feel that my public speaking & presentation skills will improve when lecture is delivered by PPT |  |

|    |                                                                                |  |
|----|--------------------------------------------------------------------------------|--|
| 13 | I feel lecture is relatively boring when is delivered by PPT                   |  |
| 14 | I feel that the teacher is more well prepared when lecture is delivered by PPT |  |

### Steps of Activities

- Necessary permission was obtained from the institutional ethical committee.
- After getting informed written consent, a self administered questionnaire (containing both close & open ended questions) was distributed among the sampled study respondents.
- The data thus gathered was compiled & analysed using spss ver.17

**Table-1 Students perception of Chalk & Talk method and PowerPoint presentation method**

| Sl. No. | Students Perception                                                                            | Code 1 |     | Code 2 |     | Code 3 |     | Code 4 |     | Code 5 |     |
|---------|------------------------------------------------------------------------------------------------|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|
|         |                                                                                                | PPT    | C&T | PPT    | C&T | PPT    | C&T | PPT    | C&T | PPT    | C&T |
| 1       | I feel the lecture is more structured and organized when delivered by                          | 22     | 06  | 32     | 28  | 31     | 42  | 53     | 42  | 22     | 42  |
| 2       | The lecture is more likely to capture my attention if delivered by                             | 33     | 06  | 51     | 25  | 33     | 22  | 24     | 59  | 19     | 48  |
| 3       | I am more likely to pay attention longer when the lecture is delivered by                      | 28     | 09  | 60     | 18  | 28     | 30  | 29     | 52  | 15     | 51  |
| 4       | I feel I understand the information better when lecture is delivered by                        | 21     | 01  | 42     | 21  | 39     | 35  | 52     | 51  | 06     | 52  |
| 5       | I feel I retain more information when the lecture is delivered by                              | 22     | 07  | 46     | 23  | 43     | 39  | 32     | 51  | 17     | 41  |
| 6       | I find it easier to study the lecture when is delivered by                                     | 23     | 08  | 49     | 24  | 34     | 36  | 42     | 52  | 12     | 40  |
| 7       | I feel the lecture is moving too fast when is delivered by                                     | 07     | 39  | 16     | 66  | 19     | 22  | 66     | 23  | 52     | 10  |
| 8       | I feel Clarity of new terms and spelling is better when lecture is delivered by                | 09     | 17  | 20     | 49  | 30     | 45  | 74     | 32  | 27     | 17  |
| 9       | I feel I am able to take my notes/diagrams more easily if lecture is delivered by              | 29     | 12  | 45     | 21  | 25     | 33  | 44     | 49  | 17     | 45  |
| 11      | I feel that my public speaking & presentation skills will improve when lecture is delivered by | 22     | 05  | 41     | 34  | 47     | 57  | 39     | 37  | 11     | 27  |
| 12      | I feel lecture is relatively boring when is delivered by                                       | 13     | 39  | 32     | 59  | 36     | 35  | 51     | 22  | 28     | 05  |
| 13      | I feel that the teacher is more well prepared when lecture is delivered by                     | 55     | 07  | 36     | 12  | 38     | 26  | 22     | 43  | 09     | 72  |

**Results Table-2 Comparison of mean score between PPT & C&T**

| Teaching Tool | Mean Score | N   | SD    | SE of Mean | $t = -4.366, df = 159, P = 0.000$ |
|---------------|------------|-----|-------|------------|-----------------------------------|
| PPT           | 41.69      | 160 | 9.688 | 0.766      |                                   |
| C&T           | 47.63      | 160 | 9.457 | 0.748      |                                   |

32.5 % student strongly agreed to the fact that they prefer class by chalk & talk and only 13.8 % student prefer class by PPT. 26.3% students felt that the lecture is more structured & organized by C&T and 13.8 % told PPT. 30% Opined that lecture delivered by C&T is more likely to capture their attention than lecture delivered by ppt. For attention span 32.5% told C&T 32.5% compared to PPT. 25.6% Students felt that they retain more information when lecture is delivered by C&T then lecture delivered by PPT. The lecture delivered by PPT moves faster 32.5% compared to C&T 6.3%. Clarity of new terms and spelling is better when lecture is delivered by PPT 16.9% than by C&T 10.6%. Students felt that they can take notes and diagrams more easily if lecture is delivered by C&T 28.1% than PPT 10.6%. The student felt that the teacher is more well prepared when lecture is delivered by C&T 45% as compared to PPT 5.6%.

**Table-3 Semester wise Comparison of mean score between PPT & C&T**

| Respondent   | Mean Score |       | SD    |        | SE of Mean |       |                                  |
|--------------|------------|-------|-------|--------|------------|-------|----------------------------------|
|              | PPT        | C&T   | PPT   | C&T    | PPT        | C&T   |                                  |
| Nonclinical  | 42.86      | 48.42 | 9.552 | 9.607  | 1.351      | 1.359 | $t = -2.512, df = 49, P = 0.015$ |
| Paraclinical | 41.98      | 45.6  | 9.503 | 10.212 | 1.344      | 1.44  | $t = -1.451, df = 49, p = 0.153$ |
| Clinical     | 40.80      | 48.65 | 6.039 | 8.527  | 1.296      | 1.101 | $t = -3.528, df = 59, p = 0.001$ |

### Semester wise Comparison of mean score between PPT & C&T Reasons for preferring C&T(106)

- Teacher is focusing more on important chapters and are well discussed.
- The teaching progresses slowly so they can easily understand the topics and cope up with the teacher.

- In C&T interaction with the teacher & student is better and it ensures better participation of both.
- It makes them feel more involved in the subject.
- They get to learn from the teacher's talk and they can concentrate on the teacher's teaching rather than writing which helps them to learn the skill of delivering lecture.

### Reasons for preferring C&T(106)

- In case of PPT the teacher skip the slide fast so in the fear that the slide will be changed they are busy copying the slide rather than listening to the lecture.
- In ppt the eye is strained looking at the screen rather than paying attention to the teacher.
- In C&T teacher is more well prepared and explains the topic and in ppt the teacher just reads the slide without explaining
- In C&T it is easier to take down notes and diagram but in ppt they can either listen or take down notes.
- In C&T they are more attentive in the class and teachers have more intellectual conversation with students and it is not boring
- The understanding is from the base point in case of C&T but in case of PPT sometimes there is no link between the slide.
- C&T is clean, slow, easily understood & easily captured.

### Reasons for preferring C&T(106)

- Ppt destroys the interaction.
- C&T is more favourable for diagrams and notes In ppt only books are displayed or just copied from internet no cognitive enhancement.
- In C&T teacher actually makes the things easier but in ppt the teacher reads the slide like newspaper.
- In ppt the students are more distracted no interaction.
- In ppt sometimes pictures are shown which is unnecessary and has no relevance with the class.

### Reasons for preferring PPT(54)

- We are well oriented to modern technology

- Ppt is good for diagram visibility
- In ppt we can see the original diagrams and date
- Ppt is an advance technology and it is visible from a distance
- It is a better process of teaching & learning not boring
- Better visualisation and good understanding
- We get more information in short period of time
- Easy to visualise and understand the concept
- During short time vast course can be completed
- In Ppt teacher can better demonstrate the topic by video show.

#### Reasons for preferring PPT(54)

Better visibility for back benchers, More convenient for the teacher no chalk & dust. Gives more information in less time. We can just take a copy of the ppt in a pen drive we don't have to take down notes. We can see the thing exactly as it looks. In ppt lecture is more structured and organised. Ppt is better while teaching in a big class. Ppt always catches attention of students and diagrams are more appreciated in ppt which is not possible in C&T. In ppt new terms and spelling can be better understood. Information is conveyed in systemic manner. More of video, picture and flow charts can be displayed.

#### DISCUSSION:

Most of the students i.e. 66% prefer the teaching tool as C & T and only 34% students prefer class if lecture is taken by PPT. In a study conducted by Vamshi Krishna. T et. al. 71 voted chalk and talk as better and effective tool to explain the subject efficiently<sup>3</sup>. In a study conducted by Mishra R majority of students 63.4% preferred lecture based on PowerPoint (PPT) presentation, followed by chalk and talk 30.9%<sup>4</sup>.

In a study by DeSa SB students who attended the class using chalkboard obtained significantly higher score in MCQ test compared to those who attended the same content based lecture using PowerPoint ( $p < 0.001$ ). The chalk board lecture were preferred by 67.5% of the students<sup>5</sup>.

In a study conducted by Nusrat Jabeen, 90.7% out of 140 students preferred PPT for overall but majority of students 80% prefer chalk and board method for taking notes and for it to be more interactive method<sup>6</sup>.

#### CONCLUSION

Based on the study we concluded that technology can interfere with the learning process and therefore great care must be taken when we adopt it. Technology can limit spontaneous interaction between teacher and students. More troubling is the focus on ppt appears to be taking priority over effort to improve and enrich teaching skill.

#### Recommendations

C&T is still a significantly preferred teaching tool. But in case ppt has to be used then the teacher must design how to make the lecture live and interesting. PPT has to be used in a way that will encourage student's engagement and critical thinking. The slides are to be explained in detail and the class has to be made more interactive. Overall an intelligent use of teaching tool and method is very crucial in increasing students learning.

#### REFERENCES

1. Vikas Seth, Prerna Upadhyaya, Mushtaq Ahmad, Vijay Moghe; PowerPoint or Chalk and Talk: Perceptions of medical students versus dental students in a medical college in India, *Journal of Advances in Medical Education and Practice*, 2010-11-16.
2. Brown G, Atkins M, *Effective Teaching in Higher Education*, London, UK: Routledge, 1988. Published by Taylor & Francis e-Library, 2002.
3. Priya Aranha, Divya Shettigar, Sanil Varghese, Chalk and talk versus power point presentation – perception of nursing faculty in India, *American International Journal of Research in Humanities, Arts and Social Sciences*.
4. Mishra R, Kesarwani P, Keshari SS. Comparison of PowerPoint and chalkboard lecture delivery methods in undergraduate medical students in Lucknow region. *Int J Innovat Med Edu Res*. 2015; 1(1): 12-14.
5. DeSa SB, Keny MS. PowerPoint versus Chalkboard Based Lectures in Pharmacology: Evaluation of Their Impact on Medical Student's Knowledge and Their Preferences. *Int J Adv Health Sci* 2014; 1(5): 10-14.
6. Nusrat Jabeen, Abdul Ghani. Comparison of the traditional Chalk and Board Lecture System Versus Power Point Presentation as a Teaching Technique for teaching Gross Anatomy to the First Professional Medical Students. *Journal of Evolution of Medical and Dental Sciences* 2015; Vol. 4, Issue 11, February 05; Page: 1811-1817, DOI: 10.14260/jemds/2015/258.