

## “Comparison of different teaching methodologies in a Medical college in North India.”

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### Abstract:

**Introduction:** The emerging technologies & the technological advances made day by day are changing the methods & techniques of teaching all over around us.

**Methodology:** The technique of teaching has seen drastic changes in the last decade with the new techniques available ranging from Power-point presentation to the video class rooms which converts the traditional class rooms to smart class rooms. The newer techniques as claimed, has advantages to provide more complete knowledge than the traditional one but at the same time it is also under the criticism by different people that it will not change the performance of the students. Keeping this in mind the present study was planned to compare the various teaching techniques.

**Results & Conclusion:** Regardless of the teaching aid used the impact of a lecture depends on the teacher. Teachers should guide without dictating, and participate without dominating. Smart classrooms are a new concept of teaching but unfortunately we can't compare it due to lack of this facility.

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### Introduction:

During the past 15–20 years the presentation methods in the classrooms has changed from the traditional chalk & talk to more advanced powerpoint & smartclassrooms methods. The most accepted criterion formeasuring good teaching technique is the amount of student learning that occurs. There areconsistently high correlations between students' ratings of the “amount learned” in thecourse and their overall ratings of the teacher and the course along with his presentation technique. Those who learned moregave their teachers higher ratings<sup>1</sup>. This samecriterion was also put forth by Thomas Angelo, when he said; “teaching in the absence oflearning is just talking.” A teacher's effectiveness is again about student learning.The literature on teaching is crammed full of well researched ways that teacherscan present content and skills that will enhance the opportunities for students to learn. Itis equally filled with suggestions of what not to do in the classroom.

However, there is norule book on which teaching technique match up best to which skills and/or content that isbeing taught. Students often have little expertise in knowing if the technique selected by anindividual instructor was the best teaching technique or just “a technique” or simply thetechnique with which the teacher was most comfortable.

A meta-analysis of 41 research studies provides the strongest evidence for thevalidity of student ratings since these studies investigated the relationship betweenstudent ratings and student learning. Doyle. T. (n.d.) quoted “The use of students'ratings for evaluating teacher effectiveness is the single most researched issue in all ofhigher education.<sup>2</sup> Most universities embrace a process by which students provide anonymousfeedback at the end of each course they complete. These ratings of instructor effectiveness, have been a hot topic since they were first employed in mid1920's<sup>4</sup> and they create

an enormous challenge for nearly every institution that uses them.<sup>5</sup> Over the years student evaluation of instructors has changed significantly especially in the areas of the purpose and methodology. They have transformed from being primarily used to assist students in the selection of courses, to helping faculty members further develop and improve their teaching skills, to assisting administrators with respect to personnel decisions.<sup>6</sup> Today, student ratings of instruction are widely used for the purpose of making personnel decisions and faculty development recommendations.<sup>7</sup> For administrators, the information derived from ratings aids them in making both summative and formative judgments dealing with faculty retention, tenure, and promotion, hiring, selecting faculty for teaching awards and honors, and in assigning teachers to courses.<sup>8</sup> Braskamp<sup>9</sup> suggests that instructors use the data formatively to develop and improve their teaching effectiveness. Student-ratings are in fact used in over 90 percent of all colleges and universities in the United States and represent the most frequently used strategy for evaluating instructors and courses.

There is much debate within the higher education community on how teaching or teaching effectiveness may be defined.<sup>10</sup> For instance, Centra (1993), defines effective teaching as “that which produces beneficial and purposeful student learning through the use of appropriate procedures”, Braskamp and Ory,<sup>10</sup> include both teaching and learning in their definition, defining effective teaching as the “creation of situations in which appropriate learning occurs; shaping those situations is what successful teachers have learned to do effectively”. Many researchers have focused on whether or not students are legitimate judges of teaching effectiveness. Though caveats abound, the general sense is that students are both rational and reliable sources of evidence,<sup>11,12</sup> While in class, students are exposed to all sorts of instructional experiences (lectures, instructional materials and aids, readings, exams). They are in effect experimental consumers—able to discern quality, relevance, usefulness, and instructor interaction with students.<sup>13</sup> As consumers, Cuseo<sup>14</sup> claims that students can judge what is taught and how it is taught, yet Braskamp & Ory<sup>10</sup> (1994) claim that students can only provide information with respect to teaching. However, Ory<sup>15</sup> sums it up best stating: “unless they haven’t been to class, as consumers they have a legitimate voice”. The all,<sup>16</sup> mentioned that the students can answer questions about the quality of lectures, the value of readings and assignments, the clarity of the instructor’s explanations. Students are certainly qualified to express their satisfaction or dissatisfaction with the experience. They have a right to express their opinions in any case, and no one else can report the extent to which the experience was useful, productive, informative, satisfying, or worthwhile.

In this study we want to resolve this question of the most appropriate technique to be useful for the medical students of our college through the help of questionnaires provided to the medical students. Commonly used techniques in lecture theatre are traditional chalk & talk, Power Point Presentation (PPT) and overhead projector with transparencies (OHP). According to one study<sup>17</sup> traditional class with chalk & talk were superior while another study<sup>18</sup> goes in favour of PPT.

So is not clear whether a particular lecture delivery method is superior to others. Moreover, most of these studies have been conducted in the developed countries and the area has not really been explored in the developing

countries where factors like power disruptions are important considerations. Therefore, the present study was planned in a medical college of north India, to assess the students' observation on traditional chalk & talk, PPT and OHP.

**Methodology:** We recruit the three batches of medical students (n=300) & provided a questionnaire of 10 questions out of which 9 were objective type & 1 was subjective type. The objective and importance of questionnaire was explained in the class before distributing questionnaire. The name of respondents were kept optional to improve authenticity of responses. As this was an open study the results are shown with the help of bar diagram, pie chart & percentages.

**Results:** 44.9% students likes the traditional technique of teaching whereas 51.7% students likes the power point while only 3.4% students likes OHP by their teachers to present their lectures. (Figure I) 64% students finds more concentration and less distraction and 71.42% finds their class mates more attentive and least disturbing to them during traditional way of teaching. When we talk about the technique by which students can easily memorize the topic 69.56% were in favor of traditional teaching while 28.26 were more favoring the PPT.(Figure II) 50% and 45.23% students felt that notes writing was easy during traditional teaching and PPT respectively. On the other hand 50% felt that their teachers were more comfortable with PPT in the lecture theatre while according to 47.61% students teachers were more comfortable with traditional methods. Similar to above trend 55.26% and 39.47% students were of the opinion that they would prefer to teach by traditional and PPT respectively.

#### **Discussion:**

A good teaching involves a good communication. Communication can be regarded as a two way process of exchanging ideas, feelings and information. It is a complex process and has five main components viz. sender (source/ teacher), receiver (audience/ students), message (content/ lecture), channels (medium/traditional chalk & talk, OHP & PPT) and feedback (effect). In this study we are trying to observe impact of medium on feedback.

In Indian medical college, lecturers are the most common form of teaching and learning. Although discussion methods in small groups appear to be a superior method of attaining higher-level intellectual learning<sup>19</sup> but not suitable for Indian medical school due to poor number of teaching faculty members in comparison to students. Hence, the lecture is here to stay, so it is immensely important that it should be as effective as possible.

Students felt that they are more oriented to topic with chalk and talk technique as compared to PPT. The reason for this may be dark room during PPT. Teacher can monitor every student's activity during chalk & talk because of good light so students will not divert. At the same time due to fear of caught by teacher some naughty students don't became obstacle for others. So students focus only on the topic by which their memorizing power also increases. More than 50% students felt that notes writing was easy during chalk & talk. This may be due to students can compete with teacher's speed of writing but can not adjusted with PPT.

We observe a interesting thing that students felt that senior faculty (Associate & Professor) were more impressive during chalk & talk while junior faculty (demonstrators & Assistant Professor) were more sensational during PPT. This may be due to more computer based knowledge of junior faculty as they can make PPT more

interesting whereas in beginning of career of senior faculty, computers were not in fashion so even now most of them can't handle it efficiently.

### Chalk and Talk

Merits: Student- teacher interaction is better, it encourages taking down the notes and diagrams as the students follow the hands of the teacher, Power failure could not interrupt the lecture.

Demerits: Poor handwriting is not legible and sometimes the blackboard is dirty, especially if used several times in the day, and at times the chalk is faulty and it soils the clothes. Also fewer diagrams can be provided and less information can be covered in the lecture.

### PPT

Merits: Better quality text and diagrams, complicated material can be make easy by 3d animations, cartoons and pictures.

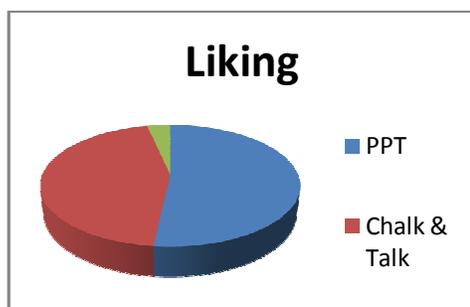
Demerits: Power failure, some teachers go too fast and then students find it difficult to take down the notes and diagrams, dark room so distraction of students easy.

General comments:

- Sufficient time should be given during PPT for students to take down their notes and the diagrams.
- Some teachers should improve their hand writing.
- PPT should contain more diagrams.
- Chalk & talk can be combined with PPT.

Our society these days are divided in to two different way of thinking on the education. Some believe that modern methods are better than the traditional method of teaching but yet these two methods are both a successful way. But both traditional and new methods have some pros and cons.PPT is ideal for fast revision and quick overview of the subject and for seminars.

**Conclusion:** Regardless of the teaching aid used the impact of a lecture depends on the teacher. Smart classrooms is a new concept of teaching but unfortunately we can't compare it due to lack of this facility.



**Figure I:** Student's attitude towards different teaching techniques (%)

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### Appendices: The Questionnaire

- 1) Which of the following technique you like your teacher to present in a theory lecture?
  - a) Traditional (Chalk & Talk)
  - b) OHP

- c) Power Point
- 2) In which technique you find more concentration & less distraction.
- a) Traditional (Chalk & Talk)
  - b) OHP
  - c) Power Point
- 3) Which technique will help in easy memorizing?
- a) Traditional (Chalk & Talk)
  - b) OHP
  - c) Power Point
- 4) In which technique, it is easy to note down the important points.
- a) Traditional (Chalk & Talk)
  - b) OHP
  - c) Power Point
- 5) According to you which technique makes your teacher more comfortable during teaching?
- a) Traditional (Chalk & Talk)
  - b) OHP
  - c) Power Point
- 6) In your opinion which technique makes your classmates more attentive & least disturbing to you
- a) Traditional (Chalk & Talk)
  - b) OHP
  - c) Power Point
- 7) Through which technique you intend to teach in future.
- a) Traditional (Chalk & Talk)
  - b) OHP
  - c) Power Point
- 8) If a teacher changes his teaching from one technique to another, what is the effect of this on your understanding of topic?
- a) Clear
  - b) Less understandable
  - c) Confusing
  - d) No effect
- 9) Do you observe any effect of age of teacher on his presentation of lecture through any technique (No personal comment)
- Please tick the appropriate answer for all three options
- a) Traditional (Chalk & Talk) - Y/N.
  - b) OHP - Y/N.
  - c) Power Point - Y/N.
- 10) Suggest your opinion to improve classroom teaching with the use of present techniques in not more than 50 words
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