

## A Study on Preference of Teaching Learning Method & Media Among Undergraduate Student of North Bengal Medical College.

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### Abstract:

**Introduction:** With changing time, method & media for teaching has changed dramatically from Gurukul system to modern classroom with audio-visual aids like slide projector, overhead projector (OHP), Computer with Liquid Crystal Display (LCD) etc. There are differences in perception regarding method & media among students determining class attendance. **Objective:** The study was aimed at assessing preferences of method and media in lecture classes by the undergraduate medical students and seeking their suggestion for improving attendance and quality of classes. **Methodology:** It was an observational, cross-sectional study in North Bengal Medical College. A pre-designed and pre-tested questionnaire was used to collect data from all students present in class. Relevant ratios and proportions were calculated. **Result:** Among 207 students 58.45% chosen practical demonstration as the most preferred method and computer with LCD projector as most preferred material (58.45%). 'Easy to understand' was the most common reason for preference of method & media. Unattractive (47.34%) and boring classes (34.30%) were cited as common reason for less attendance. Student friendly approach (33.33%) and interactive classes (31.40%) were suggested by students for increasing attendance. Quality of classes can be improved by well-equipped classroom (43.00%), student teacher interactions (41.06%) and practical classes in small groups (15.94%). **Conclusion:** Well-equipped classroom, student friendly approach, interactive and demonstration classes may attract more students in classes and improve quality of teaching.

**Keywords:** Teaching learning Method & Media, Preference, Medical students, West Bengal.

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### I. Introduction

History is the story of people - the study of our past. History teaches us to appreciate man's achievement as well as to learn from his mistake. It took man a long time to develop the art of writing. Before paper was invented, people used to write on palm leaves and bark of birch trees. Use of papyrus as writing materials goes back to 2600 BC. The Aryans followed the Gurukul system of education. A student or Brahmachari lived in household of Guru in ashrama and served him by doing various household tasks. In return, the guru imparted knowledge to his student. Education is transmitted orally from teacher to pupil. The pupil used to offer gurudakshina after completion of education. As the time passed, modes of teaching changed from Gurukul to institution based system. In old age, people used slate and chalk pencil, palm leaves with pen of bamboo branch. Among the various method used today by the teachers, chalk & talk is age old and popular method and media for teaching. As science advances more and more audio-visual aids has been introduced for teaching like Slide projector, OHP, Computer LCD etc. There are differences in opinion regarding use of audio-visual aids among the teachers. Some prefers old method and others like most modern methods for teaching. Advances in science have given rest to our cognitive domain. There is a dictum that a teacher is best judged when there is power cut. There are many advantages and disadvantages of every methods and media we use for teaching. But objective of every methods and media is to impart knowledge to students. So, aim of teaching is to satisfy student's need and demands. We should search what students prefer and why they prefer to achieve the goal of teaching which were subject matter of different studies.<sup>1-19</sup> Keeping this in mind, search for preference of method & media in classes and opinion for improving absenteeism & quality of classes among undergraduate students in a rural medical college was the focus of the present study.

## **II. Methodology**

It was an observational study, cross-sectional in design, conducted during January to March 2017 in North Bengal Medical College, Sushratnagar, Darjeeling. Objectives of the study was to assess the preference of method and media in lecture classes by the students and to seek suggestion for improving attendance and quality of classes. All undergraduate medical students constituted the study population and no sampling was done. A pre-designed and pre-tested semi-structured questionnaire was used to collect data in lecture classes from all the present students. Data compilation and analysis was done in Microsoft Excel workbook in computer. Relevant ratio and proportions were calculated.

## **III. Result**

A Total of 207 students present in the class on the dates of data collection, were included in the study. 77(37.20%) were from 2<sup>nd</sup> semester, 63(30.43%) in 4<sup>th</sup> semester and 67(32.37%) were in 6<sup>th</sup> semester. Mean age of students was 20.15±2.40 years, range being 18-24 years.

Among participants 129(62.32%) were male and 78(37.68%) were female students. Highest female students (49.21%) were found in 4<sup>th</sup> semester batch. (Table 1) Among the participants, 140(67.63%) studied in State board, 52(25.12%) in CBSE board and 15(7.25%) in ISC board during their 10+2 schooling. As North Bengal Medical College is a rural medical college in West Bengal, as high as 187(90.34%) students stayed in students hostel, 3(1.45) come from home and 17(8.21%) stayed in rented house or lodge.

While asked about preferred method for classes the largest group of students i.e., 167(80.68%) opted for practical demonstration, 110(53.14%) - chalk and talk, 87(42.03%) - discussion, 76(36.71%) - lecture and 17(8.21%) preferred role play. Regarding preference of media, 126(60.87%) preferred blackboard with chalk, 117(56.52%) - computer with LCD projector, 73(35.27%) - model & charts, 39(18.84%) - white board with marker and 1(0.48%) preferred slide projector. In counting preferred method & media of classes multiple answers were considered. (Table 2) While asked for most preferred teaching learning methods, 121(58.45%) students said it is practical demonstration, followed by chalk-talk (20.29%), discussion (10.63%) and lecture (7.25%). (Diagram - 1) 'Easy to understand' was expressed as most common reason for all the most preferred method by the students under study. Other reasons included 'give vivid idea about subject', 'good explanation', 'gives idea of question pattern of the examination', 'curriculum based on practical methods', 'offer clear idea/conception', 'involves students actively' and 'both theoretical and practical knowledge were taught in variable proportions'. (Table 3) Regarding most preferred material, computer with LCD projector tops the list (58.45%), followed by blackboard with chalk (22.22%) and model and chart (12.08%). (Diagram 2)

'Easy to understand' was expressed as most common reason for all the most preferred materials except for blackboard with chalk where 'easier note taking' was the most common reason. Other reasons included attractiveness, better visibility, 3D image, less time consuming, clearer picture and points, realistic appearance, give clear idea and interesting and comfortable in variable proportions. (Table 4)

Students were asked about causes of their less attendance in lecture classes. 98(47.34%) responded that classes were not interesting or attractive, followed by classes were boring - 71(34.30%), poor quality of standard of teaching - 40(18.32%), classes were of long duration and monotonous - 31(14.98%), teachers voice were not audible from back benches - 21(10.14%). Other less frequent causes included - classes were held in odd time (6.28%), frequent items/ part examination need time self-study (2.42%), late night study hampers attendance in morning classes (2.42%) and teachers were reading slides without discussion (0.97%). (Table 5)

Student's suggestions for increasing attendance in classes were : student friendly approach - 69(33.33%), need interactive classes - 65(31.40%), more discussion and practical classes - 34(16.43%), topic should be interesting - 31(14.98%), knowledgeable and efficient teacher - 30(14.49%), sound should be audible from back benches & regular class tests - 19(9.18%) each, teacher should do more blackboard work - 8(3.86%), display of attendance regularly/ disciplinary action for absence - 7(3.38%), duration of class should be shortened - 4(1.93%), marks may awarded for good attendance, time discipline of teacher - 1(0.48%) each. 1(0.48%) student not answered to this question. Suggestions of students regarding improving the quality of classes were: class room should be equipped with light-fan-air conditioner, microphone, OHP, LCD - 89(43.00%), more student teacher interactions - 85(41.06%), more practical / classes in small groups - 33(15.94%), good faculty/ teacher - 30(14.49%), regular assessment/ short term tests - 14(6.76%), clear voice of teacher - 13(6.28%), ability of teacher to understand students problem & student friendly relationship - 11(5.31%) each, knowledgeable teacher - 9(4.35%), small revision of previous classes - 5(2.42%), class should be in slow pace, not hurriedly, recapitulation of whole topic at the end of class - 2(0.97%) each and 2(0.97) students not given any suggestions.

#### **IV. Discussion**

The current study was aimed at exploring preference of method and medias among undergraduate medical students. 58.45% responded practical demonstration, followed by chalk-talk (20.29%), discussion (10.63%) and lecture (7.25%) as most preferred teaching learning methods. Regarding most preferred material, computer with LCD projector tops the list (58.45%). Easiness of understanding was expressed as most common reason for liking all the most preferred methods & materials.

Study conducted by Sushrit A N in a medical college of Kannur found majority of the students were multimodal (69%).<sup>1</sup> Study of Anu S et al. in Tamilnadu, showed 6.5%, 12.6% & 10.3% students preferred visual, aural and kinaesthetic modes respectively and 70.6% preferred multiple learning style.<sup>2</sup> Study by Joanna G et al. demonstrate a predominant use of digital over non-digital learning resources (69% vs. 31%;  $p < 0.01$ ) among students.<sup>3</sup> Abdulmajeed AD et al. in King Saud University documented 78.1% disagreed blackboard use in communicating with the instructor and 37.2% students agreed that using blackboard is time consuming.<sup>4</sup> Some more advances studies conducted by Singh S et. al in Pakistan described medical student's perceptions of animation based lectures would more useful than equivalent static learning material of PowerPoint or transparency.<sup>5</sup> Several other studies among non-medical students also showed similar results as the current study.<sup>6, 7, 8</sup> Regarding absenteeism the present study showed unattractive (47.34%) and boring (34.30%) classes were predominant cause of less attendance. Student's suggested that student friendly approach (33.33%) and interactive classes (31.40%) can increase attendance. Well-equipped classroom with modern amenities (43.00%), student teacher interactions (41.06%) and more practical classes in small group (15.94%) would improve the quality of classes. Numerous studies were found to explore causes and solutions for absenteeism among medical students. Study by Rao B T et. al in RIMS, Andhra Pradesh, showed laziness & taking part in extracurricular activities and sports were two main students factors and lengthy classes and lack of clarity of teachers were two main college factors for absenteeism.<sup>9</sup> In studies conducted by Tripura K et. al. in Medical College, Tripura revealed absenteeism were due to preparation for examination (55.8%), lack of interest (60.5%) and inability of mental capacity of students to match the course (64%).<sup>10</sup> Studies in Pakistan by Ahmed T et. al showed that 11.8% medical students were against mandatory attendance and attendance should be optional.<sup>11</sup> Ethiopian study by Desalegn A A et al. reported the main reason for missing lecture were preparing for examination, lack of interest, lecturer's teaching style and availability of lecture material.<sup>12</sup> In a study by Shrinin T et al in Bangladesh, similar causes of absenteeism came out like lack of interest in subject matter, poor teaching strategy, unfavourable learning environment, excessive socialization, part-time job, ill health, sleeplessness & poor relations with teachers.<sup>13</sup> Abdulaziz A et al. conducted a study at King Saud University revealed cause of absenteeism were over-sleeping (61.83%), self-studying (28.01%) or socializing with friends (10.14%).<sup>14</sup> Study of Alghamdi A assessed the prevalence, causes and impacts of medical students' absenteeism at Umm Al-Qura University. The causes of absenteeism ranged from dislike of teaching style (70%) to social causes (42.9%).<sup>15</sup> Study conducted by Mahmoud F. Qutub, Mohammad A. et al. among Saudi medical students showed that absences are mainly because of study & course dissatisfaction (25.2% & 22.4% respectively) along with absence in problem based learning session are mainly because of sleep (11.7%) and family commitments (7.0%).<sup>16</sup> Study by Daud A et. al. among undergraduate medical & dental students in a UK university showed that a majority of both dental (76%) and medical (66%) students felt lectures should be non-compulsory.<sup>17</sup> Student's attendance and academic performance seen also lowered in undergraduate clinical classes.<sup>18, 19</sup>

#### **V. Conclusion**

This type of study provides useful information for improving quality of teaching-learning process and decreasing absenteeism. Student friendly approach, interactive and demonstration classes may attract more students in classes. Well-equipped classroom with modern amenities can increase the quality of teaching learning. The current study suggests that the educator should try to achieve a balance between old form of blackboard teaching and modern LCD based teaching to sustain interest and thereby promote student's engagement which ultimately leads to improved class attendance.

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**Tables and diagram:**

**Table 1.**Distribution of students according to semester and gender.  
(n=207)

Semester	Male	Female	Total
2	56(72.73)	21(27.27)	77(37.20)
4	32(50.79)	31(49.21)	63(30.43)
6	41(61.19)	26(38.81)	67(32.37)
<b>Total</b>	<b>129(62.32)</b>	<b>78(37.68)</b>	<b>207(100.00)</b>

**Table 2.**Student's preference of methods and media for teaching.\*  
(n =207)

Preference of methods & media	No.(%)
<b>Preferred method</b>	
Practical Demonstration	167(80.68)
Chalk & talk	110(53.14)
Discussion	87(42.03)
Lecture	76(36.71)
Role play	17(8.21)
Others	4(1.93)
<b>Preferred media</b>	
OHP	15(7.25)
Computer with LCD	117(56.52)
Blackboard with chalk	126(60.87)
White board with pen	39(18.84)
Model & chart	73(35.27)
Slide projector	1(0.48)

\*Multiple response

**Table 3.** Reasons for most preference of teaching learning methods by the students.

(n=207)

Mostly preferred Methods	Lecture (n=15)	Chalk & talk (n=42)	Discussion (n=22)	Practical demonstration (n=121)	Role play (n=4)	Others** (n=3)
<b>Why prefer most*</b>						
Easy to understand	13(86.67)	3(7.14)	11(50.00)	102(84.30)	3(75.00)	1(33.33)
Give vivid idea about subject	2(13.33)	3(7.14)	2(9.09)	10(8.26)	--	--
Explanation is good/clear elaboration	2(13.33)	1(2.38)	5(22.73)	14(11.57)	1(25.000)	--
Question pattern of examination	1(6.67)	--	--	1(0.83)	--	2(66.67)

Curriculum based on practical methods	--	2(4.76)	--	5(4.13)	1(25.00)	--
Clear conception / idea	--	2(4.76)	4(18.18)	13(10.74)	1(25.00)	--
Active participation of students	--	2(4.76)	7(31.82)	7(5.79)	--	1(33.33)
Practical & theoretical knowledges were taught	--	1(2.38)	1(4.55)	4(3.31)	--	--

\*Multiple response \*\*Seminar etc.

**Table 4.** Reasons for most preference of teaching learning materials by the students.\* (n=207)

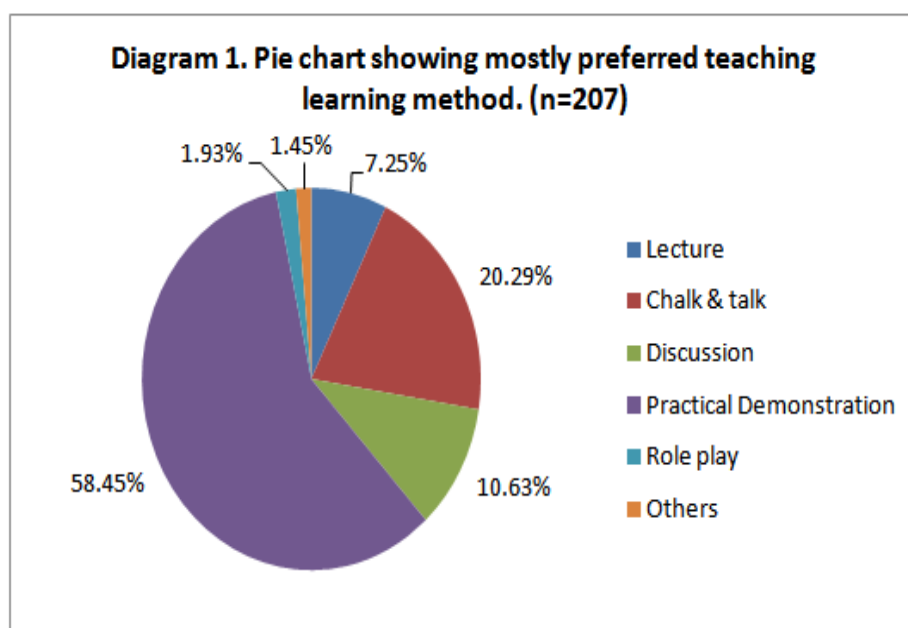
Mostly preferred Media	OHP (n=3)	Computer with LCD (n=121)	Blackboard with chalk (n=46)	White board with pen (n=10)	Model & chart (n=25)	Projector (n=2)
Why prefer mostly*						
Easy to understand & vivid description	3(100.00)	87(71.90)	37(80.43)	6(60.00)	12(48.00)	--
Attractive/ better visible	1(33.33)	29(23.97)	6(13.04)	4(40.00)	12(48.00)	--
3D image better visible	--	12(9.92)	3(6.52)	1(10.00)	3(12.00)	--
Less time consuming	--	9(7.44)	4(8.70)	--	4(16.00)	2(100.00)
Note taking easier	--	10(8.26)	4(88.70)	1(10.00)	2(8.00)	--
Picture & points clearer	--	21(17.36)	4(8.70)	1(10.00)	2(8.00)	--
Realistic appearance	--	4(3.31)	1(2.17)	1(10.00)	--	--
Clear idea	--	8(6.61)	4(8.70)	--	1(4.00)	--
Interesting & comfortable	--	9(7.44)	1(2.17)	--	3(12.00)	--

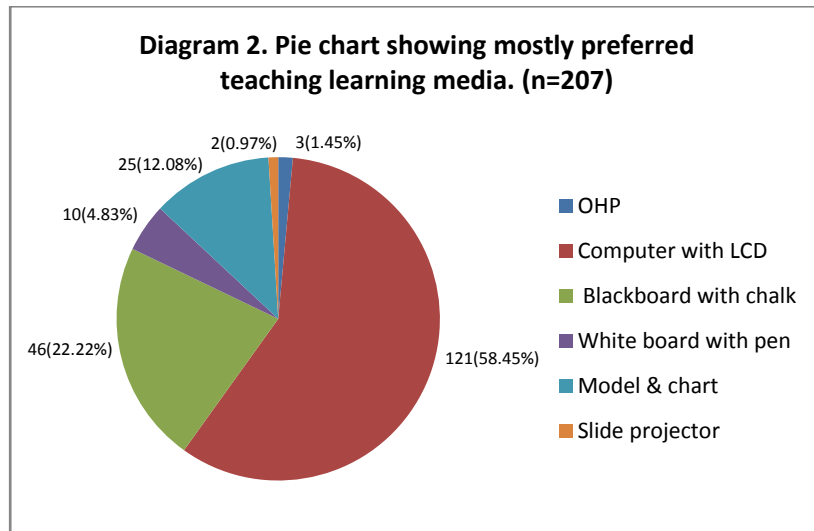
\*Multiple response

**Table 5.**Opinion of students regarding cause of less attendance in classes.\* (n=207)

Opinion regarding cause of less attendance	No.(%)
Boring	71(34.30)
Monotonous & long duration of classes	31(14.98)
Poor quality or standard of teaching	40(18.32)
Not interesting or attractive classes	98(47.34)
Frequent items/part examination need time for self-study	5(2.42)
Odd time of classes	13(6.28)
Late night study leads to morning class drop	5(2.42)
Teacher's not audible from back benches	21(10.14)
Reading slide without discussion	2(0.97)

\*Multiple response





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