

**Original Research Article:**

**“Study of first MBBS student’s perception towards various teaching methods in physiology.”**

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**Abstract:**

**Objective:**

Teaching in medical colleges has changed dramatically with the evolution of various teaching methods and technologies. Teaching is an art, and the concept is to be grasped by students at their level. Nevertheless, it depends upon the knowledge of a well-trained faculty. For decades, the Chalk and Blackboard method has been ideal. Group discussions, seminars, tutorials, practical demonstrations, etc. have been widely used but are now replaced by PowerPoint presentations. All of these methods have their own merits and limitations. Hence, the present study aimed to evaluate the choices of teaching methods liked by first-year medical students.

**Material And Methods:**

The study was conducted in the physiology department, Vedantaa Institute of Medical Sciences, Dahanu, Palghar District, Maharashtra, India. First-year MBBS medical undergraduates of this tertiary care centre and medical college in Maharashtra state participated. The study was conducted after teaching major systems in Physiology in February 2023 after the end of the first term. A total of 144 students, 67 males, and 77 females, were enrolled in this study. Students were asked to fill out answers in a questionnaire about their perceptions of various teaching methods and means of teaching aids preferred by them.

### **Results:**

Most students (52) preferred Lectures on various topics as their teaching method of choice followed by Practical's (31) students. The most useful teaching aid was a PowerPoint presentation as interpreted by 87 students.

### **Conclusion:**

First-year MBBS medical students preferred Lectures by PPT Presentation. However, various integrated teaching methods and aids can be applied simultaneously by teachers for better understanding by the students.

**Keywords:** Teaching Methods, Chack and Blackboard, PPT, Well-trained faculty.

### **Introduction:**

Teaching Physiology to First-year MBBS students is the backbone based on which every student learns to grasp core points essential for upcoming para and clinical subjects. Being a mandatory subject at the University level it becomes a compulsion for students to appear and get good grades at their final examinations. Students find introductory Physiology Systems interesting, however, as the difficulty level increases, it becomes a burden in the minds of students. Starting the MBBS curriculum with the newly introduced Foundation course which gives a brief orientation to students to various Individual departments in the Medical College has now established a keen interest in their minds. They have now built-up enthusiasm for learning first-year subjects thoroughly. Medical college teachers have developed their teaching styles to create an environment of a friendly nature for students to learn at ease. Studies have been conducted in various medical colleges across India in several Medical Universities on the perspectives of MBBS students towards these teaching methods. These can help teaching faculties to study students' interests for the use of modern-day technology for a better understanding of Physiology at the Gross root level.

### **Aims and Objectives:**

1. To study teaching methods of choice for first-year medical students.
2. To evaluate which teaching AID was most useful to the students.

### **Material and methods:**

The present study was carried out in the department of physiology on 144 first-year M.B.B.S. students of Vedantaa Institute of Medical Sciences and tertiary care centre in rural areas of Maharashtra state. A questionnaire was designed in the Physiology Department was distributed to students. MBBS students were asked to select the teaching method of choice between Lectures, Practical's, Problem-based learning, Tutorials, Demonstrations, Seminars, Group discussions, and Quiz format. It was based on students' choice without any hesitation or explanation. The next set of questions was related to their teaching aid useful in Physiology out of Chack and blackboard or Whiteboard with a marker pen, PowerPoint presentation, and Overhead projector with slides. Students were given ideas about the

purpose of the study and the questionnaire. consent was obtained from all participants. They were intimated about their right to withdraw from the study. The confidentiality of responses through the questionnaire was thoroughly maintained. The students were asked to respond freely and fearlessly. They were informed that the information given by them was for research purposes only. Their responses obtained would be used for better implementation of curriculum in the upcoming years. Data were collected and presented in tabular and graphical form.

**Observation and results:** Physiology can be taught to students through Lectures in a properly coordinated and sequential manner followed immediately by Practical's or Demonstrations on the same topics. This response was reported in our study where most students (52) preferred Lectures on various topics. This was followed by Practical's (31) students as they were interested and conducted in smaller batches for better understanding. Problem-based learning (15), tutorials (13), and small group discussions (15) were equally significant from a revision point of view amongst them. The quiz format after selected topics were taught was not liked by most of the students. These findings are depicted in table number 01 and graphical figures number1(A) and 1(B).

**Table number 1: Teaching method preferred by students.**

Sr. no.	Teaching method	Number of students		Total
		Boys	Girls	
1	Lectures	23	29	52
2	Practical	16	15	31
3	Group Discussion	6	9	15
4	Tutorials	5	8	13
5	Problem-Based Learning	8	7	15
6	Demonstrations	4	4	8
7	Seminars	3	4	7
8	Quiz	2	1	3
Total	-	67	77	144

**Figure number 1(A):**

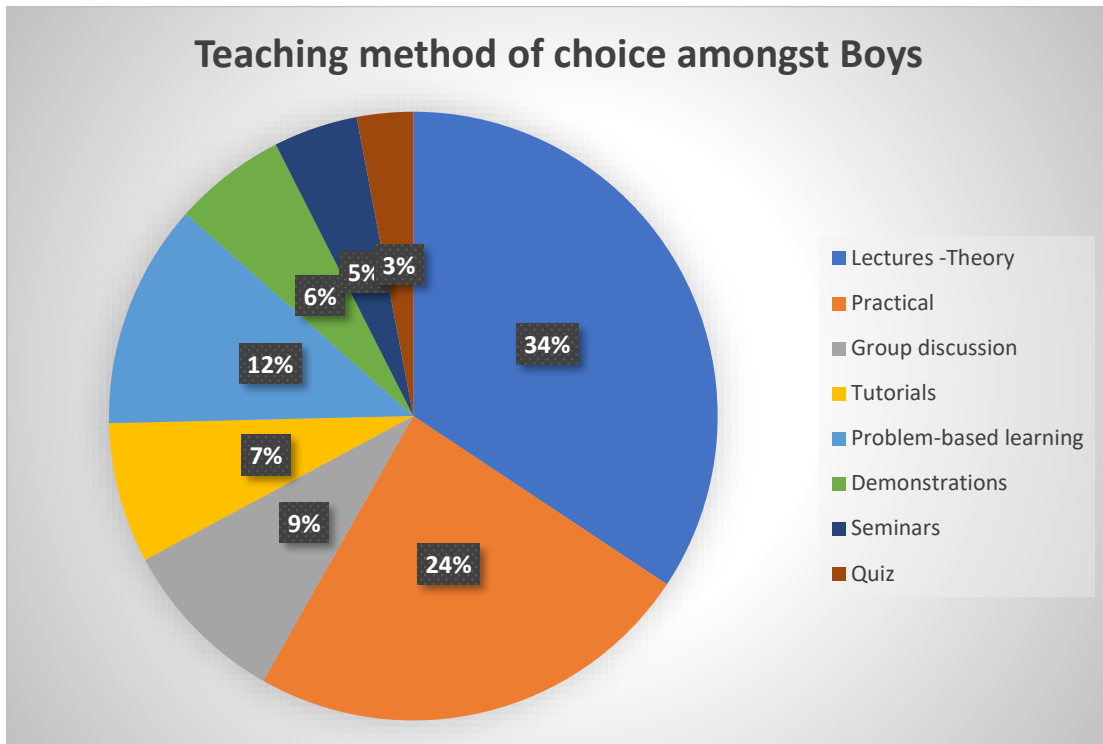
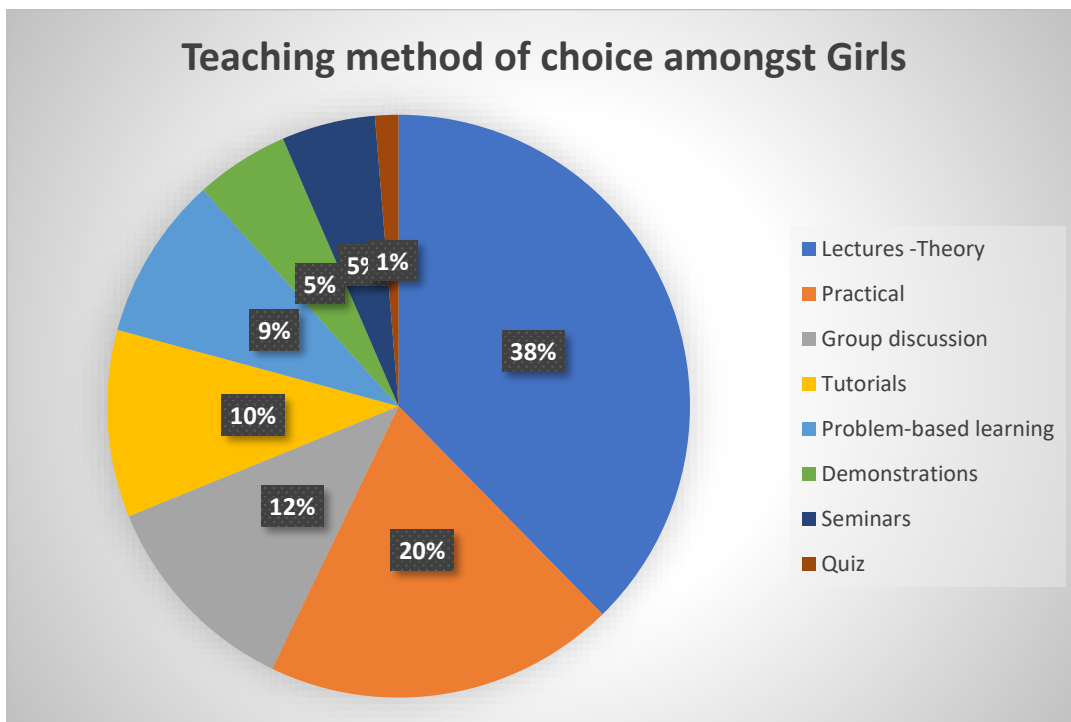


Figure number 1(B):

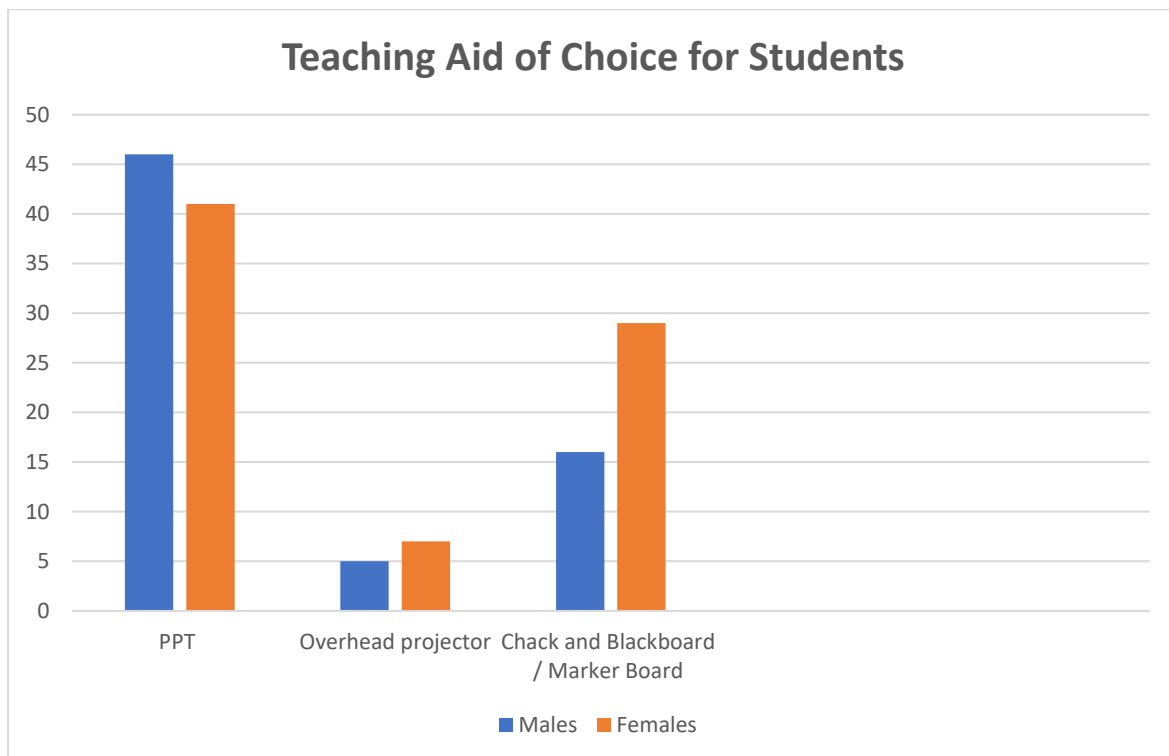


Considering the fact as to which teaching aid was most useful, it was seen in our study that PowerPoint presentation was most useful, logical, and preferred in comparison to Chack and Blackboard / Markerboard. The overhead projector was the least useful. These findings are depicted in table number 02 and graphical presentation number 02.

**Table number 2: Teaching AID preferred by students**

Sr no	Teaching Aid Preferred by Students	Number of Students		Total
		Boys	Girls	
1	PowerPoint Presentation	46	41	87
2	Overhead projector	05	07	12
3	Chack and Blackboard / Marker Board	16	29	45

**Figure number 02:**



## Discussion:

Traditionally Physiology was been taught by the Chack and Blackboard method to MBBS students. With changes in time, it has been shifted to the use of slide share and overhead projector, which ultimately got priority due to interest bulging in the minds of students. Nowadays PPT has evolved into a method of choice due to a wide range of its advantages.

Similar findings of PPT as the preferred method of choice were noted in studies done by Chavan SM et al [1], Shah T, Patel MA, Shah H [2], Prabhu R et al [3], Masih A et al [4], Lagare et al [5] and by Seth V et al [6].

PPT had its role as it was best given various advantages like better visual presentation, easier understanding, keen development of interest in students, better animations used, and wholesome communication between students and teachers. However, few students were interested in visual outlook and did not pay much attention to the teachers. Some topics were boring and depended only on the teacher's ability to keep the attention of the students.

In contrast, findings in the present study, traditional Chack and Blackboard or Markerboard with talk of speaker were better in studies done by Jose MJ et al [7], Gathe BM et al [8], Vashishtha K, Baidwan S, and Puri N [9], Shastrakar R and Nakhate M [10], and Priyadarshini KS et al [11].

This method has been universally popular amongst students as it maintains an interest in class, and direct eye-to-eye contact with the teacher, and notes can be easily drawn on salient features that the teacher explains. However, backbenchers had problems with the visualization of contents and audibility, interesting facts were not understood properly and were teacher-dependent.

Small group discussions and tutorials were useful to students as seen in our study. Important facts were easily grasped and recollected in exams, interactions between students helped develop a friendly environment, and small topics were preferred for learning amongst students.

Practical's and laboratory demonstrations were selected as their choice by students who were of the view that it created an interest of the topic taught by lectures, felt it was sort of revision and it also helped them to analyse their studies.

Problem-based learning has now evolved as the newest method of choice as it gives students a chance to exposure to various facts of the topic and in-depth knowledge of all aspects that could be applied to it. Studies done by Shilpa AV [12] and Siddiqui R [13] have established the significance of Problem-based learning as an evolving teaching modality of choice among medical students.

The least preferred Quiz pattern was not at all preferred by most of the students as it challenged their knowledge, and only a few were interested in it, creating a tense situation among those not prepared for it and not worthy for all.

Changes with time are seen amongst teachers for making topics easier, better and to grasp by students at their level. Modern technologies need to be integrated into the minds of both for better adaptation in the development of well-trained MBBS graduates at every stage of their academics.

**Advantages of study:** Help to understand MBBS student's preferences of teaching techniques.

**Limitations:** Conducted at Institute Level. Findings were Individual dependent and large sample sizes in various curricula other than MBBS are needed to get better results.

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