

# A STUDY ON THE PREFERENCES FOR TEACHING METHODS BY UNDERGRADUATE SCIENCE STUDENTS

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## Abstract

In this era of technology traditional class room is changing to smart class room. Student's preference regarding the teaching methods is an area of study. In this study three different teaching methods were adopted to teach second year undergraduate students of Zoology and Physics. On the basis of students responses the preferences of teaching methods like Chalk and Talk, PowerPoint and Integrated Methods (using Chalk and Talk and PowerPoint together) are evaluated. The article reports the outcome that majority of the students of both Zoology and Physics prefer Integrated Method of teaching.

**Keywords:** Chalk & Talk, PowerPoint, Preferences, Students, Teaching Methods.

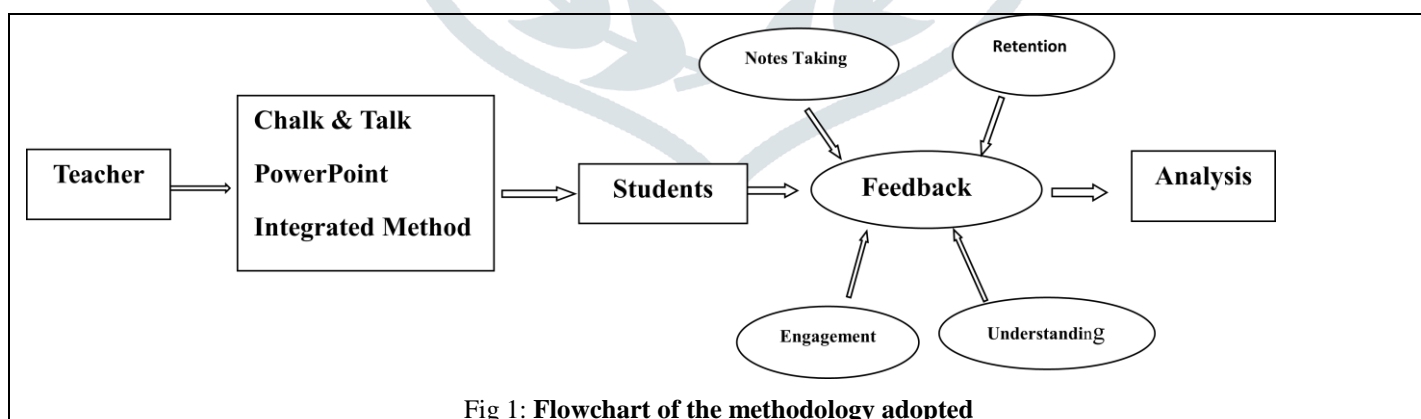
## I. INTRODUCTION

The education is most important sector for any nation. The education helps to build the healthy society. The higher education system is modified from time to time as per need. As there is rapid growth and involvement of technology in all sectors, the education system is also not apart from it. The result is that the traditional classroom is changing to smart classroom. The institutions are trying to improve their academic by imparting different teaching learning methods. The educationists from decades are trying to find the better teaching approach in the higher education system. Different results are emerged out from these studies. Hill et al, 2012 found that PowerPoint has no major effect on student's performance. According to one study by Nouri.H & Shahid A, 2005 PowerPoint has no major effect on short-term or long-term memory of lecture content. Some studies suggest that students learn more in traditional method (Amare, 2006). Overall research finding indicates that students prefer PowerPoint presentations over traditional lectures (Cassady J. C, 1998; Susskind J. E, 2005; Gok T & Silay I, 2008). Vamshi K T et al (2012) done a survey on the teaching effectiveness of Chalk & Talk and PowerPoint presentation and found that PowerPoint do not able to increase the student engagement or achievement in under-graduate classes. Hitesh M et al (2013) observe a interesting finding that senior were more impressive during Chalk & Talk while junior faculty were more sensational during PowerPoint. Naki Erdemir (2011) found that the Physics

students who were taught using PowerPoint were more successful than those in traditional lectures. S.G.Thube and A.D.Shaligram (2007) found that PowerPoint helps to understand Optics concepts easily as compared to Chalk & Talk method. Rokade S. A & Bahetee B. H (2013) concluded in their study that majority of medical students expressed that the Chalk & Talk is more interesting than PowerPoint. Jyoti Chopra et al (2014) conducted a study on teaching anatomy and found that students prefer combination of Chalk & Talk and PowerPoint. So, there is a lot of debate over advantages and disadvantages of various traditional and computer assisted teaching aids. Apperson J.M et al (2006) recommended for paying attention on the physical aspects of PowerPoint slides to improve students' learning experience. The authors study the preferences, easiness and impact of Chalk & Talk, PowerPoint and the fusion of the both methods (Integrated Method). The study was conducted in academic year 2018-19 at Dada Patil Mahavidyalaya, Karjat, located in District Ahmednagar Maharashtra. The second year science undergraduate students having Zoology and Physics subjects are selected for this study. From Zoology Unit: Silent Features of Class Reptilia, Aves and Mammalia were selected. The topic needs diagrams and explanation. From Physics Unit: Geometrical Optics was selected. The topic mostly consists of ray diagrams and mathematical steps. The class room which has blackboard and LCD facility was chosen for the study.

## II. METHODOLOGY

The adopted teaching methods are Chalk & Talk, PowerPoint and Integrated Method (involving both methods Chalk & Talk and PowerPoint) and are taught by the same teacher. The teacher alternatively uses the each three teaching methods. In this study from Zoology students and form Physics 79 students were participated. The selected each unit allotted 12 hours and 4 hours allotted for each teaching method.



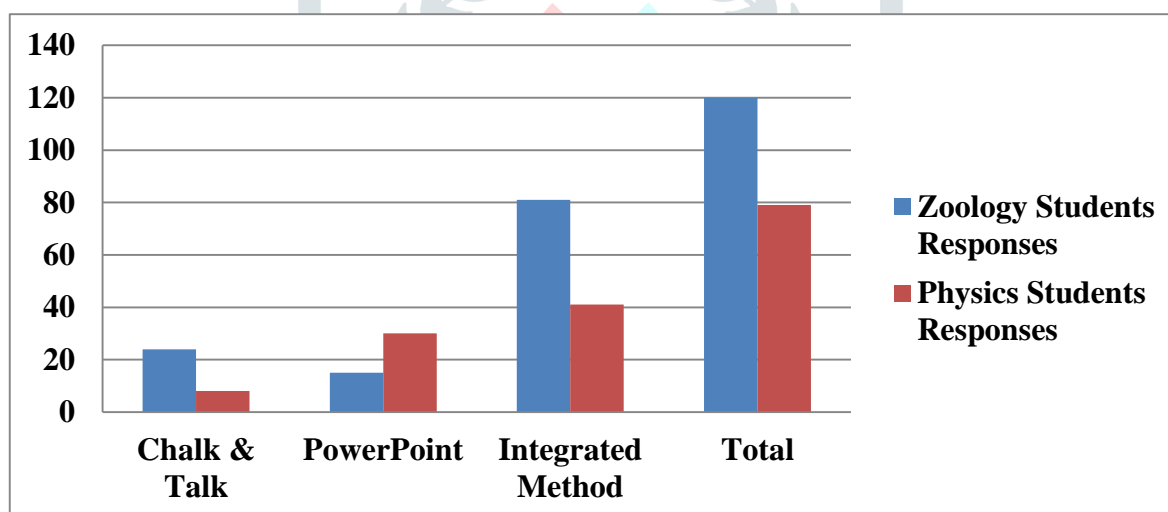
After the completion of the units the opinion is sought from students regarding the preference on the method of teaching by formal feedback. The formal feedback based on Understanding of the Content, Students Engagement, Easiness to take the Notes and Retention of the Content.

### III. RESULT AND DISCUSSION

The students of second year having Zoology prefer integrated method of teaching 68 %, 20 % give preference to Chalk & Talk and 12% prefer PowerPoint method of teaching out of 120 students. The 52% students of second year having Physics prefer integrated method, 38 % give preference to PowerPoint and 10% prefer Chalk & Talk method of teaching out of 79 students. Table 1 and Graph 1 represent the student's preference towards different teaching methods.

**Table 1:** Showing students responses regarding different teaching methods.

Subjects	Zoology	Physics
Mode of Teaching	Students Responses	Students Responses
Chalk & Talk	24	8
PowerPoint	15	30
Integrated Method	81	41
Total	120	79



**Fig2:** Showing a comparison of preference of teaching method by Zoology and Physics students.

There is a great debate about the effective mode of teaching methods. The teachers make choice of teaching methods on the basis of course content. Many points emerge out on the advantages and limitation of the traditional method of teaching and ICT enabled methods from the feedback of students like Teachers have to spent time in drawing in both subjects when taught in blackboard while in PowerPoint it is already in slide. Teachers have to use color chalks in blackboard teaching method. PowerPoint helps to maintain time of the lecture. If proper selection of color is not in the diagrams and text in slides of PowerPoint than it become irritating for the learners. Animations can create more interest among the students. In Blackboard method teacher have to prepare more for the lecture and in PowerPoint if teacher just reading the slide than it become a monotonous activity. In Integrated Method give freedom to write on blackboard draw diagram

and show animations in PowerPoint and at the same time student's engagement in lecture increase. In Zoology diagram is an essential component and in chalk and board method there is freedom for reproduction of diagram. When the opinions of students having Zoology subject is sought towards preference of blackboard method over power point many students give reason that they can learn how to draw the diagram in blackboard method. If any students ask some question during the lecture the answer can be explained by the help of diagram. But at the same time the chalk and board method is more time consuming and need good drawing skill. In case of students having Physics they give preference to power point because it helps to understand the optical phenomenon better. But the slides of the PowerPoint become the border for the teacher. As PowerPoint or traditional chalkboard both methods have some limitation while PowerPoint and chalkboard (Integrated) teaching methods are more effective. Though there is advancement in technology but it is more effective when used with traditional method of teaching.

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