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## Effectiveness of learning through youtube on the achievement in science among secondary school students

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### Abstract

The aim of this study is to investigate the effect of using youtube on students' academic achievement in science. The study was carried out on 74 students studying class 9<sup>th</sup> in Govt school Baripada, Odisha. The samples were selected by the purposive sampling technique. In the study, Achievement Test on Science (ATS) was used to collect relevant data. The intervention programme of 5 weeks was provided to experimental group students. The analysis was done after the intervention programme and found that the experimental group on which the youtube had used were more academically achieved than the control group students on which traditional method had been used. Recommendation were made on the basis of findings obtained.

**Keywords:** youtube, academic achievement, secondary school students

### Introduction

The extensive use of educational technology in all areas of life has significant impact on the society specifically on students life. Social networking sites with the help of internet has a major contribution on the education of children. These social networking sites facilitate the process of active interaction amongst the people by providing instant messaging, videos, chatting, files sharing, e-mails, blogging and more (Sahoo, 2018) <sup>[5]</sup>. Among the social networking sites, youtube occupies a central position in teaching learning process. YouTube are considered as the new technologies that help in the development of educational learning process among students through its dynamic movement of development (Parua and Sahoo, 2018) <sup>[5]</sup>. The spreading of using YouTube by the learner through breaking geographical boundaries bring them together (Si, 2018). It can be used as an educational resource, where the teacher uses the video as a model for classroom activities and discussions.

In a study by Helou (2014) <sup>[2]</sup> revealed that majority of university students agreed that social networking sites have a positive impact on their academic performance. Social networking sites are considered as an ideal source that helps us to widen our knowledge. Using youtube in teaching by teachers has significantly enhance the achievement in science among secondary school students as compare to the tradition method (Parua, 2020) <sup>[4]</sup>. Recent survey says that millions of people accessing social networking sites for their educational requirements. Thus, the field of education has undergone a drastic shift and hence gained a new dimension of digital technology in the field of education. So it is important to assess impact of social networks like youtube on the academic achievement among secondary school students.

The aim of this study is to find out the effect of youtube on the academic achievement on science among secondary school students

### Method

#### Design of the study

This research was conducted with 74 high school students of class 9<sup>th</sup> who were being educated in 2019-2020 acadmic session. The intervention programme based on Youtube learning is applied in the topic 'Motion' of science subject. There are two groups, experimental groups comprised of 37 secondary school students and 37 students for control groups.

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The lessons were carried out in experimental group by using youtube and traditional method in the control group. The achievement test on ‘Science’ is applied before and after the intervention programme to both the groups.

**Tools used**

In the study, Achievement Test on Science (ATS) contained 40 questions and was applied as pre- and post-test to

determine concept on Science. The items of the test were developed by the researcher himself. Objective type questions are there in the form of true or false, fill in the blanks, match the column and one sentence answer. The test is highly reliable and valid.

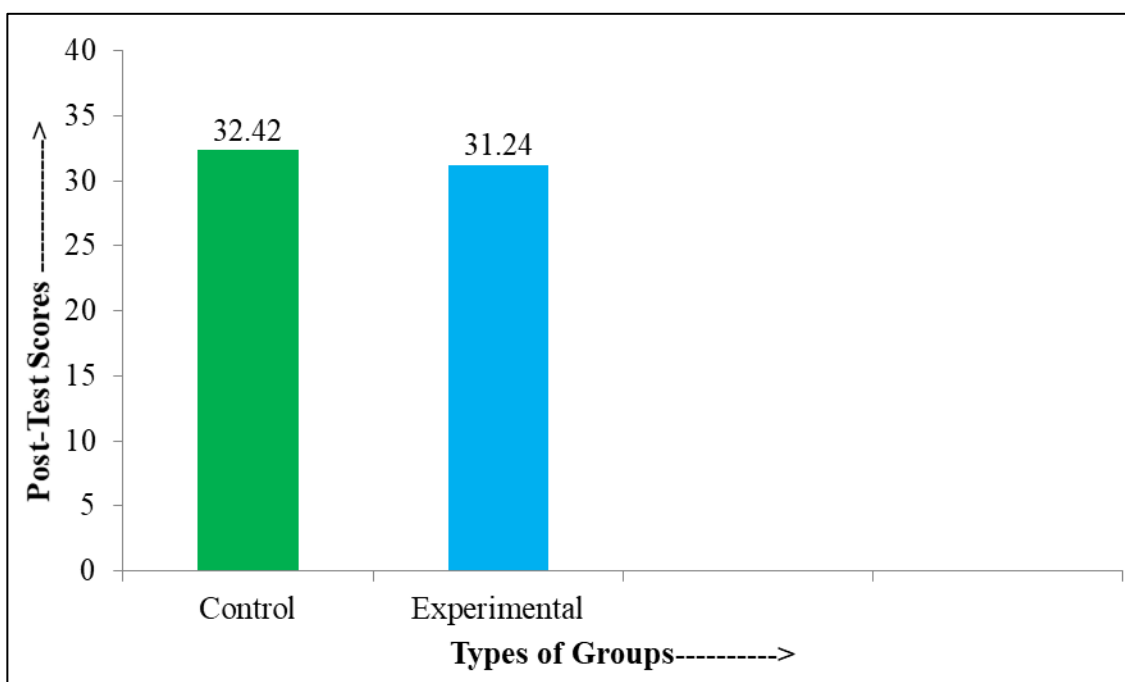
**Analysis and interpretation**

**Table 1:** Significance of difference between control and experimental group of students on science Achievement Test in pre-test

Test	N (No. of Samples)	Mean	SD	S.Ed.	t-ratio	Level of Significance
Control	37	32.42	3.95	1.45	0.83	Not Significance
Experimental	37	31.24	3.96			

Table-1 stated that the means scores of control and experimental group students in pre-test science achievement test is 32.42 and 31.24 respectively with SDs 3.95 and 3.96. The t-ratio between the two groups is found 0.83, which is not significant at any level of significance. That means there

is no significant of difference exist between the groups of students in science achievement test before the intervention programme i.e teaching through Youtube. . The mean scores of control and experimental groups are depicted in the following column graph.



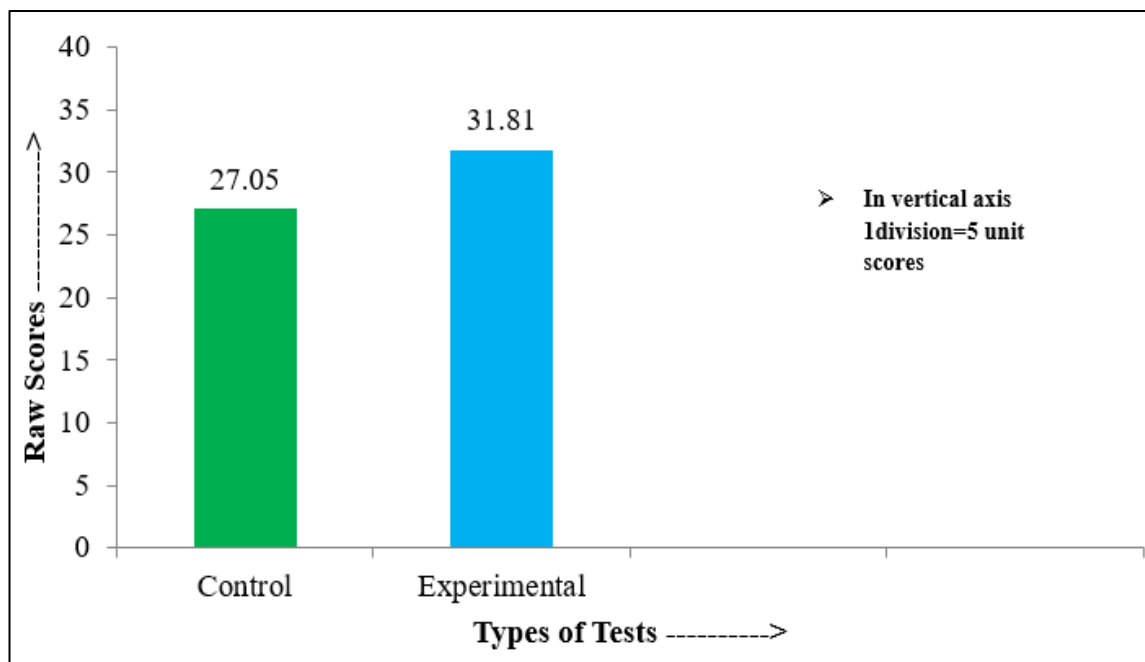
**Fig 1:** Mean of Control and Experimental groups on science achievement test in Pre-test

**Table 2:** Significance of difference between Control and experimental group students in science on post-test

Groups	N	Mean	SD	S.Ed.	t-ratio	Level of significance
Control	32	27.05	4.94	1.16	3.24	0.01
Experimental	32	30.81	3.93			

It is revealed from the table No-2, the means scores of control and experimental group is found 27.05 and 31.81 respectively with standard deviation 4.94 and 3.93. The t-ratio between the two groups is found 3.24, which is significant at .01 level of significance. That means the teaching through YouTube videos has significant effect on the achievement in science among secondary school

students. Further the mean scores of achievement in science of experimental group is higher than the control group, it indicates that students achieved more in science when they are taught through youtube as compare to the traditional method. The mean of Pre-Test and Post-Test scores are depicted in the following Column graph.



**Fig 1:** Mean scores of control and experimental groups of students on science achievement test in post-test

### Discussion and Conclusion

The findings of the study revealed that the using YouTube in teaching has significantly improved the achievement in science among secondary school students. Students those were taught through youtube they had more means scores than the students taught through traditional method of teaching. This findings supported by the study of Parua, 2020<sup>[4]</sup> and Memon, Saif and Malik, 2018<sup>[3]</sup> which claimed that YouTube videos made the lesson more exciting and stimulating and enhance achievement among students. Prior knowledge of the students should be aware by the teachers for effective teaching. Since the teachers are poor to develop youtube learning, they should be given in-service training to make up for these deficiencies. Since this teaching through youtube is efficient, it can be emphasized more in the curriculum.

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