

**A Study of attitude of Students towards Video Based
teaching in Mathematics**

PROJECT REPORT

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In partial fulfillment of the requirement

For the degree of Bachelor of Education

By

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CERTIFICATE

This is to certify that the project titled “A Study of attitude of Students towards Video Based teaching in Mathematics” has been prepared by Ruchi krishan Mohan Yadav in partial fulfillment of the requirements of the Bachelor Degree of Education of Mumbai University. It embodies materials collected and analyzed by the candidate Ruchi krishan Mohan Yadav under my guidance and it is hereby approved as indicating the proficiency of the candidate.

Dr.Geeta S Thakur

Signature of the Guide

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I hereby declare that this project report written and submitted by me under the guidance of **Dr.GeetaSThakur** is my original work.

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Place: Panvel

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Place: Navi Mumbai

(Ruchi krishan Mohan Yadav)

Date: 31/03/2021

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INTRODUCTION

Video has unique features that make it an important medium for mathematics learning, particularly at the secondary – tertiary interface. These features include its ability to present a summary of a topic in context, particularly the historical context, to bring reality in the form of a case studies and practical applications into a classroom or lecture theatre, and most importantly its power in the affective domain of learning. Video is able to motivate learning, to change attitudes and to present role models, features that are well known in the context of television advertising. In this paper Researcher examines the use of video through the eyes of the users.

Researcher report on a series of video-based learning packages that Researcher have prepared over the last seven years, discussing the problems involved with making and using them. Researcher also hear the voices of our students telling us their us their views on the use of videos in mathematics learning.

Importance Video Based Learning In Mathematics.

There are quite a lot of importance that come from using videos during mathematics and learning session. Not only does this provide a teacher with a wide range of extraordinary benefits but it's a fun experiment for Students' as well and they will certainly appreciate the entire experience to begin with. It's all about having the right approach and attention to detail here something that every teacher should focus on if he/she wants to deliver the best results.

- Adds life to the e-learning course by making it effective and engaging.
- Increases learner engagement and participation.
- Reduces cognitive overload and maximizes retention.
- Provides a simpler and practical learning experience.

STATEMENT OF THE PROBLEM

“A Study of attitude of Students towards Video Based teaching in Mathematics.”

NEED OF THE STUDY

Mathematics is one of the compulsory subjects for all levels of education, primary, secondary and higher education. This lesson is often regarded by some students as

complicated, even scary. This certainly cannot be separated from the material element, which contains numbers and symbols with a variety of formulas. So, it is often considered as a boring lesson by students. Thus, the student's motivation to follow this lesson will be so low that it affects the cognitive and psychomotor aspects of the student in this lesson. Almost every math teacher agrees on the importance of corrective feedback for the teaching and learning process. Students, except those who naturally desire mathematics, need to be stimulated through appropriate techniques and ways of learning. By employing these methods, it is believed that students' problems, such as anxiety to mathematics, can be reduced or eliminated. One way or method that can be applied is ICT-based learning by utilizing instructional media as a means of learning, and one of the learning media that can be used is audio-visual/video.

Thus, the selection of video as a learning resource in the form of learning media for mathematics subjects is considered highly relevant and effective in stimulating students' critical thinking as well as student motivation, since the lesson requires sufficient concentration from students as it relates to numbers, symbols and formulas. All this is intended to assist in the effort to achieve mathematics learning goals.

This study examined the results of previous studies on the effort of using videos in mathematics learning media on cognitive and affective aspects of students by using meta-analysis. This study aimed to describe the comparative influence of using video in mathematics learning between elementary students concerning cognitive and effective aspects.

Research purpose for investigating students attitudes towards mathematics with the use of the spreadsheet technology was based on the desire to discover how to best engage the students in mathematics through video where conceptual development is a least as important as procedural development.

OBJECTIVES OF THE STUDY

1. To find the interest among the students on video based learning in mathematics.
2. To find out the problem faced by the student during video based learning in mathematics.

3. To check the students understanding during video based learning in mathematics.
4. To study the attitude of students towards the video based learning in mathematics.

OPERATIONAL DEFINITIONS :-

The operational definition of the terms used in the study the attitude of students of Std.VII of K.P.C English High School video based learning of mathematics are as follows:

1. **Study:** To find the view of students towards video based learning of mathematics.
2. **Attitude:** The affective responses that involve positive, negative or neutral feeling of VII of K.P.C English high school towards mathematics video based learning.
3. **Students:** Respondents studying in standard VII of K.P.C English High School.
4. **Video Based teaching:** “Video-Based Learning is the use of teach mathematics and develop positive attitude of students towards mathematics to gain knowledge and skills.
5. **Mathematics:** “The study of the measurement, relationships, and properties of quantities and sets, using numbers and symbols.”

IMPORTANCE OF THE STUDY:

- This study aims to identify the primary problem faced by students while doing their study of mathematics through video based learning and for those who find the difficulty in this learning process.
- Video based leaning is good sources for the students to pass the information and maintain the teaching learning process.
- Video in the classroom to be greatly beneficial to students academic performance. Teaching methods that include the use of video and audio “reach more students and provide more opportunities for neural development and learning.

- The natural tendency to mimic our teachers and adapt teaching practices which are compatible with our belief about mathematics and the learning of mathematics. Video can be used to help teachers explore this issue in their own practice and the practice of others.
- The use of video as a learning media in mathematics plays a role in improving students' motivation in learning, enhancing students' knowledge and understanding of the lesson and improving the students' achievement.

SCOPE OF THE STUDY

The scope of the problem was limited to:

- 1) The city of Kharghar
- 2) The students of class VII of State Board only.
- 3) The students were from English medium only in the academic year 2020 – 2021 taken from K.P.C. English High School.

SAMPLE SIZE / RESPONDENTS:-

Respondents are those persons who have been invited to participate in a particular study and have actually taken part in the study.

In this action research, students of grade VII of K.P.C. School (Kharghar) are the respondents. 50 students were given the questionnaire consisting 15 questions in each to attain the objective of the research.

METHODOLOGY:-

There are various types of research methods.

A qualitative methodology is adopted for this study to approach the research questions identified earlier. Since research on students' study on video-based learning that will help to understand the child's view related to this problem, a qualitative exploration of the research topic is done by means of a semi-structured questionnaire.

Descriptive research includes survey and fact-finding enquiries of different kinds. The major purpose of descriptive research is description of the state of affairs as they exist and discover causal relationships. The main characteristics of this method are that the

researcher has no control over the variables. For the study of this research; the researcher had selected the survey studies under the descriptive method.

The rationale behind selection of descriptive survey as the methodology was to study the attitude of Students towards Video Based teaching in Mathematics.

ToolUsed:-

This is the process of collecting data through an instrument consisting of a series of questions and prompts to receive a response from individuals it is administered to.

Questionnaires are designed to collect data from a group. With each of the questions tailored to the nature and scope of the study.

A questionnaire was used here as data collection tool consisting of a series of questions for the purpose of gathering information from respondents.

The questionnaire for this research is designed for statistical analysis of the responses; they are also used as a form of data collection.

DataCollection :-

Data collection tools refer to the devices/instruments used to collect data, such as a paper questionnaire or computer-assisted interviewing system. Case Studies, Checklists and Surveys or Questionnaires are all tools used to collect data.

In this research questionnaire is used for collecting data through an instrument consisting of a series of questions and prompts to receive a response from individuals it is administered to. Questionnaires are designed to collect data from a group. Data was collected by using the questionnaire. Collected data is represented below.

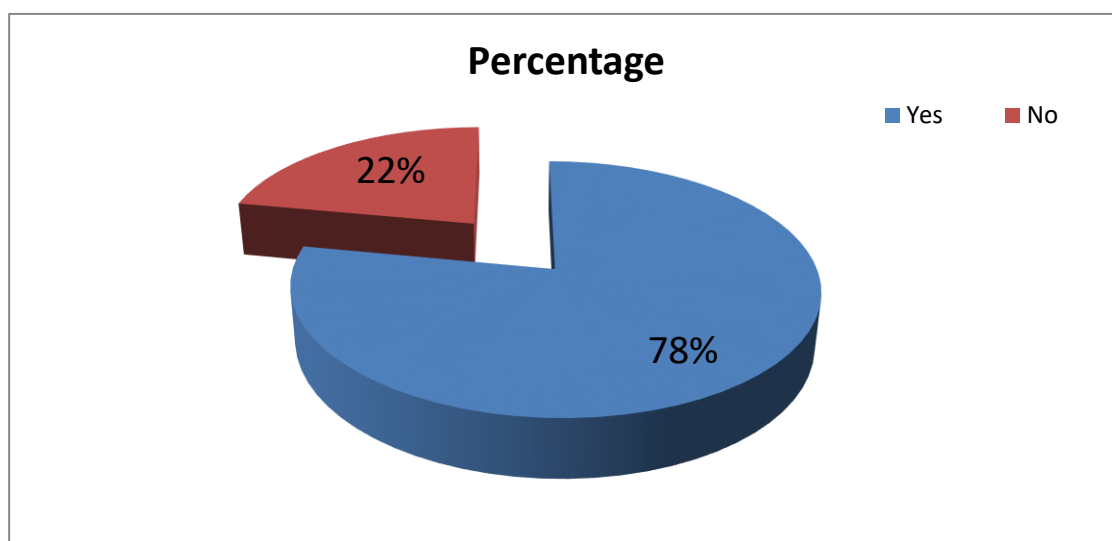
Analysis and Interpretation of Data:

Q.1. I learn mathematics easily through video.

Table No.1: -Learn mathematics easily through video.

Responses	Yes	Percentage	No	Percentage
Students	39	78%	11	22%

Figure No. 1: - Learn mathematics easily through video.



As per table 1:

- 78% of students agree that they easily learn mathematics using Video
- 22% of students do not agree that they easily learn mathematics using Video

Interpretation:

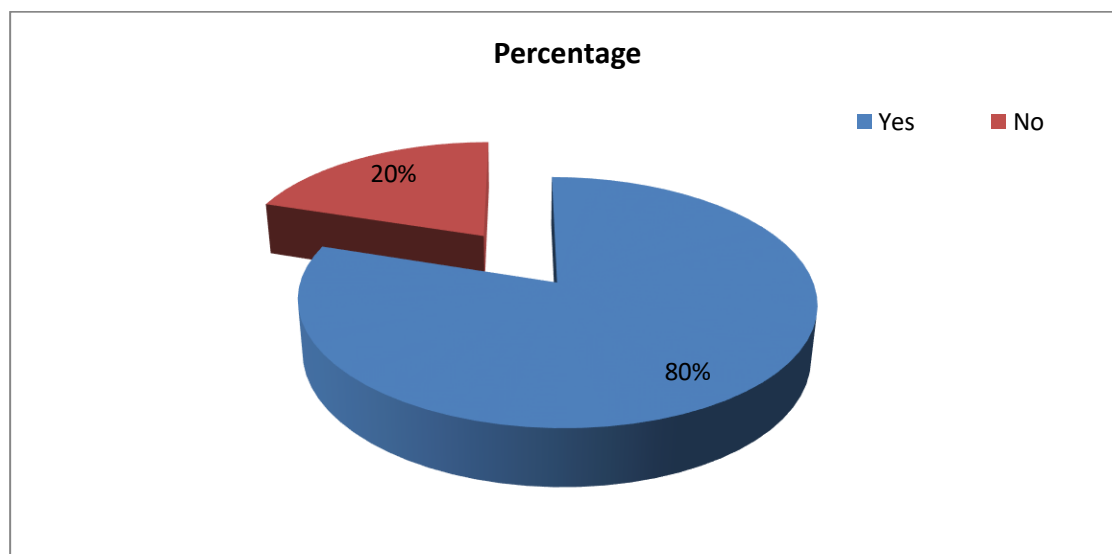
Maximum number of students find learning mathematics easy using when Videos are used by teachers to teach them.

Q.2. I want to develop my mathematics skills.

Table No. 2: Development of mathematic skill

Responses	Yes	Percentage	No	Percentage
Students	40	80%	10	20%

Figure No. 2: Development of mathematic skill



As per table 2:

- 80% of students agree that they want to develop their mathematics skills.
- 20% of students do not agree that they want to develop their mathematics skills.

Interpretation:

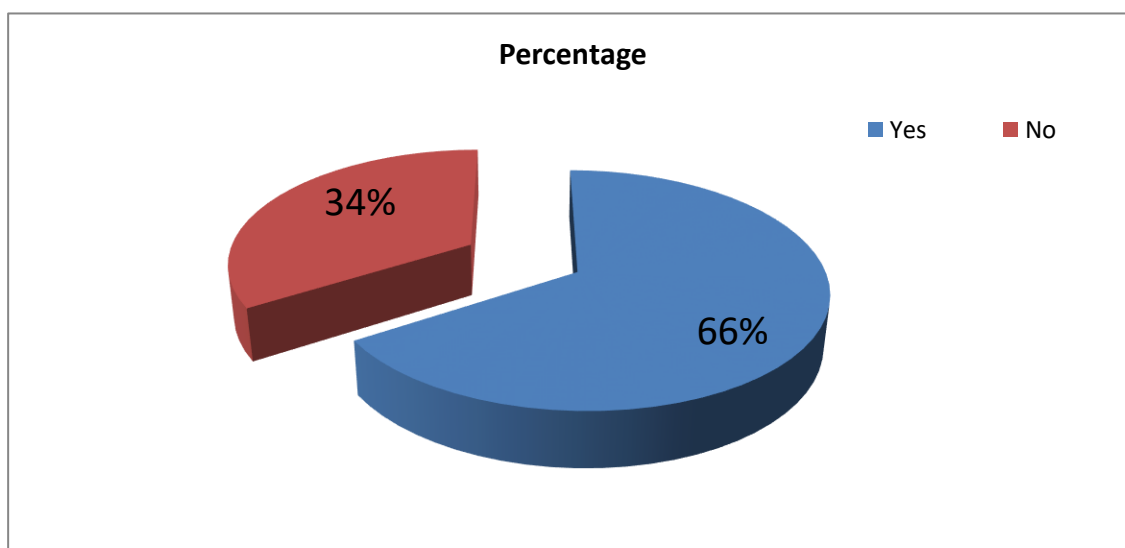
Maximum number of students find that they want to develop their mathematics skills.

Q.3. I am able to solve mathematics problem without too much difficulty.

Table No. 3: Solving mathematics problem without too much difficulty

Responses	Yes	Percentage	No	Percentage
Students	33	66%	17	34%

Figure No. 3: Solving mathematics problem without too much difficulty



As per table 3:

- 66% of students agree that they are able to solve mathematics problem without too much difficulty.
- 34% of students do not agree that they are able to solve mathematics problem without too much difficulty.

Interpretation:

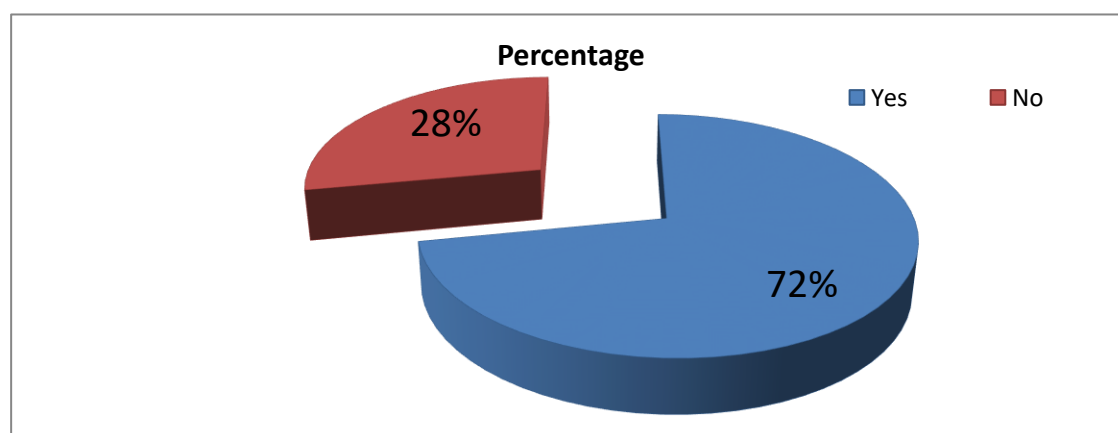
Maximum number of students find that they are able to solve mathematics problem without too much difficulty.

Q.4. I am confident that I could learn mathematics through video.

Table No. 4: Confident while learning mathematics through video

Responses	Yes	Percentage	No	Percentage
Students	36	72%	14	28%

Figure No. 4: Confident while learning mathematics through video



As per table 4:

- 72% of students agree that they are confident that they could learn mathematics through video.
- 28% of students do not agree that they are confident that they could learn mathematics through video.

Interpretation:

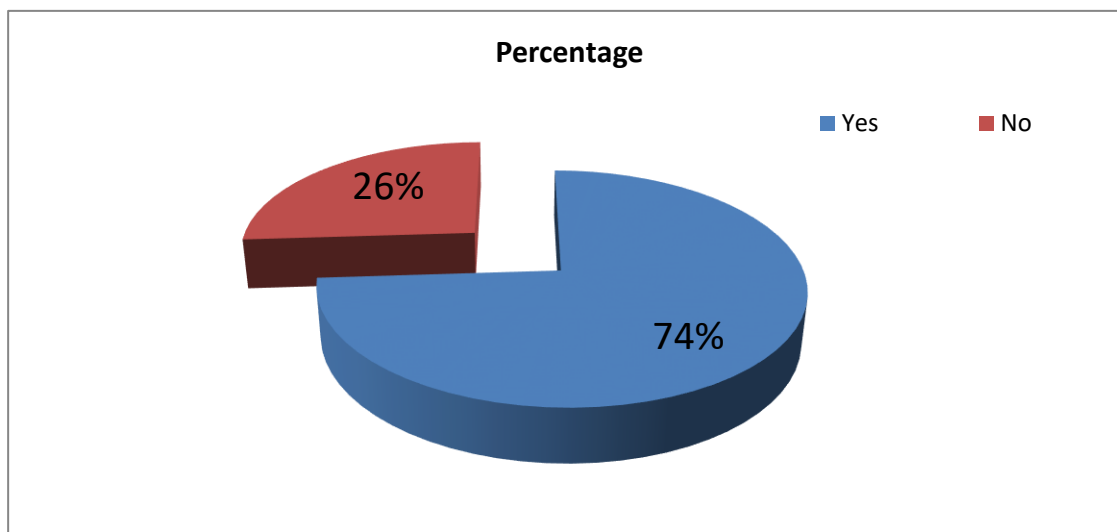
Maximum number of students find Confident while learning mathematics through video which are used by teachers to teach them.

Q.5. I am comfortable answering questions in maths class.

Table No. 5: Answering questions in maths class

Responses	Yes	Percentage	No	Percentage
Students	37	74%	13	26%

Figure No. 5: Answering questions in maths class



As per table 5:

- 74% of students agree that they are comfortable to answering questions in maths class.
- 26% of students do not agree that they are comfortable to answering questions in maths class.

Interpretation:

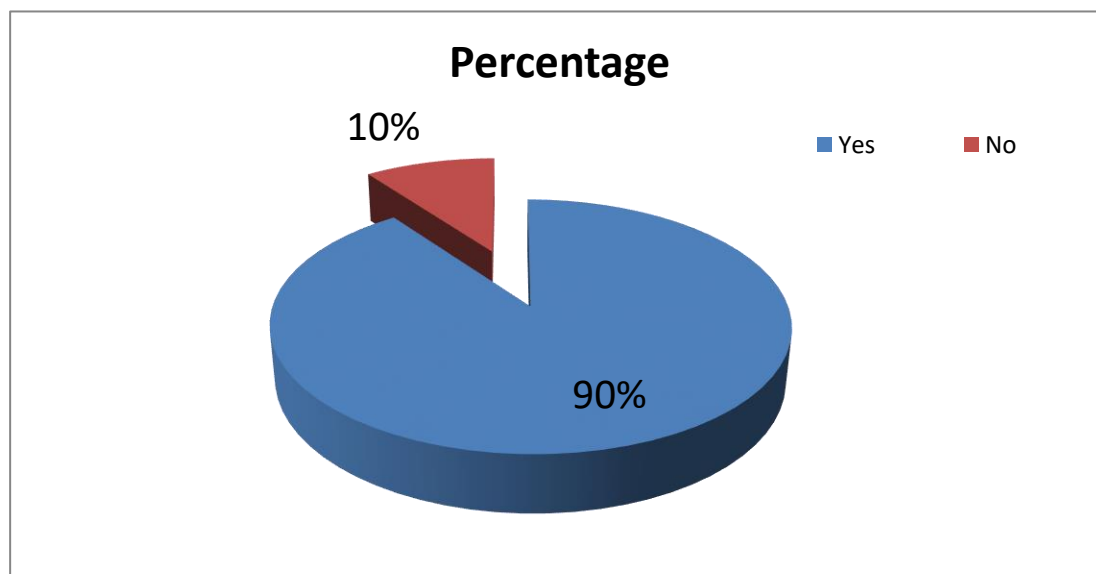
Maximum number of students find comfortable to give answering questions in maths class.

Q.6. Mathematics is important in everyday life.

Table No. 6: Importance of mathematics in daily life

Responses	Yes	Percentage	No	Percentage
Students	45	90 %	5	10%

Figure No. 6: Importance of mathematics in daily life



As per table 6:

- 90% of students agree that Mathematics is important in everyday life.
- 10% of students do not agree that Mathematics is important in everyday life.

Interpretation:

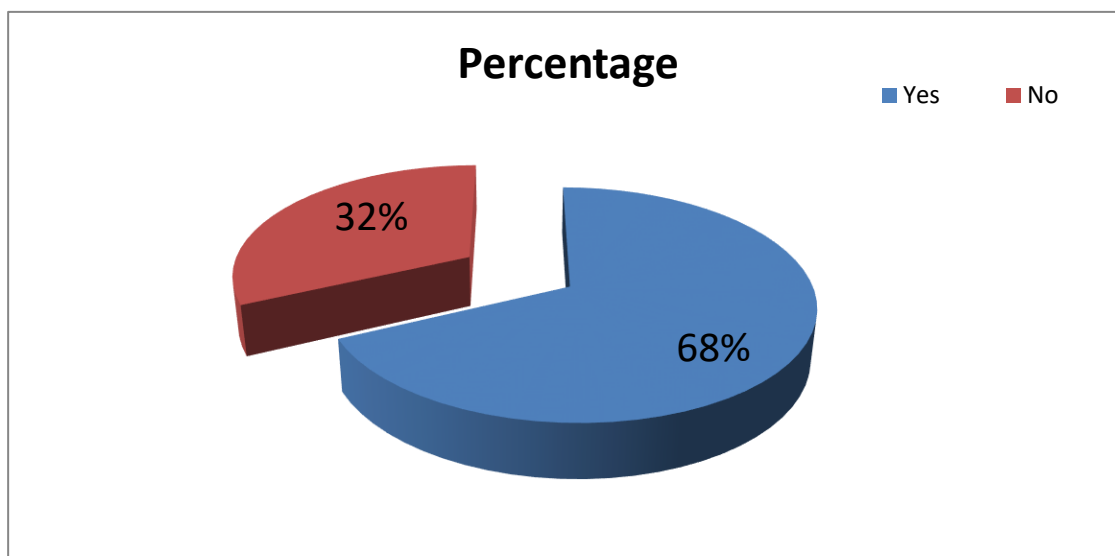
Maximum number of students find that Mathematics is important in our everyday life.

Q. 7. I am comfortable with video based teaching.

Table No. 7 :Comfortable with video based teaching

Responses	Yes	Percentage	No	Percentage
Students	34	68%	16	32%

Figure No. 7:Comfortable with video based teaching



As per table 7:

- 68% of students agree that they are comfortable with video based teaching.
- 32% of students do not agree that they are comfortable with video based teaching.

Interpretation:

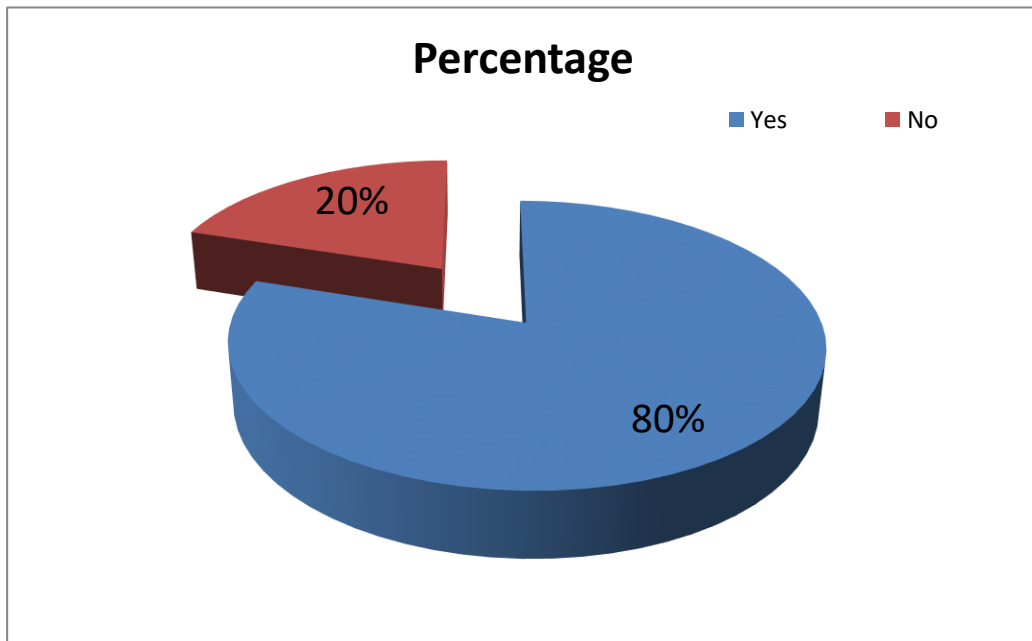
Maximum number of students find that they are comfortable with video based teaching which is used by the teachers to teach them.

Q. 8. I am feeling happy in any situation, I can learn mathematics.

Table No. 8: Learning mathematics in any situation.

Responses	Yes	Percentage	No	Percentage
Students	40	80 %	10	20%

Figure No. 8: Learning mathematics in any situation.



As per table 8:

- 80% of students agree that they can Learn mathematics in any situation.
- 20% of students do not agree that they can Learn mathematics in any situation.

Interpretation:

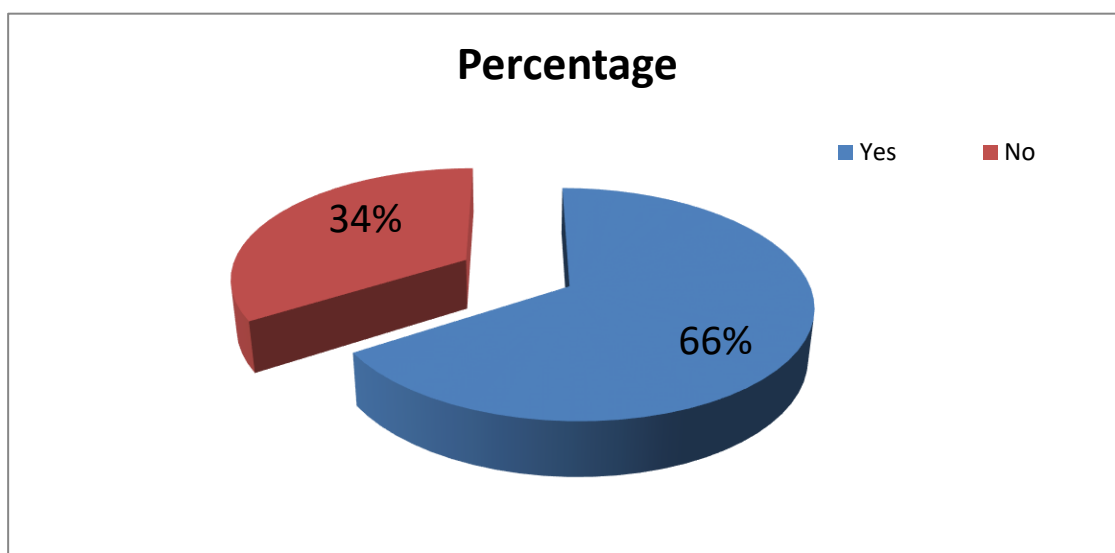
Maximum number of students find that they are comfortable in any situation to learn mathematics.

Q. 9. I really like video based learning.

Table No. 9: Students like video based learning

Responses	Yes	Percentage	No	Percentage
Students	33	66%	17	34%

Figure No. 9: Students like video based learning



As per table 9:

- 66% of students agree that they like video based learning
- 34% of students do not agree that they like video based learning

Interpretation:

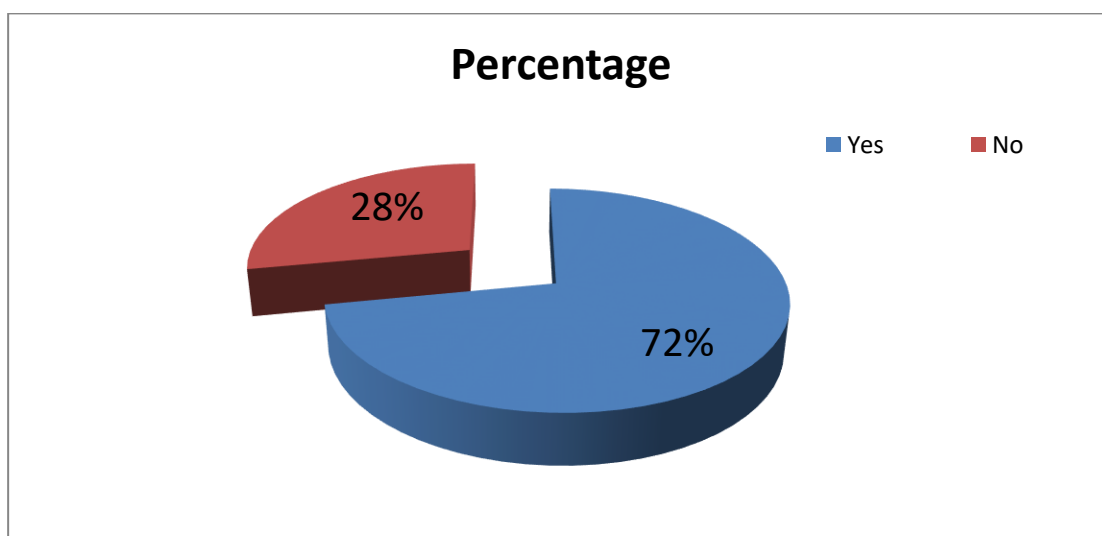
Maximum number of students find that they like to learn through video based learning.

Q. 10. I get a great deal of satisfaction out of solving a mathematics problem.

Table No. 10: Satisfaction with solving a mathematics problem.

Responses	Yes	Percentage	No	Percentage
Students	36	72%	14	28%

Figure No. 10. Satisfaction with solving a mathematics problem.



As per table 10:

- 72% of students agree that they get Satisfaction with solving a mathematics problem.
- 28% of students do not agree that they get Satisfaction with solving a mathematics problem.

Interpretation:

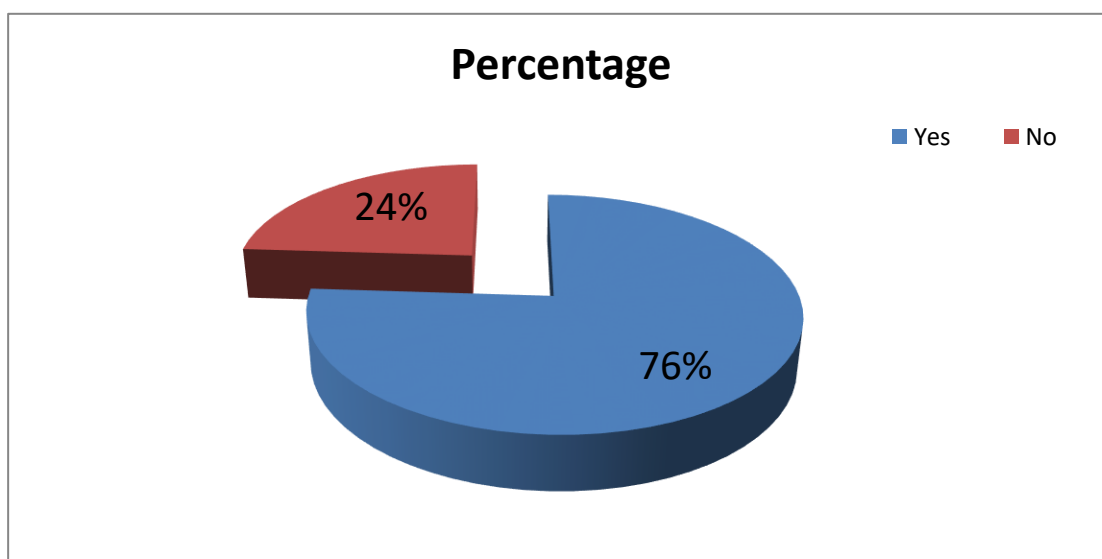
Maximum number of students find Satisfaction after solving a mathematics problem.

Q. 11. Video based learning in mathematics makes learning interesting.

Table No. 11: Video based learning in mathematics makes learning interesting

Responses	Yes	Percentage	No	Percentage
Students	38	76%	12	24%

Figure No. 11: Video based learning in mathematics makes learning interesting.



As per table 11:

- 76% of students agree that Video based learning in mathematics makes learning interesting.
- 24% of students do not agree that Video based learning in mathematics makes learning interesting.

Interpretation:

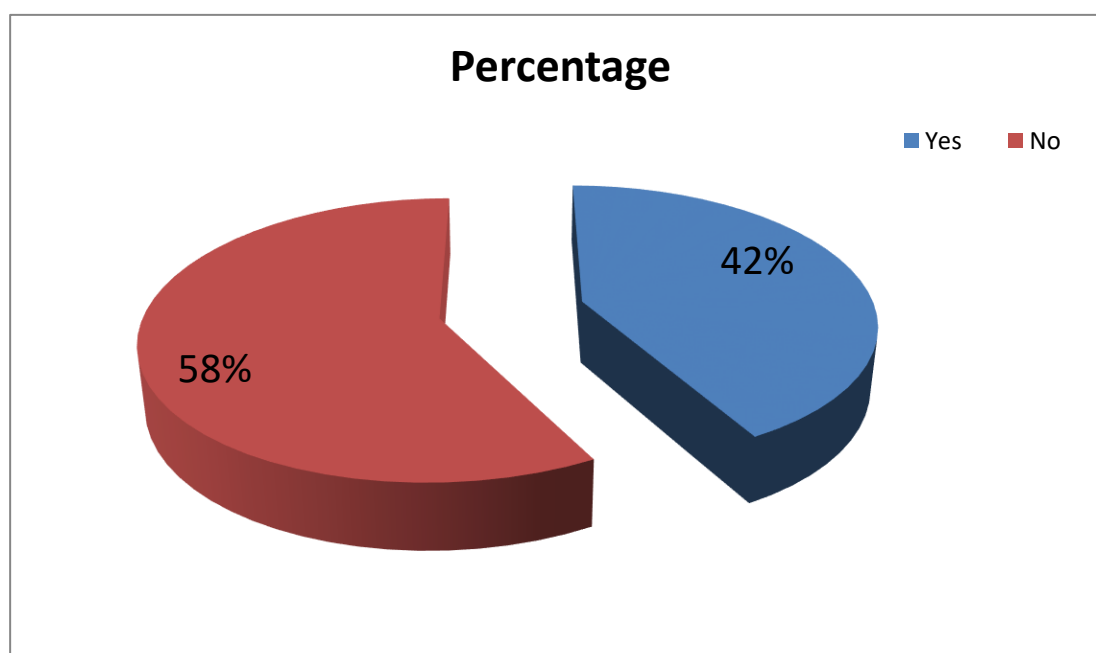
Maximum number of students find that learning through Video based in mathematics makes learning interesting.

Q. 12. Studying Mathematics makes me feel nervous.

Table No. 12: Feeling nervous while Studying Mathematics

Responses	Yes	Percentage	No	Percentage
Students	21	42%	29	58%

Figure No. 12: Feeling nervous while Studying Mathematics



As per table 12:

- 42% of students agree that Studying Mathematics makes them feel nervous.
- 58% of students do not agree that Studying Mathematics makes them feel nervous.

Interpretation:

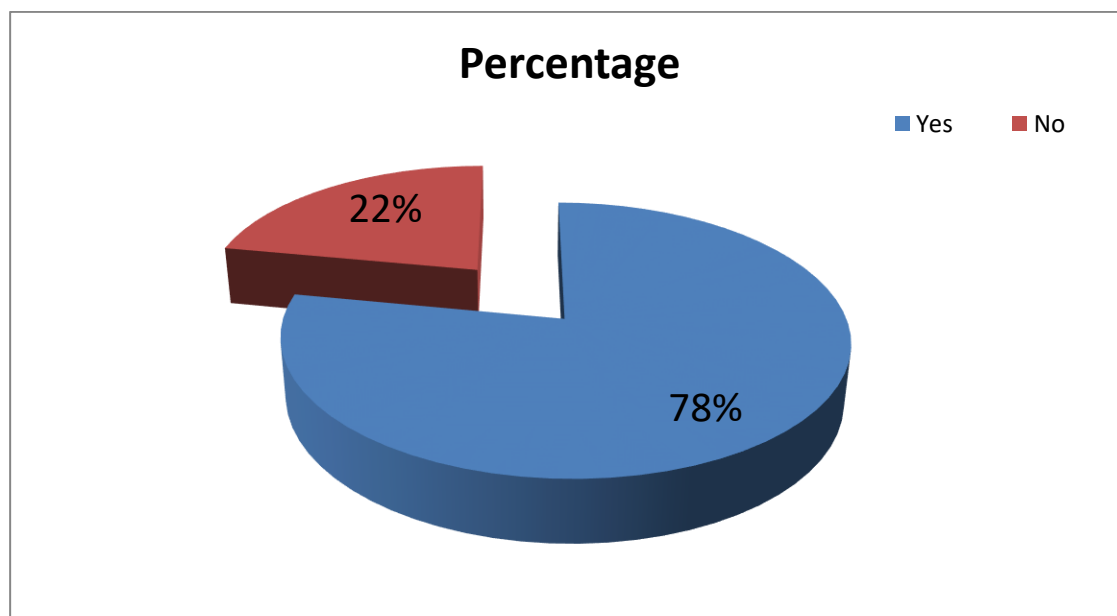
Maximum number of students find that they don't feel nervous while learning mathematics.

Q. 13. I am able to solve my doubts with video based learning in mathematics.

Table No. 13: Solving doubt of mathematics through video based learning

Responses	Yes	Percentage	No	Percentage
Students	39	78%	11	22%

Figure No. 13: Solving doubt of mathematics through video based learning



As per table 13:

- 78% of students agree that they are able to Solving doubt of mathematics through video based learning.
- 22% of students do not agree that they are able to Solving doubt of mathematics through video based learning.

Interpretation:

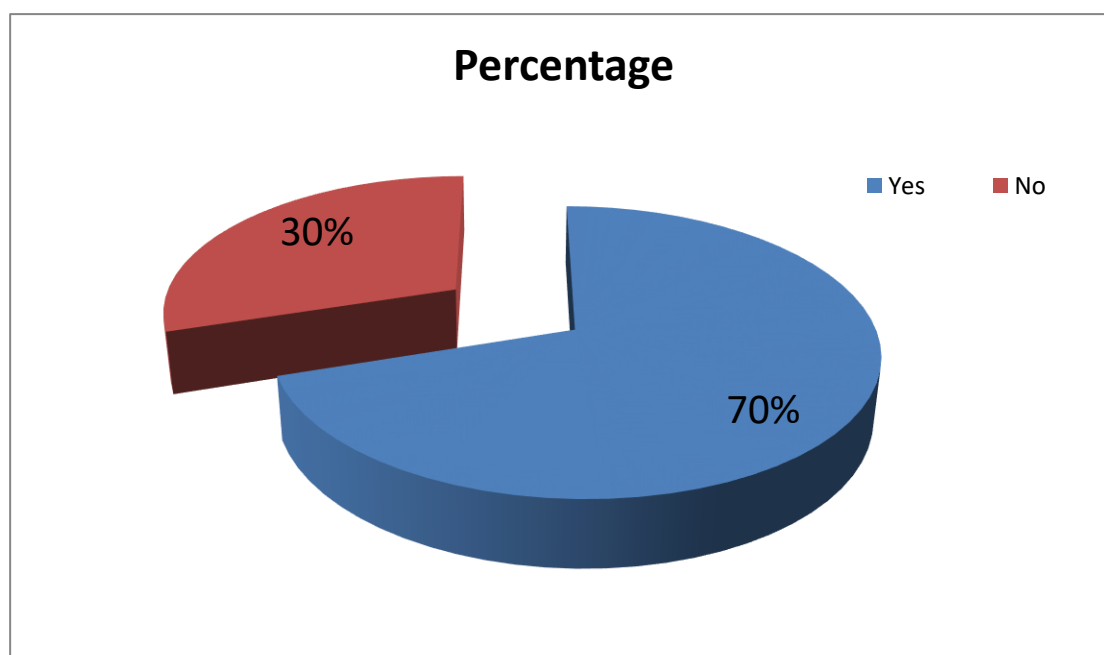
Maximum number of students find through video based learning they can solve there doubt in mathematics which is used by teachers to teach them

Q. 14. I am able to understand the concept through video based learning in mathematics.

Table No. 14: Understand the concept of mathematics through video based learning.

Responses	Yes	Percentage	No	Percentage
Students	35	70 %	15	30%

Figure No. 14 : Understand the concept of mathematics through video based learning.



As per table 14:

- 70% of students agree that they are able to Understand the concept of mathematics through video based learning.
- 30% of students do not agree that they are able to Understand the concept of mathematics through video based learning.

Interpretation:

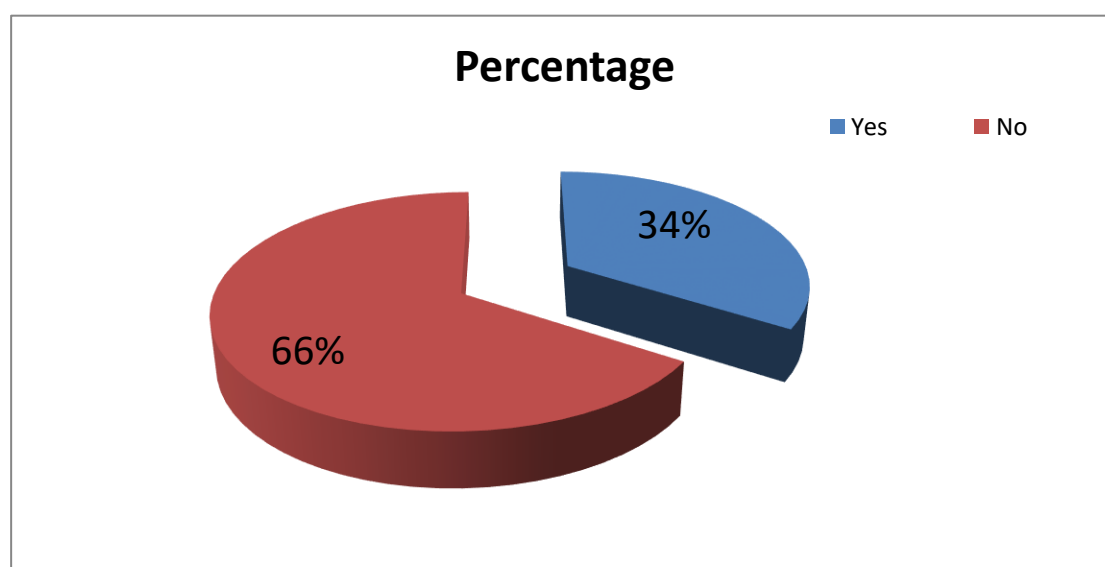
Maximum number of students find comfortable to understand the concept of mathematics which is teach through video based learning.

Q. 15. I am always confused in mathematics class.

Table No. 15: Students are confused in mathematics class

Responses	Yes	Percentage	No	Percentage
Students	17	34%	33	66%

Figure No. 15: Students are confused in mathematics class



As per table 15:

- 34% of students agree that they are confused in mathematics class.
- 66% of students do not agree that they are confused in mathematics class.

Interpretation:

Maximum number of students find that they are not always confused in mathematics class.

FINDINGS AND SOLUTIONS TO THE PROBLEM

It is seen that the students develop positive attitude towards the mathematics due to video based learning and also seen students score good marks and become more confident. The major findings of the study are as follows:

- Maximum number of students find learning mathematics easy using when Videos are used by teachers to teach them.
- Maximum number of students find that they want to develop their mathematics skills.
- Maximum number of students find that they are able to solve mathematics problem without too much difficulty.
- Maximum number of students find Confident while learning mathematics through video which are used by teachers to teach them.
- Maximum number of students find comfortable to give answering questions in maths class.
- Maximum number of students find that Mathematics is important in our everyday life.
- Maximum number of students find that they are comfortable with video based teaching which is used by the teachers to teach them.
- Maximum number of students find that they are comfortable in any situation to learn mathematics.
- Maximum number of students find that they like to learn through video based learning.
- Maximum number of students find Satisfaction after solving a mathematics problem.
- Maximum number of students find that learning through Video based in mathematics makes learning interesting.
- Maximum number of students find that they don't feel nervous while learning mathematics.
- Maximum number of students find through video based learning they can solve there doubt in mathematics which is used by teachers to teach them
- Maximum number of students find comfortable to understand the concept of mathematics which is teach through video based learning.

- Maximum number of students find that they are not always confused in mathematics class.

SUGGESTION

As a suggestion to create the awareness among the students there should be are medial teaching time to time.

- Teachers must conduct class test on certain intervals so that teachers can assess the progress of the students.
- Students must do the regular practice so that it would be easy for them to tackle the challenges while learning with video.
- Teachers must share their valuable guidance so that students can overcome the challenges and can learn in an efficient way.
- Weak students must spare more time in solving problems which will help them develop knowledge and enhance their skills.

CONCLUSION

The study focus on the video based learning in mathematics. Students really enjoying the learning through video. They are able to develop their skill and knowledge . Video based learning is helpful for the students to develop positive attitude for mathematics. From study we come to know many students like mathematics they are developing their skills in mathematics.

As video based learning is a part of the process of learning mathematics together with input from teachers, internet, textbooks, peer and themselves.

Mathematics is losing the heart and mind of secondary students. Will designed video programmes can help win over these lost heart and open minds to the beauty of mathematics.

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APPENDIX

Name of the student: _____

Class: VII

1. I learn mathematics easily through video. (Yes / No)
2. I want to develop my mathematics skills. (Yes / No)
3. I am able to solve mathematics problem without too much difficulty. (Yes / No)
4. I am confident that I could learn mathematics through video. (Yes / No)
5. I am comfortable answering questions in maths class. (Yes / No)
6. Mathematics is important in everyday life. (Yes /No)
7. I am comfortable with video based teaching. (Yes / No)
8. I am feeling happy in any situation, I can learn mathematics. (Yes / No)
9. I really like video based learning. (Yes / No)
10. I get a great deal of satisfaction out of solving a mathematics problem. (Yes / No)
11. Video based learning in mathematics makes learning interesting. (Yes / No)
12. Studying Mathematics makes me feel nervous. (Yes / No)
13. I am able to solve my doubts with video based learning. (Yes / No)
14. I am able to understand the concept through video based learning. (Yes / No)
15. I am always confused in mathematics class. (Yes / No)