



Relationship Between Motivation and Achievement in Mathematics Among Standard IX Students

A.Pio Albina

Assistant Professor, Alagappa University College of Education,
Alagappa University, Karaikudi-630 003, Tamil Nadu.

ABSTRACT

The greatest hurdle in the process of learning mathematics is lack of motivation. Mathematics education requires highly motivated students because it requires reasoning, making interpretations, and solving problems, mathematical issues, and concepts. The challenges of mathematics learning for today's education is that it requires disciplined study, concentration and motivation. To meet these challenges, learners must be focused and motivated to progress. Motivating students to be (enthusiastically) receptive is one of the most important aspects of mathematics instruction. Therefore an investigation was made to find out whether there is any significant correlation between Motivation and Achievement in Mathematics among Standard IX Students. In the present study, random sampling technique was adopted to select a sample of 150 students of standard IX in Sivagangai District and self made questionnaire was used to collect data from the students. The result revealed that there is high and significant correlation between Motivation and Achievement in Mathematics among Standard IX students.

KEYWORDS

Motivation, Achievement in Mathematics

INTRODUCTION

Mathematics is the cradle of all creations, without which the world cannot move an inch. Be it a cook or a farmer, a carpenter or a mechanic, a shopkeeper or a doctor, an engineer or a scientist, a musician or a magician, everyone needs mathematics in their day-to-day life. Even insects use mathematics in their everyday life for existence.

Learning mathematics can be made easier and enjoyable if the students are motivated through mathematical activities and games. Math puzzles and riddles encourage and attract an alert and open-minded attitude among students and help them develop clarity in their thinking.

Motivation

If a teacher fails to motivate the students to learn mathematics, then the student will develop a phobia for the subject as he moves on to the higher classes. For explaining a topic in mathematics, a teacher should take help of pictures, sketches, diagrams and models as far as possible. As it is believed that the process of learning is complete if our sense of hearing is accompanied by our sense of sight. Open-ended questions should be given to the student to answer and he/she should be encouraged to think about the solutions in all possible manners. The student should be appreciated for every correct attempt. And the mistakes must be immediately corrected without any criticism.

SIGNIFICANCE OF THE PROBLEM

The greatest hurdle in the process of learning mathematics is lack of motivation. Mathematics education requires highly motivated students because it requires reasoning, making interpretations, and solving problems, mathematical issues, and concepts. The challenges of mathematics learning for today's education is that it requires disciplined study, concentration and motivation. To meet these challenges, learners must be focused and motivated to progress.

The teacher's role in students' motivation to learn should not be underestimated. In helping students become motivated learners and producers of mathematical knowledge successfully, the teacher's main instructional task is to create a learning environment where students can engage in mathematical thinking activities and see mathematics as something requiring "exploration, conjecture, representation, generalization,

verification, and reflection". Motivating students to be (enthusiastically) receptive is one of the most important aspects of mathematics instruction. Therefore the investigator felt it necessary to plunge into a study of the Relationship between Motivation and Achievement in Mathematics among Standard IX Students.

STATEMENT OF THE PROBLEM

Relationship between Motivation and Achievement in Mathematics among Standard IX Students.

DEFINITION OF THE TERMS

Motivation

Motivation is defined here as "the process of motivating or giving students a reason for doing mathematics".

Achievement in Mathematics

In the present study the term 'achievement' refers the Mathematics marks obtained by the students in Std. IX.

OBJECTIVES OF THE STUDY

- To find the significance of correlation between Motivation and Achievement in Mathematics among Standard IX students.
- To find the significance of correlation between Motivation and Achievement in Mathematics among Standard IX male students.
- To find the significance of correlation between Motivation and Achievement in Mathematics among Standard IX female students.

NULL HYPOTHESES

There is no significant correlation between Motivation and Achievement in Mathematics among Standard IX students.

There is no significant correlation between Motivation and Achievement in Mathematics among Standard IX male students.

There is no significant correlation between Motivation and Achievement in Mathematics among Standard IX female students.

DESCRIPTION OF TOOL

The investigator used self made questionnaire to collect data

from the students. The questionnaire consists of 40 statements. Each statement consists of three responses. The 3-point scale (yes / undecided / no) is used. There are negative statements and positive statements in the questionnaire.

POPULATION FOR THE STUDY

The population of the present study is the students of standard IX in Sivagangai District.

SAMPLE FOR THE STUDY

In the present study random sampling technique was adopted to select a sample of 150 students of standard IX in Sivagangai District.

STATISTICS USED

Product moment correlation

DATA ANALYSIS

HYPOTHESIS: 1

There is no significant correlation between Motivation and Achievement in Mathematics among Standard IX students.

Table 1

'r' between Motivation and Achievement in Mathematics among Standard IX students

r-value	Remark
0.92	High correlation

It is inferred that calculated correlation co-efficient 0.92 is greater than the table value 0.113. Therefore, there is significant correlation between Motivation and Achievement in Mathematics among Standard IX students.

HYPOTHESIS: 2

There is no significant correlation between Motivation and Achievement in Mathematics among Standard IX male students.

Table 2

'r' between Motivation and Achievement in Mathematics among Standard IX male students

r-value	Remark
0.80	High correlation

It is inferred that calculated correlation co-efficient 0.80 is greater than the table value 0.113. Therefore, there is significant correlation between Motivation and Achievement in Mathematics among Standard IX male students.

HYPOTHESIS: 3

There is no significant correlation between Motivation and Achievement in Mathematics among Standard IX female students.

Table 3

'r' between Motivation and Achievement in Mathematics among Standard IX female students

r-value	Remark
0.88	High correlation

It is inferred that calculated correlation co-efficient 0.88 is greater than the table value 0.113. Therefore, there is significant correlation between Motivation and Achievement in Mathematics among Standard IX female students.

FINDINGS

There is significant correlation between Motivation and Achievement in Mathematics among Standard IX students.

There is significant correlation between Motivation and Achievement in Mathematics among Standard IX male students.

There is significant correlation between Motivation and Achievement in Mathematics among Standard IX female students.

RECOMMENDATIONS

Motivation plays a major role in students' academic work and in their achievement in mathematics. The teachers of mathematics should try as much as they could to motivate their students during the course of instructions. Teachers of mathematics must understand the basic motives already present in their students. The teacher can then play on these motivations to maximize engagement and enhance the effectiveness of the teaching process. Effective teachers of mathematics should focus attention on the less interested and less motivated students.

CONCLUSION

Mathematics offers rationality to our thoughts. It is a tool in our hands to make our life simpler and easier. Teachers of mathematics should motivate their students to realize and appreciate the beauty of the subject and embrace it with all their heart. It is a talent which should be compulsorily honed by all in every walk of life.

REFERENCES

1. **Agarwal, J.C** (1996). Principles, Methods and Techniques of Teaching, Vikash Publishers Pvt.Ltd, New Delhi.
2. **Anice James.,** (2011). Teaching of Mathematics, Neelkamal Publication Pvt Ltd., New Delhi.
3. **Kulbir Singh Sidhu.,** (2012). Teaching of Mathematics, Sterling Publishers Pvt.Ltd, New Delhi.
4. **Mangal.S.K.,** (2007). Teaching of Mathematics, Tandon Publication Pvt Ltd., Ludhiana.
5. **Rao.V.K., Reddy R.S** (2002). *Resources of Effective Teaching*, Commonwealth Publishers. New Delhi.
6. Aggarwal y.p (1988), "statistical methods", sterling publishers Pvt Ltd., New Delhi.
7. Best, John. W (1977), "Research in Education" Third edition - Prantice hall of India,Pvt,Ltd.
8. Sharma. R.A (1994), "Statistical method in educational Research", Anmol Publication Pvt,Ltd., New delhi.