A STUDY ON LEARNING MATHEMATICS AND ACADEMIC ACHIEVEMENT OF HIGHER SECONDARY STUDENTS

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Abstract
The current research was aimed at determining the impact of Learning mathematics of higher secondary students. The study was carried out using descriptive survey method. The sample is made up of 300 higher secondary students obtained in ten higher secondary schools in Srivilliputhur Taluk using simple random sampling method. The data obtained is statistically analyzed in SPSS. The standard of higher secondary teachers in learning mathematics is average in Virudhunagar district. The results indicate that Learning mathematics has significant relationship with academic achievement of higher secondary students.
Keywords: *Learning Mathematics, Achievement, Descriptive, Significant, Survey Method.*

Introduction

The word Education underlines classroom education and general development of body and behaviour. The actual instructress has to labour to elicit the best out of the child body, mind and soul. Culmination of all knowledge should be the accumulation of character and personality. The education does not only equip the child to the higher education, but also moulds him into a productive citizen to the society. It is education that we have to use to transform and diversity into different professions and vocations.

Children of today are citizens of tomorrow. It assists in self-awareness and acquiring of the ethical, moral, cultural, social and spiritual values as well as becoming aware of our environment. Education is the process by which human kind is fulfilling in itself its own inner nature, it is a man means of fulfilling his destination of coming to his goal of greatest power, Joy and Service, Truth, Charity, Righteousness, Honesty, Sacrifice, Tolerance, Punctuality, Loyalty and Faithfulness are other virtues to be inculcated in the young generation. Mahatma Gandhi vehemently emphasizes upon the fact of Truth is the ultimate goal of education (Aggarwal, 1985, P-5). The narrow sense of education is the process of changing behaviour of children under a controlled setting. To influence the behaviour. Child developmental stages and traits are highly crucial aspects that the teacher needs to be aware of in order to become a successful teacher.

Significance of the Study

Mathematics anxiety is a state of tension, apprehension and fear which interfere with the manipulation of numbers and the solving of mathematical problems in a broad range of

everyday and academic tasks. Mathematics anxiety can make one forget and lower self-esteem. Some of the practices in the typical Mathematics classroom that cause anxiety among students are the imposition of authority, public speaking and time constraints. Mathematics anxiety is a reality and affects thousands of people. This anxiety is a result of classroom where there is no consideration for different learning styles of students. Now in the world there is an increased demand for Mathematics. There are many factors outside of the classroom which influence the achievement of the students, parental acceptance is one of the major factors that influence students' achievement. In an education learning environment, several studies have indicated that there is a significant correlation between self-efficacy, anxiety, stressed and academic achievement. Learning Mathematics is a sense of stress and phobia that cause disruption in dealing with number and solving mathematical problems in many different types of situations in life and learning. Learning Mathematics can make one forget and lose confidence. This Phobia is caused in the classroom when the teacher has not considered various learning styles. In today's society there is a greater need for Mathematics. Better attitude towards Mathematics will come to reduce Learning Mathematics. Mathematics is an abstract subject and the achievement will be impacted by his / her self- efficacy. With the above perspective, but there is no such research on the impact of learning mathematics on academic achievement. In the above context the researcher had conducted a study on the academic achievement of secondary school students with respect to their learning mathematics, and academic achievement.

Objectives of the Study

1. To find out the level of Learning mathematics of higher secondary students.
2. To find out the level of academic achievement of higher secondary students.

Hypothesis

1. No significant difference exists between first group and second group higher secondary students in their Learning mathematics.
2. Government, aided and private higher secondary students do not differ significantly in their Learning Mathematics.
3. No significant difference is found among government, aided and private higher secondary students, in academic achievement.

Methodology

The researcher used a descriptive survey approach to undertake this research.

Population for the Study

The higher secondary students of Srivilliputhur Taluk, Virudhunagar district of Tamilnadu are the population of the present study.

Sample for the Study

The simple random sampling technique was used by the researcher in choosing the sample. The sample of the current study consists of 300 higher secondary students of 10 higher secondary schools of Virudhunagar district.

Tool

- Learning mathematics Scale was prepared and validated by investigator and the guide.
- The academic achievement is the scores attained by the higher secondary school students in Mathematics in the quarterly examination in Mathematics.

Statistical Techniques

Percentage, mean, Standard deviation and correlation.

Analysis of Data

Objective: 1

To determine the level of Learning mathematics students of higher secondary.

Table 1 Level of Learning Mathematics of Higher Secondary Students

Low		Moderate		High	
Count	**%**	**Count**	**%**	**Count**	**%**
71	27.3	196	65.3	33	11.0

The above table is inferred to indicate that, 27.3% of higher secondary students have low, 65.3% of them have moderated and 11.0% of them have high level of Learning Mathematics.

Objective: 2

To determine the academic performance of students in higher secondary.

Table 2 Level of Academic Achievement of Higher Secondary Students

Low		Moderate		High	
Count	**%**	**Count**	**%**	**Count**	**%**
35	11.7	195	65.0	70	23.3

The above table would imply that, 11.7% of higher secondary students have low, 65.0% of them have moderate and 23.3% of them have high level of Academic achievement.

Null hypothesis: 1

No significant difference exists between the government, aided and private higher secondary students in their Learning Mathematics.

Table 3 Difference among Government, Aided and Private Higher Secondary Students in their Learning Mathematics

Variables	Sources	Sum of Square	Degrees of Freedom	Mean Square	Calculate 'F' Value	Remarks at 5% Level
Learning Mathematics	Between	3424.942	2	1712.471	13.914	**S**
	Within	36552.428	297	123.072		
	Total	39977.370	299			

The above table is inferred that the calculated F (13.914) exceeds the table F (3.00) at 5% level of significance and the calculated F (13.914) exceeds the table F (3.00) at 2df (2, 297). Therefore null hypothesis is rejected. It demonstrates that there is a big gap between government, government aided and private school students in their Learning Mathematics.

Null hypothesis: 2

Academic achievement has no important difference between government, aided and private higher secondary students.

Table 4 Difference among Government, Aided and Private Higher Secondary Students in their Academic achievement

Variables	Sources	Sum of Square	Degrees of Freedom	Mean Square	Calculate 'F' Value	Remarks at 5% Level
Achievement in Mathematics	Between	31.618	2	15.809	0.115	**NS**
	Within	40696.179	297	137.024		
	Total	40727.797	299			

The above table is inferred to compute F value (0.115) that is less than the table value (3.00) when the level of significance (df, 2,297) is 5%. The null hypothesis is, therefore, accepted. It reveals that there is no big difference between government, government aided and private school students in their academic performance.

Major Findings

1. Learning Mathematics of higher secondary learners is moderate.
2. The academic achievement of the higher secondary students is mediocre.
3. There is a large disparity between government, aided and private higher secondary students in their Learning Mathematics.
4. No significant difference exists between government, aided and private higher secondary students in terms of their academic achievement.

Interpretation

In the current investigation, it is evident that there is a lot of difference between government, aided and private higher secondary students in their Learning Mathematics A comparison of the mean value of the type of school indicates that the mean value of the Aided school students is higher compared to the other type of school students in their Learning Mathematics. This could be because one of the reasons why students are Scared of Mathematics and fail to pass the subject is because of the peer pressure which they cannot overcome. They are not confident in their skills and cannot withstand the pressure of performance in school and other stages.

Recommendations

1. More attention to the students and consideration of individual differences of the students can be provided by the teacher.

2. Teacher ought to be more caring and encourage the students to engage themselves in learning Mathematics.

Suggestions of the Study

1. Duplicate of the current study using other districts in Tamil Nada.
2. Recreation of the current work with other variables.
3. Copy of the current research of attitude among the trainees of diploma teachers, nursing, engineers.

Conclusion

The current study will also be conducted to gauge the higher secondary academic performance in relation to Learning Mathematics and academic performance. The study result shows that there is an average Learning Mathematics and academic achievement. Suggestions made by the research would help in enhancing academic performance.

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