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Influence Of Learning Interest And Learning Difficulties On Achievement Of Students In Mathematics At Secondary Level

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Abstract

The present study viz., Influence of Learning Interest and Learning Difficulties on Achievement of Students in Mathematics at Secondary Level. Investigator used the standardized tools for learning interest and learning difficulties in Mathematics scale developed by Janakiraman B and Dr Leo Stanly S. The investigator used survey method for the present study. To find out if there is any significant difference in learning interest and Learning Difficulties in Mathematics of secondary school students with respect to Gender and to find out the influence of Learning Interest and Learning Difficulties in Mathematics on Achievement in Mathematics of secondary school students. The present study comes under the category of random sampling. The investigator selected 1090 secondary students from the schools in Kancheepuram district. The present study revealed that there is significant difference in learning interestand Learning Difficulties in Mathematics of secondary school students with respect to Gender, and there is influence of Learning Interest and Learning Difficulties in Mathematics on Achievement in Mathematics of secondary school students.

Key words: Learning interest, Learning difficulties, Achievement in Mathematics and secondary students.

1.1 INTRODUCTION

Mathematics as an abstract science of space, number and quantity. It was practiced by the ancient Egyptians, Sumerians, Indians and Chinese in a finetunedform remarkably for surveying and commercial purposes. Plato recommended the inclusion of Mathematics in the school curriculum because the subject Mathematics disciplines one's mind. Mathematicsplaysan important role in the modern civilization. Effective learning is possible only when a congenial environment is provided to the children in classroom, school, home and society as they form the important parts of the Learning Interest. Achievement in secondary education is crucial for learners. It plays a decisive role in decidingtheir future career. All possible efforts should be taken to improve the effective learning interest of Secondary students, especially in the subject, Mathematics as it is considered to be the most difficult subject.

1.2 REVIEW OF RELATED LITERATURE

Kalpana S and Malathi V (2019) took up a study on "Relationship between Interest in Mathematics and the academic achievements in Mathematics among higher secondary students."All higher secondary Mathematics group students of higher secondary schools of Tiruppur district was the population of this study. The objectives of the study were to find out if there is significant difference between interest in Mathematics and its relationship between the academic achievements in Mathematics among higher secondary students with respect to gender, Locality and to find out if there is significant relationship between the academic achievements in Mathematics among higher secondary students with respect to Type of school and medium of instruction. The sample of 300 students was selected by adopting simple random sampling. The researchers used a questionnaire with 40 items for the students with reliability values 0.966 and 0.941 respectively. It was found out that, there is no significant difference between interest in Mathematics and its relationship between the academic achievements in Mathematics among higher secondary students with respect to gender, Locality, Type of school and medium of instruction.

1.3 NEED AND SIGNIFICANCE OF THE PRESENT STUDY

Learning takes place effectively only when congenial interest is provided for children in classroom, school, home and society. Thus learning interest plays an inherent role in molding the innate potentialities of the individual. Research studies also reveal that Learning Interest should provide security and conducive interests for learning and it should befree from fear, tension, frustrationand aims to enhance achievement in Mathematics. On the light of these facts, the investigator felt that the Learning Interest has much to do with the achievement in Mathematics of pupils. Achievement in secondary education is a turning point in a student's life, to join suitable higher secondary streams after completing this stage. Hence, the foundation should be strong in Mathematics to do well in higher secondary courses and subsequently in professional courses, where Mathematics has to be studied indepth. Secondary school students have to overcome many factors, which may retard their growth in learning. School factors and home factors go hand in hand in determining the achievement in Mathematics. Moreover, different Learning Difficulties on the part of the students require the teachers to take up different steps to improve the learning of Mathematics by their students. Hence there is a need for the teacher to become familiar with the leanings styles of their students. So, the present researcher wanted to conduct a scientific investigation on the Learning Interest and Learning Difficulties in Mathematics relation to their Achievement in Mathematics of secondary school students, to find out to what extent they are inter related. Under these circumstances the present investigation has been undertaken.

1.4 TITLE OF THE STUDY

The present study is entitled as**"Influence of Learning Interest and Learning Difficulties on Achievement of Students in Mathematics at Secondary Level."**

1.5 OBJECTIVES OF THE PRESENT STUDY

The following specific objectives are stated for the present study:

1. To find out if there is any significant difference inLearning Interest in Mathematics of secondarylevel students with respect to gender.
2. To find out if there is any significant difference in Learning Difficulties in Mathematics of secondary level students with respect to gender.
3. To find out the influence of Learning Interest and Learning Difficulties in Mathematics on Achievement in Mathematics of secondary level students.

1.6 NULL HYPOTHESES OF THE PRESENT STUDY

The following hypotheses are stated for the present study:

1. There is no significant difference in Learning Interest in Mathematics of secondary level students with respect to gender.
2. There is no significant difference in Learning Difficulties in Mathematics of secondary level students with respect to gender.

3. There is no significant influence of Learning Interest and Learning Difficulties in Mathematics on Achievement in Mathematics of secondary level students.

1.7 DELIMITATIONS OF THE STUDY

The following are the delimitations of the study:

1. The study is restricted only to class IX.
2. The study is confined only to the schools in Kanchipuram Revenue district in the state of Tamilnadu.
3. Only secondary school students from Government, Government aided and private schools are included in the sample.
4. The sample is restricted to 1090 students of class IX.

1.8 METHOD ADOPTED FOR THE STUDY

The investigator adopted survey method to study the influence of high school students.

1.8.1 POPULATION OF THE STUDY

The population of the study includes students studying IX standard in Government, Government aided and Private high/ higher secondary schools of Kancheepuram district.

1.8.2 SAMPLE OF THE STUDY

In the present study, there are thirteen blocks in Kancheepuram district. Each block was considered as a stratum and from each block,three schools belonging to Government, Government aided and Private schools were selected by applying stratified random sampling technique. So, the sample size consists of 1090 for data analysis.

1.9 TOOLS USED FOR THE PRESENT STUDY

The investigator with the help of the Supervisor developed the following tools,

1. Learning Interest in Mathematics Scale developed and standardized by **Janakiraman B and Dr Leo Stanly S (2018)**
2. Learning Difficulties in Mathematics Scale developed and standardized by **Janakiraman B and Dr Leo Stanly S (2017)**

1.10 TESTING OF NULL HYPOTHESES

1. There is no significant difference in Learning Interest in Mathematics of secondary level students with respect to gender.

Table – 1

Significant difference between male and female secondary level students in their Learning Interest in Mathematics

Variable	Gender	N	Mean	SD	Calculated t- Value	Remarks at 5% level
Learning Interest in Mathematics	Male	592	244.98	12.92	4.467	S
	Female	498	241.35	13.89		

It is inferred from the Table-1 that there is significant difference in Learning Interest in Mathematics between male and female secondary level students in the calculated t- value (4.467) is greater than the table value is 1.96 at 5% level of significance. Hence the stated null hypothesis that “there is no significant difference between male and female secondary level students in Learning Interest in Mathematics” **is rejected.**

2. There is no significant difference in Learning Difficulties in Mathematics of secondary level students with respect to gender.

Table –2

Significant difference between male and female secondary level students in their Learning Difficulties in Mathematics

Variable	Gender	N	Mean	SD	Calculated t- Value	Remarks at 5% level
Learning Difficulties in Mathematics	**Male**	592	249.95	7.25	5.115	S
	Female	498	247.47	8.74		

It is inferred from the Table-3 that there is significant difference in Learning Difficulties in Mathematics between male and female secondary level students in the calculated t- value (5.115) is greater than the table valueof‘t’is 1.96 at 5% level of significance. Hence the stated null hypothesis that “there is no significant difference between male and female secondary level students in Learning Difficulties in Mathematics” **is rejected**.

3. There is no significant influence of Learning Interest and Learning Difficulties in Mathematics on Achievement in Mathematics of secondary level students.

Table – 3

Significant Influence of Learning Interest and Learning Difficulties in Mathematics on Achievement in Mathematics of secondary level students

Variables	Learning interest in Mathematics	Learning difficulties in Mathematics	Achievement in Mathematics	Multiple correlation	df	F-value	Remark at 5% level
Learning Interest in Mathematics	**1.000**	**0.173****	**0.052**	**0.244**	**2, 1087**	**34.280**	**S**
Learning Difficulties in Mathematics	**0.173****	**1.000**	**0.225****				
Achievement in Mathematics	**0.052**	**0.225****	**1.000**				

It is inferred from the above Table-5 that, there is significant influence of Learning Interest and Learning Difficulties in Mathematics on Achievement in Mathematics of secondary level students.The correlation value is 0.244. Hence, there is significant influence of Learning Interest and Learning Difficulties in Mathematics on Achievement in Mathematics of secondary level students.

1.11 MAJOR FINDINGS OF THE PRESENT STUDY

The following are the major findings of the Present study:

1. There is significant difference between male and female secondary level students inLearning Interest in Mathematics. While comparing the mean scores, male secondary level students 244.98 is better than the female secondary level students 241.35inLearning Interest in Mathematicsrespectively.

2. There is significant difference between male and female secondary level students in Learning Difficulties in Mathematics. While comparing the mean scores, male secondary level students 249.95 is better than the female secondary level students 247.47 in Mathematics inLearning Difficulties in Mathematicsrespectively.

3. There is significant influence of Learning Interest and Learning Difficulties in Mathematics on Achievement in Mathematics of secondary level students

1.12 INTERPRETATION AND DISCUSSION

1**.** t-test value of the present study reveals that there is significant difference between male and female secondary level students in their Learning Interest in Mathematics. So it is inferred that male secondary level students are better than the female secondary level students. Male students have better Learning Interest in Mathematics this is so because they are not assigned any house hold work and single minded dedication is possible for them towards their studies.

2.t-test value reveals that there is significant difference between male and female secondary level students in their Learning Difficulties in Mathematics. So it is inferred that male secondary level students are having more Learning Difficulties in Mathematics than the female secondary level students because the male students are always playful where as girls students are always dedicated in their studies. They female students generally share do many of the house hold works and it reflects in their Learning Difficulties in Mathematics and also Achievement in Mathematics.

3.The multiple correlation results of the study reveals that there are significant influence of Learning Interest in Mathematics and Learning Difficulties in Mathematics on Achievements in Mathematics of secondary level students. This may be due to the fact that there is a need to develop a favourable, positive attitude and Learning Interest of secondary level students. As more and more people accept that Learning Interest in Mathematics is just as important to decreasing the Learning Difficulties, success is possible with increasing ability to learn fast.

1.13 CONCLUSION

It is important for parents and teachers to understand that no two individuals with a Learning Difficulty will be affected in exactly the same way. The impact may be moderate or severe with symptoms often starting to show when a child begins learning how to read and write. When a condition goes undiagnosed, children are at risk of falling behind. What is worse, consistently underperforming, feeling uncomfortable in front of peers and receiving negative attention from parents and teachers can cause an otherwise highly motivated child to lose interest in school. He or she may develop a poor self-image that can lead to emotional issues in and outside of the classroom. With every Learning Difficulty comes different challenge. That is why parents and teachers can benefit from getting to know what kind of academic and emotional support is needed. Introducing them to strategies and the coping skills they need to be successful is a good start but it is also important to motivate a healthy self-image and foster confidence by nurturing self-directed learning. By self-directed learning, we can allow the individual to be responsible for certain aspects of the learning including how much material is covered in a session and how much time is spent on a given unit. The present study has proved that Learning Difficulties hamper Achievement in Mathematics and Learning Interest motivates learning and subsequently students' Achievement in Mathematics.

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