



## **ATTITUDE OF SECONDARY SCHOOL STUDENTS TOWARDS MATHEMATICS**

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### **Abstract:**

***“Mathematics should be taught on a compulsory basis to all pupils as a part of  
general education during the first ten years of schooling”***

*-Indian education commission (1964-66)*

*The study of mathematics at secondary level is necessary for the foundation stage of higher education. Every secondary school student should study the mathematics as a compulsory subject. The attitude of mathematics is one of factors for learning mathematics. The present study intended to find the attitude of secondary school students towards mathematics in Palani Educational District of Tamil Nadu, India. The study was conducted on a sample 200 ninth standard students. The sample divided into three types of institute which are Government, Government –Aided and Self-finance secondary schools. A tool used was Attitude scale towards mathematics (ASTM) for secondary school students, in order to carry out the present investigation. The investigator had adopted the normative survey method and random sampling technique was used. The results showed that the secondary school, female students has a better attitude towards mathematics than that of male students.*

### **Introduction:**

The world of today, which leans more and more heavily on science and technology, demands more and more mathematical knowledge on the part of more and more people. And the world of tomorrow will make still greater demands on a person to be “well educated” in the technological society of today, and as such he or she should have some degree of mathematical literacy. The pace of mathematical discovery and intervention has accelerated amazingly during the last few decades. It has been said that mathematics is the only branch of learning in which theories of two years old are still valid. Mathematics lays the foundation for the study of all other subjects and it is too early for a child to decide about the profession. Mathematics as an optional subject would make the choice of profession very narrow. The knowledge of mathematics is a vital role for the society. In particular, mathematics knowledge is necessary for secondary school students, it is very useful for higher education. At secondary level, attitude of mathematics is very important role for the learning mathematical concept with interest.

### **Need for the Study:**

Mathematics is a tool that can be used for the solve the problems in daily life. Due to this mathematics has been considered as one of the most important allied subject in a secondary school curriculum. The Mathematics curriculum is a vast curriculum because it is the basis of all sciences, arts and much related to daily life. The number of failures in mathematics in secondary school level examination is more comparable to that of other subjects because mathematics is a highly abstract subject. If secondary students have a positive attitude towards mathematics, their achievement in

mathematics is very well otherwise very low. So their attitude is the main role of learning mathematics.

**Statement of the Problem:**

The investigator worked in secondary schools for two years and assessed the mathematics performance and potential of students. The investigator identified that the attitude is one of factors of learning mathematics to secondary students. Several studies revealed that positive attitudes are conducive to good achievement in mathematics. Therefore; the investigator had planned the statement of the problem "*Attitude of Secondary School Students towards Mathematics*".

**Definition of the Terms Used:**

**Attitude:**

It is referred as the tendency to react favourable/ positive or unfavorable/negative towards a mathematics subject.

**Secondary School:**

The secondary school consists of IX and X standard students in the Tamil Nadu Educational system. It was followed by samacheer syllabus. The present study only selected IX standard students.

**Mathematics:**

Mathematics has the four fundamental operations of addition, subtraction, multiplication and division. Mathematics subject covers the topics such as real number system, algebra, logarithms, geometry, mensuration, probability, graphs and statistics at secondary level.

**Objectives:**

The following objectives have been formulated related to the study:

- ❖ To develop the attitude scale towards mathematics for secondary school students.
- ❖ To find out the difference between Government and Self-finance secondary school students attitude towards mathematics.
- ❖ To find out the difference between Government and Government - aided secondary school students attitude towards mathematics.
- ❖ To find out the difference between Government- aided and Self-finance secondary school students attitude towards mathematics.
- ❖ To find out the difference between male and female secondary students attitude towards mathematics.
- ❖ To find out the difference between urban and rural secondary students attitude towards mathematics.
- ❖ To find out the difference between English and Tamil medium secondary students attitude towards mathematics.

**Hypotheses:**

The following null hypotheses were formulated by the above objectives:

- ❖ There is no significant difference between Government and Self-finance secondary school students attitude towards mathematics.
- ❖ There is no significant difference between Government and Government aided secondary school students attitude towards mathematics.
- ❖ There is no significant difference between Government aided and Self-finance secondary school students attitude towards mathematics.
- ❖ There is no significant difference between male and female secondary students attitude towards mathematics.

- ❖ There is no significant difference between urban and rural secondary students attitude towards mathematics.
- ❖ There is no significant difference between English and Tamil medium secondary students attitude towards mathematics.

**Variables of the Study:**

- **Dependent variable:**
  - Attitude scale towards mathematics
- **Independent Variable:**
  - Gender
  - Medium
  - Type of school
  - Location of student

**Limitations of the Study:**

The present study has the following limitations.

- ❖ The investigator selected two hundred ninth standard students in Palani Educational District in Tamil Nadu, India, for the present study.
- ❖ The investigator selected only 3 schools in Palani Educational District.

**Method of the Study:**

Considering the objectives and hypotheses of the study, the investigator had selected the normative survey method for the present study.

**Sample:**

The random sampling technique was adopted the present study. The investigator selected only 9<sup>th</sup> standard students for the sample 200 in Palani Educational district, Tamil Nadu, India.

**Table -1**

Type of School	Name of the School	Medium	No. of Students	Gender		Location of Students	
				Male	Female	Rural	Urban
Government school	Government Higher Secondary School, Ayyalur.	Tamil	75	40	35	28	47
Government Aided school	Kalaimagal High school, Vadamadurai	Tamil	75	48	27	25	50
Self - finance school	Sakthi Sai Matric Higher Secondary School, Thangamapatty.	English	50	28	22	27	23

**Tool Used:**

Attitude scale towards mathematics was prepared and validated by the investigator and Dr.C.Sivapragasam.

**Statistical Used:**

The mean, standard deviation and t- test were used for analyzing the date.

**Testing of Hypotheses:**

**Hypothesis: 1**

*There is no significant difference between Government and Self-finance secondary school students attitude towards mathematics.*

**Table:2**

Variables	N	Mean	S.D	t - value	Significant level
Type of school					
Government school	75	150.49	10.02	2.4322	Significant at 0.05 level
Self-finance school	50	155.27	11.80		

It is inferred from the above table: 2 that the calculated t- value (2.4322) is greater than the table value (1.96). Hence the hypothesis is rejected. Thus, there is a significant difference between Government and Self-finance secondary school students attitude towards mathematics.

**Hypothesis: 2**

*There is no significant difference between Government and Government aided secondary school students attitude towards mathematics*

**Table:3**

Variables	N	Mean	S.D	t - value	Significant level
Type of school					
Government school	75	150.49	10.02	3.5315	Significant at 0.05 level
Government Aided school	75	156.67	11.37		

It is inferred from the above table: 3 that the calculated t- value (3.5315) is greater than the table value (1.96). Hence the hypothesis is rejected. Thus, there is a significant difference between Government and Government aided secondary school students attitude towards mathematics

**Hypothesis:3**

*There is no significant difference between Government aided and Self-finance secondary school students attitude towards mathematics*

**Table:4**

Variables	N	Mean	S.D	t - value	Significant level
Type of school					
Government aided school	75	156.67	11.37	0.6643	No significant at 0.05 level
Self - finance school	50	155.27	11.80		

It is inferred from the above table: 4 that the calculated t- value (0.6643) is lesser than the table value (1.96). Hence the hypothesis is accepted. Thus, there is no significant difference between Government aided and Self-finance secondary school students attitude towards mathematics.

**Hypothesis: 4**

*There is no significant difference between male and female secondary students attitude towards mathematics.*

**Table:5**

Variables	N	Mean	S.D	t - value	Significant level
Gender					
Male	116	152.45	10.64	2.9364	Significant at 0.05 level
Female	84	157.18	12.03		

It is inferred from the above table: 5 that the calculated t- value (2.9364) is greater than the table value (1.96). Hence the hypothesis is rejected. Thus, there is a significant difference between male and female secondary students attitude towards mathematics.

**Hypothesis:5**

*There is no significant difference between urban and rural secondary students attitude towards mathematics.*

**Table: 6**

Variables	N	Mean	S.D	t - value	Significant level
Location of students					
Rural	80	155.16	11.18	1.4586	Not significant at 0.05 level
Urban	120	157.52	11.23		

It is inferred from the above table: 6 that the calculated t- value (1.4586) is lesser than the table value (1.96). Hence the hypothesis is accepted. Thus, there is no significant difference between urban and rural secondary students attitude towards mathematics.

**Hypothesis:6**

*There is no significant difference between English and Tamil medium secondary students attitude towards mathematics.*

**Table :7**

Variables	N	Mean	S.D	t - value	Significant level
Medium					
Tamil	150	155.78	10.67	0.7724	Not significant at 0.05 level
English	50	154.44	10.48		

It is inferred from the above table: 7 that the calculated t- value (0.7724) is lesser than the table value (1.96). Hence the hypothesis is accepted. Thus, there is no significant difference between English and Tamil medium secondary students attitude towards mathematics.

**Findings:**

The following are the important findings of the present study:

- Self – finance secondary school students have a better attitude towards mathematics than that of Government secondary school students.
- Government –Aided secondary school students have a better attitude towards mathematics than that of Government secondary school students.
- There is no significant difference between Government-Aided and Self-finance secondary school students attitude towards mathematics.

- The secondary school female students have a better attitude towards mathematics than that of male students.
- There is no significant difference between urban and rural secondary students attitude towards mathematics.
- There is no significant difference between English and Tamil medium secondary students attitude towards mathematics.

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