

ATTITUDE TOWARDS LEARNING MATHEMATICS OF HIGH SCHOOL STUDENTS

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Abstract

This investigation was done to see if there is any significant relationship in attitude towards learning Mathematics of high school students. The sample comprises of 300 students acquired from ten high and higher secondary schools in Srivilliputhur Taluk through simple random sampling technique. The collected data is analysed statistically in SPSS. The discoveries of the reveal that there is no significant relationship in Attitude Towards Learning Mathematics Of High School Students.

Keywords: *attitude, secondary school students, simple random sampling technique and SPSS software.*

Introduction

Attitudes are acquired in several basic ways. Sometimes attitudes come from direct contact (personal experience) with the object of the attitude- such as opposing pollution when a nearby factory ruins our favorite river. Attitudes are also learned through interaction with others that is through discussion with people holding a particular attitude. Many of our attitudes are influenced by group membership. In most groups pressures to conform shape our attitudes, just as they do our behavior. Child rearing (the effects of parental values, beliefs and practices) also affects attitudes.

Science has been man's greatest ally since the dawn of civilization. It has created innumerable pathways to progress that have taken man from primitive life to the doorstep of advancement. The great achievements of science have made the present day world glorified to the extent that it has transformed the present civilization into scientific civilization. Life today is impossible without science. The role of science is of utmost importance in raising the level of country from developing to advance one. All doors of economic growth and development pass through the gateway of scientific advancement.

Secondary school is an institution which provides all or part of secondary education. Other terms such as "secondary school" are used in different nations or regions. The phrase "high school" often forms part of the name of the related institution.

Need and Significance of the Study

Competitions play an important role in the development of right attitude of students towards a particular subject. Similarly, can be the case of science Olympiad which can also bring about a change in attitude towards science of students which can ultimately

lead to improvement in academic achievement of students. In the present scenario the parents are more conscious regarding the performance of children in school related activities because of the increasing pressure of cut throat competition in society in various fields, so role of parents to motivate the children to take up various competitions for preparing them in various walks of life cannot be sidelined. In the present study review of literature is done to find the links between academic achievement, attitude towards science and parental involvement on one hand and also the missing links between the same on the other hand. Review of literature was done with the above said variables with various angles to have a thorough knowledge of these variables.

Learning Mathematics is helpful in learning most of the school subjects as it is believed to “the art of all art and science of all science”. Today the life has been more complicated, so that we need more Science to understand and adjust to the demand of life. Day by day this demand is going to be increased.

Science helps the students try to analyze problem, develop the habits of systematic thinking and objective reasoning. It helps the students to develop heuristic attitude and try to discover the facts or solution to the problems with their own independent efforts. It helps the students to understand and appreciate logical, critical and independent thinking of others.

It becomes crystal clear from the above discussion that Science is a life blood of all activities going inside a school. The investigator bears all these things in mind, and interested to assess the attitude of the students of IX and X standard towards Science. The present study will throw light on the following aspect. Findings and suggestions of this study will help the Science teacher to inculcate positive attitude towards Science of the secondary students. Hence, the present study is taken up. Hence the investigator is intended to do research on ‘Attitude Towards Learning Mathematics Of Secondary School Students’.

Objectives

1. To find out the level of attitude towards learning Mathematics of high school students.
2. To find out the level of attitude towards learning Mathematics of high school students with respect to gender.

Null Hypotheses

1. There is no significant difference in attitude towards learning Mathematics of high school students with respect to gender.
2. There is no significant difference in attitude towards learning Mathematics of high school students with respect to residence.

Delimitations of the Study

1. The study was delimited to Srivilliputtur Taluk of Virudhunagar District.
2. The study has been confined to the higher secondary school students studying in class IX and X only.

Population of the Study

The population of the present study is the students studying standard of 9th and 10th in the secondary schools in Srivilliputtur Taluk.

Sample for the Study

The investigator has selected 300 students studying in IX and X from high and higher secondary schools from the population. For selecting the students, the investigator used simple random sampling method.

Tools Used for Present Study

1. Attitude of Science Scale prepared and validated by the investigator and guide (2022).

Statistical Techniques Used

The statistical measures have used in this study: Percentage analysis Mean, SD and 't' test.

Analysis of Data

Objective: 1

To find out the level of attitude towards learning Mathematics of high school students

Table 1 Level of Attitude towards Learning Mathematics of High School Students

<i>Low</i>		<i>Moderate</i>		<i>High</i>	
<i>Count</i>	<i>%</i>	<i>Count</i>	<i>%</i>	<i>No.</i>	<i>%</i>
58	19.3	183	61.0	59	19.7

It is inferred from the above table that, 19.3 % of students have low, 61.0% of them have moderate and 19.7% of them have high level of attitude towards learning Mathematics of high school students.

Objective: 2

To find out the level of attitude towards learning Mathematics of high school students with reference gender.

Table 2 Level of Attitude towards Learning Mathematics of High School Students with Respect to Gender

<i>Gender</i>	<i>Low</i>		<i>Moderate</i>		<i>High</i>	
	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
Male	33	19.2	103	59.9	36	20.9
Female	25	19.5	80	62.5	23	18.0

It is inferred from the above table that, 19.2% of the male students have low, 59.9% of them have moderate and 20.9% of them have high level of attitude towards learning Mathematics of high school students. 19.5 % of the female students have low, 62.5% of them

have moderate and 18.0 % of them have high level of attitude towards learning Mathematics of high school students.

Null Hypothesis: 1

There is no significant difference in attitude towards learning Mathematics of high school students with respect to gender.

Table 3 Significant Difference in Attitude Towards Learning Mathematics of High School Students with Respect to Gender

<i>Gender</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Calculated 't' value</i>	<i>Remarks at 5% level</i>
Male	172	54.7384	8.79767	1.973	S
Female	128	54.6641	8.64458		

(At 5% level of significance, for df 298, the table value of 't' is 1.96)

It is inferred from the above table that calculated, 't' value (1.973) is greater than the table value (1.96) for df (298) at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is no significant difference in attitude towards learning Mathematics of high school students with respect to gender.

Null Hypothesis: 2

There is no significant difference in attitude towards learning Mathematics of high school students with respect to residence

Table 4 Significant Difference in Attitude towards Learning Mathematics of High School Students with Respect to Residence

<i>Residence</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Calculated 't' value</i>	<i>Remarks at 5% level</i>
Day-scholar	286	54.4650	8.66393	2.183	S
Hosteller	14	59.6429	8.66121		

(At 5% level of significance, for df 298, the table value of 't' is 1.96)

It is inferred from the above table that calculated 't' value (2.183) is greater than the table value (1.96) for df (298) at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is significant difference in attitude towards learning Mathematics of high school students with respect to residence.

Major Findings

Descriptive Analysis

1. 19.3 % of students have low, 61.0% of them have moderate and 19.7% of them have high level of attitude towards learning Mathematics of high school students.
2. 19.2% of the male students have low, 59.9% of them have moderate and 20.9% of them have high level of attitude towards learning Mathematics of high school students.

3. 19.5 % of the female students have low, 62.5% of them have moderate and 18.0 % of them have high level of attitude towards learning Mathematics of high school students.

Inferential Analysis

1. There is significant difference in attitude towards learning Mathematics of high school students with respect to gender.
2. There is significant difference in attitude towards learning Mathematics of high school students with respect to residence.

Interpretation

The 't' test result shows that there is significant difference in attitude towards learning Mathematics of high school students with respect to gender. While comparing the mean scores of male (54.7384) and hosteller (54.6641) secondary school students, the male students are better than female students. (i.e) Male have more positive attitude towards Science than female. This may be due to the fact that male students have heuristics attitude and try to discover the fact or solution to the problem. So they have high level of attitude towards Science.

The 't' test result shows that there is significant difference in attitude towards learning Mathematics of high school students with respect to residence. While comparing the mean scores of day-scholar (54.4650) and hosteller (59.6429) secondary school students, the hosteller are better than day-scholar students. This may be due to the fact that hosteller students may have use positive influence from peer group, it helps to develop and inculcate positive attitudes and beliefs

Recommendations of the Study

1. By adopting student – centered methods like inductive, analytic, laboratory, heuristic, problem solving, project methods, it is possible to inculcate positive attitude towards Science in students.
2. Preparatory evaluation in Science help to find learning difficulties and thus help in remedial measures.
3. Correlation approach in teaching of Science can develop positive attitude towards Science.
4. Science teaching and evaluation strategies should be biasfree. This way, males and females will tend to see themselves as equals, capable of competing and collaborating in classroom activities.

Suggestions for Further Research

1. Science needs good amount of practice and full concentration. Thus, this study advocates that parents should be hands on when it comes to their children's study habits and practice. Parents should see that their children do (practice), not just reading Science. Conducive environment at home is to be provided to enhance

concentration. This will ensure a passing score, hence, forms positive attitude towards Science.

2. Teachers are important role models and career counselors for students at all levels, more than ever at secondary school level, which is the peak stage to guarantee the students,, future career. This study recommends personal contact and timely counseling from the part of the teachers, encouraging and displaying the fact that Science paves richer chances for future career to the students.

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