

Attitude of Secondary School Students towards Mathematics

Soumen Chandra kundu¹ & susanta kar²

¹Assistant Teacher, Hura High School (H.S), Purulia

²M.Phil, Dept. of Education, Calcutta University

Abstract

Mathematics knowledge is necessary for secondary students. Attitude of mathematics is very important role for the learning mathematics concept with interest. The present investigation has been conducted to study the attitude of secondary school students towards mathematics. Sample of the study was 200 students of the 10 the grade selected from 4 Govt. Aided schools. Descriptive statistics and 't' test with $P < 0.05$ level of significance were used for data analysis. The results showed that the secondary school, urban female student has a batter attitude towards mathematics than that of rural female students.

Keywords

Mathematics, secondary students, attitude

1. Introduction

"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 (1964-1966)

Science, technology and mathematics can lead the country towards prosperity and mathematics is the key subject in these fields. Mathematics is the bedrock, queen and king of all sciences (Kolawole, 2004). Mathematics is an essential tool that can be used in our daily life. Mathematics knowledge is necessary for secondary school students; it is very useful for higher education. At secondary level, attitude of math is very important role for the learning mathematics. Mathematics attitude is referred as the tendency to react positive or negative towards a mathematics subject. Positive attitude of a learner has great importance in learning mathematics.

2. Literature review

In teaching and learning process of mathematics, the attitude towards mathematics is very important. It affects the student's achievement in mathematics. Fennema et al (1994) in study of gender and mathematics education research found that the relationship between attitude and performance is weaker for girls than boys. Thomas (2006) conducted a

study to determine the attitude towards mathematics and achievement by combining co-operative learning strategies with its instruction delivered using an Integrated Learning system (ILS). Here result revealed that students using on ILS for mathematics instruction performed better on standardized test and were more positive towards mathematics. A. Rosaly (2007) conducted a study the relationship between attitude of students towards mathematics and achievement. It has found by the Rosaly findings that, there is a high co-relation between the attitude of higher secondary levels students and their achievement learning mathematics. The attitude of the students of urban area towards mathematics is more positive than the students of rural area.

3. Statement of the problem

"The attitude of secondary school students towards mathematics of Purulia District in West Bengal"

4. Objectives

The researcher considered the followings as the objectives of the study:

- i) To study the difference in attitude of secondary school students towards mathematics with regard to gender.
- ii) To study the difference in attitude of secondary school students towards mathematics with regard to residence.

5. Research Hypotheses

The null hypotheses for the present study are as follows:

H₀₁: There exist no significant differences of attitude towards mathematics between male and female of secondary school students.

H₀₂: There exist no significant differences of attitude towards mathematics between urban and rural male of secondary school students.

H₀₃: There exist no significant differences of attitude towards mathematics between urban and rural female of secondary school students.

6. Variables of the study

Dependent variable:- Attitude towards mathematics

Independent variable:- Gender, residence

7. Limitation of the study

The present study has the following limitations:-

- i) The investigator selected two hundred tenth standards of secondary school students in Purulia district in West Bengal, for the present study.
- ii) The investigator selected only 4 secondary schools in Purulia district.

8. Sample

200 secondary level students from Bengali medium school in the district of Purulia in W.B was consider and stratified random sampling was used for sample selection .The distribution of the samples has been presented table -1

Table 1: showing the distribution of sample

Localities	male	female	Total
Rural	50	50	100
Urban	50	50	100
Total	100	100	200

9. Sample tools

Researcher developed a tool to measure attitude of secondary school students towards mathematics. After item analysis 40 items was selected .The validity and reliability was estimated by applying Test –Retest method and they was found sufficient for the study. Five point attitude scales was used, which contain 40 th statements

10. Statistical used:-

The mean, standard deviation and 't' test were used for analyzing the data.

11. Testing of hypotheses

11.1. Testing of H_{01}

Group	No. of participants	Mean	SD	df	't' values
Male	100	155.25	22.531	198	0.93
female	100	152.30	22.512		

** Not Significant

Here the score of 't' is more than the calculated value, so the result is no significant. Therefore the above said null hypothesis is acceptable, so it can be said that there is no significant differences of attitude towards mathematics between male and female students.

11.2. Testing of H_{02}

Group	No. of participants	Mean	SD	df	't' values
Urban male	50	155.56	18.78	98	0.137
Rural male	50	154.94	25.93		

** Not Significant

Here the score of 't' is more than the calculated value, so the result is no significant. Therefore the above said null hypothesis is acceptable, so it can be said that there is no significant differences of attitude towards mathematics between urban and rural male students.

11.3. Testing of H_{03}

Group	No. of participants	Mean	SD	df	't' values
Urban female	50	161.76	20.22	98	4.612
Rural female	50	142.84	20.79		

**significant at 0.05 level

Here the score of 't' is less than the calculated value, so the result is significant. Therefore the above said null hypothesis is rejected, so it can be said that there exist significant differences of attitude towards mathematics between urban and rural female students.

12) Findings of the study

Following are the findings of the present investigation:

- i) Male and female students of secondary school not differ significantly in attitude towards mathematics.

ii) Urban & rural male students of secondary school not differ significantly in attitude towards mathematics.

iii) Urban & rural female student of secondary school differ significantly in attitude towards mathematics.

13. Conclusion and recommendations

This research is accomplished on the students of secondary level to investigate the attitude towards mathematics. From the finding of this study, it was concluded that secondary school students both male and female students have almost the same attitude towards mathematics. Finally there is no disparity in the attitudes of students towards mathematics based on sex. The research idea is to find out no significant differences of attitude towards mathematics between urban and rural male students. Also found that there exists a significant difference of attitude towards mathematics between urban and rural female students. Urban female student have higher positive attitude towards mathematics as compare to rural female students. It is found that the study on mathematics is essential for rural female students. The schools and educational institutions should take measure to improve the attitude towards mathematics. Studies of socio-economic and other important parameters of secondary schools students in the district of purulia in West Bengal may accomplish further these findings from this particular study.

14. References

- i) Rosaly, A. (2007). "The relationship between attitude of students towards mathematics and achievement", M.Phil. Edu. Madurai Kamaraj Univ.
- ii) Mohamed, Lawsha. & Waheed, Hussain. (2011). "Secondary students attitude towards mathematics in a selected school of Maldives", International Journal of Humanities and Social Science, vol-1 No.15
- iii) Mubeen, S. & Saeed, S. & Arif, M.H.(2013). "Attitude towards Mathematics Achievement in Mathematics among Secondary Level Boys and Girls", IOSR journal of Humanities and Social Sciences; 6(4):38-41

iv) Senthamarai Kannan , B. & Sivapragasam, C. (2015). "Attitude of secondary school students towards mathematics", International journal of multidisciplinary research and modern education, vol-I, issue II

v) Pandey, B. (2017). "A study of Mathematical Achievement of secondary school students", International Journal of Advanced Research (IJAR)

vi) Samsujjaman (2017). "The attitude of secondary levels students towards mathematics in West Bengal: an analytic discussion", International journal of Management and social science Research Review, vol-1, issue-33, page 136