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A STUDY OF ATTITUDE TOWARDS MATHEMATICS WITH RESPECT TO THEIR ACHIEVEMENT AND GENDER AMONG ELEMENTARY SCHOOL STUDENTS

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ABSTRACT:

The study explores the attitude of elementary students towards mathematics with respect to their gender. Descriptive type of research design is used. Investigator used self-constructed Scale for the collection of data. A sample of 60 (30 Male and 30 Female) elementary school students randomly selected by the investigator from AMU. Mean, SD and t-test technique is used to interpret the data. The study found that there is a favourable positive and negative attitudes among elementary students towards mathematics. It was also found that there is a significant difference in attitude among male and female elementary students. Male students show a higher positive attitude towards mathematics than female senior secondary students.

KEYWORDS: *Attitude, Mathematics Achievement, Elementary School Students, Gender.*

INTRODUCTION:

Universal growth of the human being in education hasthe most effective tool of bringing a desirable change towards the social and economic betterment and cultural transformation of society in the status of human being and the country as a whole. Education develops the total personality of the individual and on the other hand, education contributesto the development of society. Mathematics has found a significant position in the curricula of primary and secondary education. Mathematics has become a substantial and integral part of an organized society. The knowledge of mathematics is an essential tool in our society (Baroody, 1987). It is a tool that can be used in our daily life to overcome the difficulties faced (Bishop, 1996). Due to this reason, mathematics has been considered a core subject in the school curriculum. More mathematics lessons are likely to be taught in schools and colleges throughout the world than any other subject (A. Orton, D. Orton, & Frobisher, 2004). The student underachievement in mathematics is not just a concern for particular countries but has become a global concern over the years (Pisa, 2003).

In teaching learning process attitude towards mathematics plays a critical role. Mathematics is a way to settle the mind or habit of reasoning (Locke). It has been recognized as one of the most central stands of human intellectual activity. From the beginning, it has been living and growing intellectual pursuit. It has its roots in everyday activities and from the basic structure of our highly advanced technological developments. It offers opportunities for opening the mind to new lines of creative ideas and channeling thought. Undoubtedly problem offers the most intense of all intellectual pleasures. At the same time, it is

repeated to be and rightly, so the most hypothetical of all sciences it inhibits connections between things which can be visualized only through the problem of a human being.

There are so many terms which represent the term academic achievement i.e. academic attainment, achievement, academic aspiration, etc. Generally, it refers to the performance of the learner after a course of instruction and measure it in term of marks or grades obtained in a given areas of knowledge as the level of knowledge or skill acquired after undergoing a program of instruction, may also be assessed with the help of the standardized achievement tests available in the market. According to Good "knowledge attained or skills developed in the school subjects, usually designated by the tests scores or by marks assigned by teachers, or by both." Hawes has defined "successful accomplishment or performance in particular subjects, areas, or courses, usually by reasons of skill, hard work, and interest, typically summarized in various type of grades, marks, scores or descriptive, commentary." In the present study mathematics achievement refers to achievement in mathematics. Generally obtained scores in mathematics is considered as mathematics achievement of students.

Usually attitudes, beliefs and emotions are the major descriptors of the affective domain in mathematics education. Traditionally researchers have taken the relationship between attitude towards mathematics and achievement in mathematics as a major concern in their research work. Aiken (1970) defined to attitude as a learned predisposition or tendency on part of an individual to respond positively or negatively towards some object, situation, concept or another person. According to Neal (1969) attitude towards mathematics as a tendency to engage in or avoid mathematics activities, a belief that one is good or bad in mathematics and a belief that mathematics is useful or useless.

There is much discussion about the relationship between gender and achievement in mathematics education in these days. The concern has arisen because a smaller number of females enters the academic and professional areas related to mathematics. By comparison, gender differences in achievement especially science have not been consistent and continue to be a much-debated topic. Much of the work investigating those goals have been conducted in the domain of Mathematics.

SIGNIFICANCE OF THE STUDY

Mathematics and science are the necessary tools for the modern development of human being, no nation can prosper in the absence of mathematics teaching. We can say that mathematics is the mother of all-round development. Mathematics teaching make student more rational in their thinking the present study deals with students attitude towards the mathematics and their achievement in mathematics through this study a clear cut picture of students achievement in mathematics will come out, and this study can be helpful for motivating children towards mathematics, moreover through this techniques the achievement score of students in mathematics can be increased. If there will be a provision of good guidance and counselling. This is the duty of teachers and provides that they should encourage students or try to motivate towards mathematics learning because this mathematics teaching and learning is essential for all-round development of the personality of students as well as national development.On account of all these reasons, the investigator wishes to conduct this study to acquire information concerning attitude of elementary school students towards mathematics with respect to their gender.

OBJECTIVES OF THE STUDY

The objectives of the present study are as follows:

1. To assess the attitude of elementary school students towards mathematics.
2. To assess the attitude of elementaryschool students towards mathematics with respect to their gender.

HYPOTHESES OF THE STUDY

1. There is no favourable attitude of elementary school students towards mathematics.

2. There is no difference in the attitude of elementary school students towards mathematics with respect to their gender.

METHODOLOGY AND DESIGN

Design

Research design is a detailed outline of how an investigation will take place. In this study, descriptive research design has been used by the researcher.

Population and Sample

In this study, the researcher collected data from various elementary school students of Aligarh district. The sample has been selected randomly from A. B. K. High School (Boys) and A. B. K. High School (Girls) of Aligarh district. A sample of 60 students (30 Boys and 30 girls) has been selected by the researcher.

Table-1
Distribution of Sample gender and school wise

Name of the Institutions	*Male Students*	*Female Students*	*Total*
B. K. Union High School (Boys)	30	0	30
B. K. Union High School (Girls)	0	30	30
Total	30	30	60

Research Tools Used

The researcher used the following research tools to collect required data:

1. **Attitude Scale:**To measure attitude among elementary school students the investigator used self-made "Attitude Scale". This scale consists of 20 items.
2. **Mathematics Achievement Test:** this test is prepared by the investigator to test the student's achievement in mathematics. 20 objective type question was given to the class VI. The question was Yes/No response type in which only one answer was correct and each correct answer gives one score and each wrong answer gives zero scores. The summation of marks or scores earned by a student in all questions was taken as his achievement scores in mathematics.

Statistical Techniques Used

Mean, Standard Deviation (SD) and 't' test has been used by the investigator to analyze the data.

ANALYSIS AND INTERPRETATION OF DATA

Table No-2
Percentage of students having Positive and Negative Attitudes towards Mathematics

Dimension	**%**	**N**	**df**	**t-value**
Positive Attitude	**58.5**			
Negative Attitude	**41.5**	**60**	**58**	**2.60****

**** Significant at 0.01 level of confidence (2 Tailed)**

The total students were divided into two subgroups are positive and negative on the basis of their attitudes scores. The table-2 shows that the percentage of positive and negative responses of students of the total sample were respectively, 58.5 and 41.5. The calculated 't' value comes to be 2.60 which is significant at 0.01 level with 58 df. This result shows that there is a true difference between the means of achievement scores in the mathematics of students having favourable and unfavourable attitudes towards mathematics hence the first hypothesis which **"There is no favourable attitude of elementary school students towards mathematics"** is rejected at 0.01 level of significance.

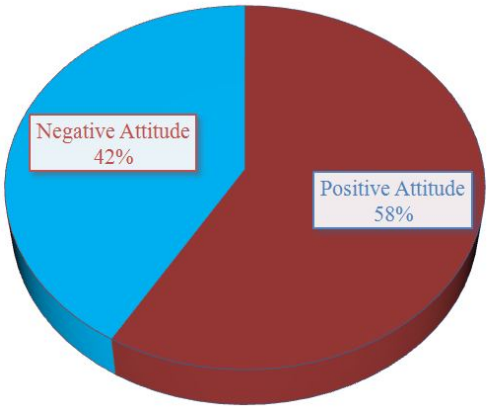

Figure No-1: Showing Percentage of Positive and Negative Attitudes towards Mathematics

Table-3
Significance of the Difference between Male and Female elementary school students in Mathematics Achievement

Gender	N	Mean	SD	Df	t-Value
Male	30	27.9	5.3		
Female	30	25.3	5.8	58	2.6*

***Significant at 0.01 level of confidence (2- Tailed)**

The table-3depicts that there is a significant difference in mean scores of Male and Female elementary students. The mean for male students was 27.9 and for female students was 25.3. the calculated t-value is 2.6 which is significant at 0.01 level of confidence. That means there is a significant difference in the attitude of male and female elementary school students towards mathematics. Male elementary school students show more attitude than female elementary school students. Therefore, the second null hypothesis **"There is no difference in the attitude of elementary school students towards mathematics with respect to their gender"** is rejected.

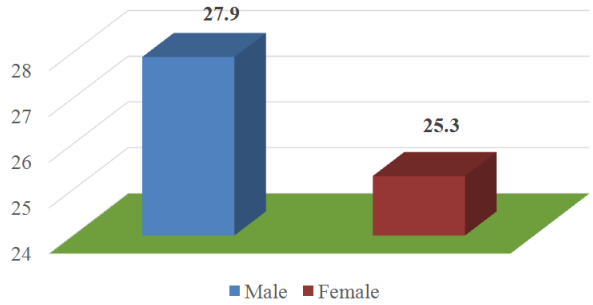

Figure No-2: showing the difference in attitude between male and female elementary students towards mathematics.

FINDINGS

The present study leadsto the following findings:

1. The study explores that there is a favourable positive and negative attitudes among elementary school students towards mathematics.
2. It was also found that there is a significant difference in attitude between male and female elementary school students. Male students show a higher positive attitude towards mathematics than female senior secondary students.

CONCLUSIONS

From the above discussion, it is clear that there is a significant positive and negative favourable attitude towards mathematics among elementary school students and male students show a more positive attitude towards mathematics. Thus, it is very important for the teachers, parents, psychologists, sociologists, philosophers, planners, educationists and guidance workers should cater attitude among elementary school students.

REFERENCES

Baroody, A. J. (1987). Children's Mathematical thinking: developmental framework for preschool, primary, and special education teachers. New York: Teachers college press.

Bishop, A. J. (1996). International handbook of mathematics education. Springer.

Orton, A., Orton, D., & Frobisher, L. J. (2004). Insights into teaching mathematics. Continuum International Publishing Group.

PISA (2003). OECD programme for International Student Assessment (PISA). Retrieved on 29 June 2011 from http://www.pisa.oecd.org/

Allport, G.W. (1937). Personality and Psychological Interpretation. London, Constable and Co. Ltd.

Best, J. W. (1970). Research in Education. New Delhi, Prentice Hall of India Private Limited.

Kerlinger. N. (1973). Foundations of behavioral research. New Delhi. Holt, Rinehart and Winston Inc.

Morgan, C.T. (1961). Introduction to Psychology and Education. NY McGraw-Hill.