A CO RELATIONAL STUDY OF ATTITUDE OF CLASS XI STUDENTS TOWARDS MATHEMATICS AND ACADEMIC ACHIEVEMENT

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ABSTRACT

Different person have different attitudes towards different objects, persons, activities and thoughts. What a person experiences about anything he develops similar attitude towards that and he reacts to it accordingly in the future. What a person experiences about anything he develops similar attitude towards that and he reacts to it accordingly in the future. The present study investigate the co-relation between attitude and academic achievement in mathematics. For this purpose a sample of 100 students of class IX students was selected randomly. Two tests namely : Achievement test in mathematics constructed by Nagappa P. Shahapur and K.M. Askam Khan and attitude towards mathematics scale by S.C. Gakhar and Rajni were administered and result revealed that there is positive high correlation between the attitude towards mathematics and academic achievement of students. It shows that higher the attitude towards mathematics, higher is the achievement.

INTRODUCTION

The mental feeling of a person towards an object, person, activity or thought is generally known as his attitude towards that object, person, activity or thought. Different persons have different attitudes towards different objects, persons, activities and thoughts. It is because of the fact that these attitudes among them are developed through their own experiences with those objects, persons, activities and thought the attitude towards it is also changed. What a person experiences about anything he develops similar attitude towards that and he reacts to it accordingly in the future. It is clear that attitude is not hereditary. Man develops it on the basis of his experiences. As Freeman said, An Attitude is a dispositional readiness to response to certain situations, persons or objects in a consistent manner, which are developed by his own experiences regarding that object, person, activity or thought and which direct him to react to these accordingly. Literature refers to attitude as a learned pre-disposition or tendency of an individual to respond positively or negatively to some object, situation, concept or another person. This positive or negative feeling is of moderate intensity and reasonable stability; sometimes it is especially resistant to change.

Attitude towards the subject denotes the interest or feeling towards studying the subject. It is the student's disposition towards 'like' or 'dislike' the subject. As we know that mathematics is a difficult subject but everybody needs some knowledge of mathematics in one way or the other. The scientific developments could not be understood unless we have a mathematical/ scientific bent or some basic knowledge of subject.

We can say in simple language attitude towards mathematics is just a positive or negative emotional disposition towards mathematics. Attitude towards mathematics comprises three components, an emotional respond to mathematics, positive or negative, a conception about mathematics, and a behavioural tendency with regard to mathematics.

Attitude towards mathematics arouses one's feeling and emotions. Both learning and feeling urge an individual to act. This action tendency of an attitude enables others to infer the feeling and understanding. N.K.Dutt (1978) says “Attitude underlie many of the significant and dramatic instances of man's behaviour”.

As we know that all the subjects taught in the school contribute to the achievement of the objective to form an integrated personality of pupil. But the subject of mathematics specially contributes much for the improvement of

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reasoning and logical thinking which are mainly responsible for the development of intellectual ability.

Krishnamurthy (1990) while discussing the importance of mathematics says that the mathematical form of today has more and more new application .It is essential for the existence and progress of modern world. The knowledge of mathematics and application has become an integral part of every new innovation.

NEED AND IMPORTANCE OF THE STUDY

The present school curriculum demands rapid learning and clear understanding of frequently changing syllabus and new curriculum. It is very essential for the teachers as well as students to have frequent and appropriate feedback of their learning.

Keeping in view the natural scope of mathematics and its unique role in solving problems in day-to-day activities, mathematics has been considered as one of the core subjects in the curriculum at the secondary level. The parents and pupil's at large consider mathematics a difficult subject and this result in more number of failures in this subject.

Though the world is more mathematically inclined, the students in schools feel it as more abstract. The teaching of mathematics is a challenge to teachers because of its wide utility in all developmental programmes of mankind. This shows not only the importance of learning mathematics but also the need for revolutionizing the teaching of mathematics in school. So, it is very important to arouse student interest/ attitude towards mathematics. Attitude of students can be influenced by the attitude of the teacher and his method of teaching. The teacher's method of teaching mathematics and his personality greatly accounted for student positive attitude towards mathematics and that, without interest and personal effort in learning mathematics by the students, they can hardly perform well in the subject. So, it is impetus to develop positive attitude towards mathematics it may affect their academic achievement.

Ma and Kishor (1997) propose a wider definition; they conceive Attitude towards mathematics as “an aggregated measure of a liking or disliking of mathematics a tendency to engage in or avoid mathematical activities, a belief that one is good or bad at mathematics, and a belief that mathematics is useful or useless”.

OBJECTIVES OF THE STUDY

1. To study the attitude towards mathematics of Class XI Students.
2. To study the academic achievement of Class XI Students in mathematics.
3. To study the relationship between attitude towards mathematics and academic achievement of Class XI Students in mathematics.

HYPOTHESIS

There is no significant relationship between attitude towards maths and academic achievement of Class XI students in mathematics.

Research Design: A normative survey method was used in the Research.

Sample and sampling technique: Using the simple random sampling technique and 100 Students were selected from the secondary schools of Panipat District.

TOOLS

The following tools were used in the study:

1. Achievement test in mathematics constructed by Nagappa P. Shahapur and K.M.Askam Khan for Class X & XI Students having 100 items.
2. Attitude towards mathematics scale by S.C.Gakhar and Rajni having 48 items in 8 areas.

DATA COLLECTION

The researchers collected the data by visiting the schools.

DATA ANALYSIS

Mean, Standard Deviation and Correlation were used for analyzing the data.

DELIMITATION OF THE STUDY

The study was delimited to Class XI only. It was delimited to two private secondary schools of Panipat District only. The study was delimited to find the achievement in maths only.

FINDING/INTERPRETATION

Objective: To Study the Attitude towards mathematics of Students of Class XI.

Interpretation:

N = 100, Mean = 26.5175, S.D. = 3.5809

Objective: To Study the Achievement in mathematics of Students of Class XI.

N = 100, Mean = 5.9306, S.D. = 20.918

ANALYSIS OF HYPOTHESIS TESTING

There is no significant relationship between the attitude towards mathematics and academic achievement of Class XI Students in mathematics

N = 100, r = 0.73

INTERPRETATION

Hypothesis is rejected and found that there is positive high correlation between the attitude towards mathematics and academic achievement of students. It shows that higher the attitude towards mathematics, higher is the achievement.

CONCLUSION

It may be remembered that favourable attitude towards mathematics has an impact on achievement in Mathematics. In schools, proper environment must be provided so that the pupils develop favourable attitude towards the subject mathematics. The teacher of mathematics can draw well balanced examples from life situation. To develop in pupils, the most favourable attitude towards the subject, they can adopt methods like Heuristic method, guided discovery, programmed instruction and inductive method. There are many factors that influence the academic achievement in mathematics at secondary stage. From the study it was observed that attitude towards mathematics have impact on achievement in mathematics. To enhance the performance in mathematics, a variety of curricular and co-curricular programmes can be instituted in schools periodically.

REFERENCES

Dutt, N.K. (1978) : Psychological foundations of education, New Delhi: Doaba house

Gakhar S.C. and Rajni: Attitude towards Mathematics Scale. National Psychological Corporation, Agra.

Lal and Joshi (2007): Educational measurement, Evaluation and statistics. R.Lall Book Depot, Meerut p- 189

Nagappa P. Shahapur and K.M.Askam Khan : Achievement Test in Mathematics. National Psychological Corporation, Agra.

Post R. Thomas (1992): Teaching Mathematics in Grades K-8 Research-Based Methods. Needham heights Massachusetts: United States of America p-298

Ravanan. R, Blessing Mary A. & Julie (2010): Attitude towards Mathematics of XI Standard Students in Trichy District.Dissertation: www.aioaer.net/ejournal/vol20108/13.htm

Sarasani, Mehender Reddy and Maddini Ravi (2010): Achievement in mathematics of secondary school students in selected variables. Edutracks Feb. Vol.9-No.6 pg 38-42

Sharma Jyoti (2004): Why students fail in Mathematics. Article Edutracks October p- 25

Student Learning (2003):An article on Attitudes, Engagement and strategies first results from PISA www. Oecd.org/data-oecd/58/37