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A Study on Anxiety in Upper Primary School Students in learning Mathematics

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Abstract

This study was conducted to find out anxiety in learning mathematics by upper primary school students of Prakasam district in Andhra Pradesh. The investigators adopted normative survey method for the study. A sample of 200 students from upper primary schools was selected by Systematic Random Sampling Technique. Anxiety tool was used for the study. For the analysis of data, descriptive statistics, like mean, standard deviation and 't' test were employed. The findings revealed that a significant difference was found in anxiety in learning mathematics.

Introduction

In this technological era, education is considered as the first step for every human activity. It plays an essential role in the development of human capital and is linked with an individual's well-being, and provides him/her with opportunities for a better living. Academic achievement is considered essential in this age of rapid change in competitions. There are certain factors, which affect students' anxiety in learning mathematics.

Anxiety

An uncomfortable feeling of nervousness or worry about something that is happening or might happen in future.

Statement of the Problem

A study on anxiety faced by Class VII students in learning mathematics

Need of the Study

Without numerical and mathematical evidence, we cannot decide numerous issues in our day-to-day life. Mathematics is the study of

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abstractions and their relationships, in which the only technique of reasoning that may be used to confirm any relationship between one abstraction and another is 'deductive reasoning'.

The place of mathematics in modern education must be determined by an analysis of the culture of civilisation of the modern society. The Kothari Commission report (1964–66) points out that the study of mathematics plays a prominent role in modern education. It says, "One of the outstanding characteristics of scientific culture is qualification." Mathematics, therefore, assumes a prominent position in modern education. Mathematics education in schools is emphasised more as it improves concept development, fosters higher cognitive abilities and skills.

Arithemetic includes the study of whole numbers, fractions, decimals, and operations of addition, subtraction, multiplication and division.

Arithmetic ability is used in everyday situations of our life. Hence, it is important in learning mathematics. When arithmetic ability is there, students' achievement will be good. When achievement in mathematics is good, they can go for higher studies easily.

Scope of the Study

The present study focuses on anxiety faced by Class VII students in learning mathematics. A sample of 200 Class VII students was selected. Variables, such as gender, locality, management and medium of instruction were taken into account to conduct the study in schools in Prakasam district of Andhra Pradesh.

Objectives of the Study

The objectives of the study are as follows:

(1) find out the anxiety faced by upper primary school students in learning mathematics

(2) find out the anxiety in learning mathematics by upper primary boy and girl students

(3) find out the anxiety faced by rural and urban upper primary school students in learning the subject

(4) find out the anxiety faced by government and private upper primary school students in learning mathematics

(5) find out the anxiety in learning mathematics by Telugu and English-medium upper primary school students

Review of Related Litarature

Researchers found there were many factors that influenced poor learning in mathematics. Rastogi found that one of the important causes of backwardness in mathematics was the poor command over basic arithmetic skills. Attitudes were closely linked with achievement. When command over basic arithmetic skills improved, attitude towards mathematics became more favourable and achievement in the subject

increased. It was also found that there was no significant sex difference in either attitude towards mathematics or achievement in the subject.

M. Chitkaram found that boys and girls of superior ability did not show significant difference between mean score on achievement in mathematics. Girls of average ability scored significantly higher in mathematics than boys.

Sunil Kumar found that the mean scores of urban students have been better than that of rural students. It was also found that OBC students got better achievement scores than SC/ST students.

P. Nirmala found that many factors influenced the academic achievement of students in mathematics at the higher secondary school level.

In the present study, it is observed that mathematics information processing skill, decision making skill and attitude towards the subject have made a significant contribution towards academic achievement in it.

Method of Research

The study involves normative survey method. The investigator selected this method because it is only status study.

Variables of the Study

The variables considered for the study, are as follows:

(1) boys versus girls in upper primary schools

(2) rural versus urban upper primary school students

(3) private versus government upper primary school students

(4) English versus Telugu-medium upper primary school students

Hypotheses of the Study

Upper primary school students do not possess high anxiety in learning mathematics.

Hypothesis 1a: There is no significant difference in anxiety in learning mathematics between boys and girls of upper primary schools.

Hypothesis 1b: There is no significant difference in anxiety in learning mathematics between rural and urban upper primary school students.

Hypothesis 1c: There is no significant difference in anxiety in learning mathematics between government and private upper primary school students.

Hypothesis 1d: There is no significant difference in anxiety in learning mathematics between Telugu and English-medium upper primary school students.

Sample of the Study

After a detailed study of all sampling methods and considering the variables selected for the research work, stratified sampling method was found suitable. In stratified sampling, the researcher has a greater control over sample selection and use.

Two hundred students of Class VII of upper primary school were selected for the study.

Tools of the Study

The selection of suitable tools for conducting the study is important. For conducting a research in any field, we need good research tools for the measurement of the aspects to be studied. Self-made anxiety tool has been used for the study.

Analysis of the Data

The data collected through the use of tools need to be organised, edited, classified and tabulated before analysis and interpretation to get generalisations and draw conclusions.

The aspects of anxiety will be analysed individually. The hypotheses framed for the study will be tested statistically and accepted or rejected accordingly. Statistical procedures, like mean, Standard Deviation (S.D.), critical ratio, chi-square test will be used to analyse the data.

Discussions and Conclusions

(1) The upper primary school students face anxiety in learning mathematics (Table 1.1).

The education system is giving more importance to enrich children's knowledge but is ignoring anxiety among students. Even parents lay more importance to educate their children but ignore anxiety among them. Over-ambition is forced by parents on students, which causes anxiety. This is not a correct situation in the education system. Parents and teachers must work to reduce anxiety level in students. It is only then that the students will achieve good results and positions.

Table 1.1

Sample	*Sample size*	*Mean*	*S.D.*
Whole	200	38.5	6.5

(2) There is no significant difference in anxiety in learning mathematics in boy and girl students of upper primary school (Table 1.2).

The study revealed that there is a slight difference among boy and girl students as regards to anxiety in learning mathematics. Girls have high level of anxiety in learning mathematics than boys. As girls face

Table 1.2

Variable	*Sample size*	*Mean*	*S.D.*	*Difference between means*	*S.E.D*	*C.R.*
Upper primary school boys	100	42.96	8.18	1.2	1.69	0.70*
Upper primary school girls	100	44.16	8.71			

* Not significant at 0.05 level

physical and psychological problems, it leads to development of anxiety levels, thereby, making mathematics learning difficult.

(3) There is no significant difference in anxiety in learning mathematics in rural and urban upper primary school students (Table 1.3).

Table 1.3

Variable	*Sample size*	*Mean*	*S.D.*	*Difference between Means*	*S.E.D*	*C.R.*
Rural upper primary school students	100	49.42	4.78	0.18	1.04	0.17*
Urban upper primary school students	100	49.69	5.61			

#Not Significant at 0.05 level

Both rural and urban school students possess the same level of anxiety in learning mathematics as they follow the same instructions. Generally, rural students face high anxiety in learning mathematics but urban students also face the same problem as they are not able to concentrate in the subject.

(4) There is a significant difference in the anxiety level in learning mathematics between government and private upper primary school students (Table 1.4).

The study revealed that government upper primary school students possesed higher level of anxiety than those studying in private school. Special classes mould a child in every aspect, paving the way for character building. The classes are helpful to students as they keep the children away from stress, strain, fear, etc. If the same training is provided to government school students, it will be helpful to them and build their confidence, leading to successful mathematics.

(5) There is a significant difference in anxiety in learning mathematics in English and Telugu-medium upper primary school students (Table 1.5).

Table 1.4

Variable	*Sample size*	*Mean*	*S.D.*	*Difference between means*	*S.E.D*	*C.R.*
Government upper primary school students	100	49.42	5.28	3.88	0.99	5.93
Rural upper primary school students	100	43.54	8.42			

When maths is taught in the regional language, Telugu, the students can understand the theme better compared to English-medium secondary school students. The medium of instruction is a major problem for upper primary school students in learning mathematics.

Suggestions for Further Research

(1) Studies may be taken up to identify the other factors affecting interest in mathematics.

(2) Studies may be conducted to find out the relationship between the anxiety of various management schools.

Table 1.5

Variable	*Sample size*	*Mean*	*S.D.*	*Difference between means*	*S.E.D*	*C.R.*
English-medium upper primary school students	100	48.36	5.84	7.8	1.32	2.12*
Telugu-medium upper primary school students	100	45.56	7.31			

* Significant at 0.05 level

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