

CHAPTER- 5

SUMMARY AND

FINDINGS

5.1 Introduction

This chapter presents a brief summary and findings of the study. This is followed by the educational implication based on the findings of the study; suggestion for further research on related topic has also been outlined.

The present study deals with the mathematics Achievement in relation to Ability in fundamental operations.

Variables of the study:

Independent Variable: Mathematics Achievement.

Dependent Variables: (1) Application in properties of fundamental operations.

(2) Awareness in properties of fundamental operations.

Background Variables: (1) Gender

(2) Type of School

The researcher used two self-made tests-Awareness and Application to find out the awareness, application and ability of the students in properties of fundamental operations. The sum of the scores in both the tests were taken as the measure of ability. For measuring achievement, marks obtained by the students in their Half yearly Examination of the School was considered.

For finding the sample, 40 C.B.S.E. schools in Bhopal district were divided into two groups – Government and Private, then from each group two schools were chosen at random finally, one section of class-VI was taken from each of the four schools. The number of students present in both the tests were finally taken as the sample size, which came out to be 166 i.e. the results of the study are on the basis of 166 students only (72 girls + 94 boys)

ANOVA was used to find results pertaining influence of achievement. Correlation was used to find results pertaining relationship and t-test was used find results pertaining background variables.

5.2 Objectives

- 1 To find out three groups (high, moderate and low) of students on the basis of their achievement in mathematics.
- 2 To find out the ability (awareness + application) in properties of fundamental operations among the three groups.
- 3 To find the influence of academic achievement in mathematics on ability in properties of fundamental operations.
- 4 To find the influence of academic achievement in mathematics on awareness in properties of fundamental operations.
- 5 To find the influence of academic achievement in mathematics on application in properties of fundamental operations.
- 6 To find the relation between achievement in mathematics and ability in properties of fundamental operations.
- 7 To find the relation between mathematics achievement and awareness in properties of fundamental operations.
- 8 To find the relation between mathematics achievements and application of properties of fundamental operations.
- 9 To find the relation between awareness and application of properties of fundamental operations.
- 10 To find out difference between girls and boys in respect of achievement in mathematics.
- 11 To find out difference between girls and boys in respect of ability in properties of fundamental operations.

- 12 To find out difference between government and private schools in respect of achievement in mathematics.
- 13 To find out difference between government and private schools in respect of ability in properties of fundamental operations.

5.3 Major Findings

- 1 Academic achievement in mathematics do influence ability in fundamental operations (in terms of both awareness and application).
- 2 Students belonging to high achievement group in mathematics are superior to their counterparts in moderate and low groups in respect of their ability in fundamental operations.
- 3 Significant positive relationship found between achievement in mathematics and ability in fundamental operations in terms of both awareness and application.
- 4 Significant positive relationship was found between the awareness of the properties of fundamental operations and its application.
- 5 No significant difference was found between boys and girls in respect of their achievement in mathematics.
- 6 No significant difference was found between boys and girls in respect of their ability in fundamental operations both in terms of awareness and application.
- 7 Although students of private schools have better achievement in mathematics than the students of govt. schools but no significant difference was found between them in their ability in fundamental operations in terms of both awareness and application.
- 8 Though it is found that ability in properties of fundamental operations varies directly with variation in achievement levels but the ability is not as good as the achievements of the students. The highest percentage score in

achievement is 100% while in ability it is only 41.2% (Max. marks obtained is 46 out of 110).

5.4 Educational Implications

From the study we get an indication that girls are on par with boys both in terms of mathematics achievement and ability in fundamental operations, which is a positive feedback for the mathematics curriculum in the sense that it is able to bring similar development in both boys and girls. No gender bias is observed in mathematics curriculum.

Although students of private school have better achievement in mathematics than the students of government schools but no significant difference was found between them in their ability in fundamental operations. This finding requires attention of private schools' teachers that they should focus more on development of concepts among students instead of simply focusing on achievement.

The ability of students in properties of fundamental operations is found to be not adequate though their achievement in mathematics is good. This indicates that though students are good in mathematics achievement their ability in properties of fundamental operations is below average. This finding has implications to mathematics instructional procedure. Mathematics curriculum of VI class stipulated the properties of fundamental operations but performance of students is found to be not adequate. This means that mathematics teachers should transact the properties of fundamental operations in such a way that students would be able to develop awareness about these properties and apply them in solving mathematical problems. Mere inclusion of properties of fundamental operations in mathematics curriculum may not help in equipping students with necessary ability in fundamental operations. Hence, there is a need to introduce innovative teaching strategies to improve ability of fundamental operations among students of VI class.

To conclude we can say that as fundamental operations are the basic requirement of studying mathematics and so it is essential to see that it takes

proper place in the curriculum as well as in various pre-service and in service training programmes to maintain the quality of mathematics education.

5.5 Suggestions for further study

- A study can be undertaken with a large sample for drawing authentic generalization.
- Relationship between mathematics achievement and some other fundamental concepts can be studied.
- A study can be carried out for different class levels and different examination boards.
- Relationship between academic achievement and fundamental concepts can be studied in other subject also.