

# A Study of Academic Achievement in Mathematics of 7<sup>th</sup> Class Students of Sirsa District

Mankesh Sheoran\*

Assistant Professor, Department of Mathematics, Govt. College, Baund Kalan, Charkhi Dadri-127306, Haryana, India

**Abstract** – In this paper the academic achievement of 7th class students BSEH students were taken as research problem. This study has been conducted on 200 students of 7th class of Sirsa district. These students have been further categorized into Government and Private school students and further classified on the basis of sex and area. In this study Mathematics Achievement Test authored by Ali Imam and Tahira Khatoon was used. The data was collected with the help of standardized Mathematics Achievement Test and Mean, S.D and 't' test was applied for analysis and interpretation of data. In this study the Private school students was having better Academic achievement in Mathematics as compare to Government school students. Similarly the male and urban area Private and Government school students were having better academic achievement in Mathematics than female and rural area Private and Government school students. The results indicates that the academic achievement in Mathematics in Private schools is found better than Governments schools because the facilities in private schools was given better than Governments schools academically. Similarly the urban area male students were having better results in mathematics due to more resources given to them. The Government schools and schools situated in rural areas and females should be given more resources financially, academically so that improvement in government schools, rural area schools and in females may be acquired.

**Keywords:** Academic Achievement, Mathematics, Private Schools, Government Schools, BSEH

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## INTRODUCTION

In the modern scientific and technical world, education plays a vital role. The educational advancement of a country shows its pace of development. Overall development of a country lies in its optimum use of human resources. Education is the greatest source of social regeneration and revitalization. Education shapes an individual from beginning to end. Education does not merely impart literary ability; it also disciplined behaviours. Education thus is the process of developing the inner abilities and powers of an individual. Education denotes the victory of knowledge over ignorance, that of reason over superstition and of light over darkness. Education is regarded as key to our nation's prosperity and welfare.

In today's competitive world, man has to struggle in field to achieve something. The struggle for success starts from the school age to be an achiever. The word achievement is a wider term. It is a measure of student's learning in a particular subject or a group of subjects. Achievement is a measure of how for a particular student has been able to learn and acquire

or has benefitted from the learning experiences given to him/her. Achievement is the proficiency of the student assessed by his performance in the academic subjects. There are many factors that contribute to the academic achievement. Basically these factors include personality, intelligence, study habits, home environment and interest and school factors. In education effective learning not only depends upon good teaching but it is also responsibility of pupils. Efficient learning depends on the learner's ability to schedule his time, physical conditions; preparation for examinations etc. learning involves the development of proper study habits and skills.

Some mechanism has always existed for assessing the worth of an individual in accordance with the needs of society. Even in ancient Greece in Sparta, tests were devised to measure the physical competence of youthful pupils (Schwartz et al, 1962). In 223 B.C. Chinese were selecting civil servants through examination (Schwartz et al, 1962). The modern testing methods can, however, be traced to the beginning of 20<sup>th</sup> century. In

contemporary times, annual examination continue to be the most widely used system of evaluation.

Generally speaking, achievement implies the net result of an individual's effort over a period of time. It shows the level of proficiency attained in scholastic or academic work. Achievement is an enduring personality characteristic in which the individual is predisposed towards success and relatively concerned with failure.

Achievement tests generally measure the present proficiency, mastery and understanding of general and specific areas of knowledge, largely, they are measures of instruction and learning. They are used to evaluate teacher's effectiveness, method of teaching, the school standards and in making surveys of pupil's performance. Thus, it enables us to know the progress of pupils in specific area of works or the whole performance in learning process of subjects for a particular period of time.

### REVIEW OF RELATED LITERATURE:

**Das N.R (2010)** the financial and managerial status of the schools seems to be the major factors of academic performance. In general, academic performances as well as mathematics performances of the government and private schools are better than the schools not getting government aids. The study also revealed that mathematics performances of schools are positively correlated with (a) the academic performance of school indicated by school leaving pass percentage and also (b) with the performances in subjects other than mathematics. On the other hand, students and teacher ratio seems not to affect the mathematics performance of the schools under study. The requirement of urgent attention to improve the performance of secondary school is indicated considering the societal needs.

**Engel M. (2012).** The findings showed that a large portion of the mathematics content taught during kindergarten may not meet the needs of many kindergarteners and that closer attention to children's knowledge and skills at school entry may be warranted. In fact, the increases shown by spending more time on more advanced math topics suggest that a relatively modest shift in classroom coverage would lead to small gains in mathematics achievement

**Kapoor. A (2003)** concluded that the student are working outside and get experience have good practical and hand in upper closing practical paper. They may try to relate the classroom experience with the field work experience, so that they may subsume the new learning with work study. Working students have better knowledge about theory paper and their academic achievement is higher than the non-working student marginally.

**Linda Mainquist (2011).** The Transcendental Meditation technique may be an effective approach for improving math and academic English achievement in low-performing students, according to a new study published in the prestigious journal Education. The study was conducted in a public middle school in California with 189 students who were below proficiency level in English and math. Change in academic achievement was evaluated using the California Standards Tests (CST).

### OPERATIONAL DEFINITIONS USED IN THIS RESEARCH:

#### Academic

The term academic has been derived from the term "Academy". The meaning of term "Academy" is "School" where special types of instruction imparted.

#### Achievement

Achievement means knowledge attained or skill developed by pupil usually in the school subjects measured by test scores or marks assigned by teacher or by both. Achievement signifies accomplishment or gain or performance carried out successfully by an individual or a group on the completion of task whether it is academic, manual, personal or social.

#### According to Webster's New Dictionary, "Achievement is:-

- a) The act of achieving
- b) A thing achieved especially skills and work, courage, fear, exploit etc."

#### Academic Achievement

In the literal sense of the term, academic achievement is the combination of two words "ACADEMIC + ACHIEVEMENT" that implies "SCHOLARY + ACCOMPLISHMENT."

Academic achievement may be called as "Competence off students shown in school subjects for whom they have taken instructions."

Academic achievement or (academic) performance is the outcome of education-the extent to which a student, teacher or institution has achieved their educational goals. Academic achievement is commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important-procedural knowledge such as skills or declarative knowledge such as facts.

Academic achievement is one of the most important goals of education. Good academic records predict the future of the child. In the age of competition at every step in life academic records speak for an individual.

**According to Good** "Academic achievement means accomplishment or proficiency of performance in a given skill or body of knowledge".

#### **According to Taneja Dictionary of Education (1989)**

"Academic achievement refers to performance in school or college in standardized series of educational tests".

**According to Kumari (2001)**"Academic achievement is the sum total of information after completing a course of instruction (partially or fully) in a particular grades he has obtained on an achievement test".

#### **Mathematics**

**According to Oxford Dictionary (1983),** "Mathematics is an abstract science which deals with study of numbers, quantity and space."

**According to Bacon,** "Mathematics is the gate and key of all sciences."

**According to Oxford Illustrated Dictionary,** "An abstract science of space and number."

**According to Webster's Third International Dictionary,** "Mathematics is science that deals with relationship and symbols of numbers and magnitude that include quantitative operations and the solution of quantitative problems."

#### **STATEMENT OF THE PROBLEM**

The problem which has been worked out in this research project stated as **A STUDY OF ACADEMIC ACHIEVEMENT IN MATHEMATICS OF 7<sup>th</sup> CLASS STUDENTS OF SIRSA DISTRICT.**

#### **NEED OF THE STUDY:**

Education is imparted for achieving certain ends and goals. Various subjects of school curriculum are different means to achieve these goals. The teaching of mathematics essentially helps the students acquiring essential mathematical knowledge, skills, interest and attitude. Mathematics has played an important role in building up modern civilization by perfecting all sciences.

In India although, Mathematics occupies the status of a compulsory subjects in the school curriculum yet the rate of the failure in the subjects is very alarming. Much of our success in the examination depends on the way we study mathematics. By knowing interest in

mathematics we can have better understanding in mathematics. Without the knowledge of mathematics one would not be able to make any progress. For a good student, it is necessary that first of all he/she should have basic knowledge of mathematics. So to achieve success in science and other subjects have immense importance in the acquisition of satisfactory level of achievement in mathematics. The study of this kind would highlight the academic achievement in mathematics of 7<sup>th</sup> class students of Sirsa District. The investigator selected this topic to check the academic achievement in mathematics of 7<sup>th</sup> Class students of Sirsa District.

#### **OBJECTIVES OF THE STUDY**

The study will be carried out by the investigator with the following objectives:-

1. To study the significant difference in the academic achievement in mathematics of students studying in 7<sup>th</sup> class Government and Private school students of Sirsa district.
2. To study the significant difference between academic achievement in mathematics of male and female students studying in 7<sup>th</sup> class Government school of Sirsa district.
3. To study the significant difference between academic achievements in mathematics of male and female students studying in 7<sup>th</sup> class Private School of Sirsa District.
4. To study the significant difference between academic achievement in mathematics of rural and urban students studying in 7<sup>th</sup> class Government school of Sirsa District.
5. To study the significant difference between academic achievement in mathematics of rural and urban students studying in 7<sup>th</sup> class Private school of Sirsa District.

#### **HYPOTHESES**

The study has been undertaken on the basis of following hypotheses:-

1. There will be no significant difference in the academic achievement in mathematics of students studying in 7<sup>th</sup> class Government and Private school students of Sirsa district.
2. There will be no significant difference between academic achievement in mathematics of male and female students studying in 7<sup>th</sup> class Government school of Sirsa district.

3. There will be no significant difference between academic achievement in mathematics of male and female students studying in 7<sup>th</sup> class Private School of Sirsa District.
4. There will be no the significant difference between academic achievement in mathematics of rural and urban students studying in 7<sup>th</sup> class Government school of Sirsa District.
5. There will be no the significant difference between academic achievement in mathematics of rural and urban students studying in 7<sup>th</sup> class Private school of Sirsa District.

**METHODOLOGY**

In this research, Descriptive Survey Method was used.

**POPULATION**

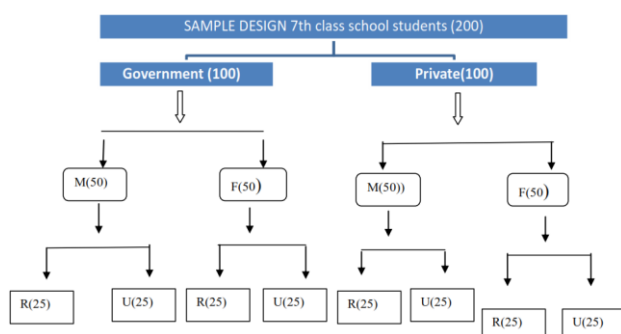
All 7<sup>th</sup> class students of Government and Private Schools of Sirsa District constituted the population.

**SAMPLE**

In this research, random sampling was used for present study. This study has been conducted on 200 students of 7<sup>th</sup> class of Sirsa district. These students have been further categorized into Government and Private school students and further classified on the basis of sex and area.

**SAMPLE DESIGN**

A diagrammatic representation of the design scheme in figure:-



**TOOLS OF RESEARCH**

In this study Mathematics achievement test authored by Ali Imam and Tahira Khatoon will be used.

**STATISTICAL TECHNIQUES USED**

Mean, SD, t-ratio will be used to interpret the results scientifically and objectively.

**DELIMITATIONS OF THE STUDY**

1. The study was delimited to sample size of 200 students of 7<sup>th</sup> class students
2. It has been delimited to only Government and Private 7<sup>th</sup> class school students.
3. It has been delimited to Sirsa district only.
4. The study was delimited in objectives, hypothesis and statistical techniques used in this research.
5. The study was delimited to only one independent variable i.e. Academic achievement in Mathematics.

**MAIN FINDINGS**

The problem worked out in this research problem is related with study of academic achievement in mathematics of 7<sup>h</sup> class students of private and government schools of HBSE. The details of procedure, techniques, analysis, interpretation and discussion of the data lead to the following conclusion in the form of results.

1. There is significant difference between Private School students and Government School students. Therefore, hypothesis is rejected. The calculated 't' value is more than standard table value at both levels of significance. The mean value of Private School students is more than Government School students regarding academic achievement in mathematics. Therefore the academic achievement of Private School students is more than Government School students, regarding academic achievement in mathematics.
2. There is significant difference between academic achievement in mathematics of male and female students of Government School students. Therefore, hypothesis is rejected. The calculated 't' value is more than standard table value at both levels of significance. The mean value of male students of Government Schools is more than female Government school students regarding academic achievement in mathematics. Therefore the academic achievement of male students of Government Schools is more than female Government school students, regarding academic achievement in mathematics.
3. There is significant difference between academic achievement in mathematics of male and female students of Private School students. Therefore, hypothesis is rejected.



The calculated 't' value is more than standard table value at both levels of significance. The mean value of male students of Private Schools is more than female Private school students regarding academic achievement in mathematics. Therefore the academic achievement of male students of Private Schools is more than female Private school students, regarding academic achievement in mathematics.

4. There is significant difference between academic achievement in mathematics of urban and rural students of Government School students. Therefore, hypothesis is rejected. The calculated 't' value is more than standard table value at both levels of significance. The mean value of urban students of Government Schools is more than rural Government school students regarding academic achievement in mathematics. Therefore the academic achievement of urban students of Government Schools is more than rural Government school students, regarding academic achievement in mathematics.
5. There is significant difference between academic achievement in mathematics of urban and rural students of Private School students. Therefore, hypothesis is rejected. The calculated 't' value is more than standard table value at both levels of significance. The mean value of urban students of Private Schools is more than rural Private school students regarding academic achievement in mathematics. Therefore the academic achievement of urban students of Private Schools is more than rural Private school students, regarding academic achievement in mathematics.

## SUGGESTIONS

1. This study has been confined to only Private and Government HBSE Schools. Efforts can be made to conduct this type of study at CBSE schools whether they are Govt. or Private.
2. This study has been conducted only on 7<sup>th</sup> class students to check their academic achievement in 7<sup>th</sup> class. It can be conducted on the other classes also.
3. This study has been confined to schools of Sirsa district only. Efforts can be made to conduct this type of study at State or National level.
4. A comparative study can be conducted on students belonging to college and university levels.

5. This study has been done only on 200 students of Sirsa district. This can be conducted on more number of students.
6. This study has been conducted only on subject mathematics. It can be conducted on other subjects like English, Science and language subjects.
7. This study can be related with other variables like emotional, intelligence, interest achievement, motivation etc.
8. This study can be conducted seeking other objectives, hypotheses and statistical techniques may be changed as per requirement.

## REFERENCES

1. Vanderbilt University (2013, May 16). Most Math being taught in kindergarten is old news to students. <http://www.ScienceDaily.com>
2. Engel M. (2012). Educational Evaluation and Policy Analysis.
3. Linda Mainquist (April 2011). California Standards Tests (CST).
4. Das N.R. (2010). Professor Department of Mathematics, Gauhati University, Guwahati, Assam.
5. Garrett H. E. (2006). Statistics in Psychology And Education, Surjit Publication, Delhi
6. Kapoor A. (2003). Effect of the work study on academic achievement, The Progress of Education VOI (LXXXIV, No.8)
7. Webster's New World Dictionary (1980). William Collins Publisher, The World Publishing co.
8. Anastasi, A. (1982). Psychological testing (eight edition), New York: Macmillian Publishing Co. INC.
9. Best, John W. and Kahn James, V. (1992). Research in Education (6th edition) New Delhi: Prentice Hall of India Private Limited
10. Borg W.R. (1973). Education Research: An introduction, New York: David Mechay Company, Inc.

11. Guilford, J.P. (1987). *Psychometric Methods*, New Delhi: TATA McGraw Hill Publishing Co. Ltd.
12. Gronlund, Norman, E. (1968). *Constructing Achievement tests*, New Jersey: Printice Hall Inc. Englewood, Cliff.
13. Gronlund, N.E. (1966). *Constructing Achievement Test*, Englewood Cliffs: Prentice Hall.
14. Imam Ali, Khatoon Tahira (2012). *Mathematics Achievement Test*, H.P. Bhargava Book House, 4/230, Kacheri Ghat, Agra.
15. Schwarts (1962). *Evaluating Student Progress in the Secondary School* New York: David Meckay Company, Inc.
16. Edwards and Kilpatrick (1948). A techniques for construction of Attitude Scale. *Journal of Applied Psychology*, 32, pp. 374-384.
17. Murray (1938). *Exploration in personality*. New York : Oxford University, Press.

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**Corresponding Author**

**Mankesh Sheoran\***

Assistant Professor, Department of Mathematics,  
Govt. College, Baund Kalan, Charkhi Dadri-127306,  
Haryana, India

[mankesh.sheoran86@gmail.com](mailto:mankesh.sheoran86@gmail.com)