
A STUDY OF ACADEMIC ACHIEVEMENT IN MATHEMATICS OF 8TH CLASS STUDENTS OF SIRSA DISTRICT IN HARYANA STATE

Prof. Dr Jai Parkash*

Principal, JCD (PG) College of Education, Sirsa

Dr .(Mrs) Sushma Hooda**

Assistant Professor, JCD (PG) College of Education, Sirsa

ABSTRACT

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. Present study determine the academic achievement in mathematics of 8th class students . In this study, 'descriptive survey method' was used. All 8th class students of Govt. Schools and Private Schools of Sirsa district in Haryana State constitute the population . Purposive stratified random sampling has been used for present study. This study has been conducted on 240 students of 8th class of Sirsa District in Haryana State. In this study Mathematics achievement test authored by Ali Imam and Tahira Khatoon tool was used . Mean, SD, t-ratio were used to interpret the results scientifically and objectively. In this study it is concluded that the mean value of Private School students is more than Govt. School students regarding academic achievement in mathematics. Therefore the academic achievement of Private School students is more than Govt. School students , regarding academic achievement in mathematics. The mean value of male students of Govt. Schools is more than female students of Govt. School regarding academic achievement in mathematics. The mean value of male students of Private Schools is more than female students of Private Schools regarding academic achievement in mathematics. The mean value of male students of Private Schools is more than male students of Govt. Schools regarding academic achievement in mathematics. The mean value of female students of Private Schools is more than female students of Govt. Schools regarding academic achievement in mathematics . From this study it is concluded that Academic achievement of Private School students is more in case of Private Schools and Academic Achievement of male students is more in both Private and Govt. Schools .

Key Word: Academic Achievement , Mathematics , Government School, Private School

INTRODUCTION

In the modern scientific and technical world, education plays a vital role. In education advancement of a country shows its pace of development. Development of a country lies in its optimum use of human resources. Education is the greatest sources of regeneration and revitalization. In today's competitive world, man has to struggle in every field to achieve something. The struggle for the success starts from the school age to be an achiever. There are many factors, which contribute to the academic achievement. Basically these factors include intelligence, study habits, home environment and interest and school factors. 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.

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

- c) The act of achieving
- d) 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 "Scholarly + Accomplishment".

Academic achievement may be called as "Competence of 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 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, quality and space."

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 8TH CLASS STUDENTS OF SIRSA DISTRICT IN HARYANA STATE'

SIGNIFICANCE OF THE PROBLEM

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 science.

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.

OBJECTIVES OF THE STUDY

The study 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 Govt. schools and in private schools of Sirsa district.
2. To study the significant difference between academic achievement in mathematics of male and female students studying in Govt. schools .
3. To study the significant difference between academic achievement in mathematics of male and female students of private schools .
4. To study the significant difference between male students of Govt. schools and male students of private schools of Sirsa district.
5. To study the significant difference between female students of govt. schools and female students of private schools of Sirsa district.

HYPOTHESES

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

1. There is no significant differences in the academic achievement in mathematics of students studying in Govt. schools and in private schools.
2. There is no significant difference between academic achievement in mathematics of male and female students studying in Govt. schools .
3. There is no significant difference between academic achievement in mathematics of male and female students studying in private schools .

4. There is no significant difference in academic achievement of male students studying in Govt. schools and private schools .

5. There is no significant difference in academic achievement of female students studying in Govt. schools and private schools .

METHOD OF INVESTIGATION

In this study, 'descriptive survey method' was used .

POPULATION

All 8th class students of Govt. Schools and Private Schools of Sirsa district in Haryana State constitute the population .

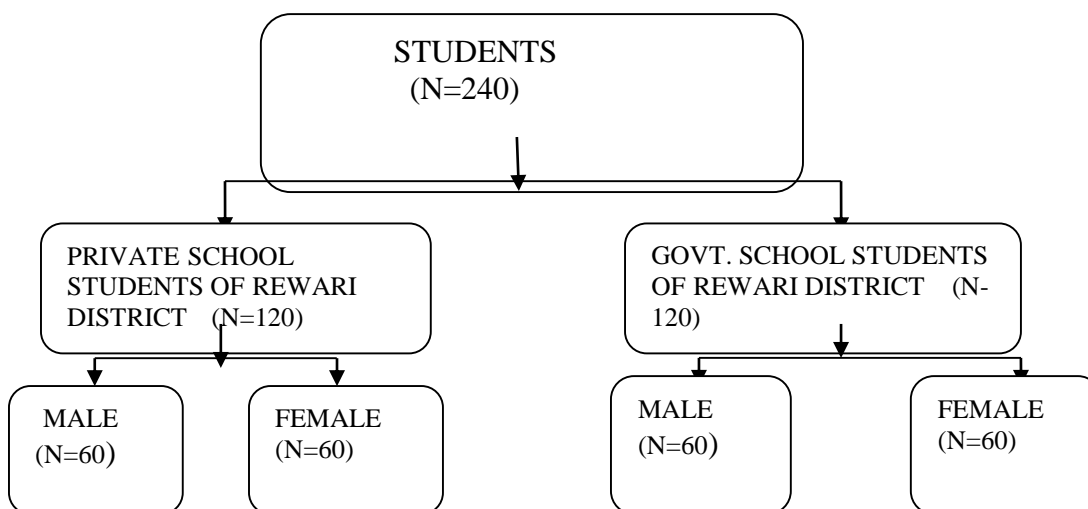
SAMPLE

Purposive stratified random sampling has been used for present study. This study has been conducted on 240 students of 8th class of Sirsa district in Haryana State. The investigation has been classify the sample into two categories of Govt. School students and Private School students.

These students have been further categorized into male and female students.

SAMPLE DESIGN

A diagrammatic representation of the design scheme in figure:-



TOOLS USED IN THIS STUDY

In this study following tool used for the purpose of collecting data:-

Mathematics achievement test authored by Ali Imam and Tahira Khatoun.

STATISTICAL TECHNIQUES USED

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

DELIMITATIONS

1. The study was delimited to only one variable.

2. The study was delimited to only 240 students of 8th class.
3. It was delimited to only school students.
4. It was delimited to 120 students of Govt. schools and 120 students of private schools of Sirsa district in Haryana State only.

ANALYSIS AND INTERPREATION OF DATA.

Every study is a very interesting thing and the analysis and interpretation of data collected during a study is the main productive part of every study.

Hypothesis No. 1

There is no significant difference in academic achievement in mathematics of students studying in Govt. Schools and in Private Schools .

Table 1

Table 1 shows the Mean, S.D., 't' values of students of Govt. Schools and students of Private Schools regarding academic achievement in Mathematics.

Nature of Variables	No. of Students	Mean	S.D.	Df	t value	Level of Significance
Private School students	120	45.23	4.28	238	14.75	Significant at both levels .05 & .01
Govt. School students	120	38.12	3.12			

df=238 at .05 = 1.97 .01 = 2.59

INTERPRETATION

Table: 1 shows that there are 120 students of Private Schools and 120 students of Govt. Schools of Sirsa district. The mean and S.D. of Private School students and Govt. School students are 45.23 & 4.28 and 38.12 & 3.12 respectively. The calculated 't' value is 14.75, which is more than standard table value at both levels of significance at .05 and .01 level of significance i.e. 1.97 and 2.59.

Therefore, it is analyzed that Hypothesis No. 1 is rejected. The mean value of Private School students is more than Govt. School students regarding academic achievement in Mathematics. Therefore, it is confirmed that the academic achievement in Mathematics of Private School students is more than the academic achievement in Mathematics of Govt. School students of Sirsa district in Haryana State.

HYPOTHESES No.2

There is no significant difference in academic achievement in mathematics of male and female students studying in Govt. Schools .

Table : 2

Table - 2 shows the Mean, S.D., 't' values of male and female students of Govt. Schools regarding academic achievement in Mathematics.

Nature of Variables	No. of Students	Mean	S.D.	Df	t value	Level of Significance
Male students of Govt. Schools	60	41.67	4.12	118	9.95	Significant at both levels .05& .01
Female students of Govt. Schools	60	35.12	3.02			

df= 118 at .05= 1.98 .01= 2.63

INTERPRETATION

Table: 1.2 shows that there are 60 male students of Govt. Schools and 60 female students of Govt. Schools of Sirsa district. The mean and S.D. of male students of Govt. Schools and female students of Govt. School are 41.67 & 4.12 and 35.12 & 3.02 respectively. The calculated 't' value is 9.95, which is more than standard table value at both levels of significance at .05 and .01 level of significance i.e. 1.98 and 2.63.

Therefore, it is analyzed that Hypothesis No.2 is rejected. The mean value of male students of Govt. Schools is more than female students of Govt. Schools regarding academic achievement in Mathematics. Therefore, it is confirmed that the academic achievement in Mathematics of male students of Govt. Schools is more than the academic achievement in Mathematics of female students of Govt. Schools .

HYPOTHESIS No. 3

There is no significant difference between academic achievement in mathematics of male and female students studying in private schools.

Table : 3

Table : 3 shows the Mean, S.D., 't' values of male and female students of Private Schools regarding academic achievement in Mathematics.

Nature of Variables	No. of students	Mean	S.D.	Df	t value	Level of Significance
Male students of Private Schools	60	48.12	5.13	118	7.58	Significant both levels .05 &.01
Female students of Private Schools	60	41.68	4.13			

df = 118 at .05 = 1.98 .01 = 2.63

INTERPRETATION

This table 3 shows that there are 60 male students of Private Schools and 60 female students of Private Schools of Sirsa district. The mean and S.D. of male students of Private Schools and female students of Private Schools are 48.12 & 5.13 and 41.68 & 4.13 respectively. The calculated 't' value is 7.58, which is more than standard table value at both levels of significance at .05 and .01 level of significance i.e. 1.98 and 2.63

Therefore, it is analyzed that Hypothesis No. 3 is rejected. The mean value of male students of Private Schools is more than the female students of Private Schools regarding academic achievement in Mathematics. Therefore, it is confirmed that the academic achievement in Mathematics of male students of Private Schools is more than the academic achievement in Mathematics of female students of Private Schools .

HYPOTHESIS No. 4

There is no significant difference in academic achievement in mathematics of male students studying in Govt. Schools and in Private Schools .

Table : 4

Table : 4 shows the Mean, S.D., 't' values of male students of Govt. Schools and male students of Private Schools regarding academic achievement in Mathematics.

Sr. No.	Nature of Variables	No. of Students	Mean	S.D.	Df	t value	Level of Significance
1	Male students of Private Schools	60	48.12	5.13	118	7.59	Significant at both levels .05 & .01
2	Male students of Govt. Schools	60		4.12			

df=118 at .05 = 1.98 .01 = 2.63

INTERPRETATION

This table 4.4 shows that there are 60 male students of Govt. Schools and 60 male students of Private Schools of Sirsa district. The mean and S.D. of male students of Private Schools and male students of Govt. Schools are 48.12 & 5.13 and 41.67 & 4.12 respectively. The calculated 't' value is 7.59, which is more than standard table value at both levels of significance at .05 and .01 level of significance i.e. 1.98 and 2.63 .

Therefore, it is analyzed that Hypothesis No. 4 is rejected. The mean value of male students of Private Schools is more than male students of Govt. Schools regarding academic achievement in Mathematics. Therefore, it is confirmed that the academic achievement in Mathematics of male students of Private Schools is more than the academic achievement in Mathematics of male students of Govt. Schools .

HYPOTHESIS No.5

There is no significant difference in academic achievement in mathematics of female students studying in Govt. School and in Private Schools .

Table : 5

Table : 5 shows the Mean, S.D., 't' values of female students of Govt. Schools and female students of Private Schools of regarding academic achievement in Mathematics.

Sr. No.	Nature of Variables	No. of Students	Mean	S.D.	Df	t value	Level of Significance
1	Female students of Private Schools	60	41.68	4.13	118	9.93	Significant at both levels .05 & .01
2	Female students of Govt. Schools	60	35.12	3.02			

df = 118 at .05 = 1.98 .01 = 2.63

INTERPRETATION

Table : 5 shows that there are 60 female students of Govt. Schools and 60 female students of Private Schools of Sirsa district. The mean and S.D. of female students of Private Schools and female students of Govt. Schools are 41.68 & 4.13 and 35.12 & 3.02 respectively. The calculated 't' value is 9.93, which is more than standard table value at both levels of significance at .05 and .01 level of significance i.e. 1.97 and 2.59.

Therefore, it is analyzed that Hypothesis No. 5 is rejected. The mean value of female students of Private Schools is more than female students of Govt. Schools regarding academic achievement in Mathematics. Therefore, it is confirmed that the academic achievement in Mathematics of female students of Private Schools is more than the academic achievement in Mathematics of female students of Govt. Schools .

MAIN FINDINGS

The problem worked out in this research project is related with study of academic achievement in mathematics of 8th class students of private schools and students of Govt. schools. The details of procedure, techniques, analysis, interpretation and discussion of the data leads to the following conclusion:-

1. There is significant difference between Private School students and Govt. 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 Govt. School students regarding academic achievement in mathematics. Therefore the academic achievement of Private School students is more than Govt. School students , regarding academic achievement in mathematics.

2. It has been proved that there is significant difference between academic achievement in mathematics of male and female students of Govt. School. 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 Govt. Schools is more than female students of Govt. Schools regarding academic achievement in mathematics. Therefore the academic achievement of male students of Govt. Schools is more than female students of Govt. School, regarding academic achievement in mathematics.

3. There is significant difference between academic achievement in mathematics of male and female students of Private Schools. 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 students of Private Schools regarding academic achievement in mathematics. Therefore the academic achievement of male students of Private Schools is more than female students of Private Schools, regarding academic achievement in mathematics.

4. There is significant difference between male students of Private Schools and male students of Govt. Schools. 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 male students of Govt. Schools regarding academic achievement in mathematics. Therefore the academic achievement of male students of Private Schools is more than male students of Govt. Schools, regarding academic achievement in mathematics.

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

CONCLUSIONS: In this study it is concluded that the mean value of Private School students is more than Govt. School students regarding academic achievement in mathematics. Therefore the academic achievement of Private School students is more than Govt. School students, regarding academic achievement in mathematics. The mean value of male students of Govt. Schools is more than female students of Govt. School regarding academic achievement in mathematics. The mean value of male students of Private Schools is more than female students of Private Schools regarding academic achievement in mathematics. The mean value of male students of Private Schools is more than male students of Govt. Schools regarding academic achievement in mathematics. The mean value of female students of Private Schools is more than female students of Govt. Schools regarding academic achievement in mathematics. From this study it is concluded that Academic achievement of Private School students is more in case of Private Schools and Academic Achievement of male students is more in both Private and Govt. Schools.

EDUCATIONAL IMPLICATIONS

There is difference between the academic achievements of the students of Govt. Schools and students of Private Schools. The academic achievement of students of Private Schools is more than as compared to academic achievement of students of Govt. Schools. Thus change must be made in teaching in Govt. Schools so that achievement of students can be increased. Female students of Private schools of Rewari district have low academic achievements, so efforts must be made to increase their academic achievements in mathematics. The average of whole sample regarding academic achievement in mathematics is low. Thus new methods must be used to make this subject more interesting by adding some new activities related to it, so as to make this subject more popular. From the present study it is suggested that activities like seminar,

discussion, quiz contest etc. must be the part of teaching mathematics in schools, so that we can develop the interest of students among mathematics and then in science. It is suggested to teacher to give proper guidance to students about the importance of mathematics for their future use.

SUGGESTIONS FOR FURTHER STUDIES

1. This study has been confined to only some schools. Efforts can be made to conduct this type of study at all the schools whether they are Govt. or Private.
2. This study has been conducted only on 8th class students . 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. This study has been done only on 240 students of Sirsa district. This can be conducted on more number of students.
5. This study has been conducted only on subject mathematics. It can be conducted on other subjects like English, Science and language subjects.
6. This study can be related with other variables like emotional, intelligence, interest achievement, motivation etc.
7. This study can be conducted on college students.

REFERENCES

- Anjum K. Shaikh (2015). A study of effect of Science Inquiry Model on achievement of Geometric Concepts of VIII Standard students. Scholarly Research Journal for Interdisciplinary Studies Nov.2014 Vol II/XV P. 2451-2456.
- Best, JOHN W. and Kahn James, V. (1970). Research in Education, New Jersey : Prentice Hall Inc Englewood, Cliff.
- Best, John W. and Kahn James, V.(1992). Research in Education (6th edition) New Delhi: Prentice Hall of India Private Limited
- Burt, H.E (1957). Applied Psychology. Eurasia Publisher New Delhi, p 261-262
- Cronbach, L.T. (1950). Essentials of Psychological Testing, third edition, New York : N.Y. Harper.
- Crow & Crow, (1963). Educational Psychology, Eurasia Publisher New Delhi, p 261-262
- Engel, M. (2015). Most math being taught in kindergartens is old news to students. <http://www.ScienceDaily.com>
- Garrett, H. E. (2006) Statistics in Psychology And Education, Surjit Publication, Delhi.
- Gronlund, Norman, E.(1968). Constructing Achievement tests, New Jersey : Prentice Hall Inc Englewood, Cliff.
- Gronlund, N.E.(1966). Constructing Achievement Test, Englewood Cliffs : Prentice Hall.
- Imam Ali, Khatoon Tahira (2016). Mathematics Achievement Test published by H.P. Bhargava Book House, Agra.
- Kapoor, A. (2003). Effect of the work study on academic achievement, The Progress of Education VOI (LXXXIV, No.8)

Kaur Navdeep (2014) Effect of Science Inquiry Model of Teaching on Achievement in Chemistry at Secondary Stage. International Journal of Advanced Research in Education Technology & Management. Vol II No.1 April 2014 , 6-11.

Mainquist, L.(2011, April). Struggling Students find TM improves academic achievement.
<http://www.sciencedaily.com>

Murray, H.A. (1938). Exploration in personality. New York : Oxford University, Press.

Schwartz, et al. (1962). Evaluating Student Progress in the Secondary School New York : David MacKay Company, Inc.

Vaughn (1951). Educational Measurement, American Council of Education.

Webster's New World Dictionary (1980). William Collins Publisher, The World Publishing Co.