



A STUDY OF ACADEMIC ACHIEVEMENT IN BIOLOGY OF 11th CLASS STUDENTS OF SIRSA DISTRICT IN HARYANA STATE

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ABSTRACT

Education shapes an individual from beginning to end. Education does not merely impart literary ability; it also disciplines behaviors. Education thus is the process of developing the inner abilities. The word achievement is a main student's learning in a particular subject or a group of subjects William Orora, Fred N. Keraro and Samuel W. Wachanga (2016). 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/her performance in the academic subjects. Present study determine the academic achievement in Biology of 11th class students. In this study, 'descriptive survey method' was used. All eleventh 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 11th class of Sirsa District in Haryana State. In this study Biological achievement test authored by S.C. Gakhar and Himadri was used. Mean, SD, t-ratio were used to interpret the results scientifically and objectively. In this study it is concluded that mean value of Private School students of CBSE is more than Private School students of HBSE regarding academic achievement in Biology. Therefore the academic achievement of Private School students of CBSE is more than Private School students of HBSE, regarding academic achievement in Biology. The mean value of female students of Private Schools of CBSE and HBSE is more than male students of Private Schools of CBSE and HBSE regarding academic achievement in Biology. Therefore the academic achievement of female students of Private Schools of CBSE and HBSE is more than male students of Private Schools of CBSE and HBSE, regarding academic achievement in Biology. The mean value of male students of Private Schools of CBSE is more than male students of Private Schools of HBSE regarding academic achievement in Biology. The mean value of female students of Private Schools of CBSE is more than female students of Private Schools of HBSE regarding academic achievement in Biology. Therefore the academic achievement of female students of Private Schools of CBSE is more than female students of Private Schools of HBSE, regarding academic achievement in Biology.

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INTRODUCTION

Education is generally conceived as a process or method of learning and training that moulds the whole of human personality in different dimensions. It modifies man's experience, transfers his instinctive urges and impulses and determines his attitude and beliefs. Education enable man to draw out his hidden talents. It trains him to increase his productivity and thus it helps him to render more effective service to society. Education is evidently a process through which desirable changes in the behavior of a child in terms of knowledge, values, skills, attitude etc. are inculcated in him through the teaching of different subjects and a regular course

of training. Education of all the children of the country has now become an accepted principle. In education effective learning not only depends upon good teaching but it is also responsibility or pupils. Efficient learning depends on the learner's ability to schedule his/her time, physical conditions, preparation for examinations etc. learning involves the development of proper study habits and skills Afuwape M.O. (2011). 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 20th century. In contemporary times, annual examination continue to be the most widely used system of evaluation.

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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 characteristics in which the individual is predisposed towards success and relatively concerned with failure Stumm, S.(2015).

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 teachers effectiveness, method of teaching, the school standards and in making surveys of pupils performance Schwarts, *Et Al.*(1962). 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.

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 of person's learning and his ability to apply what he has learned."

Academic Achievement

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 the 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 facts. Knowledge such as skills or declarative 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.

Signification 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 Biology essentially helps the students acquiring essential physical science knowledge, skills, interest, and attitude Jacinta A. Opara (2011). Biology has played an important role in building up modern civilization by perfecting all sciences.

Although, in India Biology is not a compulsory subject in the school curriculum, because the rate of the failure in the subject is very alarming. Much of our success in the examination depends on the way we study Biology. Now a day most of the students select medical or non-medical stream after 10th standard. The investigator finally decided to work on the topic "A Study Of Academic Achievement In Biology Of 11th Class

Students Of Sirsa District in Haryana State ", which remained untouched in Sirsa District.

Statement of the Problem

The problem which has been worked out in this study is " A Study Of Academic Achievement In Biology of 11TH Students Of Sirsa District In Haryana State".

Objectives of the Study

Following are the objectives of the present study:-

- To study the significant difference in the academic achievement in Biology of students studying in private schools of HBSE and in private schools of CBSE of Sirsa district.
- To study the significant difference between academic achievement in Biology of male and female students of private schools of CBSE.
- To study the significant difference between academic achievement in Biology of male and female students of private schools of HBSE.
- To study the significant difference between Academic achievement in Biology of male students of private schools of CBSE and HBSE of Sirsa district.
- To study the significant difference between Academic achievement in Biology of female students of private schools of CBSE and HBSE of Sirsa district.

Hypotheses

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

- There is no significant difference between Academic achievement in Biology of students studying in private schools of CBSE and HBSE of Sirsa district.
- There is no significant difference between Academic achievement in Biology of male and female students studying in private schools of CBSE of Sirsa district.
- There is no significant difference between Academic achievement in Biology of male and female students studying in private schools of HBSE of Sirsa district.
- There is no significant difference between Academic achievement in Biology of male students studying in private schools of CBSE and HBSE of Sirsa district.
- There is no significant difference between Academic achievement in Biology of female students studying in Private schools of CBSE and HBSE of Sirsa district.

Population

All 11th class students of Private Schools of HBSE schools and students of Private Schools of CBSE of Sirsa district constitute the population of this study.

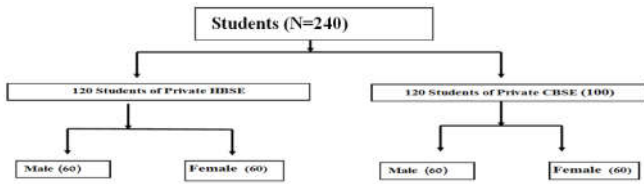
Sample

Purposive stratified random sampling has was used for present study. This study was conducted on 240 students of 11th class of SIRSA district. The sample was classified further into two categories of private School students of HBSE and CBSE.

These students were further categorized into male and female students.

Sample Design

A diagrammatic representation of the design scheme in figure:-



Tool Used

In this study Biology Achievement Test authored by S.C. Gakhar and Himadri was used.

Statistical Techniques Used

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

Analysis of Data and Interpretation of Results

The data collected were analyzed based on five hypotheses. The results obtained are as follows

Hypotheses No. 1: There is no significant difference between Academic achievement in Biology of students studying in private schools of CBSE and HBSE of Sirsa district.

Table 1 Mean, S.D., 't' values of students of Private schools of HBSE and students of Private Schools of CBSE regarding academic achievement in Biology

Teachers	N	M	S.D.	DF	't' Value	Level of Significance
Private School students of CBSE regarding achievement in Biology	120	50.23	4.28	238	14.75	Significant at both levels i.e. .05 & .01
Private School students of HBSE regarding achievement in Biology	120	43.12	3.12			

df = 238, .05 = 1.97, .01 = 2.69

Interpretation: The mean & S.D. of Private School students of HBSE and Private School students of CBSE towards Biology achievements is 50.23, 4.28 and 43.12, 3.12 respectively. The calculated 't' value is 14.75 is more than standard table value at df 98, which is 1.97 & 2.59 at .05 & .01 level of significance. Therefore, the hypothesis no. 1 there is no significant difference between Academic achievement in Biology of students studying in private schools of CBSE and HBSE of Sirsa district is rejected. The mean value of Private School students of CBSE is more than Private School students of HBSE. Therefore it is confirmed that the academic achievement in Biology of Private School students of CBSE is more than the academic achievement in Biology of Private School students of HBSE.

Hypothesis No. 2: There is no significant difference between Academic achievement in Biology of male and female students studying in private schools of CBSE of Sirsa district.

Table 2 Mean, S.D., 't' values of students of male and female students of Private schools of CBSE regarding academic achievement in Biology

Teachers	N	M	S.D.	DF	't' Value	Level of Significance
Male students of Private School students of CBSE regarding achievement in Biology	60	40.12	4.12	118	9.95	Significant at both levels i.e. .05 & .01
Female students of Private School students of CBSE regarding achievement in Biology	60	46.67	3.02			

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

Interpretation: The mean & S.D. of attitude of Male students of Private School students of CBSE and Female students of Private School students of CBSE private school students Biology achievement is 40.12, 4.12 and 46.67, 3.02 respectively. The calculated 't' value is 9.95 is more than standard table value at df 118, which is 1.98 & 2.63 at .05 & .01 level of significance. Therefore, the hypothesis no. 2 there is no significant difference between Academic achievement in Biology of Private School students of CBSE and Private School students of CBSE students studying in private schools of CBSE of Sirsa district is rejected. The mean value of Female students of Private School students of CBSE is more than male students of Private School students of CBSE. Therefore it is confirmed that the academic achievement in Biology of female students of Private School students of CBSE is more than the academic achievement in Biology of male students of Private School students of CBSE.

Hypotheses No. 3 There is no significant difference between Academic achievement in Biology of male and female students studying in private schools of HBSE of Sirsa district.

Table 3 Mean, S.D., 't' values of students of male and female students of Private schools of HBSE regarding academic achievement in Biology

Teachers	N	M	S.D.	DF	't' Value	Level of Significance
Female students of Private School students of HBSE regarding achievement in Biology	60	53.12	5.13	118	7.58	Significant at both levels i.e. .05 & .01
Male students of Private School students of HBSE regarding achievement in Biology	60	46.68	4.13			

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

Interpretation: The mean & S.D. of attitude of female students of Private School students of HBSE and male students of Private School students of HBSE private school students Biology achievement is 53.12, 5.13 and 46.68, 4.13 respectively. The calculated 't' value is 7.58 is more than standard table value at df 118, which is 1.98 & 2.63 at .05 & .01 level of significance. Therefore, the hypothesis no. 3 there is no significant difference between Academic achievement in Biology of Private School students of HBSE and Private School students of HBSE students studying in private schools of HBSE of Sirsa district is rejected. The mean value of female students of Private School students of HBSE is more than male students of Private School students of HBSE. Therefore it is confirmed that the academic achievement in Biology of female students of Private School students of HBSE is more than the academic achievement in Biology of male students of Private School students of HBSE.

Hypothesis No. 4 There is no significant difference between Academic achievement in Biology of male students studying in private schools of CBSE and HBSE of Sirsa district.

Table 4 Mean, S.D., 't' values of students of male students of Private schools of HBSE and male students of Private schools of CBSE regarding academic achievement in Biology

Teachers	N	M	S.D.	DF	't' Value	Level of Significance
Male students of Private School students of CBSE regarding achievement in Biology	60	53.12	5.13	118	7.59	Significant at both levels i.e. .05 & .01
Male students of Private School students of HBSE regarding	60	46.67	4.12			

achievement in Biology

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

Interpretation: The mean & S.D. of attitude of Male students of Private School students of CBSE and Male students of Private School students of CBSE private school students Biology achievement is 40.12, 5.13 and 33.67, 4.12 respectively. The calculated 't' value is 7.59 is more than standard table value at df 118, which is 1.98 & 2.63 at .05 & .01 level of significance. Therefore, the hypothesis no. 4 there is no significant difference between Academic achievement in Biology of male students studying in private schools of CBSE and HBSE of Sirsa district is rejected. The mean value of Male students of Private School students of CBSE is more than male students of Private School students of HBSE. Therefore it is confirmed that the academic achievement in Biology of Male students of Private School students of CBSE is more than the academic achievement in Biology of male students of Private School students of HBSE.

Hypothesis No. 5 There is no significant difference between Academic achievement in Biology of female students studying in private schools of CBSE and HBSE of Sirsa district.

Table 5 Mean, S.D., 't' values of students of female students of Private schools of CBSE and female students of Private schools of HBSE regarding academic achievement in Biology

Teachers	N	M	S.D.	DF	't' Value	Level of Significance
Female students of Private School students of CBSE regarding achievement in Biology	60	33.68	4.13	118	9.93	Significant at both levels i.e. .05 & .01
Female students of Private School students of HBSE regarding achievement in Biology	60	27.12	3.02			

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

Interpretation: The mean & S.D. of attitude of Female students of Private School students of CBSE and Female students of Private School students of CBSE private school students Biology achievement is 33.68, 4.13 and 27.12, 3.02 respectively. The calculated 't' value is 9.93 is more than standard table value at df 118, which is 1.98 & 2.63 at .05 & .01 level of significance. Therefore, the hypothesis no. 5 there is no significant difference between Academic achievement in Biology of female students studying in private schools of CBSE and HBSE of Sirsa district is rejected. The mean value of Female students of Private School students of CBSE is more than female students of Private School students of HBSE. Therefore it is confirmed that the academic achievement in Biology of Female students of Private School students of CBSE is more than the academic achievement in Biology of female students of Private School students of HBSE .

Main Findings

In Hypothesis No. 1

There is significant difference between Private School students of CBSE and Private School students of HBSE. 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 of CBSE is more than Private School students of HBSE regarding academic achievement in Biology. Therefore the academic achievement of Private School students of CBSE is more than Private School students of HBSE, regarding academic achievement in Biology.

In Hypothesis No. 2

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

In Hypothesis No. 3

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

In Hypothesis No. 4

There is significant difference between male students of Private Schools of CBSE and male students of Private Schools of HBSE. 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 of CBSE is more than male students of Private Schools of HBSE regarding academic achievement in Biology. Therefore the academic achievement of male students of Private Schools of CBSE is more than male students of Private Schools of HBSE, regarding academic achievement in Biology.

In Hypothesis No. 5

There is significant difference between female students of Private Schools of CBSE and female students of Private Schools of HBSE. 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 of CBSE is more than female students of Private Schools of HBSE regarding academic achievement in Biology. Therefore the academic achievement of female students of Private Schools of CBSE is more than female students of Private Schools of HBSE, regarding academic achievement in Biology.

Educational Implications

There is difference between the academic achievements of the students of Private Schools of HBSE and students of Private Schools of CBSE. The academic achievement of students of Private Schools of CBSE is more than as compared to academic achievement of students of Private Schools of HBSE. Thus change must be made in teaching in Private Schools of HBSE so that achievements of students can be increased. Female students of Private CBSE schools of Sirsa district have low academic achievements, so efforts must be made to increase their academic achievements in Biology . The average of whole sample regarding academic achievement in

Biology 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 Biology in schools, so that we can develop the interest of students among Biology and then in science. It is suggested to teacher to give, proper guidance to students about the importance of Biology for their future use.

CONCLUSIONS

In this study it is concluded that The mean value of Private School students of CBSE is more than Private School students of HBSE regarding academic achievement in Biology. Therefore the academic achievement of Private School students of CBSE is more than Private School students of HBSE, regarding academic achievement in Biology. The mean value of female students of Private Schools of CBSE and HBSE is more than male students of Private Schools of CBSE and HBSE regarding academic achievement in Biology. Therefore the academic achievement of female students of Private Schools of CBSE and HBSE is more than male students of Private Schools of CBSE and HBSE, regarding academic achievement in Biology. The mean value of male students of Private Schools of CBSE is more than male students of Private Schools of HBSE regarding academic achievement in Biology. The mean value of female students of Private Schools of CBSE is more than female students of Private Schools of HBSE regarding academic achievement in Biology. Therefore the academic achievement of female students of Private Schools of CBSE is more than female students of Private Schools of HBSE, regarding academic achievement in Biology.

Suggestions for Further Research

- This study has been confined to only Private Schools. Efforts can be made to conduct this type of study at all the schools whether they are Govt. or Private
- This study has been conducted only on 11th class students to check their academic achievement in 11th class. It can be conducted on the other classes also.
- 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.
- A comparative study can be conducted on students belonging to rural areas.
- This study has been done only on 240 students of Sirsa district. This can be conducted on more number of students.

- This study has been conducted only on subject Biology. It can be conducted on other subjects like Maths, Chemistry and language subjects.
- This study can be related with other variables like intelligence, interest achievement, motivation etc.
- This study can be conducted on college students.

References

- Afuwape M.O. (2011). Students' Self-Concept and their Achievement in Basic Science. *African Research Review: An International Multidisciplinary Journal, Ethiopia*, 5(4): 199-200
- Arman MI. (2014). Effectiveness of ICT approach on Students' 8th grade achievement in mathematics. *J. of Educ. Res. and Behavioral Sci.*, 2(2): 14-19.
- Ayodele, E.A., (2002). Obstacles to the effective educational development. In Akale, (ed) STAN Proceedings of the 43 Annual Conference and professional bodies like Science Teachers Inaugural Conference of CASTME Africa, Association of Nigeria (STAN) organizing seminars, pp: 539-542.
- Garrett, H. E. (2006) *Statistics in Psychology And Education*, Surjit Publication, Delhi 6.
- Gronlund, N.E.(1966). *Constructing Achievement Test*, Englewood Cliffs : Prentice Hall.
- Gronlund, Nomian, E.(1968). *Constructing Achievement tests*, New Jersey : Printice Hall Inc Englewood, Cliff.
- Jacinta A. Opara (2011) *Inquiry Method and Student Academic Achievement in Biology: Lessons and Policy Implications* American-Eurasian Journal of Scientific Research 6 (1): 28-31.
- Kapoor, A. (2003). Effect of the work study on academic achievement, *The progress of Education* VOI(134,No.8)
- S.C. Gakhar and Himadri . *Biology academic achievement test*.
- Schwartz, *Et Al.*(1962). *Evaluating Student progress in the Secondary School* New York: David Meckay Company, Inc.
- Shivappa, D., (1980). Factors affecting the academic achievement of high school pupils. Ph. D. Edu., Kar. U., Cit., in Buch, M.B. (Edu.) *Third Survey of Research in Education*. (1978-1983) New Delhi.
- Stumm, S.(2015). Curiosity is critical to academic performance. *Science Daily*. TM improves academic achievement.. <http://www.sciencedaily.com>.
- William Orora, Fred N. Keraro and Samuel W. Wachanga (2016) *Effects of cooperative e-learning teaching strategy on students' achievement in secondary school Biology in Nakuru County, Kenya*.

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