ACADEMIC ACHIEVEMENT OF SENIOR SECONDARY SCHOOL STUDENTS IN RELATION TO GENDER, SOCIAL CATEGORY AND STREAM OF STUDY

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Abstract

The study examined the academic achievement of senior secondary school students in relation to gender, stream of study and social category. A sample of 300 students of class 10+1(150 males, 150 females) from different government (10) senior secondary school of Shimla district (Himachal Pradesh, India) affiliated to H.P.S.E.B. Dharamshala. For collecting data scores in final examination (10th) was taken as academic achievement of the students. Results of analysis of variance revealed that there were no significant difference and interaction between gender and social category but stream of study differed significantly in relation to academic achievement. Students studying in science stream had significantly higher mean of Academic achievement scores than commerce and arts stream students.

Key Words: *Academic Achievement, Gender, Social Category, Streams.*

Education makes a person physically, mentally and socially a well being. Perhaps no one would deny the importance of academic achievement in education and in students' life. The success or failure of any student is measured in term of academic achievement. Today achievement is the common concern of every age group. In the liberal sense, "Achievement is that which is done successfully with efforts and skills which are applicable in every sphere of individual's life". In the modern times the term achievement means all the behavioural changes or learning outcomes which are expressed in terms of knowledge, understanding and skills.

Academic achievement refers to the attained ability or degree of competency in the school tasks usually measured by standardized tests and expressed in grades or based on norms derived from a wide sampling of pupil's performance. It has been considered as one of the most important factors in life as the future planning for higher studies or vocational training

depends upon the academic outcome i.e. their marks or grades at school stage. Today achievement is the common concern of every age group.

The effectiveness of any educational system is gauged to extent the students involved in the system achieve, whether it is in cognitive, conative or psychomotor domain. Research has come to our aid by looking into what variables i.e. personal, home, stream of study, social category, teacher etc. promote achievement and what are deterrents to it.

Academic achievement helps both the teachers and students to know that where they stand. Academic achievement is the proficiency in the performance of an individual in a given skill or body of knowledge. . The test scores or grades assigned to the students on the basis of their performance in the achievement test determine the status of pupils in the classroom (Singh et al., 2007).

OBJECTIVE OF THE STUDY

To study the differences in academic achievement of Sr. Sec. School students in relation to gender, social category, stream of study, and interactional effects between them.

HYPOTHESES OF THE STUDY

Gender, social category and stream of study will not interact significantly with regard to academic achievement of students.

SAMPLING

For the conduct of present study a representative sample of 300 students of both genders (150 SC & 150 Non SC) studying in +1 class of Shimla Districts of Himachal Pradesh was selected. The investigator has selected only govt. senior secondary school of Shimla district. Ten schools were selected randomly by draw of lots method from list of schools. Since the students belonging to non scheduled caste were available in large number, sample from this category was drawn by making use of random number table. However, very few students belonging to scheduled caste were Present in 10 +1 class in each school, so total numbers of Students belonging to these categories were included in the sample.

TOOL USED

For conducting the research a data gathering tool is required. The tool selected must be appropriate for the collection of the certain type of evidence or information or data from the research field. Thus, the research tools are the data gathering devices. For collecting data scores in final examination (10th) was taken as academic achievement of the students.

RESEARCH DESIGN

In the present study 2x2x3 factorial design consisting of two levels of gender i.e. male and female, two levels of social category i.e. Scheduled Caste and Non Scheduled Caste and three levels of Stream of study i.e. Arts, Science and commerce were used.
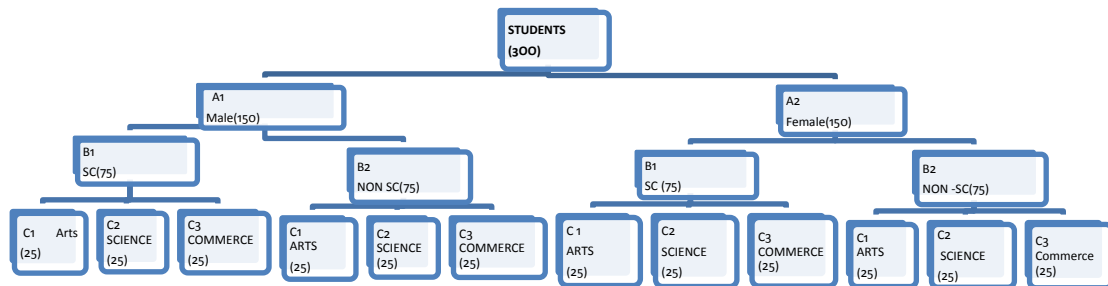
RESULT AND DISCUSSION

ACADEMIC ACHIEVEMENT OF SENIOR SECONDARY SCHOOL STUDENTS IN RELATION TO GENDER, SOCIAL CATEGORY AND STREAM OF STUDY

In order to find out the main effects of gender, social category and stream of study along with their interactional effects on the academic achievement of students analysis of variance (2x2x3 factorial design involving 2 level of gender i.e. male and female, 2 levels of social category i.e. scheduled caste and non scheduled caste and 3 types of streams of study i.e. arts, science and commerce) was applied on the means of academic achievement scores. The means of academic achievement scores of students are given in table 1 below

Table1 Means of Academic Achievement Scores of Students In Relation to their Gender, Social Category and Stream of Study

Social Category	Gender	Arts	Science	Commerce	Mean
	Male	390.52	468.76	420.16	426.48
SC	Female	380.76	469.32	428.60	426.20
	Male	392.96	467.84	397.40	419.40
Non-SC	Female	403.68	472.68	425.36	433.90
	Mean	391.98	469.65	417.88	426.55

From the means of academic achievement scores 'F' values were calculated. The result analyses are given in table 2 below

Table 2 The Complete Summary of Analysis of Variance for Academic Achievement

Sr. No	Source of variation	Sum of squares	df	Mean squares Variance	F-ratio
1.	Gender	3809.203	1	3809.203	1.491
2.	Social category	6.750	1	6.750	0.003
3.	Stream of study	312785.727	2	156392.863	61.2**
4.	Gender X Stream	4659.807	2	2329.903	0.912
5.	Gender X Social category	4084.830	1	4084.830	1.599
6.	Stream of study x Social category	8275.020	2	4137.510	1.620
7.	Gender X social category X Stream of study	1032.540	2	516.270	0.202
8.	Error variance	735601.120	288	2554.171	
9.	Total	1070254.997	299		

** Significant at 0.01 level

Main Effects

(A) Gender

The obtained value of 'F' for the main effect of gender on academic achievement of students irrespective of their social category and stream of study for df 1 and 288, came out to be 1.49, which is much below than the table value even at .05 level of significance. However, from the means score table 1, it is evident that girls have higher means of academic achievement scores (430.06) than boys (422.94) but this difference is not significant statistically.

(B) Social Category

The calculated value of 'F' for the main effect of social category on the academic achievement of students irrespective of their gender and stream of study for df 1 and 288, came out to be 0.002, which is less than the table value even at 0.05 level of significance. However, from the means score table it is evident from table 1 that Non Scheduled caste students have higher means of academic achievement scores (853.30) than Scheduled caste (852.68) but the difference is not significant statistically.

(C) Stream of Study

The calculated value of 'F' for the main effect of stream of study irrespective of their gender and social category for df 1 and 288, came out to be 61.0, which is higher than the table value even at 0.05 level of significance. It may be interpreted that students studying in different stream of study differ significantly in their academic achievement. The comparisons

in the academic achievement scores of students studying in different streams of study were made by making use of 't' test. The results are given in table 3below:

Table 3

Sr. No.	Stream of Study	Number	Mean	SD	M.D	S.E.D	df	't' value
1.	Arts (A)	100	391.98	51.81	77.67 (A-B)	7.25	198	10.7**
2.	Science (B)	100	469.65	50.78	51.77 (B-C)	7.40	198	7.40**
3.	Commerce(C)	100	417.88	48.07	25.9 (A-C)	7.06	198	3.66**

Means, SDs and 't' Value for Comparing Academic Achievement of Students Study in Different Stream of Study

From table 3 it can be interpreted that, 't' value for comparing the academic achievement of sr.sec. Students studying in arts and science streams came out to be 10.7, which is significant at 0.01 level of significance for 1/198 df. From this it is interpreted that students studying in science stream had significantly higher mean of academic achievement scores(469.65) than the students studying in arts stream(391.98).

The obtained value of 't' value for comparing the academic achievement of sr.sec. Students studying in science and commerce streams came out to be 6.9, which is significant at 0.01 level of significance for 1/198 df. From this, it is interpreted that students studying in science stream had significantly higher academic achievement scores (469.65) than their counterparts studying in commerce stream (417.88).

The computed value of 't' for comparing the academic achievement of sr.sec. Students studying arts and commerce streams came out to be 7.06, which is significant at 0.01 level of significance for 1/198 df. From this it is interpreted that Students studying in commerce stream had significantly higher mean of academic achievement scores(417.88) than the students studying in arts stream(391.98).

Interactional Effects

(A) Gender X Stream of Study

The calculated value of 'F' for the interactional effect of stream and gender on the academic achievement of students, for df 2 and 288, came out to be 0.99 which is much below than table value even at 0.05 levels of significance. It may be interpreted that the

difference in the academic achievement of boys and girls is of the same form for different streams of study i.e. arts, science and commerce.

(B) Stream of Study x Social Category

The calculated value of 'F' for the interactional effect of social category and stream of study on the academic achievement of students, for df 2 and 288, came out to be 0.799, which is much below than table value even at 0.05 level of significance. It may be interpreted that the difference in the academic achievement of Scheduled caste and non Scheduled caste is of the same form for different streams of study i.e. arts, science and commerce.

(C) Gender x Social Category

The calculated value of 'F' for the interactional effect of gender and social category on the academic achievement of students for df 1 and 288, came out to be 3.23, which is much below than the table value even at 0.05 level of significance. It may be interpreted that the difference in the academic achievement of boys and girls is of the same form for different social categories i.e. Scheduled caste and non scheduled caste.

(D) Triple Interactional Effect

The calculated value of 'F' for the triple interaction of gender, social category and stream of study with regard to the academic achievement of students for df 2 and 288, came to be 0.20, which is much below than the table value even at 0.05 level of significance. Hence**,** the hypothesis that **"Gender, social category and stream of study will not interact significantly**

With regard to academic achievement of students" was accepted.

The fact that interaction among gender, social category and stream of study is not significant means that gender X social category interaction for separate stream of study is of same form; that gender X stream of study interaction for separate level of social category is of same form; that social category X stream of study interaction for separate level of gender is of same form.

CONCLUSIONS

On the basis of the analysis of data and interpretation of results the investigator arrived at the following conclusions:

1. Male and female students do not differ significantly in their academic achievement. This finding is substantiated by Samal (1990), Jain (1981), Srivastava (1992) who also found no significant difference between males and females in their academic

achievement. Contrary to this Sarswat (1988) found that gender differed significantly in their academic achievement.

2. Students belonging to different social categories do not differ significantly in their academic achievement. However, non scheduled caste students had higher mean of academic achievement scores than scheduled caste students but the difference is not significant statistically. This findings is substantiated by Sahay(1991) who also found no significant difference .Contrary to this, Rani (1980), Aruna (1981) and Indra(1991) found that students belonging to different social category differed significantly in their academic achievement.

3. Students studying in different stream of study differ significantly in their academic achievement. Students studying in science stream had significantly higher mean of academic achievement scores than the students studying in arts and commerce streams. The students studying in commerce streams had significantly higher mean of academic achievement scores than the students studying in arts streams. This result is substantiated by Sarswat (1980) who also found significant differences in the academic achievement of students studying in different streams of study.

4. Gender and stream of study do not interact significantly with regard to academic achievement of students.

5. Social category and stream of study do not interact significantly with regard to academic achievement of students.

6. Gender and Social category of study do not interact significantly with regard to academic achievement of students.

7. There is no significant triple interactional effect of gender, social category and stream of study on academic achievement of students.

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