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Academic Achievement in Relation to Intelligence and Socio-Economic-Status of High School Students

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Abstract

The present study is based on the assumption that socio-economic-status and intelligence play an important role in the academic achievement of the students. At present Govt. is doing its all efforts to educate each and every child of the country. Various programmes are launched, different policies are framed, and various budget provisions are made to ensure access to education. It is attempted that after these all efforts whether academic achievement is related to Intelligence and socio-economic status or not. If yes, then what is the level of relationship alongwith some other factors which are contributing to the level of Academic Achievement among the students.

Keywords: *Academic Achievement, Intelligence, Socio-Economic-Status, High School students*

Introduction

Indian society is based on the family system. Family plays a significant role in our life. Family background has repeatedly proven to be strong predictor of academic achievement. It is observed that students from poor family perform below expectation as compared to rich family students. A gulf exists between low socio-economic and high socio-economic status students. In certain remote areas students come from downtrodden family, slum areas etc. to get education. These students do not bring teaching learning material because people residing there have low socio-economic status. People want to engage their children in traditional vocations as is done by them. In these vocations, there is a stipulated monetary gain. Moreover, people have poor socio-economic status. Due to poor socio-economic status

parents send their children to school without notebooks, no school bags and even at times bare-footed. Although government has initiated a number of schemes like free textbooks, scholarships, school-uniforms and mid day meal programme etc. but sometimes people do not have money even to get the uniform stitched that is provided free of cost by the government. Socio-economic status is a powerful agent in creating the cultural environment in which individuals are nourished. It is generally believed that the academic achievement is directly influenced by socio-economic status of an individual. It is also opined that the students who belong to well-to-do family have higher intelligence as compared to those students who belong to a poor family, but it is sometimes also observed that students belonging to poor family may or may not have low intelligence. To find the solutions of these types of problems the researcher has taken the present problem for investigation.

Review of Related Literature

Man is the only animal that does not have to begin a new in every generation, but can take advantage of the knowledge which has accumulated through the centuries. This fact is of particular importance in research. The investigator has not come across with any study which is directly related to the present topic. However, a number of studies mentioned below, throw some light on the multi-dimensional aspect of the problem undertaken.

Chadha and Sunanda (1990) concluded that there was a positive and significant correlation between intelligence and academic achievement and I.Q. is highly correlated with intelligence. I.Q. and academic achievement is 0.60 at 0.01 level of significant.

Significance of the Problem

The academic achievement of a student is not only a function of his/her intellectual and personal characteristics but is also influenced by his/her socio economic status and which in turn, also influences and determines the attitudes, interests and motivation of students for studies, Thus socio economic status of a family is an important variable determining the academic achievement of its students. The present study is taken to study the relationship of academic achievement to intelligence and socio-economic status.

Objectives of the Study

The following objectives were formulated in the present study:

1. To study the relationship between academic achievement and verbal intelligence of high school students.

2. To study the relationship between academic achievement and different levels of socio-economic-status of high school students.
3. To study the academic achievement of high school male students in relation to their verbal intelligence.
4. To study the academic achievement of high school female students in relation to their verbal intelligence.
5. To study the academic achievement of high school male students in relation to their different levels of socio-economic-status.
6. To study the academic achievement of high school female students in relation to their different levels of socio-economic-status.

Research Method

Since the objective is to study the relationship of academic achievement, level of intelligence and levels of socio-economic status. For this researcher collected the data from the students of high school students in two tehsils of District Solan. Researcher collected the data from the selected sample by personally visiting the schools. For this purpose the survey method of research was used.

Sample: High school students of Solan district was the population in the study. Since it is difficult for the researcher to take all the high school students, in the study, therefore appropriate sample was selected. Solan district has five tehsils out of which two tehsils were selected randomly. Out of each selected tehsils fifteen high schools were selected randomly. From each school 20 students (i.e. ten male students and ten female students) of 9^{th} class and 20 students (i.e. ten male students and ten female students) of 10^{th} class were included in the sample. Thus, 1200 students was the sample for the study.

Tools Used For Data Collection

The selection of suitable tools is of vital important for successful research. Best has remarked rightly, "Each is like carpenter having a box of tools as carpenter researcher should select some of the tools from that box to use for his work not all".

A good variety of tools have been developed regarding measurement of academic achievement in relation to intelligence and socio-economic-status. In the present study the following tools were used by the researcher for data collection from the senior secondary school students of Solan district of Himachal Pradesh:

1. Verbal Intelligence Test: This test was developed by Dr. R.K.Ojha and K. Ray Chowdhury in 1994 for 9th to 12th class students. This test consists of eight parts and stipulated time of 40 minutes was given to the students to complete the test. (Hindi Version)

2. Socio-Economic-Status Scale: This scale was developed by Dr. Meenakshi for 8th to 12th class students. This composite variable consists of four components namely a) Finance b) Property c) Education d) Social Status in life.

3. Academic Achievement

The Academic achievement of the students was procured from the school records.

Procedure

The researcher visited each school included in the sample for data collection personally. Researcher introduced himself to the head of the school and informed about the research problem on which he is working. Then he sought permission from the school authorities to collect data from the students through verbal intelligence test, socio-economic status scale and academic achievement from school records. The students were briefed about the test and they were asked to strictly follow the instructions. For the completion of the verbal intelligence test researcher gave 40 minutes to the students to record their responses to the multiple choice questions of the test items. This test consists of 8 parts. After collecting the response sheets from the students for this test the students were told to record their responses to the items contained in the second response sheet through which their socio-economic status scale was determined based on the information supplied by the students. The socio-economic status scale consists of 7 parts.

Statistical Technique Used

The techniques of product moment correlation and t-test were used to analyse data.

Analysis of Data

The brief analyses of data collected from the selected sample on the variables of Academic Achievement, Verbal Intelligence and Socio-Economic Status are presented as under.

3-2.1 Studying Relationship of Academic Achievement with Verbal Intelligence and Socio-Economic Status using the Technique of Product Moment Correlation

The following Table shows the values of Coefficient of Correlation between Academic Achievement and Verbal Intelligence & Socio-Economic Status for selected sample of high school students.

1. Total Sample

Correlation between Academic Achievement and Verbal Intelligence = 0.46*

Correlation between Academic Achievement and Socio-Economic-Status = 0.44*

**Significant at 0.01 level of confidence*

2. Boys

Correlation between Academic Achievement and Verbal Intelligence = 0.54*

Correlation between Academic Achievement and Socio-Economic Status = 0.44*

**Significant at 0.01 level of confidence*

3. Girls

Correlation between Academic Achievement and Verbal Intelligence = 0.40*

Correlation between Academic Achievement and Socio-Economic Status= 0.44*

**Significant at 0.01 level of confidence*

It is evident from above results that the correlations of academic achievement with verbal intelligence and socio-economic status are positive and significant at 0.01 level of confidence for the total sample as well as for boys and girls separately. Hence the hypothesis that *there is significant and positive relationship between academic achievement and verbal intelligence and academic achievement and socio-economic status for total sample as well as for boys and girls* separately is retained.

This indicates that there is strong positive and significant relationship between:

1. Academic Achievement and Verbal Intelligence (Total Sample)
2. Academic Achievement and Socio-Economic Status (Total Sample)
3. Academic Achievement and Verbal Intelligence (Boys)
4. Academic Achievement and Socio-Economic Status (Boys)
5. Academic Achievement and Verbal Intelligence (Girls)
6. Academic Achievement and Socio-Economic Status (Girls)

3-2.2 Comparison of Mean Academic Achievement of Three Groups of High School Students formed on the basis of Verbal Intelligence using t-Test

The total sample of 320 students was divided into three groups using M±1 SD formula. The number of students falling in high, average and low intelligence groups came out to be 46, 215 and 59 respectively. After this, 45 students were selected randomly from each group for

the purpose of analysis. In order to study the significance of difference between means of academic achievement for the three groups, t-teat was used. The results of the analysis are given below.

1. Comparison of High and Average Intelligent Groups

The results of t-test for High and Average Intelligent groups on their mean Academic Achievement scores are presented in Table 3.1.

Table 3.1: t-value for high and average intelligent groups of high school students in respect of the variable of academic achievement

Group	N	Mean	SD	SE_M	t-value
High	45	439.18	70.90	10.57	3.26*
Average	45	394.22	59.36	8.85	

** Significant at 0.01 level of confidence*

It is revealed from Table 3.1 that t-value came out to be 3.26, which is significant at 0.01 level of confidence. This indicates that high and average intelligent groups of high school students differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that *"High and average intelligent groups of high school students differ significantly with respect to their mean scores on the variable of Academic Achievement"* is accepted.

Since, the mean score on Academic Achievement is higher for high intelligent group (439.18) as compared to average intelligent group (394.22), it may be inferred that high school students possessing higher level of verbal intelligence exhibit significantly superior academic achievement in comparison to their counterparts possessing average level of verbal intelligence.

2. Comparison of High and Low Intelligent Groups

Table 3.2: t-value for high and low intelligent groups of high school students in respect of the variable of academic achievement

Group	N	Mean	SD	SE_M	t-value
High	45	439.17	70.90	10.57	7.77*
Low	45	343.75	41.92	6.25	

** Significant at 0.01 level of confidence*

It is revealed from Table 3.2 that t-value came out to be 7.77, which is significant at 0.01 level of confidence. This indicates that high and low intelligent groups of high school

students differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*High and low intelligent groups of high school students differ significantly with respect to their mean scores on the variable of Academic Achievement" is* accepted.

Since, the mean score on Academic Achievement is higher for high intelligent group (439.17) as compared to low intelligent group (343.75), it may be inferred that high school students possessing higher level of verbal intelligence exhibit significantly superior academic achievement in comparison to their counterparts possessing low level of verbal intelligence.

3. Comparison of Average and Low Intelligent Groups

Table 3.3: t-value for average and low intelligent groups of high school students in respect of the variable of academic achievement

Group	N	Mean	SD	SE_M	t-value
Average	45	394.22	59.35	8.84	4.66*
Low	45	343.75	41.92	6.25	

**Significant at 0.01 level of confidence*

It is revealed from Table 3.3 that t-value came out to be 4.66, which is significant at 0.01 level of confidence. This indicates that average and low intelligent groups of high school students differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "Average and Low *intelligent groups of high school students differ significantly with respect to their mean scores on the variable of Academic Achievement" is* accepted.

Since, the mean score on Academic Achievement is higher for average intelligent group (394.22) as compared to low intelligent group (343.75), it may be inferred that high school students possessing average level of verbal intelligence exhibit significantly superior academic achievement in comparison to their counterparts possessing low level of verbal intelligence.

3-2.3 Comparison of Mean Academic Achievement of Three Groups of High School Boy Students formed on the basis of Verbal Intelligence using t-Test

The total sample of 160 boy students was divided into three groups using M±1 SD formula. The number of boy students falling in high, average and low intelligence groups came out to be 16, 111 and 33 respectively. After this, 15 boy students were selected randomly from each group for the purpose of analysis. In order to study the significance of difference between

means of academic achievement for the three groups, t-test was used. The results of the analysis are given below.

1. Comparison of High and Average Intelligent Boy High School Students

Table 3.4: t-value for high and average intelligent groups of high school students in respect of the variable of academic achievement

Group	N	Mean	SD	SE_M	t-value
High	15	457.73	73.51	18.98	2.53*
Average	15	400.20	48.50	12.52	

**Significant at 0.01 level of confidence*

It is revealed from Table 3.4 that t-value came out to be 2.53, which is significant at 0.01 level of confidence. This indicates that high and average intelligent groups of high school students differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*High and average intelligent groups of high school students differ significantly with respect to their mean scores on the variable of Academic Achievement"* is accepted.

Since, the mean score on Academic Achievement is higher for high intelligent group (457.73) as compared to average intelligent group (400.20), it may be inferred that high school students possessing higher level of verbal intelligence exhibit significantly superior academic achievement in comparison to their counterparts possessing average level of verbal intelligence.

2. Comparison of High and Low Intelligent Boy High School Students

Table 3.5: t-value for high and low intelligent groups of high school students in respect of the variable of academic achievement

Group	N	Mean	SD	SE_M	t-value
High	15	457.73	73.51	18.98	5.40*
Low	15	338.13	44.17	11.40	

** Significant at 0.01 level of confidence*

It is revealed from Table 3.5 that t-value came out to be 5.40, which is significant at 0.01 level of confidence. This indicates that high and low intelligent groups of high school students differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*High and low intelligent groups of high school students differ*

significantly with respect to their mean scores on the variable of Academic Achievement" is accepted.

Since, the mean score on Academic Achievement is higher for high intelligent group (457.73) as compared to low intelligent group (338.13), it may be inferred that high school students possessing higher level of verbal intelligence exhibit significantly superior academic achievement in comparison to their counterparts possessing low level of verbal intelligence.

3. Comparison of Average and Low Intelligent Boy High School Students

Table 3.6: t-value for average and low intelligent groups of high school students in respect of the variable of academic achievement

Group	N	Mean	SD	SE_M	t-value
Average	15	400.20	48.50	12.52	3.66*
Low	15	338.13	44.17	11.40	

** Significant at 0.01 level of confidence*

It is revealed from Table 3.6 that t-value came out to be 3.66, which is significant at 0.01 level of confidence. This indicates that average and low intelligent groups of high school students differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "Average and Low *intelligent groups of high school students differ significantly with respect to their mean scores on the variable of Academic Achievement"* is accepted.

Since, the mean score on Academic Achievement is higher for average intelligent group (400.20) as compared to low intelligent group (338.13), it may be inferred that high school students possessing average level of verbal intelligence exhibit significantly superior academic achievement in comparison to their counterparts possessing low level of verbal intelligence.

3-2.4 Comparison of Mean Academic Achievement of Three Groups of High School Girl Students formed on the basis of Verbal Intelligence using t-Test

The total sample of 160 girl students was divided into three groups using M±1 SD formula. The number of girl students falling in high, average and low intelligence groups came out to be 30, 104 and 26 respectively. After this, 25 girl students were selected randomly from each group for the purpose of analysis. In order to study the significance of difference between means of academic achievement for the three groups, t-teat was used. The results of the analysis are given below.

1. Comparison of High and Average Intelligent Girl High School Students

The results of t-test for High and Average Intelligent groups on their mean Academic Achievement scores are presented in Table 3.7.

Table 3.7: t-value for high and average intelligent groups of high school students in respect of the variable of academic achievement

Group	N	Mean	SD	SE_M	t-value
High	25	420.04	70.88	14.18	1.68*
Average	25	389.12	58.72	11.75	

** Not Significant at 0.01 level of confidence*

It is revealed from Table 3.7 that t-value came out to be 1.68, which is not significant at 0.01 level of confidence. This indicates that high and average intelligent groups of girl high school students do not differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*High and average intelligent groups of girl high school students differ significantly with respect to their mean scores on the variable of Academic Achievement"* is rejected.

From this it may be inferred that girl high school students possessing higher and average level of verbal intelligence exhibit more or less similar level of achievement.

2. Comparison of High and Low Intelligent Girl High School Students

Table 3.8: t-value for high and low intelligent groups of high school students in respect of the variable of academic achievement

Group	N	Mean	SD	SE_M	t-value
High	25	420.04	70.88	14.18	4.27*
Low	25	352.76	34.21	6.84	

** Not Significant at 0.01 level of confidence*

It is revealed from Table 3.8 that t-value came out to be 4.27, which is not significant at 0.01 level of confidence. This indicates that high and low intelligent groups of girl high school students do not differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*High and low intelligent groups of girl high school students differ significantly with respect to their mean scores on the variable of Academic Achievement"* is rejected.

From this it may be inferred that girl high school students possessing higher and low level of verbal intelligence exhibit more or less similar level of achievement.

3. Comparison of Average and Low Intelligent Girl High School Students

Table 3.9: t-value for average and low intelligent groups of high school students in respect of the variable of academic achievement

Group	N	Mean	SD	SE_M	t-value
Average	25	389.12	58.72	11.75	2.68*
Low	25	352.76	34.21	6.84	

** Not Significant at 0.01 level of confidence*

It is revealed from Table 3.9 that t-value came out to be 2.68, which is not significant at 0.01 level of confidence. This indicates that average and low intelligent groups of girl high school students do not differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*Average and low intelligent groups of girl high school students differ significantly with respect to their mean scores on the variable of Academic Achievement"* is rejected.

From this it may be inferred that girl high school students possessing average and low level of verbal intelligence exhibit more or less similar level of achievement.

3-2.5 Comparison of Mean Academic Achievement of Three Groups of High School Students formed on the basis of Socio-Economic Status using t-Test

The total sample of 160 girl students was divided into three groups using M±1 SD formula. The number of girl students falling in high, average and low intelligence groups came out to be 30, 104 and 26 respectively. After this, 25 girl students were selected randomly from each group for the purpose of analysis. In order to study the significance of difference between means of academic achievement for the three groups, t-test was used. The results of the analysis are given below.

1. Comparison of High and average Intelligent High School Students

The results of t-test for High and Average Intelligent groups on their mean Academic Achievement scores are presented in Table 3.10.

Table 3.10: t-value for high and average intelligent groups of high school students in respect of the variable of socio-economic status

Group	N	Mean	SD	SE_M	t-value
High	40	440.43	61.85	9.78	4.18*
Average	40	383.98	58.77	9.29	

** Significant at 0.01 level of confidence*

It is revealed from Table 3.10 that t-value came out to be 4.18, which is significant at 0.01 level of confidence. This indicates that high and average intelligent groups of girl high school students do not differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*High and average intelligent groups of girl high school students differ significantly with respect to their mean scores on the variable of Academic Achievement"* is rejected.

From this it may be inferred that girl high school students possessing higher and average level of verbal intelligence exhibit more or less similar level of achievement.

2. Comparison of High and Low Intelligent High School Students

Table 3.11: t-value for high and low intelligent groups of high school students in respect of the variable of socio-economic-status

Group	N	Mean	SD	SE_M	t-value
High	40	440.43	61.85	9.78	6.52*
Low	40	358.85	49.34	7.80	

**Significant at 0.01 level of confidence*

It is revealed from Table 3.11 that t-value came out to be 6.52, which is significant at 0.01 level of confidence. This indicates that high and low intelligent groups of girl high school students do not differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*High and low intelligent groups of students of high school students differ significantly with respect to their mean scores on the variable of socio-economic achievement"* is accepted.

From this it may be inferred that high school students possessing high and low level of verbal intelligence exhibit more or less similar level of achievement.

3. Comparison of Average and Low Intelligent High School Students

Table 3.12: t-value for average and low intelligent groups of high school students in respect of the variable of socio-economic-status

Group	N	Mean	SD	SE_M	t-value
Average	40	383.98	58.77	9.29	2.07*
Low	40	358.85	49.34	7.80	

* Significant at 0.01 level of confidence

It is revealed from Table 3.12 that t-value came out to be 2.07, which is significant at 0.01 level of confidence. This indicates that average and low intelligent groups of high school

students do not differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*Average and low intelligent groups of high school students differ significantly with respect to their mean scores on the variable of Academic Achievement"* is accepted.

From this it may be inferred that high school students possessing average and low level of verbal intelligence exhibit more or less similar level of achievement.

1. Comparison of High and Average Intelligent High School Students

The results of t-test for High and Average Intelligent groups on their mean Academic Achievement scores are presented in Table 3.13.

Table 3.13: t-value for high and average intelligent groups of high school students in respect of the variable of socio-economic status

Group	N	Mean	SD	SE_M	t-value
High	15	426.20	65.34	16.87	0.83*
Average	15	405.93	68.13	17.59	

** Not Significant at 0.01 level of confidence*

It is revealed from Table 3.13 that t-value came out to be 0.83, which is not significant at 0.01 level of confidence. This indicates that high and average intelligent groups of girl high school students do not differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*High and average intelligent groups of girl high school students differ significantly with respect to their mean scores on the variable of Academic Achievement"* is rejected.

From this it may be inferred that girl high school students possessing higher and average level of verbal intelligence exhibit more or less similar level of achievement.

2. Comparison of High and Low Intelligent High School Students

Table 3.14: t-value for high and low intelligent groups of high school students in respect of the variable of socio-economic-status

Group	N	Mean	SD	SE_M	t-value
High	15	426.20	65.34	16.87	3.23*
Low	15	355.33	54.20	13.99	

**Significant at 0.01 level of confidence*

It is revealed from Table 3.14 that t-value came out to be 3.23, which is significant at 0.01 level of confidence. This indicates that high and low intelligent groups of girl high school

students do not differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*High and low intelligent groups of students of high school students differ significantly with respect to their mean scores on the variable of socio-economic achievement"* is accepted.

From this it may be inferred that high school students possessing high and low level of verbal intelligence exhibit more or less similar level of achievement.

3. Comparison of Average and Low Intelligent High School Students

Table 3.15: t-value for average and low intelligent groups of high school students in respect of the variable of socio-economic-status

Group	N	Mean	SD	SE_M	t-value
Average	15	405.93	68.13	17.59	2.25*
Low	15	355.33	54.20	13.99	

** Significant at 0.01 level of confidence*

It is revealed from Table 3.15 that t-value came out to be 2.25, which is significant at 0.01 level of confidence. This indicates that average and low intelligent groups of high school students do not differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*Average and low intelligent groups of high school students differ significantly with respect to their mean scores on the variable of Academic Achievement"* is accepted.

From this it may be inferred that high school students possessing average and low level of verbal intelligence exhibit more or less similar level of achievement.

1. Comparison of High and Average Intelligent High School Students

The results of t-test for High and Average Intelligent groups on their mean Academic Achievement scores are presented in Table 3.16.

Table 3.16: t-value for high and average intelligent groups of high school students in respect of the variable of socio-economic status

Group	N	Mean	SD	SE_M	t-value
High	25	449.80	58.48	11.70	3.63*
Average	25	387.76	62.35	12.47	

** Significant at 0.01 level of confidence*

It is revealed from Table 3.16 that t-value came out to be 3.63, which is not significant at 0.01 level of confidence. This indicates that high and average intelligent groups of girl high

school students do not differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*High and average intelligent groups of girl high school students differ significantly with respect to their mean scores on the variable of Academic Achievement"* is rejected.

From this it may be inferred that girl high school students possessing higher and average level of verbal intelligence exhibit more or less similar level of achievement.

2. Comparison of High and Low Intelligent High School Students

Table 3.17: t-value for high and low intelligent groups of high school students in respect of the variable of socio-economic-status

Group	N	Mean	SD	SE_M	t-value
High	25	449.80	58.48	11.70	6.46
Low	25	353.08	46.65	9.33	

** Significant at 0.01 level of confidence*

It is revealed from Table 3.17 that t-value came out to be 6.46, which is significant at 0.01 level of confidence. This indicates that high and low intelligent groups of girl high school students do not differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "*High and low intelligent groups of students of high school students differ significantly with respect to their mean scores on the variable of socio-economic achievement"* is accepted.

From this it may be inferred that high school students possessing high and low level of verbal intelligence exhibit more or less similar level of achievement.

3. Comparison of Average and Low Intelligent High School Students

Table 3.18: t-value for average and low intelligent groups of high school students in respect of the variable of socio-economic-status

Group	N	Mean	SD	SE_M	t-value
Average	25	387.76	62.35	12.47	2.23
Low	25	353.08	46.65	9.33	

** Significant at 0.01 level of confidence*

It is revealed from Table 3.18 that t-value came out to be 2.23, which is significant at 0.01 level of confidence. This indicates that average and low intelligent groups of high school students do not differ significantly with respect to their mean scores on Academic Achievement. Hence, the hypothesis that "Average and low *intelligent groups of high school*

students differ significantly with respect to their mean scores on the variable of Academic Achievement" is accepted.

From this it may be inferred that high school students possessing average and low level of verbal intelligence exhibit more or less similar level of achievement.

Conclusions

1. There is strong positive and significant relationship between:
    1. Academic Achievement and Verbal Intelligence (Total Sample)
    2. Academic Achievement and Socio-Economic Status (Total Sample)
    3. Academic Achievement and Verbal Intelligence (Boys)
    4. Academic Achievement and Socio-Economic Status (Boys)
    5. Academic Achievement and Verbal Intelligence (Girls)
    6. Academic Achievement and Socio-Economic Status (Girls)
2. High school students possessing higher level of verbal intelligence exhibit significantly superior academic achievement in comparison to their counterparts possessing average level of verbal intelligence.

Educational Implications

Each systematic educational investigation has some bearings for educational planners, designers, practitioners, teachers, students. In the present case also based on findings of the study, some educational implications were spelled out. Helping students to develop effective way to handle the barrage of information coming from the environment as well as their own thinking processes is a major goal of our educational system that will increase in importance in the future.

On the basis of research findings following educational implications can be laid down:

1) Teacher should try to create democratic and interactive environment in the classroom so that students belonging to the low socio-economic status also feel free to discuss their problems related to studies.

2) The school should take steps to orient the parents of the students so that they provide stimulating environment to their children at home. This will enhance intelligence level and there by the academic achievement of the students.

3) Teacher should give remedial teaching to needy students in particularly, the students having lower intelligence level.

4) The teacher should identify student's intelligence level and on that basis should make selection of appropriate teaching methods and strategies.

References

Chadda, N.K. and Chandna Sunanda (1990). "Creativity intelligence and scholastic achievement", A residual study, **Indian Educational Review**, Vol. 25(3), pp. 81-85.

Desh Pande, Shashikala and R. Saraswati (1991). "Relationship between Homework and Achievement". **Perspectives in Education**, 7 (2), 105-112.

Garcia Bacete, Francisco-Juan and Oliver Rodriguez, Juan Carlos (Universidad Jaume I; Developmental, Educational, Social, and Methodological Psychology Department, Castellon, Spain). "Family and ability correlates of academic grades: Social status group differences". **Psychological Reports**, 2004 (Aug.), Vol. 95(1), 10-12.

Georgiou, Stelios, N. (U. Cyprus, Department of Education, Nicosia, Cyprus), "Achievement attributions of sixth grade children and their parents". **Educational Psychology**, 1999 (Dec.), Vol. 19(4), 399-412.

Guerrero, B.G. (2000). "An analysis of Academic, Demographic, and Non-cognitive Factors and the Influence of Academic Performance during the Freshman year in college". **Dissertation Abstract International** Vol. 61, Jan 2001, P.2591A.

Jimerson, Shane; Egeland, Byron and Teo, Adrian (U. California, Graduate School of Education, Santa Barbara, (A) A Longitudinal study of achievement trajectories: Factors associated with change. **Journal of Educational Psychology**, 1999 (March), Vol. 91(1), 116-126.