



ACADEMIC ACHIEVEMENT OF SECONDARY STAGE STUDENTS IN RELATION TO THEIR PERSONALITY TYPES AND INTELLIGENCE

Vandana Aggarwal, Ph. D.

Abstract

In the recent year Psychological variables of an individual in widely used in different context in Education. The present study described in this paper has examined whether Personality and Intelligence can be a useful tool for the coming generation or not one strategy has evolved to see whether Personality & Intelligence have significant effete on Academic Achievement. In order to improve Academic Achievement of students there has always been a research for developing Personality and Intelligence level among students. The sample were drown from IXth class students (N=200) from four different schools of Chandigarh. Three way analysis of variance and inter-correlation were used to analyze the data. The descriptive survey revealed that high intelligent group in higher in Academic Achievement than the low intelligent group secondly, there are no significant differences between Academic Achievement of introvert and extrovert group of students. Lastly the inter correlation of Academic Achievement, Intelligence and Personality types were positive and significant. The findings of the present study are not only useful to the research in terms of further research but they will also have applications to the classroom practices, organizational management in schools and Personality development.



Scholarly Research Journal's is licensed Based on a work at www.srjis.com

Introduction:

Man has attained refinement only through the process of education. Education develops the personality of an individual and makes him learned and helps in possessing strong character. In fact it is the process of training the individual so as to draw out the best in him and enables him to have success in competitive age. One of the most important factor concerns of education is to ensure that each and every child is able to make best use of his abilities. Our educational institutes, therefore have a rime duty to fully promote academic excellence and achievement.

The problems why students fail to achieve in the school has always been analysed in different ways by psychologists, educators and researchers. Educational research involves the attempt to discover the complex determiners of academic achievement. Early work concentrated on intelligence as the explanatory variable and held that it is the level of intelligence, which is regarded as single most effective predicator of school achievement. There is an

overwhelming evidence establishing intelligence as the most significant predictor of school achievement. Researchers have discovered that non-intellectual variables; for example personality, motivation, school climate, self concept were equally important predictors of academic achievement.

This means intelligence is an integral part of an individual's personality influencing his performance and achievement in every sphere of life. The purpose of the present investigation is to see how far intelligence and personality influence academic achievement and to see if there is any significant relationship between academic achievement, intelligence and Personality.

ACADEMIC ACHIEVEMENT

Academic achievement generally refers to the scores obtained in the annual examination, or refers to the degree or level of success or proficiency attained in some specific areas concerning scholastic or academic work. Academic achievement has always been a critical area and main centre of educational research. Despite varied statements about the aim of education the academic achievement of a pupil continues to be the most important and primary goal of education. Academic achievement generally refers to the degree of level of success or that of proficiency attained in some specific area concerning scholastic or academic work. There seem to be considerable similarities in the views of several authors.

Walia (1979) holds that achievement signifies accomplishment or gain or a performance carried out successfully.

According to Naresh Kumar (1985) Education at different stages is geared to different aims but no one can deny the fact that the academic – achievement of the student continues to be the main concern and the most important goal of education at all the different stages

PERSONALITY TYPE

Etymologically the term 'personality' has been derived from the Latin word 'persona' which means a mask used by actors in ancient time according to the concept of mask, personality was thought to be the effect and influence which the actor left on the mind of the audience. Even today for a layman, personality means the effect which an individual leaves on other people. But it is a very superficial approach. One cannot ignore the inner aspect of One's behavior.

Dawidoff (1976) defined personality as “the unique pattern of relatively enduring behavior feelings, thought motives, interests and attitudes that characterize a particular individual.”

Webster Dictionary (1988) defined personality as the quality or state of being of a person, personal existence, the condition on fact relating to a particular person.

INTELLIGENCE

Intelligence is generally considered as the ability of an individual to learn and adapt to new environment. The term intelligence is used to explain the differences in the mental ability that are the product of age and maturation. Intelligence is an important factor that contributes to success in life even though it does not imply that a person of high intelligence will always be a successful person.

Webster’s Dictionary (1958) maintains that intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with his environment.

Good (1973) regards intelligence as the ability to learn and to criticize what is learnt, the ability to learn from experience and to deal with new situation, and a degree of ability represented by performance of the group tests selected.

STATEMENT OF THE PROBLEM

The proposal study may be precisely stated as under:-

**“ACADEMIC ACHIEVEMENT OF SECONDARY STAGE STUDENTS
INRELATION TO THEIR PERSONALITY TYPES AND INTELLIGENCE”**

OBJECTIVES OF THE STUDY

The objectives formulated for the present study are as follows:

1. To study the effect of intelligence on the academic achievement of secondary stage students.
2. To find out the effect of personality on the academic achievement of secondary stage students.

HYPOTHESES

The hypotheses formulated for the present study are as follows:

1. The academic achievement of high intelligence group will be significantly higher than that of the low intelligence group of students.

2. The Academic achievement of introverts will be significantly higher than that of the Extrovert group of students.
3. The Inter-Correlation among the variables of Academic Achievement and Personality Types will be positive and significant.

DELIMITATIONS OF THE STUDY

The present study has been delimited to:

- The study has been delimited to the IX class students of government schools.
- The sample has been limited to the schools of Chandigarh only.

REVIEW OF RELATED STUDIES

Mohan (1975) reported that intelligence as measured by progressive matrices was positively related with total educational attainment.

Parwinder and Bajwa (1985) conducted a study on intelligence (verbal and non verbal) as a correlate of academic achievement of grade X boys and girls. They found that verbal intelligence had positive insignificant relationship with Hindi, Punjabi and English, while non-verbal intelligence had significant relationship with Science, Mathematics and Social Studies.

Khanam (2004) found no relationship between programmed learning material as a means of learning and personality variable such as extroversion and neuroticism, extroversions, and level of aspiration. She reported that programmed learning material was less effective than the teacher directed structural lessons for achievement in the learning of concepts and rules.

Madan (2006) demonstrated that introverts performed better on vocabulary and educational attainment in the age group of 20 to 25 years.

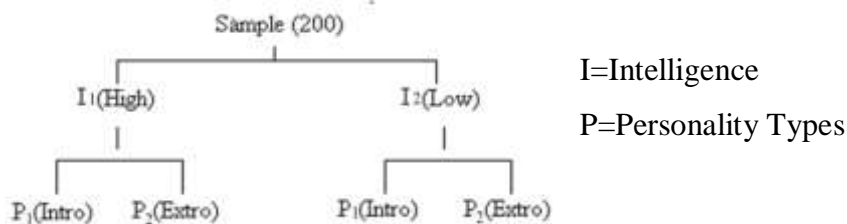
Singh (2007) studied intelligence and some personality factor in relation to academic achievement of school students. The academic achievement was found to be positively and significantly related to introversion at 0.05 level.

New some et al (2000) conducted a study to determine the relationship of emotional intelligence, cognitive ability and personality with academic achievement. Both cognitive ability and personality were significantly associated with academic achievement. None of the EQ factors was significantly related to academic achievement.

DESIGN OF THE STUDY

The present study was essentially a descriptive survey. The design of the study is based on 2 x 2 factorial design. The factors of intelligence and personality Type are independent variables, whereas academic achievement is a dependent variable. The variable of intelligence has been varied at two levels – high and low, whereas the variable of personality Types has been varied at two levels – Introverts and Extroverts.

The layout of the design is given below:



SAMPLE OF THE STUDY

The present study was conducted on 200 students of ninth class, from four schools of Chandigarh (U.T.) From each school 50 students were randomly selected.

Sr.No.	Name of the School	No.of Sample
1	Government Model Senior Secondary School, Sector 21, Chandigarh	50
2	Government Model Senior Secondary School, Sector 20, Chandigarh	50
3	Government Model Senior Secondary School, Sector 36, Chandigarh	50
4	Government Model Senior Secondary School, Sector 35, Chandigarh	50

TOOLS AND THEIR DESCRIPTION In the present study the following tools were used for the collection of data.

- General Mental Ability Test by Jalota (1972.).
- Eyesenck's Moudsley Personality Inventory by Jalota and Kapoo (1966).
- For Academic Achievement the record was taken from the gazette of the eighth class examination conducted by CBSE Board.

ANALYSIS OF DATA

The collected data were analysis by using the following statistical techniques:

- i) Three way Analysis of Variance
- ii) Inter-correlations

GRAPHICAL REPRESENTATION OF DATA

This part deals with the graphical representation of the Academic Achievement of students shown by them on the levels of the independent variables of Personality Types and Intelligence.

Table 1 Mean Score of the Students in Academic Achievement in respect of Low Intelligence and high Intelligence.

Variable and its levels	Mean Scores
Intelligence	
Low Intelligence	301.96
High Intelligence	417.07
Total	360.56

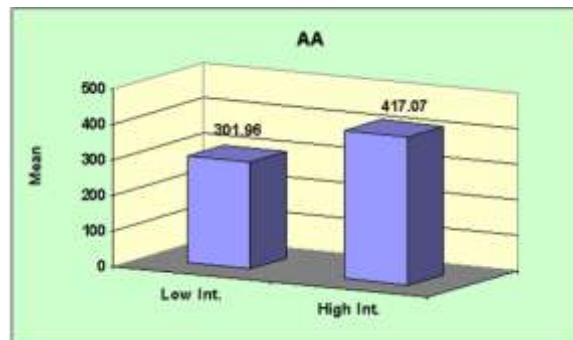


Fig 1: Mean Score of Academic Achievement in respect of Low Intelligence and High Intelligence.

Table 2 Mean Score of the students in Academic Achievement in respect of Introverts and Extroverts.

Variable and its levels	Mean Scores
Personality Types	
Intro.	351.81
Extro	369
Total	360.56

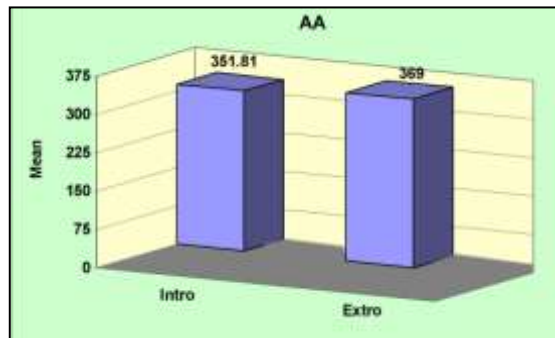


Fig. 2: Mean Scores of Academic Achievement in respect of Introverts and Extroverts.

Table 3 Mean Scores of the students in Academic Achievement in respect of Introverts and Extroverts in relation to Low Intelligence and High Intelligence.

INT.	PER	Mean Scores
LOW INT.	INTRO	300.31
	EXTRO	303.5
	TOTAL	301.96
HIGH INT	INTRO	399.64
	EXTRO	434.5
	TOTAL	417.07
TOTAL	INTRO	351.81
	EXTRO	369
	TOTAL	360.56

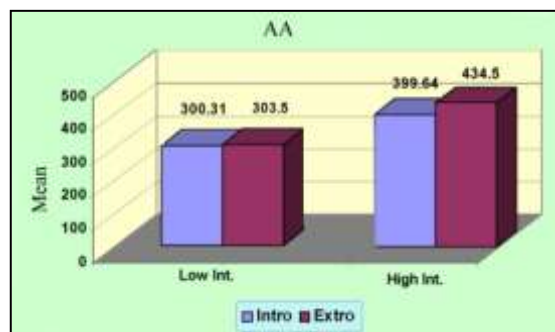


Fig. 3 Mean Scores of Academic Achievement in respect of Introverts and Extroverts in relation to Low Intelligence and High Intelligence.

THE RESULTS OF DATA ANALYSIS ARE PRESENTED AS FOLLOWS:

- The main effects of independent variables of Personality and intelligence.
- Summary of two way ANOVA of variables of Personality Types Intelligence and total Academic Achievement.

MAIN EFFECTS OF INTELLIGENCE

The main effect of Intelligence was analyzed over two levels, low intelligence and high intelligence.

Tables

\bar{X} , SD, MS, and F-ratio for Total Academic Achievement classified by Intelligence.

	Personality Types	No. of cases	Mean	SD	Sum Sq (SS)	df	F Ratio	Sig
AA	Intro	27	351.81	89.68	4971.556	1	0.941	0.337
	Extro	28	369	95.66				

	Int	No. of cases	Mean	SD	Sum Sq (SS)	df	Mean Sig	Ratio	Sig
AA	Low	27	301.96	41.74	182186.423	1	182186.423	34.473	.01
	High	28	417.07	92.86					

This table shows that F-ratio is highly significant as .01 level. There are significant differences between Low Intelligence and High Intelligence on Academic Achievement at .01 level of confidence.

The perusal of means shows that Low Intelligence group has lower Academic Achievement than that of High Intelligence group, because the mean value of Low Intelligence group (301.96) is lower than that of the High Intelligence group (417.07).

PERSONALITY TYPES

The main effect of Personality was analyzed over two levels: Introverts and Extroverts.

Table

\bar{X} , SD, MS, and F-ratio for Total Academic Achievement classified by Personality Types.

This tables shows that the F-ratio for total Academic Achievement classified by Personality Types is not significant even at .05 level of confidence.

The table shows that there are no significant differences between Introverts and Extroverts students on Academic Achievement at any level, indicating thereby that Introverts and Extroverts students have no differences on Academic Achievement.

THE INTER CORRELATION AMONG THE VARIABLES OF ACADEMIC ACHIEVEMENT, INTELLIGENCE AND PERSONALITY TYPES

Table

The inter correlation Matrix of the variables pf personality types, intelligence and Academic achievement (N=55)

Variables	Intelligence	Personality types	A.A.
Intelligence	1	.205**	.760**
Personality Types		1	.191*
A.A.			1

Note:**Significance at .01 level of confidence

*Significance at .05 level of confidence.

The correlation between Intelligence and Academic Achievement is significant at .01 level of confidence and the correlation between Personality Types and Academic Achievement is significant at .05 level. This shows that Intelligence and Personality Types are significantly related to the Academic Achievement of the students. The correlation between Intelligence and Personality Types is positive and significant at .01 level of confidence. This shows that Intelligence is highly correlated with Personality Types of the students.

Discussion of Results

Discussion of results in the light of Hypotheses

The results obtained from the analysis of tables are discussed in the context of hypotheses formulated earlier. The results already arrived at by various related studies have also been compared with the results of present study. This has been done to make the study more meaningful.

The F-ratio for the variable of Intelligence is 34.47 which is significant at .01 level of confidence. This shows that there are significant differences between the Academic Achievement of High Intelligence and Low Intelligence groups of students. The group of intelligence shows higher Academic Achievement than that of the low intelligence group. So the first hypothesis of the study which states that “The Academic Achievement of High Intelligence group will be significantly higher than that of the low intelligence group” is accepted.

The Second hypothesis of the study states that “The Academic Achievement of Introverts will be significantly higher than that of the Extroverts group”.

The results of the present study reveal that there are no significant difference in the Academic Achievement of Introverts and Extroverts. So, the second hypothesis of the study is rejected.

The third hypothesis states that “The inter-correlation among the variables of Academic Achievement, Intelligence, and personality types will be positive and significant.” The Correlation between Academic Achievement and Intelligence is significant at .01 level of confidence and the correlation between personality types and academic achievement is significant at .05 level. This shows that Intelligence and personality types are significantly related to the Academic Achievement of the students. So, the fourth hypothesis is accepted.

DISCUSSION OF RESULTS BASED ON EARLIER RESEARCHES

Results of the present study are in agreement with the results of following studies:

- Studies of Jacobson, Dickinson and Fleishment (1969), Pandey and Singh (1970), Ingall (1985), Mehar (1992) and Kumari (1994) have shown the intelligence affects Academic Achievement of the students significantly.
- The results of the studies by Borton, Dielman and cattell (1977), Lewis (1985), Borg and Shapiro (1996) and Ziegert (2000) are not in agreement with the results of the presents studies since they indicated that the personality factors predict Academic Achievements of the students.
- Sinha(1967), New Some et al (2000) have shown a positive relationship between Intelligence and Personality Types on Academic Achievement.

CONCLUSIONS

The following conclusions are drawn:-

- There are significant differences between the Academic Achievement of High Intelligence and Low Intelligent students.High Intelligence groups is higher in Academic Achievement than the low Intelligence group.
- There are no significant differences between the Academic Achievement of Introverts and Extroverts groups of students.
- The Inter-correlation of Academic Achievement, Intelligence and Personality Types were positive and significant.

EDUCATIONAL IMPLICATIONS

- The study may be helpful to identify the students with high and low level of intelligence and can relate their Academic Achievement with the level of intelligence. They can exhort the students with low Intelligence to show higher Academic Achievement through some incentives.

- The teachers can treat the students with Introvert and Extroverts Personality types alike to ensure high Academic Achievement.
- The study may be helpful in providing direction to the teachers and parents to provide suitable facilities and congenial environments to promote the academic achievement of the students.
- The teachers can guide and motivate students who have high Academic Achievement to help other students of their class.
- The findings of the present study are not only useful to researchers in term of further research but they will also have applications to the classroom practices, organizational management in schools and personality development. It may also help to the teachers, parents, guidance workers to identify the low achievers, diagnose their problems and providing guidance to improve their performance.

SUGGESTIONS

Some suggestions may be made hereby for other possibilities of research in this field

- The study may be replicated on the sample of different populations of schools, colleges and for other different classes in universities.
- The present study is limited to schools of Chandigarh (U.T.) only. It is suggested that a similar study may be conducted for other states and at national level.
- The present study is limited to a small sample. Further study can be carried out on a large sample.
- The present study is focused on the Government Model Senior Secondary Schools only. It can be extended to Private Schools or Colleges also.

REFERENCE

- Borg, M.O. and Shapino, S.L. (1996). *Personality performance in principles of economics. Journal of Economic Education*, 27, 3-25.
- Borton, K.; Dielmon, T.E. and Cattell, R.B. (1977). *Personality and IQ measures as predictor of school achievement. Journal of Educational Psychology*, 63(4), 398-404.
- Dawidoff, L.L. (1976). *Introduction to Psychology*. N.Y.: McGraw Hill.
- Good, (1973). *Dictionary of Education (3rd Edition)* New York: McGraw Hill, *Indian Educational Review*, 3(1), 1968.
- Ingalls, S.I. (1985). "The effect of superior Intelligence and behavioural handicaps on the Academic Achievement and related studies of fifth and sixth grade boys." *Distt. Abstr. Int. Vol. 9A*, pp. 28-36.

- Jacobson, L.I.; Dickinson, I.C. Fleishman, J.N. (1969). "Relationship of Intelligence and mediating process to concept learning." *J. Edu. Psychol.* Vol. 60(2), pp. 109-112.
- Khanam, R (2004) "performance of high school students in Biology as a function of personality types and instructional design for concepts and level of learning" *Ph.D.Thesis, P.U.Unpublished.*
- Kumari, S. (1994)"A study acquisition of geographical concepts in relation to intelligence, personality, cognitive style and socio demographic variables." *Ph.D. Thesis, Department of Education, Panjab University, Chandigarh.*
- Lewis, L.(1985). A multivariate analysis of variables associated with academic success within college environment. *Distt. Abst. Int.(72), Vol.12, Order No. 850264.*
- Madan, V. (2006) *The relation of neuroticism and extraversion to intelligence and academic achievement to different age level. Ph.D. Thesis, Panjab University, Chandigarh.*
- Mehar, R. (1992) "Effectiveness of concept attainment model on achievement in segment of 9th class geography with respect to intelligence and attitude towards the subject." *M.Ed Dissertation, Panjab University, Chandigarh.*
- Mehta, P. (1969). *Achievement motive of high school bots, NCERT, New Delhi.*
- Mohan (1975). "High school science achievement as a function of personality and intelligence". *Journal of Education and Psychology, 32 (4), p. 217-222.*
- Naresh kumar (1985). *Dissertation for the degree of M.Ed., DAV College of Education, Abohar.*
- New Some, S., Day, A.L. and Catano, V.M.(2000). *Assessing the predictive validity of emotional intelligence, personality and individual differences, 29 (6), 1005-1016.*
- Pandey, V.D. and Singh, D.P. (1970). " A correlation study of reading speed, Academic Achievement and intelligence of University students." *Journal of Educational Psychology, 28, 3.*
- Singh, K.(2007) *A study of creative thinking of high school students of Himachal Pradesh in relation to some cognitive and non-cognitive.*
- Walia, J.S.(1987). *Advanced Educational Psuchology. Jallandhar City, Paul Publisher.*
- Webster: *Third New International Dictionary.*