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A Correlational Study of Intelligence, Study Habits and Academic Achievement At Tenth Grade Students

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ABSTRACT

A correlational study of intelligence, study habits and academic achievement at tenth grade students sample consisting of 200 participants, 100 of whom were females and 100 were males. The data were collected by the Group Test of Mental Ability, Study Habits Inventory (SHI) and Students' annual mark of class ninth was accepted as the indicator of their academic achievement. The results leads to the four null hypothesis are accepted showing no difference between intelligence and academic achievement of male and no significant difference between academic achievement and study habits of female students and no difference between intelligence and study habits of male and female.

KEYWORDS academic achievement, intelligence, study habits.

Introduction

Modern cyber era is full up competition. In this age everyone has develop a competitive zest to compete over other in quest of achieving life goals. Amongst the various areas where people try to compete other's, the academic pursuit semis to emerge as the most important and relevant aspect of life where people make their effort to do their best over others, which starts from the very beginning of schooling. In all such efforts, there is the notion of excellence. Excellence in education has been of prime importance for not only school children but also it is of entrust importance for their parents, teachers etc. Hence, all school machinery along with the parents of school going children make all efforts to create such an academic environment where excellence are developed and nourished such efforts are not made for single reasons to do best in the academic but for the reason.

In the light of the above fact, academic achievement most likely seems to be as one of the predictions of people's success in general and pupils' success in their life career in particular. Hence, it is to be noted that academic achievement is an outcome of the instruction provided to the children in schools, which is determined by the grades, or marks secured by the students in the successive examination. The term "achievement" refers to indicate the degree of level of success attained in some general and specified area. It represents to the acquirement of knowledge as skills and may imply ability to make appropriate use of such knowledge or skill in a variety of present and future situations. Academic achievement is defined by Crow and Crow (1969) as the extent to which a learner is profiting from instruction in a given area of learning i.e. achievement is reflected by the extant to which skill and knowledge has been imparted to him. Academic Achievement is influenced by personality, motivation, opportunities, education and training. There are several other factors also which influence the academic achievement of student like study habit, intelligence, socio economic status and self-concept etc. Nuthane & Yenage (2009) has examined the causes of poor academic performance among university undergraduates.

Study habits refer to the activities carried out by learners during the learning process of improving learning. Study habits are intended to elicit and guide one's cognitive processes during learning. According to Patel (1976) study habits include home environment & planning of work, reading & note taking habits, planning of subjects, habits of concentration, preparation for examination, general habits & attitudes, school environment. Study habits are habitual way of exercising and practicing the abilities for learning. These are techniques, which a student employs to go about his or her studies, which are consistent and have become stereotyped as a result of long application or practice. It is one of the major factor effecting academic achievement of the students.

Intelligence has traditionally been considered an important predictor of academic achievement (Furnham, 1995). Intelligence traditionally, was defined in terms of ability to do abstract reasoning, ability to learn and ability to adapt in novel situations. The recent views of intelligence recognize active role of an intelligent person in terms of shaping and selecting an environment according to his or her choice. It is a manifestation of cognitive ability with reference to one's academic achievement. According to Stern (1914)," intelligence is a general capacity of an individual consciously to adjust his thinking to new requirements. It is the general mental adaptability to new problems and conditions of life". Terman (1921), "an individual is intelligent in the proportion that he is able to carry on abstract thinking".

HYPOTHESIS:

1. There exists no significant relationship between intelligence and study habits on male sample at tenth grade Students.
2. There exists no significant relationship between academic achievement and study habits on male sample at tenth grade Students.
3. There exists no significant relationship between intelligence and academic achievement on male sample at tenth grade Students.
4. There exists no significant relationship between intelligence and study habits on female sample at tenth grade Students.
5. There exists no significant relationship between academic achievement and study habits of female sample at tenth grade Students.
6. There exists no significant relationship between intelligence and academic achievement of female sample at tenth grade Students.
7. There exists no significant difference between male and female of intelligence at tenth grade Students.
8. There exists no significant difference between male and female of study habits at tenth grade Students.
9. There exists no significant difference between male and female of academic achievement at tenth grade Students.

SAMPLE: Target population of this study was all of the tenth grade students in Aligarh Muslim university schools during the

2012-13 academic years in Aligarh city. Total 200 students Sample population consisted of 100 male and 100 female students.

TOOLS:
INTELLIGENCE:
Group Test of Mental Ability developed by R.K.Tondon. It has a total of 91 questions employing seven types of sub-tests namely; number series, vocabulary similar, vocabulary opposites, classifications, best answers, analogies and reasoning.

STUDY HABITS: The Study Habits Inventory (SHI) developed by M.Mukhopadhyay and B.N. Sansanwal was used in the present investigation. This is comprised of 52 items.

ACADEMIC ACHIEVEMENT: The annual examination marks of class ninth students obtained from the office of the institution to measure academic achievement.

PROCEDURE: A good rapport was established with the subjects and it was assured to them that their responses will be kept confidential and will be used only for research purpose. Then the tools were administered on to them and the investigator explained the items to the participants. SPSS 16.0 package for undertaken mean, Standard Deviation, Pearson's Coefficient of Correlation and t-test analysis were used.

ANALYSIS AND INTERPRETATION OF DATA
Table: 1 Shows the mean and standard deviation of male and female students

Variables	Male		Female	
Intelligence	Mean	SD	Mean	SD
	55.67	18.88	18.86	20.12
Study Habits	57.25	15.03	15.03	13.23
Academic Achievement	57.75	9.88	9.78	10.70

Table 1 revealed the means and standard deviation of male and female of the three variables that is intelligence, study habits and academic achievement.

Table: 2 Relationship between intelligence, study habits and academic achievement of male sample (Pearson's coefficient correlation 2tailed test)

Correlation matrix

Variables	Intelligence	Study habits	Academic achievement
Intelligence	1	0.29*	0.18
Study habits		1	0.48**
Academic achievement			1

****. Correlation is significant at the 0.01 level (2-tailed) &*. Correlation is significant at the 0.05 level (2-tailed).**

Table 2 revealed that correlation between study habits and academic achievement for male sample was 0.48 which is significant at 0.01 levels showing that academic achievement covaries or is related study habits. It shows that higher the study habits scores better the academic achievement scores. The correlation between intelligence and study habits were (r) 0.29 which was also significant at 0.05 levels this shows that intelligence and study habits are also related to each other. More level of intelligence boys tend to have better study habits but there is no correlation between intelligence and academic achievement of male sample.

Table: 3 Relationship between intelligence, study habits and academic achievement of Female sample (Pearson's coefficient correlation2tailedtest)

Correlation matrix

Variables	Intelligence	Study habits	Academic achievement
Intelligence	1	0.19	0.499**
Study habits		1	0.39**
Academic achievement			1

****. Correlation is significant at the 0.01 level (2-tailed)**

It can be seen from table.3 that coefficient of correlation(r) between intelligence and academic achievement for female students sample was 0.499 which is significant at 0.01 levels showing that higher the intelligence scores better the academic achievement scores. The correlation between intelligence and study habits was 0.39 which is significant at 0.01 levels shows intelligence and study habits are also correlated to each other, more intelligence female tends to have better study habits. But there is no correlation between intelligence and study habits of female sample.

Table: 4 Shows difference between boys and girls on intelligence, study habits academic achievement at tenth grade Students

Variables	Means compared		Standard error of difference between means	t-test value	Significance
	M1	M2			
Intelligence	55.67	18.86	3.3093	.8245	Significance
Study Habits	57.25	15.03	2.4108	1.451	Significance
Academic Achievement	57.75	9.78	1.7540	2.793	Significance at 0.01 levels

In order to test the null hypothesis no difference between intelligence of male and female, the t-was used test. The detailed of results obtained are shown in table. 4 the average score of intelligence test for male students was (mean= 55.67& S.D18.86) and that for female (mean=58.4&S.D 19.99). The t-value obtained for the difference of two means was 0.8242. When the values to be significant at 0.01&0.05 levels were more than the obtained values. This shows that this value of t-value (0.8242) is not significant.

FINDING OF THE STUDY
1. There was significant and positive relationship found between intelligence and study habits on male sample at tenth grade Students.
2. There was significant and positive relationship found between academic achievement and study habits on male sample at tenth grade Students.
3. There was no significant difference found between intelligence and academic achievement on male sample at tenth grade Students.
4. There was significant and positive relationship found between intelligence and academic achievement on female sample at tenth grade Students.
5. There was significant and positive relationship found between intelligence and study habits on female sample at tenth grade Students.
6. There was no significant difference found between study habits and academic achievement on female sample.
7. There was no significant difference found between male and female on intelligence at tenth grade Students.
8. There was no significant difference found between male and female on study habits at tenth grade Students.
9. There was significant difference found between male and

female on academic achievement at tenth grade Students. This means that female and male differ in academic achievement and females are better in academic achievement.

CONCLUSION

The results leads to the conclusion that four null hypothesis are accepted showing no difference between intelligence and academic achievement of male and no significant difference between academic achievement and study habits of female students and no difference between intelligence and study habits of male and female.

In case of female sample, it is found that academic achievement is related to intelligence. It shows that higher the intelligence scores better the academic achievement scores. Further, females it is investigated that intelligence and study habits are also related to each other. More intelligent female tends to have better study habits.

In case of male sample it was founded that academic achievement co varies with study habits it means that higher the study habits scores better the academic achievement scores and intelligence and study habits are also related to each other, more the intelligent male tends to have better study habits.

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