
International Multidisciplinary Research Journal

Golden Research Thoughts

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RNI MAHMUL/2011/38595

ISSN No.2231-5063

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GRT **EFFECT OF INTELLIGENCE ON ACADEMIC
ACHIEVEMENT OF SECONDARY SCHOOL
STUDENTS- A STUDY IN LAKHIMPUR DISTRICT OF ASSAM**

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Abstract:-The study aimed at to investigate the academic achievement of secondary school students according to gender and place of residence and to determine the level of intelligence according to gender and place of residence of Lakhimpur District of Assam.. The sample of study consisted of 100 students of class-X drawn from government and provincialised schools of Lakhimpur districts of Assam. Survey method is used for collection of data. The results of the study reveal that there is difference between boys and girls and rural and urban students on the average academic achievement.

Keywords:Intelligence, academic achievement.

1.INTRODUCTION

In this era of globalization and technological revolution education is considered as a first step for every human activity. It plays a vital role in the development of human capital and is linked with an individual's well-being and opportunities for better living (Battle and Lewis, 2002). It ensures the acquisition of knowledge and skills that enable individuals to increase their productivity and improve their quality of life

Modern society depends on a strong and vibrant educational system. In the present educational scenario, the whole student has become the centre of concern; it is not only the cognitive intelligence, but also the creativity, emotions and interpersonal skills influences academic success of the students. Learning of the student, which is utmost important influenced by a number of factors like intelligence, adjustment, socio-economic status, social acceptance or reject, and other personality factor. Intelligence in one of the most important factors that having an influence on the academic achievement of the students.

Besides many changes in the aims and practices of education it still stresses the significance of academic achievements. Each and every student aspires for high academic achievement. Academic achievement is the way of knowing learning of different individual and now it is scientifically established fact that academic achievement is inextricable bound up with and dependent upon intelligence and ability.

LITERATURE REVIEW

A number of studies have already been conducted on intelligence. The investigator presented few studies as reviewed below.

Abdullah et al (2004) investigated is there any significant relationship between gender and EQ and is there any significant relationship between students level of EQ and their negative academic affect and academic achievement. The study reported that girls have higher EQ than boys and there is significant relationship between gender and EQ. Colet Andreu and Vives Fabia Morales (2005) in their study on relationship between impulsivity, intelligence and academic failure reveals that impulsivity is not directly related to intelligence and many act as a moderator variables between individual resources and their achievement. . Laidra Kaia et all (2006) conducted a study to document how intelligence and personality relate to academic achievement in Estonian schools, from elementary to secondary level. Results show that there do not appear to be dramatic differences in the way of intelligence and personality dispositions relate to the grades children get in Estonian school at different educational levels. Mishra Poonam,(2012) studied to investigate the effect of Emotional Intelligence on Academic Achievement of senior secondary students. A sample of 1000 students was drawn adopting random-cum cluster sampling technique from Government senior secondary schools of Jaipur district, Rajasthan. The study revealed that there is a positive

effect of emotional intelligence on academic achievement of total group students and especially girl students. . Ghazi Safder Rehman et al (March 2011) found a significant correlation between self perceived verbal/ linguistic, logical/ mathematical; inter personal, intrapersonal, naturalistic, intelligence and student's academic achievement. There was insignificant correlation between self perceived musical intelligence and academic achievement. Naderi Habibollah et al (2008), have examined intelligence and gender as predictors of academic achievement. The findings showed a lower correlation independent variables (score of intelligence and gender)and CGPA in this study

OBJECTIVES OF THE STUDY

- a. To Study the Academic Achievement of the Secondary School Students according to gender..
- b. To Study the Academic Achievement of the Secondary School Students according to place of residence.
- c. To determine the level of Intelligence according to gender.
- d. To determine the level of Intelligence according to place of residence.

HYPOTHESIS OF THE STUDY

- Ho1. There is no significant difference on the academic achievement of students of the Secondary level according to gender.
Ho2. There is no significant difference on the academic achievement of students of the Secondary level according to place of residence.

VARIABLES

Dependent variable for the purpose of the study was academic achievement and independent variables were intelligence, male –female and urban- rural.

Method and Sample Design

The study was conducted under the normative survey method. The population of the study is all the Secondary School students studying class- X in Lakhimpur District. 100 sample for the study was selected on the basis of simple random sampling method. 10 number of schools were selected randomly as sample schools.

Tools for Data collection

To know the level of Intelligence of the secondary school students the investigator has used the scale “Group Test of Intelligence” constructed by Dr. P.N. Mehrotra. It is a standardised scale in which reliability was found .88, test- retest reliability is .89 and Kuder Richardson reliability is .85.

Academic achievement of the students is determined by the average marks obtained in the test examination of Class- X conducted by the Lakhimpur District Examination Board.

RESULTS AND DISCUSSION

Collected data through above mentioned inventories were analyzed in terms of mean, standard deviation, t- test method. The results have been presented in the tables.

Objective 1

In order to study the academic achievement of the Secondary school students the investigator analyzed the average marks of the boys and girls data through percentage and results are shown in the table - 1.1.

Table – 1.1
Percentage distribution of students on the average marks according to gender

Examination Marks	Students					
	Boys		Girls		Total	
	Students	%	Students	%	Students	%
10– 19	3	6.0	4	8.0	7	7.0
20-29	4	8.0	0	0	4	4.0
30– 39	9	18.0	24	48.0	33	33.0
40– 49	5	10.0	9	18.0	14	14.0
50– 59	19	38.0	6	12.0	25	25.0
60– 69	6	12.0	3	6.0	9	9.0
70– 79	3	6.0	0	0	3	3.0
80– 89	1	2.0	2	4.0	3	3.0
90– 99	0	0	2	4.0	2	2.0
Total	50	100.0	50	100.0	100	100.0

Here, it has been found that highest number of boys and girls student have obtained marks in the range of 30 to 39 with 33 percent. It also shows that among the boys student the highest percentage of boys is in the range of marks 50 to 59 i.e. 38 percent, again the highest percentage of girls student is in the range of marks 30 to 39 i.e. 48 percent

The investigator attempted to make a comparison on average marks between boys and girls. To test the null hypothesis first mean score was calculated for both group and then “t” test was applied. The result is presented in the table 1.2.

Table -1.2
Mean, standard deviation and t –test of the average marks of boys and girls student.

Examination	Gender	N	Mean	Mean Difference	Std. Deviation	T test
Marks	Boys	50	46.45	12.10	17.629	3.590
	Girls	50	34.35		16.034	

It is found that the mean score of both boys and girls student are 46.45 and 34.35 respectively, as such the mean difference 12.10 is considerably high. When “t” test was applied to compare the mean score it was found that the calculated't' value 3.590 is greater than the table value at 5% level of significance. Consequently our null hypothesis is rejected. We can conclude that there is significant difference between boys and girls students on the average academic achievement in the examination.

OBJECTIVE 2

In order to find out the academic achievement of secondary school students according to gender the investigator analyzed the data through percentage and results are shown in the table 1.3.

Table-1.3
Percentage Distribution of students on the average marks according to place of residence

Examination Marks	Area				Total	
	Rural		Urban		Students	%
	Students	%	Students	%		
10 – 19	0	0	7	14.0	7	7.0
20 – 29	0	0	4	8.0	4	4.0
30 – 39	12	24.0	21	42.0	33	33.0
40 – 49	12	24.0	2	4.0	14	14.0
50 – 59	20	40.0	5	10.0	25	25.0
60 – 69	4	8.0	5	10.0	9	9.0
70 – 79	1	2.0	2	4.0	3	3.0
80 – 89	1	2.0	2	4.0	3	3.0
90-99	0	0	2	4.0	2	2.0
Total	50	100.0	50	100.0	100	100.0

Hence, it has been found that highest number of rural and urban students have obtained marks in the range of 30 to 39 with 33 percent. It also shows that among the rural students the highest percentage is in the range of marks 50 to 59 i.e. 40 percent, again the highest percentage of urban students is in the range of marks 30 to 39 i.e. 42 percent.

The study also tried to know the difference between urban and rural students on the average marks. It is assumed that there is no difference on the academic achievement of the students according to place of residence.

Table -1.4
Mean, standard deviation and t –test of the average marks of urban and rural students

Examination	Place of residence	N	Mean	Mean Difference	Std. Deviation	T test
Marks	Rural	50	49.23	17.67	10.791	5.685
	Urban	50	31.56		19.151	

The analysis shows that the Mean score of rural students is 49.23 and urban students is 31.56 with a high mean difference of 17.67. When the both mean scores was compared with “t” value it is found that the “t” value is 5.685 which is greater than the table value at 5% level of significance. So, the null hypothesis is rejected. There is difference between rural and urban students on the average academic achievement.

Objective 3

In order to know the level of intelligence of secondary school students the data are classified into six different levels i.e. very inferior, inferior, dull average, average, bright average and superior level of intelligence and calculate the percentage.

Table- 1.5
Percentage Distribution of students in the levels of intelligence according to gender.

Score	Intelligence Level	Students					
		Boys		Girls		Total	
		Students	%	Students	%	Students	%
0-30	Very Inferior	0	0	0	0	0	0
30-37	Inferior	7	14.0	4	8.0	11	11.0
37- 43	Dull Average	6	12.0	13	26.0	19	19.0
43-57	Average	18	36.0	22	44.0	40	40.0
57-63	Bright Average	11	22.0	3	6.0	14	14.0
63-70	Superior	8	16.0	8	16.0	16	16.0
	Total	50	100.0	50	100.0	100	100.0

It has been found from the analysis that level of intelligence of highest number of boys student is in average level (scores 43 to 57) with 36 percent and level of intelligence of highest number of girls student is in average level (scores 43 to 57) with 44 percent. Hence, it has been found that girls' student level of intelligence is higher than that of boys

The investigator also tried to make an comparison between boys and girls student in their scores of intelligence.

Table 1.6
Mean and Standard deviation of intelligence scores of students according to gender.

Variables	Gender	N	Mean	Std. Deviation
Intelligence level	Boys	50	149.32	43.432
	Girls	50	135.32	42.934

The analysis shown that the Mean score of Intelligence for boys is 149.32 and girls is 135.32 with a mean difference of 14 which is very high. The standard deviation of intelligence for boys and girls are 43.432 and 42.934 respectively.

Objective 4

One of the objective of the study was to determine the level of Intelligence of students according to place of residence. To determine the level of Intelligence of the students of urban and rural area the investigator classified the data and computed the percentage. The results are shown in table 1.7.

Table – 1.7
Percentage Distribution of students in the level of Intelligence according to place of residence.

Score	Intelligence Level	Students					
		Rural		Urban		Total	
		Students	%	Students	%	Students	%
0-30	Very Inferior	0	0	0	0	0	0
30-37	Inferior	4	8.0	7	14.0	11	11.0
37-43	Dull Average	4	8.0	15	30.0	19	19.0
43-57	Average	19.0	38.0	21.0	42.0	40.0	40.0
57-63	Bright Average	10	20.0	4	8.0	14	14.0
63-70	Superior	13	26.0	3	6.0	16	16.0
	Total	50	100.0	50	100.0	100	100.0

It has been found that level of intelligence of highest number of rural students is in average level (scores 43 to 57) with 38 percent and level of intelligence of highest number of urban students is in average level (scores 43 to 57) with 42 percent. Hence, it has been found that level of intelligence of urban students is higher than that of rural students.

To compare the difference of mean score of intelligence between rural and urban students mean scores are computed.

Table – 1.8
Mean and standard deviation of intelligence of students according to place of residence

Variable	Place of Residence	N	Mean	Std. Deviation
Intelligence Level	Rural	50	53.8744	9.66231
	Urban	50	46.2000	8.83266

It is found that the mean score of Intelligence for both rural and urban students is 53.8744 and 46.2000 respectively, as such the mean difference 17.6744 is quite high. The standard deviation of Intelligence for both rural and urban students is 9.66231 and 8.83266 respectively.

FINDINGS

The following are the major conclusions drawn from the present study -

1. It was found that among the boys student the highest percentage is in the range of marks 50 to 59 i.e. 38 percent, again the highest percentage of girls student is in the range of marks 30 to 39 i.e. 48 percent.
2. The test of significance indicates that there is difference between boys and girls student on the average academic achievement in the test examination.
- 3.. It also shows that among the rural students the highest percentage is in the range of marks 50 to 59 i.e.40 percent, again the highest percentage of urban students is in the range of marks 30 to 39 i.e. 42 percent.
- 4.. The test of significance indicates that there is difference between rural and urban students on the average academic achievement in the test examination.
5. Mean score of Intelligence for boys is 149.32 and girls is 135.32 with a mean difference of 14 which is very high.

7.It is found that the mean score of Intelligence for both rural and urban students is 53.8744 and 46.2000 respectively, as such the mean difference 17.6744 is quite high.

CONCLUSION

The academic achievement of students depends on many factors like social, psychological, cultural etc. It is observed from various studies that among the factors intelligence is one of the most significant factors and has significant effect on the academic achievement of the students in various examinations.

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