A STUDY ON LATERAL THINKING AND ACADEMIC ACHIEVEMENT OF HIGH SCHOOL STUDENTS

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ABSTRACT

The objective of the study was to find out the relationship between Lateral thinking and Academic achievement of high school students. Stratified random sampling technique was used for the selection of the sample. The investigator adopted the survey method for this study. It was found that the level of lateral thinking is moderate among high school students. It was also found that there exists a positive correlation between lateral thinking and academic achievement of high school students.

INTRODUCTION

Education is the most important agent for change. It is expected to change the attitude and values among people and create in them a desire for progress. Education is the agent which helps in increasing contemporary knowledge and in the dissemination of information on current facts. It meets the challenge of our time and attempts to meet the needs of the country. Education is the process by which people acquire knowledge, skills, habits, values and attitudes. The word education is also used to describe the results of the educational process.

SIGNIFICANCE OF THE STUDY

In teacher centered instruction, teachers direct the learning process and students assume a receptive role in their education. Student centered learning allows students to actively participate in the learning process from an autonomous view point and promote self learning. Students spend the entire class time constructing a new understanding of the

material being learned in a proactive way. Varieties of hands-on activities are administered in order to promote successful learning. When a teacher allows their students to make inquiries by lateral thinking or even sets the stage for his or her academic success, learning becomes more productive. Hence the investigator chose to study a problem in the area of lateral thinking and academic achievement of high school students.

OBJECTIVES OF THE STUDY

1. To find out the level of lateral thinking of high school students.
2. To find out the level of academic achievement of high school students.
3. To find out whether there is any significant difference between rural and urban high school students in their lateral thinking.
4. To find out whether there is any significant difference between male and female high school students in their lateral thinking.
5. To find out whether there is any significant difference between rural and urban high school students in their academic achievement.
6. To find out whether there is any significant difference between male and female high school students in their academic achievement.
7. To find out whether there is any significant relationship between lateral thinking and academic achievement of high school students.

NULL HYPOTHESES

1. There is no significant difference between rural and urban high school students in their lateral thinking.
2. There is no significant difference between male and female high school students in their lateral thinking.
3. There is no significant difference between rural and urban high school students in their academic achievement.
4. There is no significant difference between male and female high school students in their academic achievement.
5. There is no significant relationship between lateral thinking and academic achievement of high school students.

RESEARCH METHODOLOGY

Method adopted in the present study

In this study the investigator adopted the survey method.

Population

The population of the present study was the students studying in private, government and aided high schools in Sivaganga district.

Sample

The investigator selected 300 high school students studying in Sivaganga district. For selecting the students, the investigator used the stratified random sampling technique.

Tools Used

In the study investigator used the following tools.

i. Lateral thinking scale developed by Edward de Bono 1967

ii. Academic achievement test

Statistical Techniques Used:

Mean, Standard Deviation, t-test, ANOVA and Pearson's product moment correlation.

DATA ANALYSIS AND INTERPRETATION

Table 1

LEVEL OF LATERAL THINKING OF THE HIGH SCHOOL STUDENTS

Lateral Thinking	Low		Moderate		High	
	N	%	N	%	N	%
	51	17	218	72.7	31	10.3

It is inferred from the above table that 72.7% of the high school students have a moderate level, 17% of them have low level and 10.3% of them have high level of lateral thinking.

Table 2

LEVEL OF ACADEMIC ACHIEVEMENT OF THE HIGH SCHOOL STUDENTS

Academic Achievement	Low		Moderate		High	
	N	%	N	%	N	%
	40	13.3	218	72.7	42	14

It is clearly understood that 72.7% of high school students have a moderate level, 13.3% of them have low level and 14% of them have high level of academic achievement.

Table 3

DIFFERENCE BETWEEN RURAL AND URBAN HIGH SCHOOL STUDENTS IN THEIR LATERAL THINKING

Variable	Rural N=164		Urban N=136		Calculated value of 't'	Remark at 5% level
Lateral Thinking	Mean	S.D	Mean	S.D		
	43.98	5.92	45.43	5.831	2.140	S

(At 5% level of significance, the table value of 't' is 1.96)

The above table reveals that there is significant difference between rural and urban high school students in their lateral thinking, as the calculated value 2.140 is greater than the table value 1.96 at 5% level of significance and hence the null hypothesis "there is no significant difference between rural and urban high school students in their lateral thinking" is rejected.

Table 4

DIFFERENCE BETWEEN MALE AND FEMALE HIGH SCHOOL STUDENTS IN THEIR LATERAL THINKING

Variable	Male N=173		Female N=127		Calculated value of 't'	Remark at 5% level
Lateral thinking	Mean	S.D	Mean	S.D		
	44.65	5.652	44.62	6.28	0.36	NS

(At 5% level of significance, the table value of 't' is 1.96)

The above table reveals that there is no significant difference between male and female high school students in their lateral thinking, as the calculated value 0.36 is lower than the table value 1.96 at 5% level of significance. Hence the null hypothesis "there is no significant difference between male and female high school students in their lateral thinking" is accepted.

Table 5

DIFFERENCE BETWEEN RURAL AND URBAN HIGH SCHOOL STUDENTS IN THEIR ACADEMIC ACHIEVEMENT

Variable	Rural N=164		Urban N=136		Calculated value of 't'	Remark at 5% level
Academic Achievement	Mean	S.D	Mean	S.D		
	78.03	12.09	83.26	8.28	4.432	S

(At 5% level of significance, the table value of't' is 1.96)

It is inferred from the above table that there is significant difference between male and female high school students in their academic achievement as the calculated value (-4.43) is greater than the table value 1.96 at 5% of significance. Hence the null hypothesis "there is no significant difference between rural and urban high school students in their academic achievement" is rejected**.**

Table 6

DIFFERENCE BETWEEN MALE AND FEMALE HIGH SCHOOL STUDENTS IN THEIR ACADEMIC ACHIEVEMENT

Variable	Male N=173		Female N=127		Calculated value of 't'	Remark at 5% level
Academic Achievement	Mean	S.D	Mean	S.D		
	80.53	12.62	80.22	7.81	0.263	NS

(At 5% level of significance, the table value of 't' is 1.96)

It is inferred from the above table that there is no significant difference between male and female high school students in their academic achievement as the calculated value 0.263 is less than the table value 1.96 at 5% of significance. Hence the null hypothesis "there is no significant difference between male and female high school students in their academic achievement" is accepted**.**

Table 7

SIGNIFICANT RELATIONSHIP BETWEEN LATERAL THINKING AND ACADEMIC ACHIEVEMENT OF HIGH SCHOOL STUDENTS

N	ΣX	ΣY	ΣXY	ΣX^2	ΣY^2	Correlational coefficient	Remark at 5% level
300	36570	12063	441143910	1337364900	145515969	0.372	S

(At 5 % level of significance for 298 df, the table value is 0.072)

The above table reveals that there is significant relationship between lateral thinking and academic achievement of high school students as the correlation coefficient 0.372 is greater than the table value 0.074 at 5% level of significance; hence the null hypothesis "there is no significant relationship between lateral thinking and academic achievement of high school students" is rejected.

FINDINGS

1. High School students have moderate level of lateral thinking and academic achievement.
2. There is significant difference between rural and urban high school students in their lateral thinking.
3. There is no significant difference between male and female high school students in their lateral thinking.
4. There is significant difference between rural and urban high school students in their academic achievement.
5. There is no significant difference between male and female high school students in their academic achievement.

6. There is significant relationship between lateral thinking and academic achievement of high school students.

INTERPRETATION

Significant relationship was found between lateral thinking and academic achievement of high school students. Lateral thinking will help to improve the academic progress. So the achievement will be high in high school students.

RECOMMENDATIONS

1. Group activities such as project works, group discussions, cultural programs, sports and games may be conducted to improve their lateral thinking.
2. By conducting outreach programmes like NSS, NCC etc., lateral thinking among high school students could be developed.
3. Co-curricular and extra curricular activities should be given importance in the school campus to develop maturity in students.

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