

LATERAL THINKING OF SECONDARY TEACHER EDUCATION STUDENTS

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ABSTRACT

The main objective of the study was to find out the level of lateral thinking of secondary teacher education students. The survey method was adopted. A sample of 400 secondary teacher education students in Tirunelveli district of Tamilnadu was selected using stratified random sampling technique. A self made tool was used for collecting the data. Percentage analysis, t-test, ANOVA and Chi square were the statistical techniques used. The results revealed that 19.5% of secondary teacher education students have high level of lateral thinking. Significant difference was noticed between male and female secondary teacher education students in their lateral thinking. Significant difference was observed among Science, Arts and Maths group secondary teacher education students. Significant association was found between the lateral thinking of secondary teacher education students and annual income of parents.

INTRODUCTION

In today's information age, creative thinking skills are viewed as crucial for students to cope with a rapidly changing world. If adolescents are to function effectively in this age of massive discontinuities and accelerating change, they must be equipped with lifelong learning and creative thinking skills necessary to acquire and process information. The world is becoming more and more competitive. Quality of performance has become the key factor for personal progress. Edward de Bono who invented the term "lateral thinking" in 1967 is the pioneer of lateral thinking. Lateral thinking is concerned with the generation of new ideas by using left and right brain. Liberation from old ideas and the stimulation of new ones are twin aspects of lateral thinking. Lateral thinking is a creative skill from which all people can benefit enormously.

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SIGNIFICANCE OF THE STUDY

Lateral Thinking is used both at home and school by students at all levels. At school, the emphasis has traditionally always been on vertical thinking which is effective but incomplete. This selective type of thinking needs to be supplemented with the generative qualities of creative thinking. Lateral Thinking is the process of using information to bring about creativity and insight restructuring. Lateral thinking can be learned, practiced and used. It is possible to acquire skill in it just as it is possible to acquire skill in school subjects. Today the students are being trained mostly in vertical thinking. The teachers are not aware of the importance of developing Lateral Thinking ability among students.

The students face many challenging situations personally in their life and in their learning environment. If the students are trained in lateral thinking in the form of hemispherical thinking, they can achieve something significant in their life. Accordingly, this study assumes greater importance in today's educational field. To develop lateral thinking ability a teacher should know how lateral thinking ability is related to academic achievement of the students. This study assumes that lateral thinking is the genesis of creativity, which happens to be the goal of present day education. Class teaching in our country, has unfortunately been convergent in nature and left brain based. The emphasis is therefore to be laid on lateral thinking of students at all levels especially among secondary teacher education students.

OBJECTIVE

1. To study the lateral thinking of the secondary teacher education students with reference to i) Gender, ii) Main subject and iii) Annual income

HYPOTHESES

1. There is no significant difference between male and female secondary teacher education students in their lateral thinking.
2. There is no significant difference among Arts, Science and Maths group secondary teacher education students in their lateral thinking.
3. There is no significant association between families' annual income of secondary teacher education students in their lateral thinking.

METHOD USED

The investigators used the Survey Method to study the lateral thinking of secondary teacher education students.

POPULATION AND SAMPLE

The population included secondary teacher education students of Tirunelveli district in Tamil Nadu. The sample consisted of 400 secondary teacher education students selected by stratified random sampling technique.

TOOLS USED

The lateral thinking tool was designed and validated by the investigators.

STATISTICS USED

Percentage analysis, t-test, ANOVA and Chi square were used for data analysis.

DATA ANALYSIS

The level of lateral thinking of the secondary teacher education students is average.

Table 1

Level of lateral thinking of secondary teacher education students

Dimensions	Low		Moderate		High	
	N	%	N	%	N	%
Analogies	126	31.5	224	56.0	50	12.5
Fractionation	54	13.5	274	68.5	72	18.0
Generation of alternatives	71	17.8	231	57.8	98	24.5
Brain storming	97	24.3	243	60.8	60	15.0
Dominant ideas	46	11.5	314	78.5	40	10.0
Lateral thinking	64	16.0	258	64.5	78	19.5

From the above table it is inferred that among the secondary teacher education students 12.5% possess high level of Analogies, 18.0% possess high level of Fractionation, 24.5% possess high level of generation of alternatives, 15.0% possess high level of brain storming, 10.0% possess high level of dominant ideas and 19.5% possess high level of lateral thinking.

Hypothesis 1

There is no significant difference between male and female secondary teacher education students in their lateral thinking.

Table 2

Difference between male and female secondary teacher education students in their lateral thinking

Dimensions	Gender	N	Mean	S.D.	Calculated 't' value	Remark
Analogies	Male	25	2.44	1.044	1.158	NS
	Female	375	2.19	1.106		
Fractionation	Male	25	3.76	1.589	2.334	S
	Female	375	3.12	1.315		
Generation of alternatives	Male	25	2.64	0.757	0.166	NS
	Female	375	2.61	1.058		
Brain storming	Male	25	2.92	1.077	1.624	NS
	Female	375	3.28	1.138		
Dominant ideas	Male	25	3.24	1.128	1.154	NS
	Female	375	2.97	1.148		
Lateral thinking	Male	25	15.00	3.291	1.207	NS
	Female	375	14.17	3.653		

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

The 't' values in the above table show that there is no significant difference between male and female secondary teacher education students in their analogies, generation of alternatives, brain storming, dominant ideas and lateral thinking. But there is significant difference between male and female secondary teacher education students in their fractionation. Male secondary teacher education students are better than female in their fractionation.

Hypothesis 2

There is no significant difference among Arts, Science and Maths Group secondary teacher education students in their lateral thinking.

Table 3

Difference among arts, science and maths group secondary teacher education students in their lateral thinking

Variable	Source of variation	df (2,397)		Calculated 'F'-value	Remark
		Sum of squares	Mean square		
Lateral thinking	Between	104.474	52.237	4.016	S
	Within	5163.276	13.006		

The 'F' value in the above table shows that there is significant difference among Arts, Science and Maths Group secondary teacher education students in their lateral thinking.

POST ANOVA TEST (Waller- Duncan)

Table 3(a)

Waller-Duncan scores showing the mean difference among arts, science and maths group secondary teacher education students in their lateral thinking

Subject	N	Subset for alpha = 0.05	
		Mean 1	Mean 2
Science	114	13.61	
Arts	183	14.18	14.18
Maths	103		14.99

The Waller Duncan test result indicates that among the Science (13.61), Arts (14.18) and Maths (14.99) group, secondary teacher education students Maths group students are better in their lateral thinking than their counter parts.

Hypothesis 3

There is no significant association between families' annual income and lateral thinking of secondary teacher education students.

Table 4

Association between families' annual income and lateral thinking of secondary teacher education students

Dimensions	df	Calculated χ^2 Value	Remarks
Analogies	4	5.675	NS
Fractionation		1.110	NS
Generation of alternatives		4.864	NS
Brain storming		5.606	NS
Dominant ideas		7.880	NS
Lateral thinking		11.559	S

(At 5% level of significance, for 4 df, the table value of χ^2 is 9.488)

It is inferred from the above table that there is no significant association between families' annual income and analogies, fractionation, generation of alternatives, brain storming and dominant ideas. But there is significant association between families' annual income and lateral thinking of secondary teacher education students.

FINDINGS

1. No significant difference is found between male and female secondary teacher education students in their analogies, generation of alternatives, brain storming, dominant ideas and lateral thinking. But significant difference is observed between male and female secondary teacher education students in their fractionation. Male secondary teacher education students dominate female in their fractionation.
2. There is a significant difference among Science, Arts and Maths group secondary teacher education students in their Lateral thinking. The result reveals that Maths group students are better in their lateral thinking than their counterparts.

3. There is no significant association between families' annual income and analogies, fractionation, generation of alternatives, brain storming and dominant ideas of secondary teacher education students. But there is significant association between families' annual income and lateral thinking of secondary teacher education students.

CONCLUSION

The purpose of this investigation was to study the lateral thinking of secondary teacher education students. The lateral thinking is based on left and right brain activities. The findings revealed that the gender was not influencing the lateral thinking of the secondary teacher education students. This means that the male and female secondary teacher education students have same level of lateral thinking. The findings revealed that Maths group secondary teacher education students were better than Arts and Science groups secondary teacher education students. This may be due to the fact that Maths group students have more opportunities to use their right and left brain. This may enhance their lateral thinking.

REFEENCE

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