

LEARNING STYLES AND ACADEMIC ACHIEVEMENT OF X STD STUDENTS

Research
Paper

ABSTRACT

The main objective of the study was to find out the academic achievement and learning styles of X standard students. The survey method was adopted for the study. A sample of 200 X standard students from seven schools of Virudhunagar Educational District was selected. A General Data Sheet and a Learning Style Inventory were used as tools. Percentage analysis, 't' test were the statistical techniques used. The major finding was the level of learning styles and the level of academic achievement are average.

INTRODUCTION

Learning occurs in stages, and at each stage students learn in different ways. Difficulties that arise at home and in school are often due to differences in learning styles. Children's academic performance and success in life depend on the thinking and problem solving skills they develop in early childhood. Students have different learning styles, that is, characteristic strengths and preferences in the ways they take in and process information. Functioning effectively in any professional capacity, however, requires working well in all learning style models.

According to Stacy Mandle (2005) there are seven specific types of learning style namely 1) Linguistic 2) Logical 3) Spatial 4) Musical 5) Bodily 6) Interpersonal 7) Intrapersonal

It is important to understand that learning styles are not personality traits and we all adopt different styles in different contexts. A weakness or reluctance to adopt any single style will block our ability to achieve academically.

SIGNIFICANCE OF THE STUDY

Learning style is an important factor in the academic achievement of the students. Some students may have poor learning styles which may be due to several factors such as family background, economic status, size of the family, education of the parents etc. Individual differences also play a vital role in the learning styles of children. Learning styles may be different from child to child and they also differ in case of high, average and low achievers.

All school entrants, from beginning to end, require some styles and practice them to pursue knowledge successfully. These learning styles play a vital role in deciding their level of achievement. This achievement score determines their future career. The ambitions and aspirations of our students are largely governed by the learning styles adopted by the students.

OBJECTIVES

1. To find out the level of learning styles and their dimensions in X standard students with respect to sex.
2. To find out the significant difference between a) boys and girls b) rural and urban X standard students in their learning styles.
3. To find out the level of academic achievement of X standard students with respect to sex.
4. To find out the significant difference between a) boys and girls b) rural and urban X standard students in their academic achievement.

HYPOTHESES

1. The level of learning styles and their dimensions in X standard students with respect to sex is average.

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Table 1
LEVEL OF LEARNING
STYLES OF BOYS AND GIRLS

Dimensions	Boys						Girls					
	Low		Average		High		Low		Average		High	
	N	%	N	%	N	%	N	%	N	%	N	%
Linguistic	19	19.6	63	64.9	15	15.5	15	14.6	70	68	18	17.5
Logical	12	12.4	70	72.2	15	15.5	16	15.5	71	68.9	16	15.5
Spatial	19	19.6	62	63.9	16	16.5	13	12.6	73	70.9	17	16.5
Musical	15	15.5	64	66	18	18.6	15	14.6	69	67	19	18.4
Bodily	16	16.5	59	60.8	22	22.7	22	21.4	61	59.2	20	19.4
Interpersonal	17	17.5	68	70.1	12	12.4	14	13.6	63	61.2	26	25.2
Intrapersonal	15	15.5	65	67	17	17.5	17	16.5	68	66	18	17.5

It is inferred from the above table that the level of learning styles of X standard boys and girls is average.

Hypothesis 2

There is no significant difference between X standard boys and girls in their learning styles.

Table 2
't' VALUE BETWEEN BOYS AND GIRLS IN
THEIR LEARNING STYLES

Dimensions	Sex	Mean	SD	N	Calculated 't' value	Remark at 5% level
Linguistic	Boys	34.94	4.87	97	3.5	S
	Girls	37.2	4.24	103		
Logical	Boys	30.44	4.57	97	3.53	S
	Girls	32.59	3.99	103		
Spatial	Boys	19.84	3.95	97	2.55	S
	Girls	20.82	3.39	103		
Musical	Boys	25.11	3.79	97	1.64	NS
	Girls	25.98	3.7	103		
Bodily	Boys	15.34	2.65	97	3.06	S
	Girls	16.43	2.35	103		
Interpersonal	Boys	23.78	3.56	97	1.09	NS
	Girls	24.27	2.71	103		
Intrapersonal	Boys	32.72	5.67	97	2.65	S
	Girls	39.72	4.92	103		

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

NS - Not significant (Null Hypothesis accepted)

S - Significant (Null Hypothesis rejected)

- There is no significant difference between X standard boys and girls in their learning styles.
- There is no significant difference between rural and urban X standard students in their learning styles.
- The level of academic achievement of X standard students with respect to sex in average.
- There is no significant difference between X standard boys and girls in their academic achievement.
- There is no significant difference between rural and urban X standard students in their academic achievement.

METHOD ADOPTED FOR THE PRESENT STUDY

The investigator adopted the survey method to find out the learning styles and academic achievement of X standard students.

POPULATION OF THE STUDY

The population for the present study consisted of X standard students studying in Virudhunagar educational district.

SAMPLE FOR THE STUDY

The investigator used the random sampling technique. Seven schools were selected randomly and from each school, the students studying in X standard were selected randomly. Totally the sample consisted of two hundred X standard students.

TOOLS USED IN THE PRESENT STUDY

The investigator used (a) General data sheet and (b) Learning Styles Inventory (c) Quarterly Exam Marks for collecting data.

DATA ANALYSIS

Hypothesis 1

The level of learning styles and their dimensions in X standard students with respect to sex is average.

Hypothesis 3

There is no significant difference between rural and urban students in their learning styles.

Table 3

't' VALUE BETWEEN RURAL AND URBAN STUDENTS IN THEIR LEARNING STYLES

Dimensions	Category	N	Mean	SD	Calculated 't' value	Remark at 5% level
Linguistic	Rural	108	36.63	5.06	1.75	NS
	Urban	92	35.49	4.15		
Logical	Rural	108	31.92	4.3	1.27	NS
	Urban	92	31.12	4.51		
Spatial	Rural	108	20.16	3.48	1.81	NS
	Urban	92	19.65	3.94		
Musical	Rural	108	26.05	3.77	2.00	S
	Urban	92	24.99	3.68		
Bodily	Rural	108	16.13	2.39	1.37	NS
	Urban	92	15.63	2.72		
Interpersonal	Rural	108	24.36	3.2	1.6	NS
	Urban	92	23.56	3.07		
Intrapersonal	Rural	108	39.23	5.36	1.38	NS
	Urban	92	38.18	5.36		

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

NS – Not significant (Null hypothesis accepted)

S – Significant (Null hypothesis rejected)

Hypothesis 4

The level of academic achievement of X standard boys and girls is average.

Table 4

LEVEL OF ACADEMIC ACHIEVEMENT OF X STANDARD BOYS AND GIRLS

Sex	Low		Average		High	
	N	%	N	%	N	%
Boys	20	20.6	56	57.7	21	21.6
Girls	22	21.4	59	57.3	22	21.4

It is inferred from the above table that 20.6% of the boys have low, 57.7% average and 21.6% high levels of academic achievement. Among the girls 21.4% of students have low, 57.3% average and 21.4% high levels of academic achievement.

Hypothesis 5

There is no significant difference between X standard boys and girls in their academic achievement.

Table 5

't' VALUE BETWEEN X STANDARD BOYS AND GIRLS IN THEIR ACADEMIC ACHIEVEMENT

Category	N	Mean	SD	Calculated 't' value	Remark at 5% level
Boys	97	63.44	16.33	1.37	NS
Girls	103	66.63	16.72		

(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 boys and girls in their academic achievement.

Hypothesis 6

There is no significant difference between rural and urban X standard students in their academic achievement.

Table 6

't' VALUE BETWEEN RURAL AND URBAN X STANDARD STUDENTS IN THEIR ACADEMIC ACHIEVEMENT

Category	N	Mean	SD	Calculated 't' value	Remark at 5% level
Rural	108	59.21	16.24	5.93	S
Urban	92	71.98	14.19		

(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 rural and urban students in their academic achievement.

FINDINGS

1. The level of learning styles and their dimensions in X standard students with regard to sex is average.
2. There is no significant difference between boys and girls in their Musical and Interpersonal learning styles. But there is significant difference between boys and girls in their linguistic, logical, Spatial, Bodily and Intrapersonal. Girls (M=37.20, 32.59, 20.82, 16.43, 39.72) are better than boys (M=34.94, 30.44, 19.84,

15.34, 32.72,) in their Linguistic, Logical, Spatial, Bodily and Intrapersonal.

3. There is no significant difference between rural and urban students in their learning styles in dimensions such as Linguistic, Logical, Spatial, Bodily, Interpersonal and Intrapersonal. But there is significant difference between rural and urban students in their learning style in the dimension: Musical. That is Rural students (M=26.05) are better than urban students (M=24.99).
4. The level of academic achievement of X standard students with respect to sex is average.
5. There is no significant difference between X standard boys and girls in their academic achievement.
6. There is a significant difference between rural and urban X standard students in their academic achievement. That is, the urban students (M=71.98) are better than rural students (M=59.21) in their academic achievement.

INTERPRETATIONS

1. The 't' test reveals that the X standard girls are better than the boys in their linguistic learning style. This may be due to the fact that they have very good memory power and a remarkable ability to repeat everything they have learnt.
2. The 't' test reveals that the X standard girls are better than the boys in their spatial learning style. This may be due to the fact that the girls are visualizers. They spend most of the time by watching movies, day dreaming and staying as far away from reality as possible. But they are very good at working with colours and pictures.
3. The 't' test reveals that the X standard girls (M=39.72) are better than the boys (M=32.72) in their Intrapersonal learning style. This may be due to the fact that they are strong-willed people who can work best alone. They do best in self-paced instruction, individualized projects and working alone. They pride

themselves on being independent and original and they tend to stand out from the crowd.

4. The 't' test reveals that the rural students (M=26.05) are better than the urban students (M=24.99) in their musical learning styles. This may be due to the fact that the rural students have a chance to listen everything in the best way. They have followed very good learning styles because of the calm environmental Conditions. And this type of musical learners learn best through rhythm, melody and music.
5. The 't' test reveals that the urban students (M=71.98) are better than the rural students (M=59.21) in their academic achievement. This may be due to the fact that these students have a sufficient exposure for learning the subjects. And they may have the provision of internet at home. This would be more helpful for the urban students to achieve better than the rural students.

RECOMMENDATIONS

1. Technologically-oriented teaching and brain-storming sessions should be provided to enhance the linguistic ability of the students.
2. Prospective students should be given ample opportunity to develop their logical style of learning by giving individualized puzzle-solving sessions and logical lab facilities.
3. Spatial ability of the students should be enhanced through weekly talent search programmes.
4. Musical learning styles could be developed through poems.
5. Bodily learning styles could be improved by incorporating games in learning. Cultural exchange programme and guidance service programme could be conducted to develop the students' Interpersonal learning styles.
6. Intrapersonal learning styles of students should be encouraged through counseling programmes.

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