

A Study on Learning Styles and Academic Achievement of High School Students



Education

KEYWORDS : Learning Styles, Academic Achievement, High School Students.

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ABSTRACT

An investigation was made to find out whether there is any significant relationship between academic achievement and linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles of the students. In the present study, random sampling technique was adopted to select a sample of 250 students of high schools in Ramanathapuram Educational district, and self made standardized tool was used to collect data. The result revealed that there is no significant relationship between academic achievement and linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles of school students.

Introduction:

One of the major factors on which effective learning depends is the learning style of the learner. Students have different learning styles - 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 makes. If teachers teach exclusively in a manner that favours their students less preferred learning style modes, the students discomfort may be great enough to interfere with their learning. An objective of education should be to help students build their skills in both their preferred and less preferred modes of learning. Learning style models make sure that the learning needs of students in each category are met at least part of the time.

TYPES OF LEARNING STYLES - CHARACTERISTICS

According to Stacy Mandle (2005) there are seven specific types of learning styles.

1) Linguistic- This type of learners loves to read, write and tell stories. They tend to memorize places, dates, names and trivia very easily. They have a remarkable ability to repeat everything we have ever told them, exactly word for word. These students learn best by saying, hearing and seeing words. From these type of pupils we can have another Shakespeare.

2) Logical - This child is very mathematically inclined. They enjoy solving problems particularly if they are maths related. This type of student learns best by categorizing, classifying and working with abstract patterns or relationships.

3) Spatial - These are the visualizers. They spend most of the day dreaming, watching movies, and staying as far away from reality as possible. They are very good at working with colours and pictures.

4) Musical - This type of learner is best at noticing details, pitches and rhythms that escape the normal listener. They learn best through rhythm, melody and music.

5) Kinesthetic - This type of learner is always on the move. These are the learners who can do more than one thing at a time. Generally recognized as ABHD (Attention Deficit Hyperactivity Disorder), many are misdiagnosed.

6) Interpersonal - They are the social butterflies. They adapt easily to any type of social situation have many friends and are excellent leaders. They are patient, understanding and very empathetic, which makes them favourable among their playmates.

7) Intrapersonal - These strong willed people work best alone. They are the strong, silent type. 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 without even trying.

It is important to localize 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 learn effectively.

Significance of the Study:

Students use different approaches when face with the learning tasks and problems. The way in which the students approach the learning tasks and the behaviour in learning situation determine their learning styles. It is pointed out that the learning style on individual has relation to factors such as prior learning experiences, openness to interpersonal and intrapersonal information, physical facilities and learning environment. As it also contributes towards academic achievement, it was decided to study about the different learning styles of high school students. Hence the investigator ventures to investigate in to this issue.

Academic achievement is hinged on a number of factors .These factors could be related to the teacher, the family, the school and the pupil. One of the major factors is the learner's learning styles.

The above viewpoints have led to the investigation into the "Learning Styles and Academic Achievement of High School Students".

Statement of the Problem:

"Learning Styles and Academic Achievement of High School Students"

Definition of the Terms:

Learning Styles

Learning Styles refer to the different ways of learning; the seven specific types of learning styles developed by various psychologists.

Academic Achievement

Academic achievement means the extent to which the learner has learnt in the subject over a period of study.

A measure of knowledge gained in formal education usually indicated by test scores, grade point averages and degrees.

High School Students

By high school students' the researcher means the students studying in Standard IX in Ramanathapuram District.

Objectives:

1. To find out whether there is any significant difference between boys and girls in their linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles.
2. To find out whether there is any significant difference between rural and urban school students in their linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles.
3. To find out whether there is any significant relationship between academic achievement and linguistic, logical, spatial,

musical, kinesthetic, interpersonal and intrapersonal learning styles of the students.

Null Hypotheses:

1. There is no significant difference between boys and girls in their linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles.
2. There is no significant difference between rural and urban high school students in their linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles.
3. There is no significant relationship between academic achievement and linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles of the students.

Method Adopted For The Present Study:

To investigate and to determine the status of present phenomenon the survey method is the best.

Description of the Tool:

LEARNING STYLES INVENTORY

The investigator searched the internet, consulted books and materials on learning styles. The investigator also sought the views of the professors on learning styles. Then the investigator developed 50 items on learning styles under 7 dimensions. Each item contains three options such as (i)yes, (ii)sometimes and (iii)no. Hence each respondent could fall under anyone of the above options. The learning styles inventory consists of 50 objective type questions. There is no right or wrong answers to these questions. Each answer mentions different learning styles.

Sample for the Study:

In the present study, random sampling technique was adopted to select a sample of 250 students of high schools in Ram-anathapuram Educational district.

Statistical Techniques Used:

Mean, Standard Deviation, 't' test and Product Moment Correlation were the statistical techniques used.

Data Analysis:

Null Hypothesis- 1

There is no significant difference between boys and girls in their linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles.

**Table 1
DIFFERENCE BETWEEN BOYS AND GIRLS IN THEIR LEARNING STYLES**

Learning Styles	BOYS N=134		GIRLS N=116		Calculated 't' value	Remarks at 5% level
	Mean	SD	Mean	SD		
Linguistic	19.24	4.57	19.04	4.8	0.33	NS
Logical	17.22	3.89	17.27	4.13	0.09	NS
Spatial	12.93	3.06	12.99	3.49	0.16	NS
Musical	14.89	3.81	13.92	4.84	1.76	NS
Kinesthetic	8.95	2.02	9.01	2.1	0.23	NS
Interpersonal	12.54	3.08	12.8	3.1	0.68	NS
Intrapersonal	20.97	12.77	19.11	5.49	1.46	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 the high school boys and girls in their linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles.

Null Hypothesis- 2

There is no significant difference between rural and urban school students in their linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles.

**Table 2
DIFFERENCE BETWEEN RURAL AND URBAN SCHOOL STUDENTS IN THEIR LEARNING STYLES**

Learning Styles	RURAL N=115		URBAN N=135		Calculated 't' value	Remarks at 5% level
	Mean	SD	Mean	SD		
Linguistic	19.96	4.44	18.46	4.76	2.56	S
Logical	17.92	3.66	16.67	4.19	2.5	S
Spatial	13.74	3.08	12.29	3.28	3.59	S
Musical	15.24	3.75	13.76	4.68	2.74	S
Kinesthetic	9.31	1.93	8.69	2.11	2.42	S
Interpersonal	12.7	3.01	12.63	3.15	0.17	NS
Intrapersonal	20.8	13.77	19.52	5.21	1	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 rural and urban school students in their interpersonal and intrapersonal learning styles. But there is significant difference between rural and urban school students in their linguistic, logical, spatial, musical and kinesthetic learning styles.

Null Hypothesis- 3

There is no significant relationship between academic achievement and linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles of school students.

**Table 3
RELATIONSHIP BETWEEN ACADEMIC ACHIEVEMENT AND LEARNING STYLES OF SCHOOL STUDENTS**

LEARNING STYLES	TOTAL	
	Calculated 'γ' Value	Remarks at 5% Level
Linguistic	0.03	NS
Logical	0.09	NS
Spatial	0.08	NS
Musical	0.08	NS
Kinesthetic	0.01	NS
Interpersonal	0.11	NS
Intrapersonal	0.04	NS

(At 5 % level of significance the table value of 'γ' is 0.256)

It is inferred from the above table that there is no significant relationship between academic achievement and linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles of school students.

Findings:

1. There is no significant difference between boys and girls in their linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles.
2. There is no significant difference between rural and urban school students in their interpersonal and intrapersonal learning styles. But there is significant difference between rural and urban school students in their linguistic, logical, spatial, musical and kinesthetic learning styles.

While comparing the mean scores of rural and urban school students in their linguistic, logical, spatial, musical and kinesthetic learning styles, rural school students are better than urban school students.

3. There is no significant relationship between academic achievement and linguistic, logical, spatial, musical, kinesthetic, interpersonal and intrapersonal learning styles of school students.

Recommendations:

1. Teachers should have a sound knowledge and understanding of the importance of learning styles.
2. Students should be given training in selecting appropriate learning styles.

3. Special opportunities should be given to develop logical style of learning.
4. Teachers should handle different types of teaching aids to develop their learning.
5. Teachers should encourage the students in learning by doing method.
6. Spatial ability of the students should be enhanced through some talent search programmes.

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