



# RELATIONSHIP BETWEEN LEARNING STYLES AND ACHIEVEMENT IN COMMERCE OF HIGHER SECONDARY STUDENTS

E. Ashok Raj\* and Dr. A. Joaklm\*\*

\*Ph.D. Research Scholar, Department of Education, Annamalai University, Annamalainagar, Tamilnadu in India.

\*\*Assistant Professor, Government College of Education for Women, Coimbatore-641001

## Abstract

*In the present study the investigator has adopted the relationship between learning styles and emotional intelligence of higher secondary students. The Learning Styles Inventory (LSI) developed by Karuna Shankar Misra (2012) and Achievement Test in Commerce constructed and validated by the investigator, were used to collect the data from a sample of 967 higher secondary students studying in Chengalpattu District of Tamilnadu State, India. The survey method had been followed and purposive sampling technique was used in administration of the research tools. The result of the analysis reveals that the different types of learning styles namely enactive learning style, figural learning style and verbal learning style are average and also achievement in commerce is average level of higher secondary students, there is significant difference in the enactive learning style, figural learning style and verbal learning style of higher secondary school students with respect to their gender and there is significant difference in the Achievement in Commerce of higher secondary school students with respect to their gender, there is significant and positive relationship between achievement in Commerce and enactive learning style, figural learning style and verbal learning style of higher secondary school students. It is evident that only 28.9% of the total variance in achievement in commerce is attributed by the enactive learning style, figural learning style, verbal learning style of higher secondary school students. The remaining percentage of variance 71.1 % (1-R Square) is to be accounted by other factors which are not included in this study and there is significant contribution of enactive learning style, figural learning style, verbal learning style on the dependent variable achievement in Commerce of higher secondary school students.*

**Key Words:** Learning Difficulties, Achievement in Commerce, Gender and Higher Secondary Students

## 1. Introduction

Learning style is the manner in which a learner perceives, interacts with, and responds to the learning environment. Components of learning style are the cognitive, affective and physiological elements, all of which may be strongly influenced by a person's cultural background. Since learners differ in their preferences to certain learning styles, it will be important for teachers to examine the variations in their students on the features of their learning styles, because the information about learner's preference can help teachers become more sensitive to the differences students bring to the classroom

Achievement is taken as a key criterion to evaluate one's total potentialities and capabilities. It occupies a very important place in teaching and learning process. One of the best legacies a nation can offer

its citizen is education especially for the younger generation. For this reason, the development of a nation or a community depends entirely on the quality of education of such a nation. The basis of any genuine development must begin with the development of human resources.

## 2. Need and Importance of the Study

The structure of commerce involves abstract concepts, ideas and theories related to business, management, accounting and like and the mode of curriculum transaction strategies demands the learners to discover patterns and relationship in highly structured schemes that prompts to strengthen their cognitive processing and thereby solve pertinent issues and problems. Learning style is the manner in which a learner perceives, interacts with, and responds to the learning environment. Components of learning style are the cognitive, affective and physiological elements, all of which may be strongly influenced by a person's cultural background. So the investigator felt the need for conducting this study to find out the learning style and academic achievement in commerce of higher secondary school students

## 3. Review of Literature

Udhaya Mohan Babu and Kalaiyarasan (2020) conducted a study on a study on learning style of higher secondary school students. The findings revealed that There is no significant difference between XI and XII standard higher secondary school students in their learning styles in the dimensions. This study will be more fruitful when suggestions given by the investigator are applied for further study and it will be of great help for those who want to study further in this field.

Krishnamurthy.S and M.Subramanian (2012) had attempted to know the level of mental health of post graduate commerce subject students and their achievement in commerce subject. The data was collected from 600 post graduate commerce students in various colleges from Cuddalore district. The findings of the study reveal that the post graduate commerce subject students are having above average level of mental health and average level of achievement in commerce subject. The subsamples of gender, type of institution and community shows significant difference in their mental health and achievement in commerce subject but the remaining variables under study do not show any significant difference in it. The mental health level of female students is not as much of male students, so concern authorities should give special initiative to female students to develop their mental health.

## 4. Operational Definitions of the Study

### Learning style

Oxford (2001) defines learning styles as an approach that learners use in learning a new language or studying various subjects.

### Achievement in commerce

Achievement in commerce refers to the grades of the students in achieving the courses of their studies in commerce

## 5. Objectives of the Study

1. To find out the level of following different types of learning style of higher secondary students.
  - a. Enactive Learning Style

- b. Figural Learning Style and
  - c. Verbal Learning Style
2. To find out the level of academic achievement in commerce higher secondary students.
  3. To find out whether there is any significant difference in the different types of learning style of higher secondary students with regard to the gender.
  4. To find out whether there is any significant difference in the achievement in commerce of higher secondary students with regard to the gender.
  5. To find out whether there is any significant relationship between academic achievement in commerce and the different types of learning styles of higher secondary students.
  6. To find out whether there is any significant contribution of different types of learning styles on the dependent variable achievement in Commerce of higher secondary students.

## 6. Hypotheses of the Study

1. The level of following different types of learning style of higher secondary students is low.
  - a. Enactive Learning Style
  - b. Figural Learning Style and
  - c. Verbal Learning Style
2. The level of academic achievement in commerce higher secondary students is low.
3. There is no significant difference in the different types of learning style of higher secondary students with regard to the gender.
4. There is no significant difference in the achievement in commerce of higher secondary students with regard to the gender
5. There is no significant relationship between academic achievement in commerce and the different types of learning styles of higher secondary students.
6. There is no significant contribution of different types of learning styles on the dependent variable achievement in Commerce of higher secondary students.

## 7 Method of the Study and Sample Used

The normative survey method was adopted in the present study.

The present investigation, 967 higher secondary school commerce students studying in Chengalpattu District, Tamilnadu State in India have been selected as the sample using purposive sampling technique..

## 8. Analysis of Data and Interpretation

The data collected were descriptively analyzed by employing the following statistical techniques:

1. Descriptive Analyses
  - i. Measures of central tendency (Mean)
  - ii. Measures of variability (Standard Deviation)
2. Differential Analyses ('t' test and 'F' test)
3. Co-relational Analyses (Karl Pearson Product Moment Correlation) and
4. Regression Analysis

## Descriptive Analysis

### Result of Hypothesis 1

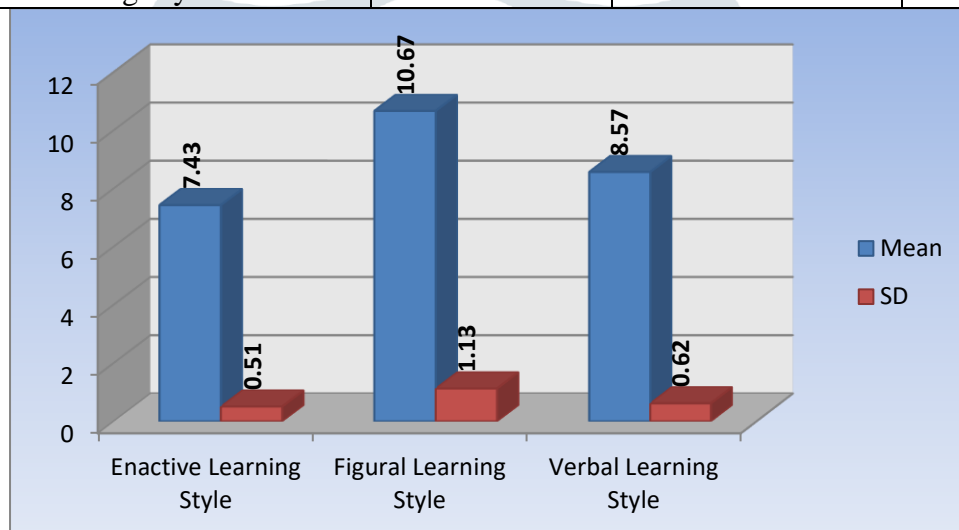
The level of following different types of learning style of higher secondary students is low.

- Enactive Learning Style
- Figural Learning Style and
- Verbal Learning Style

**Table-1**

**Showing the Mean and Standard Deviation Scores of Different Types of Learning Styles of Higher Secondary Students**

Types of Learning Style	N	Mean	SD
Enactive Learning Style	967	7.43	0.51
Figural Learning Style	967	10.67	1.13
Verbal Learning Style	967	8.57	0.62



**Figure-1**

**Bar Diagram Showing the Mean and Standard Deviation for Different Types of Learning Style of Higher Secondary Students**

From table-1, the calculated mean and standard deviation for enactive learning style scores of the entire sample is found to be 7.43 and 0.51 respectively. The mean score lay in between ( $M \pm \sigma$ ) value i.e., 6 to 8, Hence, the framed hypothesis 1(a) is rejected and it is concluded that the enactive learning style of higher secondary school students is average.

From table-1, the calculated mean and standard deviation for figural learning style scores of the entire sample is found to be 10.67 and 1.13 respectively. The mean score lay in between ( $M \pm \sigma$ ) value i.e., 9 to 11, Hence, the framed hypothesis 1(b) is rejected and it is concluded that the figural learning style of higher secondary school students is average.

From table-1, the calculated mean and standard deviation for verbal learning style scores of the entire sample is found to be 8.57 and 0.62 respectively. The mean score lay in between ( $M \pm \sigma$ ) value i.e., 8 to 9, Hence, the framed hypothesis 1(c) is rejected and it is concluded that the verbal learning style of higher secondary students is average. Among the learning styles of higher secondary students, the highest mean value is for the figural learning style.

## Result of Hypothesis 2

The level of academic achievement in commerce higher secondary students is low.

**Table 2**

### Mean and Standard Deviation for the Achievement in Commerce Scores of Higher Secondary School Students

Variable	N	Mean	SD
Achievement in Commerce	967	59.60	11.03

From table-2, the calculated mean and standard deviation for achievement in Commerce scores of the entire sample is found to be 115.21 and 18.40 respectively, which mean score lay in between (49-70), Hence, the framed hypothesis (2) is rejected and it is concluded that the achievement in commerce of higher secondary students is average.

## Differential Analysis

### Result of Hypothesis 3

There is no significant difference in the different types of learning styles of higher secondary school students with regard to the gender.

**Table-3**

### Mean Difference of different types of Learning Styles Scores of Higher Secondary Students with regard to Gender

Different Types of Learning Style	Gender	N	Mean	SD	't' Value	Level of Significance at 0.05 Level
Enactive Learning Style	Male	554	7.08	0.59	2.09	Significant
	Female	413	8.70	0.68		
Figural Learning Style	Male	554	10.40	1.56	3.01	Significant
	Female	413	11.00	1.20		
Verbal Learning Style	Male	554	8.47	0.58	2.67	Significant
	Female	413	9.84	0.79		

It is seen from the above table that the 't' value for different types of learning styles are calculated as 2.09, 3.01 and 2.67 respectively. The 't' value for enactive learning style, figural learning style and verbal learning style is greater than the table value 1.96 at 0.05 level of significance. Hence, the hypothesis 5(a) is rejected and it is concluded that there is significant difference in the enactive learning style, figural learning style and verbal learning style of higher secondary students with respect to their gender.

### Result of Hypothesis 4

There is no significant difference in the achievement in commerce of higher secondary students with regard to the gender.

**Table-4**  
**Mean Difference of Achievement in Commerce Scores of Higher Secondary School Students with regard to Gender**

Variable	Gender	N	Mean	SD	't' Value	Level of Significance at 0.05 Level
Achievement in Commerce	Male	554	57.54	10.94	4.06	Significant
	Female	413	62.25	12.82		

It is seen from the above table that the 't' value calculated is 4.06, which is greater than the table value 1.96 at 0.05 level of significance. Hence, the hypothesis 7(a) is rejected and it is concluded that there is significant difference in the achievement in commerce of higher secondary students with respect to their gender. It is also inferred that female students are having more Achievement in Commerce than the male students.

### Correlation Analysis

#### Result of Hypothesis 5

There is no significant relationship between achievement in Commerce and

- Enactive Learning Style
- Figural Learning Style and
- Verbal Learning Style

of higher secondary students.

**Table-5**

**Co-Efficient of Correlation between Achievement in Commerce and Different Types of Learning Styles of Higher Secondary Students**

Variable	N	Enactive Learning Style	Figural Learning Style	Verbal Learning Style
Achievement in Commerce	967	.419**	.528**	.395**

\*\* . Correlation at 0.01 level (2-tailed)

\* . Correlation at 0.05 level (2-tailed)

Table-5 shows, the co-efficient of correlation between achievement in Commerce and enactive learning style, figural learning style and verbal learning style of higher secondary students is found to be N=967, r=.419, .528 and .395 at 0.01 level which indicates that there is positive correlation between achievement in Commerce and enactive learning style, figural learning style and verbal learning style of higher secondary students scores. Therefore the stated hypothesis is rejected and it is concluded that there is significant and positive relationship between achievement in Commerce and enactive learning style, figural learning style and verbal learning style of higher secondary students.

### Regression Analysis

#### Result for Hypothesis 6

There is no contribution of different types of learning styles on the dependent variable achievement in Commerce of higher secondary students.

**Table-6****Contribution of Different Types of Learning Styles of Higher Secondary Students on Achievement in Commerce**

Model	Unstandardized Coefficients		Standardized Coefficients	't' value	R <sup>2</sup> =0.289 F=18.175
	B	Std. Error	Beta		
Constant	231.225	1.831		30.590	
Enactive	.456	.108	.574	3.706	
Figural	.661	.144	.175	4.580	
Verbal	.432	.100	.145	4.302	

The table-6 shows the R square value, which is found to be 0.289. It is evident that only 28.9% of the total variance in achievement in commerce is attributed by the enactive learning style, figural learning style, verbal learning style of higher secondary students. The remaining percentage of variance 71.1 % (1-R Square) is to be accounted by other factors which are not included in this study.

It is evident from table-6, the F value is found to be 18.175, which is significant at 0.01 levels. It indicates that there is a significant contribution of enactive learning style, figural learning style, verbal learning style on the dependent variable achievement in commerce of higher secondary students. Hence the framed hypothesis (10) is rejected and it is concluded that there is significant contribution of enactive learning style, figural learning style, verbal learning style on the dependent variable achievement in commerce of higher secondary students.

**9. Findings of the Study**

- The level of the Enactive Learning Style, Figural Learning Style and Verbal Learning Style are average of higher secondary students.
- The level of achievement in commerce of higher secondary students is average.
- There is significant difference in the enactive learning style, figural learning style and verbal learning style of higher secondary students with respect to their gender.
- There is significant difference in the achievement in commerce of higher secondary students with respect to their gender.
- There is significant and positive relationship between achievement in Commerce and enactive learning style, figural learning style and verbal learning style of higher secondary students.
- It is evident that only 28.9% of the total variance in achievement in commerce is attributed by the enactive learning style, figural learning style, verbal learning style of higher secondary school students. The remaining percentage of variance 71.1 % is to be accounted by other factors which are not included in this study and there is significant contribution of enactive learning style, figural learning style, verbal learning style on the dependent variable achievement in commerce of higher secondary students.

## 10. Conclusion

In the present study of the relationship between learning styles and achievement in commerce of higher secondary students, findings revealed that the average level of different types of learning styles namely enactive, figural and verbal and also achievement in commerce is average of higher secondary student. It is also find out there is significant and positive relationship between achievement in Commerce and enactive learning style, figural learning style and verbal learning style of higher secondary students.

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