

# A STUDY ON LEARNING STYLES AMONG HIGHER SECONDARY STUDENTS

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## **Abstract**

In this study the learning styles of higher secondary students of Kanniyakumari District in Tamil Nadu was focused. The main objectives of the study were to find out the level of learning styles of higher secondary students and to find out the significant difference in learning styles with regard to gender. 609 samples were selected by simple random sampling technique. Learning style inventory developed and validated by Maria Jeslin.M and Selvakumar.K.R (2022) was used to collect the data. Statistical techniques used in this study were percentage analysis and 't'-test to find out the significant difference in learning style with regard to gender. The results indicated that there was a significant difference in the learning styles of higher secondary students irrespective of their gender

**Key words:** Learning style, Higher secondary students, Kanniyakumari, Simple random sampling technique, Gender.

## **Introduction**

Nelson Mandela said, "Education is the most powerful weapon which you can use to change the world". Education shows us the importance of hard work and at the same time helps us to grow and develop. Education is an important tool which is very useful in everybody's life. It has played an important role in the career world of the twenty-first century. Education allows us to better understand the world in which we live. Through education, we have become

thoughtful about what happens around us. Learning is defined as modification of desirable behavior through experience. Learning styles are the “composite of characteristic cognitive, affective and physiological factors that serve as relatively stable indicators of how a learner perceives, interacts with and responds to the learning environment.” stated by Keefe (1987). Learning style is “the way in which each learner begins to concentrate on process internalize, remember and retain new and difficult academic information” given by Dunn & Dunn (1993). Learning Style refers to the pattern of behavior an individual uses for new learning. Understanding Learning Styles is important because to know one’s strength the fullest and weakness in learning, while addressing deficiencies, thereby forming a more balanced or whole individual. Learning styles may differ due to individual difference. They also affect teaching and learning processes in terms of teachers and students.

### **Significance of the Study**

Learning style is an important factor in the academic carrier of the students, some students have good learning styles and 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. Individual differences also play a vital role in learning styles of children. Learning styles may be differing from child to child and they also differ in case of high, average and low achievers. The learning styles also vary among the students from school to school, management to management, locality to locality.

Many researchers have expressed that learning style of student is the most important factor in his/her academic performance. Learning style has important bearing for classroom teacher, curriculum designer, educational technologist, guidance and counseling workers and even educational administrators.

Learning style is a complex construct for which a comprehensive understanding is evolving. Individual learning styles should be acknowledged and respected. Learning style is a function of heredity and experience, including strengths and limitation and develops individuality over the life span. It is a combination of cognitive, affective and psychomotor responses that characterize how each person learns (Selwyn.S & Bensam.W., 2018).

Learning style describes how a person learns a new information, understanding and retains the skills. Learning style points out how cognitive, affective and psycho motor skills, mostly turn into permanent qualities. It also points out the learners' attention in the classroom environment and their interaction in understanding. So, learning style is an individual quality which continues steadily in on unperturbed way. As every learner's handwriting is completely different from one another, everyone's learning style also differs. Therefore, the classroom climate which a teacher creates for the students must enable the learners to think, to refresh and to create meaningful learning. It must create an opportunity for learning through discussion and with other students. Hence there is a need to study about learning style of higher secondary students and find out their own learning styles.

### Objectives

1. To find out the level of learning styles among higher secondary students with respect to gender; and
2. To find out the significant difference in learning styles and its dimensions among higher secondary students with respect to gender.

### Hypothesis

1. There is no significant difference between male and female higher secondary students in their Learning Styles and its dimensions.

### Methodology

The researcher has chosen survey method to study the learning styles of higher secondary students. Learning styles inventory (LSI) developed and validated by Maria Jeslin and Selvakumar(2022) was used for collecting the required data. A sample of 609 students studying in various higher secondary students in Kanniyakumari district was selected using simple random sampling technique. The collected data was analyzed using mean, S.D, 't' test and Percentage Analysis

### Objective :1

The level of Learning Styles and its dimensions of higher secondary students with respect to Gender

### Table 1

***Level of Learning Styles and its dimensions of higher secondary students with respect to Gender***

Dimension	Gender	N	Low		Moderate		High	
			No.	%	No.	%	No.	%
Active Learning	Male	217	47	21.7	132	60.8	38	17.5
	Female	392	46	11.7	264	67.3	82	20.9
Reflective Learning	Male	217	41	18.9	154	71.0	22	10.1
	Female	392	47	12.0	276	70.4	69	17.6
Visual Learning	Male	217	40	18.4	146	67.3	31	14.3
	Female	392	59	15.1	277	70.7	56	14.3
Verbal Learning	Male	217	32	14.7	157	72.4	28	12.9
	Female	392	54	13.8	267	68.1	71	18.1
Sensing Learning	Male	217	29	13.4	158	72.8	30	13.8
	Female	392	57	14.5	255	65.1	80	20.4
Intuitive Learning	Male	217	30	13.8	156	71.9	31	14.3
	Female	392	55	14.0	256	65.3	81	20.7
Sequential Learning	Male	217	38	17.5	147	67.7	32	14.7
	Female	392	65	16.6	246	62.8	81	20.7
Global Learning	Male	217	40	18.4	154	71.0	23	10.6
	Female	392	50	12.8	282	71.9	60	15.3
Learning Styles	Male	217	30	13.8	140	64.5	47	21.7
	Female	392	46	11.7	259	66.1	87	22.2

From the above table it is inferred that 13.8% of male higher secondary students have low, 64.5% of them have average and 21.7% of them have high level of Learning Styles. With respect to female students, 11.7% of them have low, 66.1% of them have average, and 22.2% of them have high level of Learning Styles.

## Differential Analysis

### Hypothesis-I

There is no significant difference between male and female higher secondary students in their Learning Styles and its dimensions.

**Table 2**

*Comparison of male and female higher secondary students in their Learning Styles and its dimensions*

Dimension	Gender	N	Mean	SD	Calculated value of 't' test	Remark at 5% level
Active Learning	Male	217	22.43	5.156	3.015	S
	Female	392	23.68	4.311		
Reflective Learning	Male	217	18.20	4.684	3.230	S
	Female	392	19.48	4.649		
Visual Learning	Male	217	17.41	4.622	2.212	S
	Female	392	18.24	4.228		
Verbal Learning	Male	217	21.37	4.364	2.144	S
	Female	392	22.17	4.458		
Sensing Learning	Male	217	17.80	3.961	1.446	NS
	Female	392	18.20	4.223		
Intuitive Learning	Male	217	24.00	5.798	2.280	S
	Female	392	25.15	6.116		
Sequential Learning	Male	217	21.12	4.875	1.489	NS

	Female	392	21.74	5.046		
Global Learning	Male	217	25.18	5.506	3.109	S
	Female	392	26.61	5.284		
Learning Styles	Male	217	21.35	4.915	2.295	S
	Female	392	24.71	5.785		

(At 5% level of significance, the table value is 1.96)

### ***NS- Not significant, S- Significant***

It is inferred from table 2 that calculated value of 't' (3.015, 3.230, 2.212, 2.144, 2.280, 3.109 and 2.295) is greater than the table value (1.96) for df 607 at 0.05 level of significance. Hence the null hypothesis is rejected. This shows that there is significant difference between male and female higher secondary students in their Learning Styles and its dimensions except sensing learning and sequential learning.

While comparing the mean scores, the female higher secondary students are better than male higher secondary students in their Learning Styles and its dimensions active learning, reflective learning, visual learning, verbal learning, intuitive learning, global learning.

### **Findings**

The interpretations are made based on the findings from the above tables:

The percentage analysis shows that the majority of the higher secondary students express moderate level of learning styles. Another very important learning-style difference is that females enjoy learning with varied strategies whereas males need more structure and routine especially when learning new and difficult content (Honigsfeld, A. and Dunn, R.,2003).

Someone with a preference for visual learning is partial to see and observe things, including pictures, diagrams, written directions and more. This is also referred to as the "spatial" learning style. Female students learn through sight understand information better when it's presented in a visual way. This visual learning gives opportunities to draw pictures and diagrams on the board, or ask students to doodle examples based on the topic they're learning (Smith, L.H., & Renzulli, J.S.,1984).

The female students can learn best when they have the opportunity to do “hands on” experiences with materials. That is, working on experiments in a laboratory and models with materials provide the most successful learning situation. Writing notes or instructions can help students to remember information and physical involvement in class related activities may help the students to understand new information. The female students will be more successful in completing work well when they work with 2 or 3 classmates. The stimulation one can receive from group work helps them to learn and understands new information.

Female students have better learning styles than the male students. The reason may be that the male students show more areas in the brain dedicated to spatial-mechanical strengths, whereas female students generally demonstrate a focus on verbal-emotive processing. Female students are generally enabling them to sit still, hardwired to be less impulsive, focus, read, and write and speak at an earlier age than male students.

## Conclusion

Different students use different learning styles and acquire knowledge from various sources during their higher secondary learning journey. Every student has a preference for a certain sensory mode to receive and process all acquired information. Identifying their learning styles can help students to strengthen their preferred learning styles (Bin Eid, A et.,al., 2021). Teachers should use suitable instructional strategies to benefit teaching and learning.

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