

# PERCEPTUAL LEARNING STYLES OF HIGH SCHOOL STUDENTS

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## ABSTRACT

One of the major factors on which effective learning depends is the learning style of the learner. This study examined the perceptual learning style of 480 high school students of seven different schools in Coimbatore city. The results showed that a majority of the students preferred the visual learning style. Government school students preferred the visual and the auditory learning styles compared to their counterparts in private, government aided and corporation schools.

## INTRODUCTION

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 perceptual learning style which refers to preferences in ways to process information. The predominant use of a given perceptual learning style (or some combination) could have a bearing on one's academic accomplishment.

## PERCEPTUAL LEARNING STYLES

According to James and Gardener (1995), Learning style is defined as "the complex manner in which, and conditions under which learners most efficiently and most effectively perceive, process, store and recall what they are attempting to learn". They categorise learning styles according to perceptual, cognitive and affective dimensions. Perceptual learning is influenced by physical and sensory elements that reflect the body's response to external stimuli. It includes a range of perceptual elements, visual, auditory, tactile and kinesthetic. Visual learners get more benefits from visual presentations. Auditory learners get more out of words - written and spoken explanations. Kinesthetic learners learn best through movement of their large or gross motor muscles. They take in information best when they are moving. Tactile learners prefer opportunities where they can actually do something physically with the information they are to learn. Tactile learners also enjoy learning by doing.

## NEED AND SIGNIFICANCE OF THE STUDY

Students use different approaches when faced with

learning tasks and problems. The way in which the students approach the learning tasks and the behaviour in learning situations determine their learning style. It is pointed out that the learning style of an 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.

## MAJOR OBJECTIVES OF THE STUDY

1. To find out whether there is any significant difference in the perceptual learning styles of boys and girls.
2. To find out whether there is any significant difference between the perceptual learning styles of students studying in Government, Government aided, Corporation and Private schools.

## HYPOTHESES

1. There is no significant difference between the perceptual learning styles of boys and girls.
2. There is no significant difference among the perceptual learning styles of students studying in Government, Government aided, Corporation and Private schools.

## METHODOLOGY

The method adopted in the present study is the survey method. The sample selected for the study consists of 480 High School students from seven schools in Coimbatore city. Perceptual Learning Style Preference Questionnaire (Developed by Reid, 1987) was used to analyse the learning style of the students. The aspects

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included in the scale are characteristic of auditory, visual, tactile and kinesthetic learners.

**ANALYSIS AND INTERPRETATION**

Table 1 shows the type of learning styles possessed by the high school students.

**Table -1**  
**PERCEPTUAL LEARNING STYLES OF HIGH SCHOOL STUDENTS**

Learning style	N = 480	Percentage
Visual	206	42.9
Auditory	155	32.3
Tactile	70	14.6
Kinesthetic	49	10.2
Total	480	100

When the learning styles of students were analysed, it was found that 42.9 percent of the students were having the visual learning style, followed by those having the auditory learning style (32.3%). The tactile learning style was possessed by only 14.6 percent of the students while the remaining 10.2 percent were found to possess the kinesthetic learning style.

Learning styles based on gender was compared by using the test of significance of difference between means. The obtained t - values are given in Table -2

**Table -2**  
**GENDER AND PERCEPTUAL LEARNING STYLE**

Learning styles	Group-I Boys (N=240)		Group-II Girls (N=240)		Calculated t-value	Remark at 5% level
	Mean	SD	Mean	SD		
Visual	19.21	5.01	19.29	5.18	0.17	NS
Auditory	19.44	4.91	19.71	4.67	0.61	NS
Tactile	15.90	4.60	15.03	4.24	2.15	*
Kinesthetic	16.08	3.92	15.52	4.01	1.55	NS

SD - standard deviation NS - Not significant \* Significant at 0.05 level

From the table, it is clear that there is significant difference between the learning styles of boys and girls as

regards the tactile style alone. The mean value indicates that boys prefer the tactile learning style.

To study whether type of school influences the choice of perceptual learning styles, analysis of variance was done.

**Table-3**  
**TYPE OF SCHOOL AND PERCEPTUAL LEARNING STYLES**

Variable	Source of variation	Sum of square	df	Mean square	Calcu. F-value
Visual	BG	397.72	3	132.57	5.22*
	WG	12096.15	476	25.412	
	Total	12493.87	479		
Auditory	BG	302.71	3	100.90	4.44*
	WG	10819.19	476	22.73	
	Total	11121.90	479		
Tactile	BG	61.51	3	20.50	1.08 <sup>NS</sup>
	WG	9061.99	476	19.04	
	Total	9123.50	479		
Kinesthetic	BG	75.72	3	25.24	1.69 <sup>NS</sup>
	WG	7120.15	476	14.96	
	Total	7195.87	479		

\* Significant at 0.01 level NS - Not significant

There are statistically significant differences among the learning styles of students in the four types of schools. F value is significant at 0.01 level in visual and auditory learning styles. And the F value is not significant in tactile and kinesthetic learning styles.

As the F value is found significant, Duncan's method is used to find the difference between the learning styles of students in different types of schools.

**Duncan's Multiple Range Test**

This test was conducted to find out which means are significantly different from the other means.

Scores of the Multiple Range Test (Duncan's Method) obtained by four groups on the variables of visual learning style are presented in Table -4

**Table-4**  
**TYPE OF SCHOOL AND VISUAL LEARNING STYLE**

School type	N	1	2
Government	120		20.68
Government Aided	120	19.09	
Corporation	120	18.66	
Private	120	18.30	

The above result (mean score of 20.68) shows that most of the students in government schools follow the visual learning style, which implies that the students like visual presentational aids like charts, graphs and pictures.

Scores of the Multiple Range Test for four groups on the variables of auditory learning style are presented in Table -5

**Table-5**  
**TYPE OF SCHOOL AND AUDITORY LEARNING STYLE**

School type	N	1	2
Government	120		20.78
Government Aided	120	19.02	
Corporation	120	19.07	
Private	120	18.68	

The mean scores of 19.52, 19.07 and 8.68 obtained for students of Government Aided, Corporation and Private schools did not show much difference as in the visual learning style. The government school students show a greater mean score than the other three school types. The greater mean score for government schools for the auditory learning style shows that the students in government schools prefer the auditory learning style.

It is concluded that the government school students follow visual and verbal methods, in preference to tactile and kinesthetic learning styles. Usage of projectors, power point units and other audio visual gadgets can create more interest among the government school students and this helps them succeed in their studies and achieve more.

As there is significant difference among the learning styles of government, government aided, corporation and private schools, the hypothesis stated "there is no significant difference among the learning styles of government, government aided, corporation and private schools" is rejected.

## MAJOR FINDINGS

1. The comparison of the learning styles revealed that 42.9 percent of the students adopted the visual learning style and 32.3 percent used the auditory learning style. The tactile learning style was adopted by only 14.6 per cent while the remaining 10.2 per cent were found to possess the kinesthetic learning style.

2. The t-value obtained for the perceptual learning styles showed that boys prefer the tactile learning style.

3. The government school students showed marked difference in learning styles as compared to students of the other types of schools. Most of the government school students followed visual and auditory learning styles.

## CONCLUSION

Quality improvement of education requires that teachers enable all children achieve essential levels of learning. Each student in a class has his own learning style. Research reveals that striking differences exist among students as regards their rates of learning and their final levels of content mastery. These differences could be attributable to the children's learning styles (Snider, 1990). So students, if taught in their preferred learning style, will learn with interest and curiosity. It is high time that teachers had a sound knowledge and understanding of the importance of learning styles to enable them to extrapolate from what is known as the basis for effective teaching - learning process.

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