



# A Study of Perceptual Learning Styles with Academic Achievement in Private Higher Secondary Schools in Aizawl City

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## ABSTRACT

Individual learning styles depend on cognitive, emotional and environmental factors, as well as one's prior experience. In other words, everyone's different. It is important for educators to understand the differences in their students' learning styles, so that they can implement best practice strategies into their daily activities, curriculum and assessments. This study was undertaken with the objective to find out if there is a relationship between the students learning styles and academic achievement of private higher secondary schools in Aizawl city. The scale used for this study is Perceptual Learning Style Preference Questionnaire constructed by Joy Reid (1984). The data from the present study is collected from 2 Private Higher Secondary schools. The sample consists of 192 students, with 96 each from Oikos Higher Secondary School and Providence Higher Secondary Schools. Findings showed that there is no correlation between the academic achievements and the scores on different learning styles of the students. A particular learning style does not have effect on the marks of the students.

**Keywords:** Learning Styles, Perceptual Learning Styles, Preference, Academic Achievement and Private Higher Secondary Schools

The term "learning styles" speaks to the understanding that every student learn differently. Technically, an individual's learning style refers to the preferential way in which a student absorbs processes, comprehends and retains information. For example, when learning how to build a clock, some students understand the process by following verbal instructions, while others have to physically manipulate the clock themselves. This notion of individualized learning styles has gained widespread recognition in education theory and classroom management strategy. "Learning style" refers to how an individual responds to the learning environment (Claxton & Ralston, 1978; Wooldridge, 1995). Dunn and Griggs (2000) describe learning style as the way an individual begins to concentrate on, process, internalize, and remember new information and skills.

Psychologists have identified different learning styles. It is said that there are over seventy learning style models and each model is made up of at least two specific learning styles. One can categorize these learning styles into three broad types: Perceptual Learning Styles, cognitive learning styles, and personality learning styles. Perceptual Learning Styles are the means by which learners extract information from their surroundings through the use of their five senses. Individuals have different "pathways" that are specific to them. When information enters that "pathway" the information is retained in short term memory. Repeated exposure and use promote retention in long term memory. Perceptual learning style also referred to as sensory learning style, concerns with the involvement of learner's sense organs in the process of learning, such as eyes and ears. Learners

employ their sense organs to process the stimuli from outside. There are five styles fall into this type, namely, visual learning (learn by seeing), auditory (learn by hearing), reading/writing (learn by processing text), tactile learners (learn by touching), and kinaesthetic learning/practical learning (learn by doing).

**Rationale of the Study**

The need of the study of Perceptual Learning Styles of students emerges from the lack of in-depth research of learning styles. There has always been poor or absence of information and awareness on the kind of learning strategies adopted by the students. It is known that most teachers tend to teach in the way they were taught or in the way they preferred to learn. Sometimes conflicts might arise because of a mismatch between the teacher’s teaching style and learner’s learning styles, which might have negative consequences both on the part of the learner and teacher. It is important to understand learning styles to ensure that tutors are instructing according to the learner’s style and not the tutor’s. A tutor who instructs only according to his own style makes learning more difficult for the learner. It is necessary for tutors as they should know about learning styles to be able to help learners identify their personal learning styles. This knowledge will help learners to build self-confidence and to learn to manage their own learning.

The absence of efforts of the educational system to identify learner’s styles and strategies not only in Aizawl but India as a whole, and correlate these with the student’s academic achievement created the need of such a study. This study is crucial for identification of one’s own learning style as well as for teachers to enable them to employ suitable methods and strategies for better achievement of the learners. Hence, it is the need of the hour to conduct this study and it has been taken up.

**Objective of the Study**

To find out if there is a relationship between the students learning styles and academic achievement.

**Population and Sample**

The data from the present study is collected from XI<sup>th</sup> and XII<sup>th</sup> standards students of 2016-17 batches of 2 Private Secondary schools- Oikos

Higher Secondary School and Providence Higher Secondary School which have all the Science, Arts and Commerce streams. A total of 192 students, with 96 each from both schools were randomly selected. Data is taken from students of any race, culture, caste, religion, sex, with age ranging from 16 – 18 in Aizawl, Mizoram by random sampling.

**Tools**

The scale used for this research is Perceptual Learning Style Preference Questionnaire constructed by Joy Reid (1984). This questionnaire consists of 30 questions measuring 6 learning categories such as Visual, Tactile, Auditory, Group, Kinesthetic and Individual. It is a 5 point Likert Scale ranging from Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree. The scores are divided into three-Major Learning Style Preference, Minor Learning Styles Preference and Negligible.

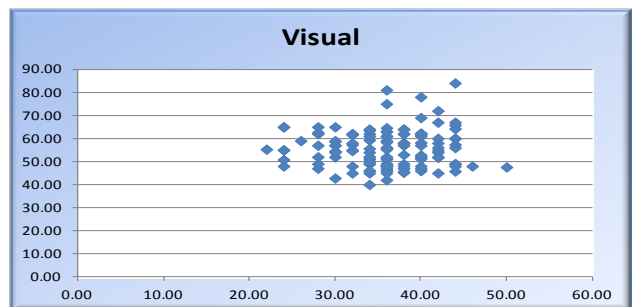
**Analysis and Interpretation**

The collected data were carefully analyzed and interpreted to find out if there is a relationship between the students learning styles and academic achievement. Pearson’s Product Moment Correlation was used to find out the relationship between six different perceptual learning styles and academic achievements of the students.

**Table 1:** Comparison of different learning styles and academic achievement of all students

**1.1: Visual Learning Style**

	No. of students	Mean	SD	Correlation	Significance Level
Visual	192	35.75	5.08	-0.009	0.05
Marks	192	56.34	7.84		

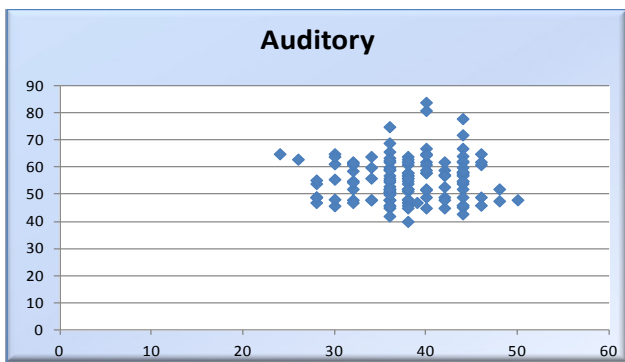


It is found vide Table 1.1 of Visual Perceptual Learning Style that the mean for scores on Visual learning style is 35.75 (SD=5.08) and the mean for

the academic achievement is found to be 56.34 (SD=7.84). It also shows that the correlation is -0.009 which means that the test of correlation is insignificant. There is *no correlation* and that the correlation is negligible implying that the two variables tested do not have effect on each other. Therefore, the hypothesis is accepted.

**1.2: Auditory Learning Style**

	No. of students	Mean	SD	Correlation	Significance Level
Audio	192	37.65	5.12	-0.01	0.05
Marks	192	56.34	7.84		



As per Table 1.2 of Audio Perceptual Learning Style, the mean for scores on Audio learning style and the academic achievement are 37.65 (SD=5.12) and 57.34 (SD=7.84) respectively. It further shows that the correlation is - 0.01 which means that the test of correlation is found to be insignificant. This indicates that there is *no correlation* between the two variables, i.e. the auditory learning style scores and the academic achievement. Hence, the hypothesis is accepted.

**1.3: Kinaesthetic Learning Style**

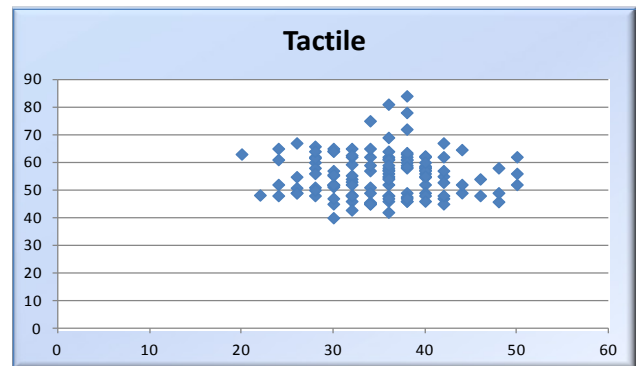
	No. of students	Mean	SD	Correlation	Significance Level
Kinaesthetic	192	35.31	5.83	0.02	0.05
Marks	192	56.34	7.84		

Looking at Table 1.3 of Kinaesthetic Learning Style, the mean for scores on Kinaesthetic learning style and the academic achievement are 35.31 (SD=5.83) and 56.34 (SD=7.84) respectively. It further shows that the correlation is found to be 0.02 which also reveals that the test of correlation is not significant. This indicates that there is *no correlation* between the academic achievement and the scores on

kinaesthetic learning style and do not effect each other. Therefore, the hypothesis is accepted.

**1.4: Tactile Learning Style**

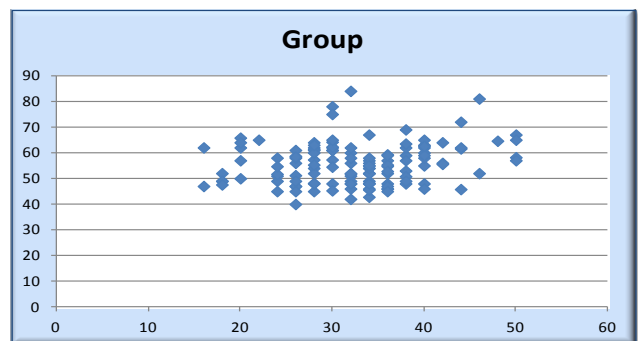
	No. of students	Mean	SD	Correlation	Significance Level
Tactile	192	34.63	6.32	-0.06	0.05
Marks	192	56.34	7.84		



An examination of data vide Table 1.4 of Tactile Learning Style reveals that the mean for scores on Tactile learning style is 34.63 (SD=6.32). The mean for the academic achievement is 56.34 (SD=7.84). It also found that the correlation is -0.06 showing that the test of correlation is insignificant. This indicates that there is *no correlation* between the two variables, i.e. the scores on tactile learning style and the academic achievement of the students do not have effect on each other. Hence, the hypothesis is accepted.

**1.5: Group Learning Style**

	No. of students	Mean	SD	Correlation	Significance Level
Group	192	31.75	7.27	0.15	0.05
Marks	192	56.34	7.84		

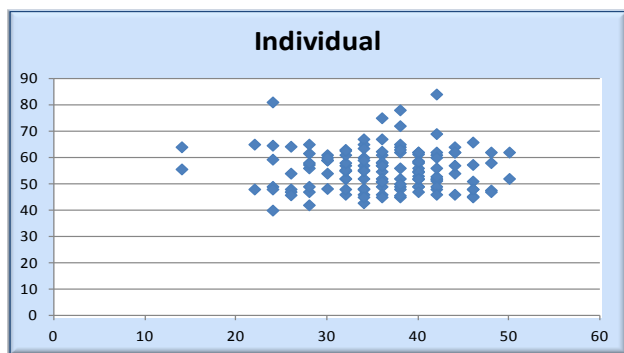


Analysis of data vide Table 1.5 shows that the mean for scores on Group learning style is 31.75 (SD=7.27)

and the mean for academic achievement is 56.34 (SD=7.84). It also shows that the correlation 0.15 which indicates that the test of correlation is not significant. This implies that there is **no correlation** between the two variables on Group Learning Style. Therefore, the hypothesis is accepted.

1.6: Individual Learning Style

	No. of students	Mean	SD	Correlation	Significance Level
Individual	192	35.93	6.89	-0.06	0.05
Marks	192	56.34	7.84		



A critical analysis of data vide Table 1.6 reveals that the mean for Individual learning style is 35.93 (SD=6.89) and the mean for academic achievement is 56.34 (SD=7.84). The correlation is found to be - 0.06 which means that the test of correlation is insignificant. It implies that there is negligible correlation, i.e. *no correlation* between the two variables- the scores on individual learning style and the academic achievement of the students.

In measuring the strengths and direction of a linear relationship between two variables, i.e., the scores on different learning styles and the academic achievement of the students, it has been found that there is no correlation between them. Generally, there is no difference of learning styles preference based on the academic achievement in this study.

A study by Gappi (2013) also explored on the student’s preferred learning styles and their academic achievements and found that there was no significant statistical correlation between the academic achievement and the learning style preferences of the students. Lesa (1981) also reported that there was a weak negative relationship between learning style and grades. Studies conducted by Aranya Srijongjai (2011) and Saleh Khatib and Shadia Ghosheh (2013) has also reported that

students’ learning style preferences did not correlate with their academic performance.

## DISCUSSION AND CONCLUSION

From the Pearson Product Moment Correlation analysis, it is found that there is no significant relationship between the different Perceptual Learning Styles with academic achievement. The overall result showed that there is no significant relationship between learning styles and academic achievement. The values of coefficient correlation found shows that there is no correlation between the academic achievements and the scores of different learning styles of the students. A particular learning style does not have effect on the marks of the students.

From the findings, there is no significant relationship that can be seen between student’s learning styles and their academic achievement. A study by Gappi (2013) also explored on the student’s preferred learning styles and their academic achievements and found that there was no significant statistical correlation between the academic achievement and the learning style preferences of the students. Lesa (1981) also reported that there was a weak negative relationship between learning style and grades. Studies conducted by Aranya Srijongjai (2011) and Saleh Khatib and Shadia Ghosheh (2013) has also reported that students’ learning style preferences did not correlate with their academic performance.

However, we cannot deny that students’ learning styles influence their academic achievement. Studies had also revealed that students’ academic achievement was directly influenced by their learning styles. A study by Abidin, *et al.* (2011) using Joy Reid’s Perceptual Learning-Style Preference Questionnaire (1987) has also found that the analyses of the data indicated a significant relationship between overall academic achievement and learning styles. Vaishnav & Chirayu (2013) has also revealed that there existed positive high correlation between kinaesthetic learning style and academic achievement. The main effects of the three variables - visual, auditory and kinaesthetic were significant on academic achievement.

Therefore, teachers and experts and those who are responsible in planning the curriculum for Secondary schools have to bear in mind that students learn in various ways and dimensions

(Wratcher, Morrison, Riley & Scheirton, 1997). Teachers should be aware that students who are of different backgrounds or social economy status have different preference towards two or more learning styles. Ambruster et al., (2009) stressed that teachers have to continuously become dynamic and flexible in their teaching styles by employing various methods and approaches in their teaching and learning sessions which suit their students learning styles.

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