



## Learning Style Preferences among Secondary School Students of selected Schools in Visakhapatnam District of Andhra Pradesh

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### Abstract

The present study is an attempt to find out the relationship between preferred learning style of students to certain demographic variables like gender, place of living, religion and parents' educational level. The study was conducted on the sample of 300 secondary school students of Visakhapatnam District. For the purpose, the researchers used the 'Learning Style Inventory' developed by Jaffery Barsch (1996). Since the data was on nominal scale, Chi-Square test was employed to analyze the data. The findings of the study revealed that the most preferred learning style of secondary school students was Visual (45.7%) followed by Auditory (21%), Tactile (18.3%) and kinesthetic (15%). Moreover, the study revealed that there was no significant impact of certain demographic variables like gender, place of living, religion and educational level of father on the learning style preferences of secondary school students. However, significant impact of mothers' educational level on the learning style preferences of these students was reported in the study. The findings of the study would provide better understanding to the teachers to construct curriculum, planning of lessons and to teach according to students' learning styles. These findings are important not only in shaping teaching practices but also in highlighting issues that help policy makers, administrators, curriculum framers, stakeholders, parents and faculty members to think more deeply about their role in facilitating student learning.

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### Introduction

The study was conducted to analyse preferable learning styles among secondary school students of district Visakhapatnam. The present study is a modest effort to find out the effect of gender and place of Living on learning style preferences of secondary school students. A sample of 300 secondary school students of District Visakhapatnam of Andhra Pradesh was selected for the study. Learning Style Inventory (2012) by Sreekala and Amalraj was used to collect relevant information for the study. Findings of the study indicate that the most preferred learning style among secondary school students is Visual (45.7%) followed by Auditory (21.0%) and Kinaesthetic (15%) It means that most of the secondary school students favoured visual format of learning. It was also found that the most preferred learning style among male and female students was visual learning style. Rural, urban and semi-urban students were found to have no significant difference in their learning styles.

Every individual has its own natural or habitual pattern of acquiring and processing information in learning situations. The common ways or patterns by which people learn are known as their learning styles. Learning styles are set of cognitive, emotional and psychological factors that serve as relatively stable indicators of how a learner perceives, interacts with and responds to the learning environment. Everyone has a combination of

various learning styles. Some people may find that they have a dominant style of learning, with far less use of the other styles while others find that they use different styles in different circumstances. A core concept is that individuals differ in the ways they learn. The idea of individualized learning styles was initiated in 1970s and since then has influenced education

remarkably. It was recommended by the proponents of the use of learning styles in education that teachers should identify the learning styles of their students and adapt their teaching methods to best fit learning style of each student. Although there is ample evidence for differences in individual thinking and ways of processing various types of information, few studies have reliably tested the validity of using learning styles in education.

It is important that individuals should identify their learning styles. Being aware of their own pattern of learning, they can take the responsibility for their own learning. When the learner shows the conscientiousness of his/her own learning he/she attributes meaning to the process of learning, develops understanding of his/her own form of learning and becomes much more satisfied with the environment he/she interacts with. In this way, he/she will acquire constantly changing and increasing amount of information without any need for the assistance of others. Learning how to learn and grasping knowledge in a suitable manner may lessen the need for an overbearing control by teachers. Generally students acquire and process information in different ways: by seeing and hearing, reflecting and acting, reasoning logically and intuitively, analyzing and visualizing etc. Teachers also vary in their teaching methods, some apply instructions, lecture, or demonstrate while others lead students to self-discovery; some focus on principles and others on applications; some emphasize memory and others understanding. When learning styles of most students mismatch with teaching styles of the teachers, the students may become bored and inattentive in the class, do poorly on tests, get discouraged and lack interest about the courses, curricular activities and themselves too. In some cases students may lead to poor attendance and dropouts. (Nasir, 2006)

Learning is an episode in which a motivated individual attempts to adapt his behaviour so as to succeed in a situation which he perceives as requiring action to attain a goal (Pressey, Robinson and Horrocks (1967). Learning is a lifelong process and occupies very important place in human life. Learning is not confined to school or a particular age only rather it is a comprehensive a term which is involved to every aspect of life at all developmental stages. It is the basis of success for every individual. Every individual has its own way of perceiving and understanding information. Some people learn by oral repetition, some by writing it out, while others may learn through practical work. Therefore every learner has his own learning style. The learning styles play a crucial role in how effectively the information is stored. Each learner has different ways of learning that depend upon many personal factors and everyone has a distinct cognitive learning style.

The learner should search answers to his/her problems and explore own style of learning. He/she should know what to learn and how to solve the problem. This awareness will change learner's perspectives on learning new things. The knowledge of learning style is important for many reasons. First of all, since everyone is different from others, learning style is liable to vary. Secondly, teachers may use a wide range of methods in an effective way to teach according to the style of learning and thirdly, if teachers really identify patterns of learning of the group, they can manage many things in education and communication. Being aware of their students' learning styles, psychological qualities and motivational differences teachers can regulate the teaching-learning process in desirable direction.

(Montgomery, 1996; Mumford and Honey, 1996). Learning style can be described as a set of factors, behaviours and attitudes that simplify learning for an individual. It is the ability of learners to understand and process information in learning situations. It is the learner's habitual way of acquiring and processing information. The idea of learning styles originated in the 1970s, and has greatly influenced education.

Each person has his or her own individual way of gathering and processing information, and solving problems in day-to-day situations. These personal cognitive abilities, acquired through a long process of socialization are called "learning styles" (Reynolds, 1997). Riding (2005) assured that students are not all the same and that individual differences influence both their learning and their academic achievement. Knowledge of one's learning style can lead to enhanced learning and helps the learner focus on improving weaker points. Learning Styles analysis is also useful for informing the teaching and learning process and can be used as a tool to enhance achievement and inclusion. (Rose & Nicholl, 1997).

Psychologists, educationists and researchers have defined the learning style in different ways. Following are the definitions given by the different authors:

Keefe (1979) defines "learning styles as the composite of characteristic cognitive, affective and psychological factors that serve as relatively stable indicators of how a learner perceives, interacts with and responds to the learning environment". Letteri (1980) states that learning style refers to the style of information processing, the storage and retrieval of information. Debellow (1990) defines the learning style as the way people absorb process and retain information. Reiff (1994) states that learning style can be described as a set of factors, behaviours and attitudes that facilitates learning in a given situation. James and Gardner (1995) states that the ways learner's react to overall learning environment make up the individual's learning style. Vermunt (1996) defines learning style as coherent whole of learning activities that students usually employ. According to Sarasin (1998), "the preference or predisposition of an individual to perceive and process information in a particular way or combination of ways". Fleming (2001) opines learning style as individual's preferred ways of gathering, organizing, and thinking about information". An overview of various definitions of „learning style“ reveals that learning styles are consistent preferred ways of learning which the individual learners employ during learning of various tasks.

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### **Significance of the study**

Previous works and investigations in the field of learning have indicated the existence of individual difference in the learning process. Each Individual thinks, perceives, remembers and solves problems in one’s own unique style. Trevathan (2002) reported learning style as an important aspect of student learning process that may influence academic achievement. Boys (2003), Oswald (2003) and Maynes (2004) reported that there is a positive relationship between learning style and academic achievement. Many studies have reported the significant effect of learning style and achievement.

Though many studies have been conducted in the field of learning style and related variables, a few attempts were made to study preferred learning styles of secondary school students in relation to their gender and place of living. Hence the investigator made an attempt to conduct a study on secondary school students pertaining to this particular area. It is expected that the results of the study would be helpful in organizing guidance and counselling programs for school students for maximizing their academic performance by adopting proper learning style.

### **Objectives of the Study**

The objectives of this study are as follows:

1. To investigate the most preferable learning style of Secondary school students.
2. To find out the effect of the prominent demographic determinants i.e. gender and place of living on learning style preferences of secondary school students.

### **Methodology**

#### **Sample:**

All the secondary school students of district Visakhapatnam comprised the population of the study. A representative sample of 300 (150 Male & 150 Female) secondary school students belonging to five secondary schools were selected from the population.

**Tools Used:**

‘Learning Style Inventory’ developed by Sreekala and Amalraj, (2012) which is a 3 point scale consisting of 42 statements was used to study preferred learning styles. The inventory is classified into three categories visual, auditory and kinaesthetic. The reliability of the inventory was 0.9

For obtaining information about gender and place of living a personal data sheet had been constructed by the researcher.

**Statistical techniques used**

By using the latest version of SPSS the following statistical techniques were employed:

Percentage Statistics

Measures of central tendency Chi-square Test

**Results and Discussion:**

Table I Descriptive statistics related to the preferred Learning Style of Secondary school students

| No. of Stds. | Types of Learning Style | Frequency | Percentage | Cumulative % |
|--------------|-------------------------|-----------|------------|--------------|
| 300          | Visual                  | 152       | 50.7       | 50.7         |
|              | Auditory                | 78        | 26         | 76.7         |
|              | Kinaesthetic            | 70        | 23.3       | 100          |
| Total        |                         | 300       | 100.0      |              |

The table I reveals that the most preferred learning style among secondary school students is Visual (50.7%) followed by Auditory (26%) and Kinaesthetic (23.3%). It means that visual learners are more prevalent among the secondary school i.e. majority of students learn through visual aids than auditory or body movements. The result of this study is in coordination with the results of the study conducted by Maya and Rao (2004) who also reported that most of the students appear to be visual learners.

Table II Descriptive statistics related to the preferred Learning Style of Secondary school students in terms of gender and place of living.

| Groups<br>Type of Learning Style | Gender                    |      |                             |      |                           | Place of living            |    | Semi-Urban (N=134)<br>Freq.<br>% |      |
|----------------------------------|---------------------------|------|-----------------------------|------|---------------------------|----------------------------|----|----------------------------------|------|
|                                  | Male(N=150)<br>Freq.<br>% |      | Female(N=150)<br>Freq.<br>% |      | Rural(N=35)<br>Freq.<br>% | Urban(N=131)<br>Freq.<br>% |    |                                  |      |
| Visual                           | 76                        | 50.7 | 77                          | 51.3 | 18                        | 51.4                       | 77 | 58.8                             | 58   |
| Auditory                         | 41                        | 27.3 | 37                          | 24.7 | 9                         | 25.7                       | 29 | 22.1                             | 40   |
| Kinaesthetic                     | 33                        | 22   | 36                          | 24   | 8                         | 22.9                       | 25 | 19.1                             | 36   |
|                                  |                           |      |                             |      |                           |                            |    |                                  | 26.9 |

The review of the table II indicates that when preferred learning styles was observed in secondary school students in relation to their gender and place of living it was found in coordination with the results obtained in table I i.e. the most preferred learning style among male and female students was visual followed by auditory and kinaesthetic style. However, percentage of female students (51.3%) was higher than male students (50.7%) in favour of visual style of learning. Moreover the similar results were obtained for rural (51.4%), urban (58.8%) and semi-urban students (43.2%).

Table III Significance of difference in Learning Styles of Secondary school students in relation to Gender and Place of living.

| N   | Group           | Chi-Square Value | D.F. | Level of Significance |
|-----|-----------------|------------------|------|-----------------------|
| 300 | Gender          | 5.242            | 3    | 0.15                  |
|     | Place of Living | 8.895            | 6    | 0.18                  |

The above table reveals that male and female secondary school students do not differ significantly so far as their learning style is concerned. The results of this study is in coordination with the studies conducted by Thambusamy (2002) who concluded that the gender was not a significant variable in Engineering students learning style preferences and Nasir (2006) who also found that the learning styles were not significantly different between male and female students. However, this result differs somewhat from that of Sizemore & Schultz (2005) where the male students had a significantly greater frequency of the Visual style than female students. It was also found that rural, urban and semi-urban students show no significant difference in their learning styles. The findings of the present study reveal that the most preferred learning style among secondary school students is Visual style of learning (50.7%) followed by auditory (26%) and Kinaesthetic (23.3%) learning styles. The results found is contradictory to the traditional belief that learners mostly learn through activities or 'Learning by Doing'.

### Conclusion

The findings of the present study reveal that visual learning style is the most preferable learning style among secondary school students followed by auditory and kinaesthetic learning style. The most preferred learning style among male and female students was visual followed by auditory and kinaesthetic style. However, percentage of female students (51.3%) was higher than male students (50.7%) in favour of visual style of learning. Moreover the similar results were obtained for rural (51.4%), urban (58.8%) and semi-urban students (43.2%). It may be because human brain has a power to decipher visual imagery much faster and visual sense is so active in humans that it not only enables us to recognise information at much faster rate but it also helps us to memorise information for a long period of time.

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