

**Learning Styles and Problem Solving Ability of Secondary School Students.**

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**ABSTRACT** The Learning style of an individual varies from person to person. The learning style depends upon the dominance of functioning of the hemisphere of Brain. The functioning of right and left hemisphere of the brain decides the learning style. The Problem solving ability of the person also depends on the functioning of hemisphericity of brain. The survey method was used for the collection of data by using Random sampling technique. The Venkatraman Learning style (SOLAT) Test was administered and L.N. Dubey test of problem solving ability was administered to 100 secondary school students. The findings showed that both right hemisphere as well as left hemisphere dominance of brain shows low and very Low problem solving ability respectively.

**Key words**-Learning Style, Problem Solving ability, Secondary school student.

**INTRODUCTION:**

Most people are differing in their use of styles of learning and they try to adopt themselves to the stylistic demands according to situation. Styles of learning depend upon the cerebral dominance of the individual in retaining and processing different models of information in his own style of learning and thinking. Styles indicate hemisphericity functions of the brain, and students learning strategy and information processing are based on the preference of brain area. Styles are propensity rather than abilities. They are the ways of directing the intellect which an individual finds comfortable. The styles of learning are as important as levels of ability and we ignore to identify and develop students thinking styles at their earlier and appropriate age. Parents and teachers are able to perceive the children and their natural tendencies of how they think act and learn in different ways and in different situations. For example one child may welcome structure in learning and another may welcome new ways of doing things, and rest may fear for learning. One child may perform task in an orderly manner and, another may perform in unsystematic

manner. This is due to individual differences in style of thinking and learning. In academic institutions teaching and learning process are mismatched. Teaching and thinking style of the teacher and learning style of the student differ because learning differences are not tied up to the understanding and thinking ability of the students. Many educators are still perplexed about the styles of students in learning and thinking process.(zeenat2018)

### **What is Problem Solving?**

The process of working through details of a problem to reach a solution. Problem solving may include mathematical or systematic operations and can be a gauge of an individual's critical thinking skills.([www.buisenessdictionary.com/definition/problem](http://www.buisenessdictionary.com/definition/problem))

**RATIONALE OF THE STUDY:** Learning Styles like abilities are not etched in stone at birth. They are in large part develop due to environmental condition and by way of nurturing children by their parents and teachers. It is foremost important for the teachers to focus their attention on students favoured thinking styles before imparting subject matter .If they fail to do so, the consequences may be serious, because the teachers may tend to confuse styles of students mind. Since the method of teaching adopted by the teacher reflects their own personal style of thinking, the students who have the same thinking style of the teachers are only benefitted and rewarded .Otherwise the students whose styles are different do not correspond with the teachers styles are labeled as 'Slow', 'Dull' and even 'Stupid'. If the mismatch exist between the preferred styles of the teacher and that of the students, such students are frequently seen to be uninterested in the content, feel bored and reject the learning activities that are compatible with their own styles of Learning. Both teachers and students tend to exploit their own preferred styles, which may match or may not match. Therefore it is important for the teachers to know the students preferred styles of learning, so that the teachers can capitalize the opportunities for student learning. The Learning style also determines the cognitive process like analysis, synthesis and evaluation and problem solving ability, critical thinking etc. So it is very essential to study the learning style in order to study the individual cognitive process in detail. This study was undertaken to know whether, learning style do effect the problem solving ability of students

in the class, if it is affecting than to what extent, and how the teacher should use this learning style ability to optimize the problem solving ability of children in the class.

**OBJECTIVES:**

- 1) To study the Problem solving ability of secondary school students with dominancy of right hemisphere of brain.
- 2) To study the Problem solving ability of secondary school students with dominancy of left hemisphere of brain.

**HYPOTHESES:**

- 1) The Learning style of students with dominancy of right hemisphere of brain shows high Problem solving ability.
- 2) The Learning style of students with dominancy of left hemisphere of brain shows low Problem solving ability.

**SCOPE:**

- 1) This study would be helpful for the Educationist and teacher to understand the learning style of secondary school students.
- 2) This study would be helpful to study the problem solving ability of students who differ in their Learning styles.

**LIMITATIONS:**

- 1) **Area**-This study is limited only to Aurangabad City only.
- 2) **Unit**-This study is limited only to English medium secondary school students.
- 3) **Content**-This study is limited to the learning styles and Problem solving ability.

**OPERATIONAL DEFINITION:**

- 1) **Correlation Study:** A Study which compares two variables
- 2) **Learning Style:** different ways to retain and process information.
- 3) **Problem solving ability: Ability** to solve problem experienced in day today life.

### **RESEARCH METHODOLOGY:**

- 1) **Research Method**-Survey method was used for collection of data .The Secondary school children of English medium school were selected as a sample. The learning style test (SOLAT) by venkataraman and problem solving ability test was administered on a selected sample and their learning style was studied. After studying the learning style Problem solving ability test was administered and their problem solving ability was measured.
- 2) **Sampling technique:** Simple Random sampling technique was used.
- 3) **Sample size:** 100 secondary school students of English medium schools.
- 4) **Sample design:**

|                           |
|---------------------------|
| Aurangabad District       |
| Aurangabad Schools        |
| 5 English medium schools  |
| Secondary school students |
| 100 School students       |

### **TOOLS:**

- 1) SOLAT (Style of Learning and Thinking)-Dr.D.Venkatraman
- 2) **Test of problem solving ability** by-L.N. Dubey

### **VARIABLES:**

- 1) **Independent Variable**-Learning Style and Problem solving ability.
- 2) **Dependent variable**-Secondary School students.

**STATISTICAL TECHNIQUE:** Mean(average)

### **DISCUSSION OF THE RESULT**

- 1) The Learning style of students with dominancy of right hemisphere of brain shows High Problem solving ability.

| Variable                                                            | Mean  | Range | Interpretation |
|---------------------------------------------------------------------|-------|-------|----------------|
| Problem Solving ability with dominancy of Right hemisphere of brain | 8.012 | 8-10  | Low ability    |

As the mean value is **8.012**, according to the norm table which lies in the range of 8-10, which shows Low problem solving ability.

- 2) The Learning style of students with dominancy of left hemisphere of brain shows low Problem solving ability.

| Variable                                                           | Mean   | Range | Interpretation   |
|--------------------------------------------------------------------|--------|-------|------------------|
| Problem Solving ability with dominancy of Left hemisphere of brain | 7.8158 | 8-10  | Very Low ability |

As the mean value is **7.8518**, according to the norm table which lies in the range of 8-10, which shows Very Low problem solving ability.

### **CONCLUSIONS:**

#### **HYPOTHESIS NO.01**

- 1) The Learning style of students with dominancy of right hemisphere of brain shows High Problem solving ability.

The Hypothesis No.02 is rejected, as the mean value is **8.012**, according to the norm table which lies in the range of 8-9, which shows Low problem solving ability..

### **HYPOTHESIS NO.02**

- 1) The Learning style of students with dominancy of left hemisphere of brain shows low Problem solving ability.

The Hypothesis No.03 is rejected, as the mean value is **7.8158**, according to the norm table which lies in the range of 8-9, which shows Low problem solving ability.

### **SUGGESTIONS:**

- 1) The parents and teachers should understand the nature of students mind and its functions in different styles of learning before imparting knowledge.
- 2) It is important for the teacher to know the preferred styles of learning so that the teacher can capitalize the opportunities for students learning.
- 3) Styles like abilities are not itched in stone at birth. They are large part developed due to environmental condition and by nurturing children by parents and teachers.
- 4) The teacher should see that his/her teaching style should match the learning style of the pupil.

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