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## Elements of Learning Styles and Academic Achievement of Secondary School Students

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### Abstract

Learning style is a wide concept which gives the centrality to learning and makes it better. Educational research helps to explore the issue of academic achievement or success by different learning styles. Review of literature indicates that in majority of the research work the main aim of the investigator(s) remains to find out different learning styles which significantly affect the academic achievement of students. This paper delineates various elements of learning styles which may influence the academic achievement of students. These elements include: Environmental, Emotional, Social and Physiological.

**Keywords:** Learning styles, academic achievement, secondary school students and academic quality.

### Introduction

Students remember difficult information- by hearing, speaking, seeing, manipulating, writing or notes taking, experiencing and combination of these. Every student has a learning style- all have at least some preferences- the result of many influences. Certain learning style characteristics are biological, whereas others are developed through experience (Restak, 1979).

### Definitions

**Learning style:** Kolb (1984) described learning styles as the way to process new information including strategies that are consistently adopted to learn. Learning style is a biologically and developmentally imposed set of personal achievement that makes the same teaching method effective. "Styles indicate the hemisphericity functions of the brain and students learning strategy and information processing are based on the preference of the brain area" (Venkataraman, 1990).

**Academic achievement:** Academic achievement and career aspirations in adolescence are often correlated (Abu-Hilal, 2000). Crow and Crow (1969), defined "academic achievement as the extent to which a learner is profiting from instructions in a given area of learning i.e., achievement is reflected by the extent to which skill or knowledge has been imparted to him". Mitzel, H.E. (1984), "Academic achievement is often defined in relation to the concept of aptitude, by simple contrast measuring the learning that takes place during definable course of instruction."

**Secondary school:** Good, C. V. in the Dictionary of Education (1945), "Secondary school is the school division following the elementary school, comprising most often grades 9-12 or grades 7-12." Secondary education is a crucial link between primary and higher education. It holds the key for shaping an individual's way towards higher education. One of the most important outcomes of any educational set-up is the achievement of the students. Depending on the level of the achievement, individuals are characterized as high achievers, average achievers and low achievers.

**Academic quality:** for student's learning styles institutions organize classrooms to respond to their individual needs like quiet or sound, bright or soft illumination, warm or cool room temperatures, seating arrangements, mobility or grouping preferences.

### **Review of literatures:**

**Learning concept:** There are a number of learning related concepts, such as curriculum, discipline, academic quality, social relation and motivation which have been a focus of attention, when attempting to identify learning factors affecting achievement (Cassidy & Eachus, 2000). Devi (2003) found that effect of family factor exerts its impact on the achievement. In research, learning concept is more important than the others. Family is the first factor which directly affects the learning process of a person as student.

**Environmental concept:** Mishra (1993) defined characteristics as cognitive, affective and psychological behavior that serve as relatively stable indicators of how learners perceive and interact with and respond to the environment. According to Hawk & Shah (2007) there was emergence of numerous learning style models with five learning style instruments (the Kolb learning style indicator, the Gregorc learning style indicator, the Felder-Silverman index of learning style, the Vark questionnaire and the Dunn- Dunn productivity environmental preference survey). They reviewed the environmental concept by the models and difference between the models.

**Learning style and academic achievement correlation:** Cassidy and Eachus (2000) measured learning style in undergraduate students and its relation with academic achievement. They found that there was a positive correlation between learning style and academic achievement with a strategic approach, negative correlation with an apathetic approach and unrelated to a deep approach to learning. A significant correlation of learning style was present with other academic performance- related factors such as academic self-efficacy and academic locus of control. These factors influence all over academic achievement of students for future study in life. Cassidy (2004) overviewed the different theories, models and measures of learning styles to use possible tools for measurement. Aim of study was to provide such an account, attempting to clarify common areas of ambiguity and in particular issues surrounding measurement and appropriate instruments. Next was to bring necessary components together for a broader appreciation of learning style and suggest possible tools for measurement.

## Elements of learning style which affect academic achievement:

### 1. Environmental elements:

- **Sound:** Some learners require absolute quiet to learn, while others do best with music or other sound in the background. This will help the learner to learn difficult problems easily and this improves his performance in exam and finally related with his academic achievements.
- **Light:** Some learner requires bright light to concentrate, whereas others require a softer and perhaps more focused light. Light is an important factor which helps to learn, because if light is not suitable for learning, learner won't be able to concentrate on topic and this will directly affect the academic achievement.
- **Temperature:** Classroom temperature or room temperature where learner is going to learn has to be normal for concentration without any interruption. This will help the learner to score more in academics.
- **Design:** In this element architectural designing of institution, rooms and facilities which are provided by the institution are included which exert direct or sometimes indirect effect on the performance of learners in learning process. And academic achievement of a learner depends on the learning process.

### 2. Emotional Elements:

- **Motivation:** By giving rewards for improvement in learning strength of learner is a good example of motivation. Learning strength improves the achievement in academics.
- **Persistence:** Some learners remain focused on an academic task until it has been completed, whereas others need to be reminded to complete the task at hand. Completion of task has to improve achievements in academics.
- **Responsibility:** Some learners do what is required whereas others do the opposite of what they are supposed to do. They are reminded to complete the task in order to improve achievements in academics performance.
- **Need for structure:** Some rely on the directives of teachers or peers to provide structure to a task, whereas others determine their own structure for completing a task and that affects the academic achievement.

### 3. Social Elements:

- **Working alone:** Some students perform best when studying alone. They improve their self ability to perform good academic achievement.
- **Peers:** Some students prefer to study with a group of peers. Some academic activities like sports are played in teams. Some academic tasks too can be performed and learned better with the help of peers.
- **Adult:** Some students prefer to work with an adult like mother, father, brother and sister. Family support helps to improve learning style and this results in good academic achievement.
- **Variety:** Some function in varied ways, whereas others learn best in a single pattern. Science can be easily understood by experiments in labs. This will also help to improve academic achievement.

### 4. Physiological Elements:

- **Perceptual Strengths:** Some students learn best by hearing (auditory) complex material, others by reading or seeing it (visual), others when able to manipulate items with their hands (tactual, as when doodling or taking notes), and still others learn most effectively when moving while they are concentrating (kinesthetically, such as tapping their feet or walking). These characteristics directly affect the learning process and academic achievements.
- **Intake:** Some learners require a drink or something to eat; others ignore drink and food when concentrating on new and difficult material. This affects concentration, which directly or indirectly influences the academic achievement.
- **Time of day:** Some prefer to concentrate in the morning, other in the early or late afternoon, and some prefer the evening. Concentration helps in learning difficult problems and improves academic achievements.
- **Mobility:** Some sit and concentrate for long periods of time without much movement; others require the ability to move about. This element of learning style indirectly affects the academic achievement.

### Conclusion:

Learning style has been focus of such a vast number of research and practitioner based studies in the area, there exists a variety of definitions, theoretical positions, models, interpretations and measures of construct. This can be considered a natural consequence of extensive empirical

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investigation on a continually developing concept which proves useful in gaining understanding of a crucial and prevailing endeavor as learning. This knowledge is common to many experienced, instructors in learning process. Elements of learning style i.e. environmental, emotional, sociological and physiological significantly affect the learning process and influence the academic achievements.

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