

Understanding the Learning Styles and its Influence on Teaching/Learning Process

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Abstract: The construct of learning style has recently assumed a special significance in education context. Many psychologists have expressed the belief that the way student prefer to learn is perhaps the single most important factor in his academic performance. This study aimed to expose the learning styles having great significance for ensuing in the learning process and to ascertain the effectiveness of these styles in teaching/learning processes. The purpose of this study was to determine the influence of learning styles in the teaching/learning processes. The research served two key purposes: First purpose was to detect the influence of the learning styles on teaching/learning process and second purpose was to review the key models in a range of learning environments to better understand their qualities and deficiency. Thus, identifying students' learning styles enables teachers to organize their instruction according to their needs. Moreover, identifying learners' learning styles facilitates their learning and learners become more self-confident. In addition, "teaching to our students' learning styles can help students get more excited about the subject, explore and understand the facts, enjoy grappling with the implications, and most importantly, be more willing to put what they have learned into practice"

Keywords: Understanding; Learning Styles; Teaching Learning/process;

I. INTRODUCTION

Teaching and learning are the main components of the system of education. This system formally runs in school. The students learning takes place in classroom environment. So if the classroom environment is effective the system of education is successful otherwise no one can save it from destruction.

Teaching/learning situation directly or indirectly depends upon learning styles. Different theorists and educationists have defined learning styles in their own way. They believe that this is an important concept to be studied. The concept of style helps to understand that how the learners are same with each other, and how they differ in terms of learning.

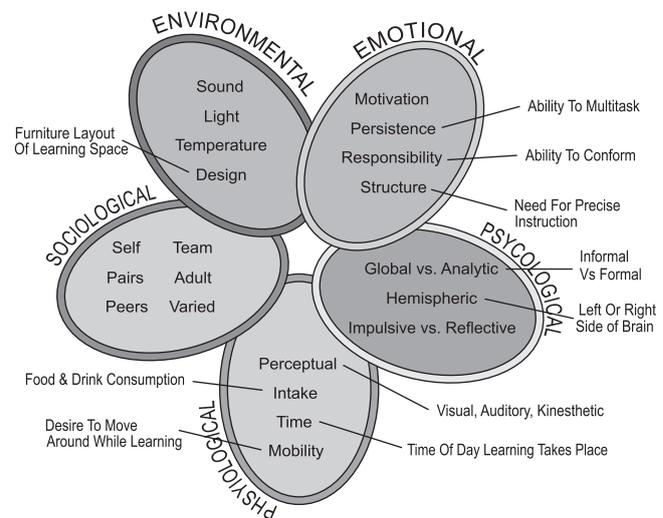
There are various definitions about what learning style is. Firstly "learning style" concept was introduced by Rita Dunn in 1960. Recently in the education area, the concept of "learning style" has gained great impact too. According to Kefee learning styles, "are characteristic cognitive, affective and physiological traits that serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment" [1]. Kolb describes learning styles as individual preferred ways while they receive and process information [2]. In addition, Grasha describes learning styles differently as "personal qualities that influence a student's ability to acquire information to interact with peers and the teacher, and otherwise to participate in learning experiences" [3].

According to Felder and Silverman, learning style is an individual characteristic strengths and preferences that they prefer while processing information. Thus, learning style is the way which an individual prefers while acquiring, retaining and retrieving information [4].

Apart from the definitions of learning styles there are different models which depicts that there are different learning styles and each learner had been preferred learning styles. That helps the learner in learning situations. Let us throw light some of the important models.

II. DUNN AND DUNN LEARNING STYLES MODEL

Dunn and Dunn Learning Styles Model is one the famous model within learning style models. This model represents that both biological and individual developmental qualities possessed by an individual and how a person learns new information and skills are indicated by this peculiar characteristic of that person. The learning style model of Dunn and Dunn is under:



Five learning style stimuli and some elements for each stimulus were identified by Dunn and Dunn [5]. These stimuli are environmental, emotional, sociological, physiological and psychological processing. Also the elements which were within the stimuli are sound, light, temperature, and room design which are recognized as the environmental stimuli. Motivation, persistence, responsibility and structure were recognized as emotional stimuli.

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Learning alone, in a pair, with peers, with a teacher and such were recognized as sociological stimuli. Perceptual, intake while learning, energy patterns during the day and mobility needs are recognized as physiological stimuli. Global or analytic, hemisphericity and impulsive or reflective are recognized as psychological processing stimuli [6].

Dunn and Dunn state that each learner responds differently toward their environment. Sound is one of these elements. Some students need complete silence when they contemplate on something. On the other hand, others need sound while learning [7]. Furthermore, they respond differently to the light. Some students need too much light to think better while others prefer less illumination. People also react in a different way to temperature. Some students are more comfortable in warm state of affairs while others prefer cool places. Lastly, design of the room is essential. Some learners are more triumphant when they are in an informal physical environment (carpeting, couch or bed). On the other hand, some learners can learn more efficiently in a formal environment (desks, hard chairs).

Some students prefer to learn on their own because they learn more effectively while they are alone. Some of them prefer to learn groups or some of them work with their peers or interact with an adult. Also range of tasks while learning can be preferred by students. All these elements are named as sociological stimuli [7].

Perceptual component is one of the rudiments of physiological stimuli. Some students prefer pictures or maps as visual equipments, some of them prefer music and lectures as auditory activities, and the others prefer to be tactical or kinesthetically activity while they learn information [8]. While concentration on something to learn, intake component is important for students. Some students like to eat or drink something while others not. Moreover, time of day when learners' energy is the highest also has part in students' learning [7]. A fraction of the learners can concentrate on task at different times during the day: Morning, afternoon or evening [8]. Besides, some students who desire mobility need to move from place to place while dealing with a task [7].

Global and analytic elements are inside psychological stimuli. Global learners learn better when they focus on the overall topic [8]. Dunn states that those who prefer the short stories, illustrations, and graphics are global learners' learning preferences. On the other hand, Dunn asserts that the information should be provided to analytic learners successively when they learn recent information. In order to understand the whole picture, these learners have to learn all parts of the information by bringing little pieces together. Furthermore left and right brain supremacy is related to the hemisphericity element. Analytic learners have left brain supremacy whereas global learners possess right brain supremacy. Besides, impulsive learners choose to take a decision in a quick way while reflective learners tend to make use of all options and alternatives before decision making [8].

III. KOLB'S LEARNING STYLE MODEL

Kolb developed his learning style model over years basing it on the research on various others, for example Rogers, Jung,

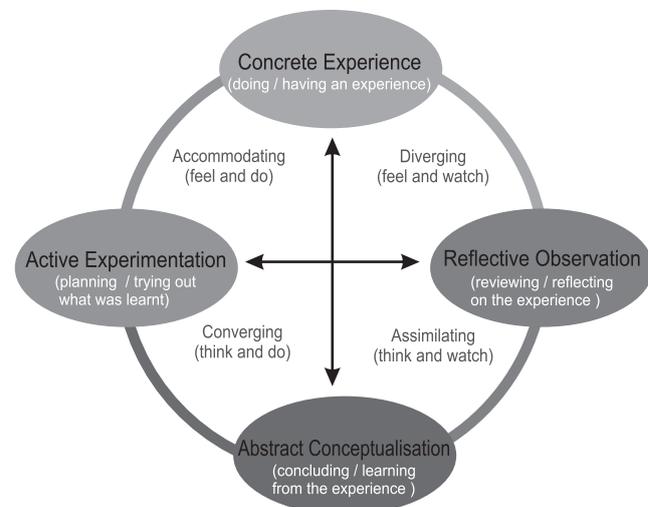
and Piaget. Kolb's learning theory includes four different learning styles, which are based on a four-stage learning cycle. The learning cycle stages are:

- Concrete Experience (CE) - feeling
- Reflective Observation (RO) - watching
- Abstract Conceptualization (AC) - thinking
- Active Experimentation (AE) - doing

The below figure shown a flow chart the cycle of Kolb's learning styles. Kolb said that concrete experiences lead to observations and reflections. These reflections are immersed and translated into abstract concepts with implications for action, which a person can actively test and experiment. This enables creation of new experiences and starts a new cycle [9].

Ideally the process represents a learning cycle where all the bases on learning, experiencing, reflecting, thinking and acting are treated. The learning styles definitions are representations of the combination of two preferred styles.

- Diverging (CE/RO)
- Assimilating (AC/RO)
- Converging (AC/AE)
- Accommodating (CE/AE)



Knowing a person's learning style allows learning to be orientated according to the ideal method. Everyone responds to and needs the stimulus of all types of learning styles to one extent or another - it's a matter of using emphasis that fits best with the given situation and a person's learning style preferences [6].

The diverging learning style is learning through feeling and watching. The word diverge means break up or differ from something. These people have a preference to watch rather than do. They are best at viewing concrete situations from numerous different viewpoints. They like working in groups, receive personal feedback, collect information and make use of imagination to solve problems [10]. The assimilating learning style combines watching and thinking as ways to learn.

The word, assimilate, means absorbing and translating. This can mean that the assimilators like apparent explanations rather than practical opportunity. For assimilators ideas and concepts are more imperative than people. They would like clear explanations and tend to like logically sound theories over ones that are based on practical value. These kinds of learners like readings, lectures and exploring analytical models [10].

The converging learning style is learning by doing and thinking. The word converge means to get closer to something. It can be seen as the convergers like to combine ideas and practice closer together. People with converging learning style like to find out solutions for realistic issues. They prefer technical tasks, and are less concerned with people and social or interpersonal issues. Convergers like to experiment with new ideas, to simulate and to work with practical applications [10].

The accommodating learning style combine doing and feeling as ways to learn. The word accommodation means adaptability which can mean that the accommodators like to adapt the learned things into practice. Learners who prefer accommodating learning style like to do things concretely. The Accommodating learning style relies on intuition rather than logic. These learners take a practical and experiential approach to learned material. They prefer to work in teams to complete tasks [10].

IV. GRASHA AND REICHMANN LEARNING STYLE MODEL

Grasha and Reichmann Learning Style Model are based on social interaction approach. This model examines students' responses toward classroom activities instead of evaluating students' personality and cognitive characteristics [11]. Hence, this model especially focuses on the social and affective dimensions of the learning preferences in defining learning styles. According to this model, six learning styles are classified as three categories. Each category is arranged on a bipolar continuum. These learning styles are competitive-cooperative, avoidant-participant, and dependent-independent. As Grasha emphasizes a student can possess more characteristics of one learning style than another style. Observation of these dominant characteristics is easy in class. Each learner has a dominant learning style. However, each person possesses more than one style in addition to his or her dominant learning style [12].

Each learning style of the Grasha and Reichmann Learning Style Model was explained by Grasha [13].

Competitive students need to be rewarded so they compete with their peers. Also, they prefer to perform well above their classmates. For their class achievements, recognition is expected by these students. Moreover, they enjoy being at the focal point of the attention. Some of their general classroom preferences are being a leader in a group in discussions, teacher-centred instruction and activities which enable them to be superior to their peers. On the other hand, collaborative students learn through cooperating with their peers and teachers. Thus, they prefer to learn by sharing. Therefore small group projects and discussions are these learners' inclinations [13].

Students who have avoidant learning style are unwilling to participate in lectures. They are not curious about what is going on in class either. Therefore, they do not prefer caring teachers. Pass and fail grading systems and tests are not within their general learning classroom preferences. Unlike avoidant students, participants like to attend courses and classroom activities as much as possible. They are also enthusiastic to fulfil both the necessary and the optional requirements of the courses. Moreover, discussions and reading assignments are among their general classroom preferences [13].

Learners with dependent learning style want an authority such as a teacher or a peer because they need clear instructions and guidelines to do something. In other words their source of structure is their teachers and peers. They just learn what they need to learn. Moreover, teacher-centred instruction is their general classroom preference. On the contrary, students, who have independent learning style, prefer to study on their own, rely on their learning abilities and they like independent assignments rather than group projects. They prefer student-centred learning as their general classroom preference [13].

V. DISCUSSION

Learning Styles in teaching/learning process, researches showed that successful learning is obtained by situations which are considered students' individual characteristics [14]. Learning style is one of the individual characteristics that have a great impact on students' learning. The learning styles will certainly differ among students in the classroom; Dunn and Dunn said that teachers should try to make changes in their classroom that will be beneficial to every learning style. Some of these changes include room redesign, the development of small-group techniques, and the development of Contract Activity Packages. Redesigning the classroom involves locating dividers that can be used to arrange the room creatively, clearing the floor area, and incorporating student thoughts and ideas into the design of the classroom [7].

Knowing how your child learns best allows you to teach more effectively and also makes it a more enjoyable experience for both you and your child. By finding out a student's preferred learning style you will be able to identify possible challenges for a student on their particular course or courses. Evidence suggests that students attracted to vocational courses are more likely to have a kinesthetic preferred learning style. Many students enjoy the practical element of a vocational course but find the theory part of the course quite challenging. This can be when inappropriate behaviour can emerge. One of the reasons for this is that theory tends to be taught in a visual and auditory way and therefore the kinaesthetic learner finds it even more of a challenge than the other learners.

Therefore, both teachers and students should be aware of learning styles and teachers should consider different learning styles during their instruction. Both teachers and students can control their own learning if they know what their learning styles are [15]. Learning increases if both students and teachers know how they learn and what their learning preferences are [16].

Thus, identifying students' learning styles enables teachers to organize their instruction according to their students' individual needs. Moreover, identifying learners' learning styles facilitates their learning. Also, learners become more self-confident. In addition, 'teaching to our students' learning styles can help students get more excited about the subject, explore and understand the facts, enjoy grappling with the implications, and most importantly, be more willing to put what they have learned into practice" [17]. Besides, Lefever emphasizes that active participation in the class, motivating toward learning, and learning in a quick way and good relations in a group can be realized by students if they are given the opportunity to show their learning preferences in class [17]. Coffield et al, states that students' learning styles should be identified by teachers and instructional designers by assessing students' individual learning needs and designing particular learning and teaching interventions which encourage learners to demonstrate their styles [18]. Moreover, Reiff mentions that in order to prepare an effective curriculum students' learning styles should be taken into consideration [19].

Learning style researches expose that students become more successful if they learn in their own preferred way. However, teachers impose their own preferred learning styles to students during instruction [7]. Their needs harmony between learning styles of students and their teachers' teaching styles leads to effective learning. Thus, consideration of learners' learning style preferences is helpful for both instructional planning and program development.

Dunn (1990) mentioned that "students are not failing because of the curriculum. Students can learn almost any subject matter when they are taught with methods and approaches responsive to their learning style strength". Thus, learners can learn in a most effective way if variant learning styles of learners accommodate in their learning [20].

VI. CONCLUSION

To summarize the points indicated here represent how learning styles can be put into practice. These indications relate to understanding learning styles, understanding learning, understanding the learning environment, understanding the role of the course and the curriculum, understanding the task and understanding the role of resources and each of these can be applied to a range of learning contexts.

The experience of learning may be more important to many students than the actual finished product. At the same time it is important that students, themselves become aware of their own learning style. This is the first and most important step to achieving a degree of self-sufficiency in learning. Acknowledging learning styles therefore can help to promote skills that extend beyond school, as knowledge of learning styles can equip all students for lifelong learning.

Many recent studies have focused on learning styles. Teachers or people involved in scientific works should benefit from this research. Teachers and scientists should study the research results and apply the findings in the class environment. If necessary, they can communicate with other people studying in this field. As mentioned before, technological developments provide us with this opportunity.

In both pre-service and in-service education, it is very important that teacher candidates be educated as being aware of the learning styles. The students should also think wisely. They need to be critical and creative in learning how to learn. This kind of awareness not only supports learning but also improves the student's self-confidence.

To increase the efficiency of learning styles in learning process, firstly, it may be beneficial to explain illustratively how students benefit from learning styles. In addition, methods-techniques and materials taking the learning styles of students into consideration can be used by the teachers. Teachers can also guide the parents in providing learning conditions suitable for the students' learning styles. The purpose of using learning styles is to find the best ways for both students to learn effectively and teachers to teach efficiently.

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