Review Paper

Identifying Various Learning Styles Amongst Students

Praveen Kumar Arora[1,] Sonal Singh Arora[2]

[1]Professor and Head, Department of Forensic Medicine and Toxicology, Sri Aurobindo Medical College and PG Institute, Indore.
[2]Senior Lecturer, Department of Conservative Dentistry and Endodontics, Sri Aurobindo College of Dentistry and PG Institute, Indore.
Corresponding Author: Sonal Singh Arora
E-mail: doc_sonal77@yahoo.co.in

ABSTRACT

As teachers we are always eager to use the best teaching methods to make our students learn more efficiently. Each teacher has his/her own specific teaching style, but at the same time each student also has his/her peculiar learning style. Teaching learning process is compromised when there is a mismatch between the two. Therefore, it is important for teachers to understand the various learning styles of students/ learners and adopt different strategies in their teaching to make teaching-learning process more effective.
Dr. Richard Bandler and Dr. John Grinder are credited with initial work on learning styles (LS), in their work on Neuro-Linguistic Programming during 1970's. They identified three basic learning styles; visual, auditory and kinaesthetic. Later additional learning styles were advocated and identified by many researchers. Currently, academicians accept four basic learning style preferences (LSPs) among students as suggested by Fleming and Mills.
Learners do not possess any one learning style exclusively. Although students have one or the other preferred learning style, they can adopt more than one learning styles as required by the situation. Studies have shown that most of the students are able to analyze their learning styles and that they are flexible about adopting different learning styles. Understanding these learning style differences enable teachers to help students to adopt appropriate learning strategies. The best learning style is not to depend upon any single LS. Teachers should adopt various teaching strategies to address the needs of students with different LSPs e.g. using gestures, pictures, discussions, stories etc.

Key Words: Learners, teachers, LSPs, learning style, learning preference.

INTRODUCTION

As teachers and trainers we always strive to use the best teaching methods to make our students learn better. Learners have their particular learning styles. Richard Bandler and John Grinder (1970s) identified 3 types of learners: a. Visual learners, b. Auditory learners, and c. Kinaesthetic learners [1]. Neuro-linguistic programming explains the links between individuals' internal or neural experiences, their language and the pattern of behaviour (programming). As such NLP offers understanding of individuals' subjective experiences. NLP holds promising potential in improving teaching-learning process, because the teacher-learner relationship is a dynamic

process, which is meaningful only through two way feedback and not merely the transmission of information from one end to other. Teaching, essentially is a process which, a) creates the conditions which are conducive to learning, b) facilitates the learners to explore and express their internal experiences, and c) leads them towards the desired goal of academic activity [2]. The various learning styles as identified by Bandler and Grinder are as follows:

Visual Learners
Students with visual learning style prefer depiction of information pictorially e.g. in maps, diagrams, charts, graphs, flow charts, symbolic arrows etc. They perform best if they are given the opportunities to express their knowledge and present it in picture format. Even when describing something such students make a mind-map to explain what they have learned in a topic [1]. They also prefer to draw diagrams, labelled pictures, flow charts, graphs and other such techniques which express what other people could have expressed in words. This method can also be called as Graphic. This method of expression does NOT include photographs or reality movies, videos or PowerPoint. They recall information by remembering how it was set out on a page [3].

Auditory Learners
Auditory learners are the students who learn best from verbal instructions, like dialogues, discussions, lectures, radio, speaking, talking to oneself. They are benefitted from engaging them in debates, small group discussions, seminars, symposia and other such techniques. Such learners may also prefer to record their lessons in audio or video format and listen it repeatedly. They also like to link their learning with various anecdotes [1]. Thus, they basically learn when the information is heard or spoken and prefer learning by lectures, radio, web-chats, speaking on phone or talking the things and other methods discussed earlier. Talking out loud and talking to oneself are also included in this type of learning. The complex situations are also sorted out by speaking them out, rather than solving them silently in mind first and then speaking [3]. They solve problems by talking about them and use rhythm and sound as memory aids.

Kinaesthetic Learners
These students learn best when they are involved or active in groups and with a range of hands on or practical activities e.g. role plays, skits, making out the models, crafts etc. They also learn better by using 2D or 3D models or objects. Such learners benefit from such educational activities which involve physical activity like educational games, interacting and examining the models or real patients [1]. As such the learning is through personal experience, practice or simulated teaching learning sessions e.g. demonstrations, hands-on exercises, videos and movies of real experiences, documentaries, case studies etc. The real or concrete nature of the example is important. Students with this type of preference learn from experience of doing something and their own experiences are important [3]. They thrive acting out a story or using models or objects to describe their ideas, movies or videos of real things, case studies.

Bernice McCarthy developed 4MAT system of learning in 1972 and described four major learning styles based on this system:
   i)   **Type One: Imaginative Learners:** She mentioned that such learners perceive the information concretely and reflect to process the same; as such they integrate the experience with themselves. They need to be personally involved in the act to learn social justice and values. They are interested in people and culture. They may have difficulty in making decisions, because they see all aspects of the problem.
   ii) **Type Two: Analytical Learners:** This category of learner perceives information in abstract form and then processes it by reflection. They integrate their observations and devise their own theories. They think through the ideas and need to know the ideas of experts. They value sequential thinking. Such students like traditional classroom teaching. They are verbally highly skilled and avid readers.
   iii) **Type Three: Common Sense Learners:** This type of learners perceives information abstractly and then actively processes it. They integrate theoretical concepts with

practical and learn by testing the theories by applying common sense. They are down-to-earth problem solvers. Usually they are skills-oriented individuals and like to experiment and like to work on real problems. They find the school frustrating.

iv) **Type Four: Dynamic Learners:** This category of students perceives information concretely and then processes it actively. They integrate their past experiences with application and learn by trial and error. They are enthusiastic about new things and adapt to people who relish change. They are flexible and reach accurate conclusions even in the absence of justification. They find school as tedious and overly sequential, as they seek their interests in diverse ways [4].

Many other tools have been developed to understand individual learning process e.g. a) Vermunt's inventory, b) Kolbe learning style indicator, c) Meyer Brigg indicator, d) Fleming and Mills VARK questionnaire. VARK is an acronym for visual, auditory, read/write and kinaesthetic [5]. Research has proved that different students have different learning style preferences [6-8]. Learning style preferences are significantly different in males and females [9]. Studies have been successful to show that the most effective learners adapt to the learning style which is required by a particular situation [10]. A teacher should help students to learn to adapt different learning strategies in different situations. Awareness among students of their own learning styles improves learning by enabling students to use appropriate strategies in different learning situations [11-12]. Dunn (1983) has shown that most of the children are capable of analysing the way they learn, although some cannot [13].

The VARK Modalities
The acronym VARK means Visual, Aural, Read/write and Kinaesthetic modalities used for learning. It was suggested by Fleming and Mills in 1992 and it reflects the experiences of the learners and trainers or teachers [3]. The Visual, Aural and Kinaesthetic modalities encompass the qualities as described by Bandler and Grinder. The Read/write modality of learning was identified by Fleming and Mills and is as follows:

Read/write Learners: Learners with read/write learning style have preference for information displayed as words. This modality is found widely among teachers and learners as it has strong preference of employers. It emphasized text-based input and output e.g. manuals, reports, essays, assignments etc. Learners with this preference like to work with PowerPoint, internet, diaries, lists, dictionaries, quotations, words etc.

Multimodality: Although a variety of learning styles are identified, no learner belongs strictly to any one of these categories. As life is multimodal so are the learners. Seldom has any learner used only one modality or can it be considered sufficient for learning. Therefore, every learner is considered to conform to VARK profile, although the preferred mode varies among different learners. Fleming and Mills have developed VARK questionnaire, which provides score for all four modalities and also helps to highlight the most preferred modality by a learner. This helps in identifying the learning style of the student, which further helps the student and teacher to plan teaching learning sessions accordingly. Those students who do not have one preferred mode over the others are called as multimodal.

Multimodal students are of two types:

a. **Type One (flexible):** Learners who are flexible with their preferred learning style depending on the work or condition they are involved in. Thus they are specific to the context rather than the learning modality and easily switch from one modality to other, are classified in this category. They are labelled as VARK Type One; whereas

b. **Type Two (put all preferred modes):** These learners prefer to get information or its expression in all of the preferred modes. They may take more time to gather the information as they try to get it in more than one mode. As a result, they usually have deeper understanding of the concepts. Although they may appear to be slow-deliverers, they simply need all the information before they act. Such learners are labelled as VARK Type Two [3].

Studies have proved that individualization of instructional method doesn't contribute significantly to learning outcomes. Bhagat and others studied the impact of motivation for incorporating multiple learning styles by 1st year MBBS students to enhance learning outcomes [5]. They found that to maximize learning one must use a mixed method approach. Awareness of their learning style preference among students and motivating them to adopt other LS increases the learning outcomes significantly. They concluded that awareness of individual learning style and use of externally regulated strategies for enhanced learning helped students to adopt other learning styles. This improved their learning practices and, thus, better learning outcomes. Therefore, the teachers should try to identify and make a conscious effort to let the students explore other learning styles. Various strategies, as described by Fleming and Mills, can be adopted to cater the needs of students with different LSPs.

Strategies for Learners with preferred learning modes:

Visual Strategies
- Lectures with gestures and picturesque language
- Flowcharts
- Underlining, highlighters, different colors
- Textbooks with diagrams and pictures
- Graphs, symbols

Aural Strategies
- Classes, discussions, tutorials
- Discuss topics with others and teachers
- Explaining to people
- Using tape recorder
- Describing pictures and other visuals to someone who was not there

Read and Write Strategies
- Lists, headings
- Dictionaries, glossaries
- Definitions, handouts
- Textbooks, library
- Notes, essays
- Manuals

Kinaesthetic Strategies
- Using all senses: sight, touch, taste, smell…
- Laboratories
- Field trips and field tours
- Giving real-life examples
- Hands on approaches

CONCLUSION

Teachers need to be aware of their preferred teaching style. They should also make conscious effort to understand the learning style of most of the students in the class. As a class has a mix of students with different preferred learning styles, teachers should try to adopt different teaching strategies to cater the needs of students with different LSPs. Teachers should also make conscious efforts to create awareness among students of their learning style preference and should motivate, guide and help them to adopt other learning strategies.

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