Learning How to Learn:
An Analysis Through Styles and Strategies

Lili Kumari Padhi, Kalinga Institute of Industrial Technology, India

Deepanjali Mishra, Kalinga Institute of Industrial Technology, India

ABSTRACT

This article describes how every learner is a unique creative individual responsible for paving his/her own way of learning in a preclusion of external restraints. Learners apply a bunch of idiosyncratic means to segue the information into knowledge. The various implications of such manipulated formulation by the learners implies strategic responses to new information and indicates a rational commitment to learn in many different ways. Pertaining to this we have also different versions of learning styles and strategies and their categories. The growing innovative and multiple dynamic ways of learning here bring diffidence to the existence of those stipulated types of learning styles and strategic traditions. This article makes an attempt to synthesize the different types of ways of learning; the self-determined learning strategies along with the prevailing theories of learning styles hypothesis.

KEYWORDS

Behaviour, Cognitive, Learning, Online Technology, Strategies, Styles

INTRODUCTION

Over the ages, continuously many teaching learning methods and techniques of language have emerged and evanesced. They have their own underlying theoretical bases. These continual and acute changes in language learning and teaching theories along with the extant drift to increase learners' autonomy have put the teachers' self-confidence in a startlingly tough condition. So, the important part of giving priority to promote learners' independent learning is never to be left unattended. Moreover, talents are not confined to biological limitations but can be heightened to an unlimited degree by virtue of long practice and varied training. Assorted studies on language styles and strategies apprise about 'how' and 'how better' the learners acquire the language through self-directed involvements. It is often observed that the teachers manifest their resistance towards the updated feasible facts and lie in the same track of conventionality. There is a plethora of current research sources in this regard, but often teachers follow no facts and evidence-based studies, thus lead the class in their own habits of conventionality, imposing certain selected preferences on the learners, irrespective of their attentiveness. There is still a need of more studies on the contradictory messing hypothesis of learning styles.

The educational philosophy revolving around 'learning to learn' has stimulated considerable debates in both theoretical and practical fields of education. Many researchers such as Coffield, Mosely,

Hall, and Ecclestone (2004); Sternberg, Grigorenko, and Zhang (2008), Kozhevnikov (2007), Dunn (1990), Kolb (1984, 1985), Honey and Mumford (1992), Deshler and Schumaker (1986), Dunn and Griggs (1988), Cornett (1983), etc., have done extensive studies on the support of the existence of certain learning styles and about their impact on learning. However, in contrast to this, around these last four decades, the researchers like Pashler (2009), Kirschner and van Merrienboer (2013), Massa & Mayer (2006), Riener and Willingham (2014) have been active surging in the study of learning styles seeking more empirical evidences.

The Concept of Learning Style

The idea of learning style deals with mode of instruction affecting learning outcomes. Different definitions of this concept are found such as "way of concentrating, absorbing, processing, and retaining new and difficult information" (Dunn & Dunn, 1993), "some cognitive styles and dispositions influencing how and what students learn" (Ormrod, 2008), "summarize the environmental, emotional, sociological, physiological, and global/analytic processing preferences that a student has for learning" (International Learning Styles Network, 2008), "biologically and developmentally imposed set of characteristics that makes learning terrible or wonderful"(Dunn & Griggs, 1988, p. 3) etc.

Various study preferences and educational practices pertaining to the theories of learning styles are collected from different literature reviews and depicted below with prevailing categorizations. Table 1 shows learning styles, ways of learning, course of teaching, learning activities.

STUDIES CONTRARY TO EXISTENCE OF LEARNING STYLES

Having reviewed extensive studies on learning styles and their categories, the general interrogation of practicality and scientific base of those stipulated leaning styles are under discourse. The current research studies display sizeable discredits acclaiming it as 'brain myth' in front of the traditional anecdotes. The authentication of prevailing learning styles therefore is an analytical aspect in pedagogical domain in order to combat its unscientific impressions on the learners and teachers as well. Pashler and McDaniel (2009) in 'Learning Styles: Concepts and Evidence' affirm sufficient evidence to integrate learning styles into common learning practices. The stereotypical classifications of learning styles claim about learning attached with specific sensory organs which contradict the fact of most learning happening through multiple sensory domains at a time. Thus, the matching hypothesis of a particular learner with a particular learning style falls flat when it surpasses beyond the practical significance of mastering the subject matter in many different ways by the same learner. "There lies a big gap between the actual way of effective learning and the way that someone prefers to learn" (Kirschner, 2016).

As James Randi rightly quotes, "No amount of belief makes something a fact", the theme of this paper is to reveal whether any specific basis lies in the certain optimal learning strategies of a particular learner and whether the learner sticks to that learning strategy consciously all the time. "The self-reported preferred way of learning is often a bad predictor of the way people learn most effectively, what people prefer is not per definition, what is best for them" (Kirschner, 2016).

Taking into consideration of low objectivity, lack of proven fact and significant empirical evidences behind the learning style postulations, Kirschner gives the conclusive statement, "when designing instruction that takes differences between learners into account, their cognitive abilities are to be assessed rather than their preferred styles because abilities are better predictors of how people learn most effectively. Moreover, these cognitive abilities should be objectively measured on an ordinal scale and in an objective way, rather than by subjective self-reports that are used to assign people to types on the basis of one or more arbitrary criteria" (Kirschner & van Merrienboers, 2013).

Earlier supporters of learning styles advocate the dichotomies of learning styles such as visual vs. verbal, impulsive vs. reflective, linear vs. holistic etc. and that the learning can be bettered by matching particular teaching with that style. Practically learning satisfaction is beyond own specific

Table 1. Learning styles, ways of learning, course of teaching, learning activities

Learning Styles	Ways of Learning	Course of Teaching	Learning Activities
Visual	Through seeing (iconic or symbolic)	Using white or black board writings, text books with sufficient figures, illustrations, colorful pictures and highlights of major and minor visual links etc., overhead projectors, gestures and postures flash card, slide show, screen displays, diagrams, graph, flow charts, different images, key points on the screen and other info graphics, colorful clear depictions etc.	Seeing and saying, seeing and doing, seeing and differentiating, seeing and drawing, seeing and guessing, use of class notes, visual review, sticky notes, screen shots, information sheets etc.
Auditory	Through hearing	Delivering undistorted lectures or holding plain oral conversations, organizing role plays, mock interviews, debate, elocution, quiz, rhymes, riddles, stories, jokes, explanations and discussions.	Listening and doing, listening and drawing, listening and narrating, listening and filling etc., loud reading, restating, reciting, reviewing, rehearing, recalling things to self, interactions among peer and with the teacher, voice records etc.
Verbal	Through expression	Making oral lectures, conducting rhymes, guessing words, tongue twisters, limericks, collaborative teaching- learning, oral lectures, use of mnemonics and acronyms, Scripting of memorable words and sentences, reading things dramatically and in a varied manner, group work.	Collaborating with peers, doing acronyms, rhymes, discussing in a study group, recording speaking, setting some key points to text, speaking before mirrors, and talking themselves through simulators, public speaking, debating, politics, writing and journalism, verbal exchanges, music, performing arts, lyrics etc.
Kinesthetic	Through use of body movements.	creating an active lab setting of more physical involvements, class demonstrations and field work, stimulations of senses like sight, touch, smell, hearing and speaking through energetic activities like TPR (Total Physical Response), music, rhyme, video, power point presentations, field trips, real life examples, collections, project work, role play, exhibitions, Application of the knowledge such as comparison and analysis of ideas, taking help of references, scrutinizing samples.	Total physical responses, experiments, actions, demonstration. real-life experiences, note taking, Studies in short intervals of time, group presentations, learning by frequent movements, physical responses, tangible objects, realia, collages, models, experiments, action works etc. trial and error method etc.
Tactile	Through touch	Use of tangible teaching learning materials, reallia, collages (pictures made by sticking pieces of colored paper and cloth onto the paper)	Touch and feel to learn.
Socio-interpersonal	Through working with others	Organizing Group work, discussions, forming specific clubs, role-playing techniques etc.	Social interaction, conversation with others, social activities, imaginative associations, group work etc.
Individual	Through working alone	Teaching to write personal diary, to express likes, dislikes and independent views.	Self-analysis, self-talk, silence, monitoring own progress.
Logical	Through logic, reasoning and systems.	Brainstorming, logical and mathematical reasoning, comparing and contrasting, analyzing etc.	Doing brainteaser, Sudoku backgammon, discovering solutions, comprehension etc.
Multimodal	Through miscellaneous modes	Organizing different activities	Doing many activities together.

sensory preferences. The striking factor is that if any person is asked to express his preference about how he likes information to be presented to him, he may want to know about the subject matter before responding to any interaction pattern, which loses credit to be taken as a precondition for validating the educational application of respective learning styles. It is dependent on many other factors such as; content of the learning, innate ability, capacity to learn, interest, background knowledge, circumstances, availability of time etc. Music seeks auditory mode, dance demands kinesthetic mode, drawing is on the lookout for visual practice and so on. An auditory learner does not learn drawing by listening to it; a visual learner does not learn music by seeing it and so on. Learning needs different sense organs to be engaged. Moreover, in the process of observation and experiments we use our smell to learn. Will that be named as olfactory learning style!

There is a recognized fact that every learner is a unique individual having a special talent, ability, intelligence of his own due to unique genetic traits, which leads his/her special interest for a particular subject area and that necessarily should not be assimilated with teaching methodologies. Here few lines are added from 'the myth of learning styles.'

"But in separating the wheat from the pseudoscientific chaff in learning-styles theory, we will make clear that the wheat is contained in other educational approaches as well. A belief in learning styles is not necessary to incorporating useful knowledge about learning into one's teaching… The claim that the mode of presentation should match the preferred mode of learning subsumes several other claims, and it is worth unpacking the learning-styles concept in order to consider its constituent sub claims separately" (Riener and Willingham, 2014).

Role of Senses in Learning

To determine the best training protocol for a specific learning can involve multiple senses. Suppose the learning is on distinguishing different features of insects. We can consider perceptual visual learning to enable the learner to identify and discriminate different color, structure, shape, size of the insects through different attractive visual images in video clips. How would it be when their sounds are associated? Most probably a positive remark, since sound is also another prominent feature of the insects to distinguish them. The soundless video clip will have less impact on the learners in comparison to the moving noising insects in the video. Naturally in a garden or in an insect lab the learning by touching (some harmless insects) and smelling (some produce odoriferous chemicals) may make the learning more permanent. Human brain is designed that way to integrate information through multiple sensory logical relations. The work of Shams & Seitz (2006) has shown a deep analysis in this field. Studies of learning, and in particular perceptual learning, may have focused on learning of stimuli consisting of a single sensory modality. But the above-mentioned authors' experience in the world involves constant multisensory stimulation. Since visual and auditory information are closely integrated in performing many tasks that involve localizing and tracking moving objects. The training conventions that employ unisensory stimulus management and do not engage multisensory learning mechanisms might not be optimal for learning. On the other hand, multisensory-training protocols may augment estimated natural settings and stand more effective for learning (Shams & Seitz, 2006).

To gain new knowledge one hardly confines his senses in one or two, rather engage all senses together for a whole kind concrete and meaningful experience. Children delight to experiment with different senses and learn in different situation. So they love active learning outdoors. Hence giving stress on one particular sense to learn may discourage the incorporation of connective learning through many senses together.

LEARNING STYLES HYPOTHESIS

Individual differences may bring in multiple ways of learning. But the stipulated ways, whether being solely responsible for the enhancement of learning is again probed in many different contexts by many researchers. Dr. Tesia Marshik, professor of psychology, at TEDxUWLaCrosse conference

on February 24th, 2017 had a talk on learning styles narrating those as incredibly pervasive, ever to be questionable. To hold an experiment, she took a list of words for different groups, made one group listen, one group see the words, but the result was same regardless of how the material was presented. From many other tests she mentioned that in classroom when a teacher teaches, he/she does not put questions based on particular sensory mode, rather she wants to know the information stored in terms of meaning. According to her when any learning material is presented, the learners perceive it the way it is presented, say for example through audio or visual means, and not necessarily through their preferable sensory modes. So, she discards the real existence of stipulated learning styles and their making of any difference. 'The Myth of Learning Styles' begins with the statement 'no credible evidence about the genuine survival of learning styles'. No doubt there is existence of profuse theories about learning styles, but no sufficient evidence is found to support that definitely. Some learning style theorists are in the reasoning that if there is no variety in learning styles, then there is no variety in the abilities, interests, knowledge, backgrounds, talents among the learners, all students are identical. The studies thus assert that the differences among students give rise to different learning styles, but no strong evidence suffices to support the catering of particular preferences for assuring finer and higher quality learning. It is a significant concern to take into account that there has been a specific version of the learning styles hypothesis that manifestly appears most both within the educational writings and within the minds of most people believing learning style with the idea that instruction should be furnished in the mode that meets the learners' style.

Exponents of learning-style postulation profess that optimum instruction calls for proper diagnosis of individuals' learning style in order to be tailored accordingly. Many organizations provide professional development workshops for teachers and educators on the concept of learning styles. Reputed schools are seen assessing their learners for their learning modalities to provide them with proper instructional choices. Different learning style models, inventories, questionnaires and other instructional tools such as OPAL (Observational Primary Assessment of Learning Style (OPAL), BE (Building Excellence) are extensively in occurrence to trigger the maximum retention and memory of the learners.

Despite the extensive assessment tools and techniques and wide popularity of the concept it does require strong scientific evidences in order to gauge the actual effectiveness of learning enhancement, as there seems missing of more other factors regulating the process.

Learning style theories lead to classification of learners into purely some distinct categories and not a gradation of scores taking different dimensions into consideration. The irony is that every individual is excited about being specifically treated as a unique learner but when the outcome is below the satisfaction level, the fault is charged on the instructor and the style of instruction and not on individual ability. So we are under hesitancy about suggesting the pure categories of learning styles to be administered for the learners.

In fact, if a particular learning style is said to be diagnosed and then is imposed on a specific child, the learning may not be accelerated or be made a large difference and may be found to be equivalent irrespective of preferred mode as it is not independent of the subject matter, ability, educational background and interest level of the learner. The general teaching methodology happens to be different for different subjects; say for example auditory for music, kinesthetic for dance, visual for mathematical equations or drawing, socio-inter personal for sociology, tactile for science, verbal for language, solitary for creative writing etc. Different learners on the other hand have different levels of weakness for particular subjects. Learning that subject will call for preferably the particular choice of learning as the subjects are delivered or usually learnt and not any purely supposed mode of sensory preferences.

Learning Strategies

The language learning is not about memorizing and vomiting in the exam, but shaping life through its natural and confident use. Learning is more significant than teaching. Everything can't be taught but

everything can be learnt, since teaching loses meaning unless learning happens. The current context is about effective learning. The learning tricks or the academic skills followed by the learners to excel their performances are named as learning strategies. In this case the learner constructs his own microcosms of knowledge from past or current experiences and assimilates, utilizes the knowledge, gaining new units of experiences. Knowledge acquired by learners' own effort reveals the far reaching facts of cognitive development along with the pedagogical processes based on the two strong facets; that knowledge is not unassertively accepted but vigorously constructed by the assimilated subject and that the function of cognition is flexible and serves the undeniable establishments and not the exploration of the metaphysical actuality.

Learners are the most prominent determinant in the whole teaching learning process. A system of burdened and impulsive education without learner's own interest, style and plan does not awaken the mind and the dormant intelligence in it but stuffs it mechanically creating some chaos and conflictions haemorrhaging the talent. So, a learner is better to follow his own built steps to learn things properly. They need to participate rigorously and bring about efficient learning experiences permanently. They work independently with individual accountability. Their active participation multiplies the educational impact. Learners differ from each other by their different characteristics; personal, academic, social, cognitive, emotional etc. Learners' characteristic mode of functioning that we reveal throughout our perceptual and intellectual activities in a highly consistent and pervasive way. Their productivity certifies their learning. Their passive receiving of information shrugs of their individual specific abilities. On the contrary their abilities are nurtured and fostered, when they create their own exercises. Learning strategies refer to learners' self-generated conceptions, emotions and actions, which are meticulously aligned towards achievement of their goal.

CONCEPT AND TYPES OF LEARNING STRATEGIES

A learner applies various tricks of his own to remember things. Strategies improve student performance in spite of lacking a good cognitive skill earlier. Learning strategies are defined as "the steps taken by learners to enhance their own learning" (Oxford, 1990, p.1). In the opinion of O'Malley and Chamot's (1990), learning strategies are "the special thoughts or behaviours that individuals use to help them comprehend, learn or retain new information" (1). These can play a role in lightening the second language teachers' burden and can help the learners manage their own process of learning (Cohen, 1998). These also help in increasing student independence and engagement with learning. Through various strategies learners realize the best one and find out the weakness in ineffective strategies in order to augment the performances and thus ultimately take new challenges. Thus, their opportunities to practice skills become wider, eventually leading to a ray of positive hope in the fairness of the education system.

As students step up from one class to another, they confront greater challenges of imbibing much information, working independently, comprehending the extended and complicated written text, expressing them properly, presenting well in tests, etc., and demanding higher order learning strategies. "The strategies which may assist language learners to be more active and independent influencing learning achievement are meta-cognitive strategies. According to O'Mally and Chamot (1990) "These are higher order executive skills, which require planning for the positive results of learning activities" (44). To induce the concentration of the mind and to increase its potentiality they have to apply some learning strategies to accomplish any task more effectively and efficiently despite their knowledge and versatility deficits. Scarcella defines learning strategies as "specific actions, behaviours, steps or techniques; such as seeking out conversation partners, or giving oneself encouragement to tackle a difficult language task used by students to enhance their own learning" (Scarcella& Oxford, 1992). "Learning strategies can also validate students to become more independent, autonomous, lifelong learners" (Allwright, 1990). Students apply a broader range of learning strategies with their

consciousness sometimes and acquire the skills of language and sometimes the skilled teachers make them adopt the appropriate ones.

Schumaker and Deshler (1986) have the opinion that "learning strategies an individual's approach to a task. It includes how a person thinks and acts when planning, executing and evaluating performance on a task and its outcomes." It assures learning strategy is a deliberate individual practice to organize and remember things in learning process.

Oxford (1990) compiles the learning strategies briefly as "any specific action taken by the learner to learning easier, faster, more enjoyable, more self-directed, more effective and more transferable to new situations, is a language learning strategy." Rubin (1982) opines "learning strategies are strategies which contribute to the development of the language system which the learner constructs and affects learning directly". Cohen (1998) gives his consent "in second language learning, learning strategies constitute those processes which are consciously selected by learners and which may result in actions taken to enhance the learning or use of a second or foreign language, through storage, recall, application of information about the language". Diverse definitions of learning strategies have been accepted by the broad educational field of psychology depending on different theoretical perspective of strategies. The encompassing definition of language learning strategies given by Oxford is, "Language learning strategies are purposeful, conscious (or at least partially conscious) mental actions that the learner uses to meet self-chosen goals in specific settings. These depend on multiple interacting factors, can be learnt with the help of a teacher, book, friend, internet or can be generated by self" (Oxford, 2017, p. 82).

The different definitions and opinions on language strategies can be analysed in brief as follows. Learning strategies are learners' actions or behaviour for improvement of their own apprehensions and internalization. These may be behavioural or cognitive. They may have direct or indirect effect on language development. They are flexible and often conscious. They are problem oriented and solution intended. These may be conscious or subconscious steps towards goal. Use of right strategies at right time helps the learners learn the language in a better way i.e. in an autonomous and independent manner. According to Wenden (1998) "it increases learning results, making recall easier, … and it sets right the role of development in learning as well as the talent and speed of learners' cognitive engagement" (Wenden, 1998, p. 520).

Categorization of Learning Strategies

It is mostly observed that today's learners destitute some essential skills like note-taking, note-making, idea-organizing etc. resulting abysmal performance. They can be trained to use strategies. Some learning strategies adopted by different learners are; repeating new words in mind till they remember them, taking risks by using the learnt language in conversations, guessing the meaning of the new words, asking others feedback on their use of language, throwing themselves into critical situations of using the language, recording, judging and correcting by self for fluency and accuracy, asking a learner to revise what they have learnt, discovering ways of remembering new vocabulary, exploring own area of weakness and deciding the ways of improvement etc.

Learning strategies according to the two psychological scientists Dr. Yana Weinstein and Dr. Megan Smith (2016) are the six research-based learning strategies as shown in Table 2.

According to Weinstein, Mayer & Richard E. (1983, pp. 1-4) learning strategies are the key points to influence the encoding process of the learners. They categorise learning strategies in Table 3.

Language learning strategies, according to Oxford (1990) are divided into six categories, as shown in Table 4.

In her further papers Oxford lays more emphasis on functions of learning strategies like planning, organizing, monitoring and evaluating rather than the rigid classifications like cognitive, emotional, social, motivational or compensatory type (Oxford, 2017). She analyses the language learning strategies through different language learners; as one language learner analyses her emotional faculties to learn a language, other guesses the meaning of the new language based on the background of his

Table 2. The six research-based learning strategies

Learning Strategies by Dr. Yana Weinstein and Dr. Megan Smith (2016)	
Learning Strategies	**Descriptions**
Spaced practice	Learning to be done in smaller chunks over regular intervals of time
Retrieval practice	Recalling learnt information putting all the learning materials away
Elaboration	Asking students open ended questions to elaborate their understanding as much detail as possible
Interleaving	Practicing different skills one after another interrupting the repetitive monotony of the same thing
Concrete examples	Showing concrete examples for the abstract phenomena
Dual coding	Combining words with visuals for durable learning

Table 3. Categories of learning strategies

Learning Strategies	Descriptions
Rehearsal strategies	Copying, note taking, underlining, shadowing for easy repetition
Elaboration strategies	Creating analogies, generate note-taking, paraphrasing, summarizing, question answering
Organizational (building internal connections)	Outlining, creating a hierarchy
Comprehension monitoring	Checking for comprehension failure, self-questioning
Affective	Being alert and relaxed, overcoming test anxiety

Table 4. Six categories of language learning strategies

Language Learning Strategies: An Overview Oxford (1990)	
Strategy	**Description**
Cognitive strategy	The strategies show what the learners think about their own learning. Ex- reading for specific location or reading for identifying rules etc.
Metacognitive strategy	The strategies learners employ in their learning process. Ex- observing own mistakes, planning for improvement.
Memory strategy	The strategies help the learners how to remember the language. Ex- use of flash card, have regular revisions.
Compensation strategy	These help learners compensate their limited knowledge. Ex- to guess the meanings, predict the connotative idea.
Social strategy	These are used by the learners to facilitate their own learning. Ex- learning the native culture, seeking counseling from experts.
Affective strategy	These are used to make learning comfortable, regulate feelings, and motivate the learners. Ex- feel relaxed about the language, get self-satisfaction or reward on good performance.

knowledge on the topic and another learner outlines some important and useful information on paper to learn the language etc.

Learning strategies involve processing of information in cognitive faculty regardless of the teaching strategies and are used in assessing the time to time progress of the child. One may use multiple learning strategies in different situations. Different learning strategies are chosen and developed by the learners in order to cope with immediate academic pressures and by the teachers to help the poor students to meet the growing demands as well.

Some other examples of learning strategies according to Clark, Deshler, Schumaker, and Alley (1984), Robbins (1982), compiled in Table 5 with their respective aims and objectives.

Table 5. The six learning strategies with their aims and objectives

Sl. No.	Names of the Strategies	Objectives	Aims
1	The word Identification Strategy	To decipher quickly the multi syllable words.	Acquire information from written materials
2	The Visual Memory Strategy	To create a cognitive idea of an event described in a picture	Acquire information from written materials
3	The Self-Questioning Strategy	To formulate creative questions which are intended but not expressed by the author	Acquire information from written materials
4	The Paraphrasing Strategy	To be able to use different substitutes to obtain greater quality	Acquire information from written materials
5	The Interpreting Visual Aid Strategy	To gain information from various visuals	Acquire information from written materials
6	The Multipass Strategy	To go through a lesson by three passes; to survey, to get key information and to study critical information	Acquire information from written materials
7	The listening and note-taking strategy	To identify organizational tips, note important words and organize them into delineated form from lectures	Identify and reserve important facts.
8	The first letter mnemonic strategy	Memorizing key information for tests	Identify and reserve important facts.
9	The paired associates strategy	Memorizing key information for tests	Identify and reserve important facts.
10	Sentence writing strategy	Use varieties of techniques for writing the sentences in proper structure	Expedite written articulation and manifestation of competence
11	The paragraph writing strategy	Organize and write a cohesive paragraph	Expedite written articulation and manifestation of competence
12	The theme writing strategy	Organize and write an integrated multi paragraph theme	Expedite written articulation and manifestation of competence
13.	The error monitoring strategy	Identify and rectify the errors in written products	Expedite written articulation and manifestation of competence
14	The assignment completion strategy	Schedule and organize learners to complete assignments on time	Expedite written articulation and manifestation of competence
15	The test taking strategy	To take continuous and comprehensive tests effectively	Expedite written articulation and manifestation of competence

In a corollary, learning strategies involve processing of information in cognitive faculty regardless of the teaching strategies and are used in assessing the time to time progress of the child. One may use multiple learning strategies in different situations. Different learning strategies are chosen and developed by the learners in order to cope with immediate academic pressures and by the teachers to help the poor students to meet the growing demands as well.

Teacher's Role in Developing Learning Strategies

Teaching is not limited merely to impart knowledge to the learners but to develop skills and strategies by making them capable of further learning. Weinstein (1983) opines, 'Good teaching includes teaching students how to learn, how to remember, how to think and how to make them self-motivated' (p.3). Teachers are strategy instructors. Learners are strategy developers. Teachers confirm, reassure, encourage the right ways concerning the students' interests, motivations, habits and performances. Teachers focus basically on two things about the learners; 'what to learn' and 'how to learn'. Learners need to know how to remember, how to solve problems, how to paraphrase, summarize and create a hierarchy, how to retain information longer, how to apply, analyse and evaluate. Then they can dive into the ocean of knowledge without the physical presence of the teacher. In order to build internal connections among inputs, a teacher as an ardent strategy instructor first addresses the curriculum demand the child wants to meet, and determines the task specific strategy as a necessary remediation for the student. The new strategy is introduced to the learners by breaking down it into simpler components. Then the strategy is modelled before the students seeking their full involvement to learn the steps systematically. Finally, the students practice strategy to a coveted level of performance and master over it. The next step is to practice the strategy taking proper reinforcement and corrective feedback from the teacher. A post-test may be taken to mark the satisfactory progress in the target strategy. For instance, the teacher keeps himself informed about the learners' progress with strategies and introduces one after another. According to Kiewra (2002), "a good strategy instructor should enable the learners generalize and apply the strategies in many other different situations by providing ample practice opportunities to them".

PRACTICAL SIGNIFICANCE OF LEARNING STRATEGIES

Being a teacher, the author has come across the free discussions of learners to memorize terms and definitions through various ideas and tricks of their own. That, in fact laid the hard core of interest in the field of the study. The history book of one ninth class student was filled with numerous descriptions and dialogues around the historic pictures, for example a dialogue from Lord Curzon's mouth 'divide and rule' and a drawing of two horns on his head, which according to the student helps him to recap quickly about Curzon's crooked character during revisions. This strategy resembles the 'The Visual Memory Strategy' (Clark, Deshler, Schumaker, & Alley, 1984), which creates a cognitive idea of an event described in a picture by acquiring information from written materials. Furthermore, another student visualizes India map on his own physique, assuming his head as Jammu Kashmir, left hand as seven sister states, right hand as Gujarat, left foot as Tamilnadu, right foot as Kerala and so on, as in 'The Interpreting Visual Aid Strategy' (Lenz, Schumaker, & Deshler, in press) a learner gains information from various visuals.

Similarly, the trick of the application of analogies to remember the concept was also amusing. The definition of 'dative bond' which is a coordinate covalent bond in which 'the two electrons derive from the same atom and both the elements have same sharing' was compared by a tenth class student as in 'dating' a boy spends and both the boy and girl have same sharing on that. This strategy resembles analogy strategy for smooth memory. Idioms are remembered by students in their own mental images as 'raining dogs and cats' means the raindrops are heavier than even the animals.

Children also make their own stories to remember a sequence of events, taking the key points of the topic. Use of mnemonics to remember Fleming's left-hand rule as mechanical force, magnetic field and electric current with drawing of Father, Mother and Child on thumb, index and middle finger, also surges a deep analysis on a way of learning. As in 'The first letter mnemonic strategy,' (Robbins, 1982) learners memorize key information for tests Identifying important facts.

One of the brighter students was found to play 'teacher student game with self' by asking, answering, annoying, punishing and applauding to self. It favours 'The Self-Questioning Strategy' (Clark et al., 1984), which tells about learners formulating creative questions which are intended but not expressed by the author.

Role of Online Technologies in Enhancement of Learning Strategies

Use of online Technology has become more convenient and useful methodology of instruction for a teacher as well as learners. This method enables students to develop the skills of critical thinking, in learning innovative concepts and in expressing their ideas in a creative manner. The teachers can use technology effectively in order to inculcate multiple strategies among the learners comparatively in an easy and better way. Learners can exploit technology time and again; communicate consistently with wider range of professionals, exciting and flexible audio, video and digital media networking. They enhance their public speaking abilities, interview skills, presentation styles and also, they get ideas to innovate new projects and concepts effectively through updated software applications. The instructors try to integrate technology while taking their classes and they have options to use a varied range of technological tools so that they can teach students who are at different intellectual levels. There are different online activities which can be carried out through mobile phones, desktop or laptops. and they use an amalgamation of visual communication, auditory communication to interact with the students while engaging them and making the class more interesting.

Comparison of Learning Styles With Learning Strategies

Concerning to the theories of learning styles and strategies, it is deduced that while the former refers to the relationship of an individual with his method of learning, the later mentions the attitude and actions related to the learning objectives. While learning styles deal with the cognitive level and learners' preferences, learning strategies deal with meta-cognitive level and learners' competence. Moreover, learning style refers to approach whereas learning strategy refers to the actions taken for learning. According to Oxford in "The Role of Styles and Strategies in Second Language Learning" (1989), while learning styles reveal the preferred system of brain response and biological reciprocation to certain sensory stimuli, learning strategies explicate distinct actions, techniques, strides and stances adopted by the learners to amplify their learning, learning styles provides the tendency to prepare specific learning strategies. The strategies deal with specific approach and the styles refer to general approach of learning. Further, where the existence of specific learning style is under question, comparison of it with strategies of learning in practical field is a void.

CONCLUSION

This study explored the extent to which the general approach of learning style or the specific action of learning strategy have impact on the cognitive, affective or the behavioural aspects of the learners. While the diversity among learners derives theory of some general corollary, the result of the studies that used proper research design contradicts to meet the standard versions of particular learning styles hypothesis. The contrast between the profuse popularity of the theories of learning styles and the lack of credible evidence creates a chaos. The minimum precondition for validating the practical utility of learning styles is yet to be demonstrated. Learning strategies are the innovations of every unique

individual. Teacher as a strategy instructor has to deliberately develop the appropriate plan, material and course of action in order to get the maximum learning outcomes for the growing academic challenges. A teacher addresses, appraises and escalates those. Increasingly, the intensity is about 'learning by doing'. Self-explored strategies seek self-engagement. So, the issue of building capacity for learning with a range of key constructs including application of learning strategies to produce effective language learners is to be viewed intensely.

REFERENCES

Cohen, A. D. (1998). *Strategies in Learning and Using a Second Language*. Essex, UK: Longman.

Deshler, D. D., & Schumaker, J. B. (1986). Learning Strategies: An Instructional Alternative for Low-Achieving Adolescent. *The Council for Exceptional Children*, *52*(6), 583–590. PMID:3699089

Dunn, R., & Griggs, S. (1988). *Learning Styles: Quiet Revolution in American Schools*. Reston, VA: National Association of Secondary School Principals.

Kiewra, A. K. (2010). How Classroom Teachers Can Help Students Learn and Teach Them How to Learn. *Theory into Practice*, *41*(2). doi:10.1207/s15430421tip4102-3

Kirschner, P. A. (2016). Stop propagating the learning styles myth. *Computers & Education, 106*(2017), 166-171. doi:10.1016/j.compedu.2016.12.006

Kirschner, P. A., & van Merrienboer, J. J. G. (2013). Do learners really know best? Urban legends in education. *Educational Psychologist*, *48*(3), 169–183. doi:10.1080/00461520.2013.804395

Kolb, D. (1984). *Experiential Learning Experience as the Source of Learning and Development*. New Jersey: Prentice Hall.

O'Malley, J. M., & Chamot, A. U. (1990). *Learning Strategies in Second Language Acquisition*. Cambridge, UK: Cambridge University Press. doi:10.1017/CBO9781139524490

Ormrod, J. E. (2008). *Educational Psychology: Developing Learners*. Upper Saddle River, NJ: Pearson/Prentice Hall.

Oxford, R. (1989). *The Role of Styles and Strategies in Second Language Learning*. ERIC Digest.

Oxford, R. (1990). *Language Learning Styles and Strategies: What Every Teacher Should Know*. New York: Newbury House Publisher.

Pashler, H., & McDaniel, M. (2009). Learning Styles: Concepts and Evidence. *Psychological Science in the Public Interest*. doi:10.1111/j.1539-6053.2009.01038.x PMID:26162104

Riener, C. & Willingham, D. (2010). The Myth of Learning Styles. *Change the Magazine of Higher Learning,* August 2010, 33-36. doi:10.1080/00091383.2010.503139

Rubin, J., & Irene, T. (1982). *How to be more successful language learner*. Boston: Heinle and Heinle.

Scarcella, C. R., & Oxford, R. L. (1992). *The Tapestry of Language Learning: The Individual in the Communicative Classroom*. Boston, MA: Heinle & Heinle.

Schumaker, J. B., Denton, P. H., & Deshler, D. D. (1984). *Learning Strategies Curriculum: The Paraphrasing Strategy*. Lawrence: University of Cansas.

Schumaker, J. B., Deshler, D. D., Alley, G. R., & Denton, P. H. (1982). Multipass: A learning strategy for improving reading comprehension. *Learning Disability Quarterly*, *5*(3), 295–304. doi:10.2307/1510296

Shams, L. & Seitz, A. R. (2006). Benefits of Multisensory Learning. *Trends in cognitive sciences.* doi:10.1016/j.tics.2008.07.2006

Weinstein, C. E., & Mayer, R. E. (1983). *The Teaching of Learning Strategies.* Innovation Abstracts, 5*(32).*

Wenden, A. (1998). Metacognitive knowledge and language learning. *Applied Linguistics*, *19*(4), 515–537. doi:10.1093/applin/19.4.515

Lily Kumari Padhy is a research scholar in the School of Humanities, KIIT.

Deepanjali Mishra earned her PhD in English from Utkal University, Bhubaneswar. Motivating and Talented English Professor driven to inspire students to pursue academic and personal excellence. Consistently driven towards extensive research and exceptional track record towards contribution to various publication work. Energetic, highly career oriented and focused for attainment of goal. Her area of interest includes feminism and gender studies, sociology, linguistics, and management. She has over 15 years of teaching and research experience. Published a book titled "I am A Woman." Organised a National Workshop on Publishing Manuscript in 2019 and International Conference on "Incorporating Folklore studies in Management Practices" in December 2017. She has published two books titled "I am a Woman" with Bahri Publishers New Delhi in 2017 and "Corporate Communication: an insight." She has also published an edited volume titled, "Science and Spiritualism for a Sustainable World" with IGI Global, Pennsylvania publishers in 2019 and "Corporate Communication- an insight" in 2019. She is the guest editor of Research Chronicler, Literaria, and the Indian Journal of Communication. She has published over 26 research papers in reputed international journals and has presented her papers in various international conferences in India and abroad like IIT, IIM, South Korea, China, and Nepal.