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Exploring the Impact of Learning Styles on Tailoring Individual Learners' Needs: A Systematic Review

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ABSTRACT

The present study is an attempt to explore the role different learning styles perform in order to fix or address multiple needs of the learners. It is done through the review of existing literature that is relevant to secondary source of data to attain the objective of the essay. There is no denying the fact that each individual is different and distinctive in terms of academic, social, cultural and economic context. Their physical, mental, conceptual and emotional faculties are also not similar. They are also having dissimilar linking, modes and preferences. Therefore, it is impossible to deem that they will learn in the same fashion or their needs will be satiated in a similar way. It highlights the need to have different learning styles so that to address the needs of each and every learner. As regard the structure of the study is concerned, first of all learning style has been elaborated with the help of review that is available. Secondly, why learning styles are imperative has been justified. Thirdly, different models that highlight different learning styles have been elaborated along with the discussion of how they address the needs of the learners. Lastly, a brief summary of the findings with regard to relevant literature has been pinned down.

Keywords: Learning Styles, Learners' Needs, VARK Model, Experiential Learning, Mind Model Learning, Learning Style Inventory

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INTRODUCTION

Learning style is a term that is utilized to express the mode or fashion through which a learner attain, retain and utilize his imagination to process data to acquire a skill or knowledge which is deemed as learning. As it is based on the intrinsic differences of learners, so it is also known as individual style of learning. Learning style always conceived the strengths or positive aspects, discarding the weaker aspects to enable a learner to acquire new things by means of his or her opted mode of learning. Larkin and Budny (2005) deems learning style is a biologically and developmentally imposed set of personal characteristics that make the same teaching and learning methods effective for some and ineffective for others. Learning style aids the learners to be more proficient, productive and impactful individual by optimizing their individual calibre. In addition, learning style acts as the characteristic of cognitive, affective, social, and physiological behaviours that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment (MacKeracher, 2004, p. 71).

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The term learning style refers towards the notion that the learners process information in their instruction in diverse ways. Their capabilities, skills, mental levels, academic and social background vary from each other. So, it is but natural that they learn better and effectively when they are taught in the mode they prefer or which is akin to their needs as a learner. These notions have given birth to the concept of categorization of learners into diverse groups. In addition, there are some learners who learn well while seeing things, others learn best when they listen, others have more prone towards physical and interactive activities. So, all learners can not learn in a similar fashion or through a single style rather different learning styles are needed to address the various needs of different learners (Pashler et al., 2009). Since 1960s instruction or learning is being linked with the aptitude or preference of the learners which is termed as a learning style to maximize the effects of the learning and learners.

Lot of time, resources and funds are extended on learning style to make the learning in line with the preferred learning style (Scott, 2010). Pashler et al. (2009) even traced the history of learning style in the 1940s through the assessment of Myers–Briggs that gained popularity. Some researchers have linked the idea of learning style with the recent development that was projected by Gardner as multiple intelligences. Allcock and Hulme (2010) have highlighted the role of multiple intelligences in choosing the opted or preferred style of learners. They even pointed out the role of various type of intelligence while preparing lesson plan to address the various needs of the learners and to make the learning process more effective and impactful. This practice has an effective, appealing and persuading phenomenon to direct their attention towards learning more efficiently. Bearing in mind all these, the concept of learning style is gaining broader acceptance.

Research Questions

Current study is anticipated to explore the answers of subsequent study questions to assert the need of diverse learning styles and to satiate the assorted learning experiences of the learners.

- What is the persona of assorted learning styles to address the needs of the learners?
- Why diverse learning styles are imperative?
- How does diversity of learning models satiate the distinctive learners' needs to learn and excel?

FRAMEWORK OF THE STUDY

Origin and Development of Learning Style

In the recent decades, the concept of learning style gained prominence and influence due to its impacts with regard to addressing the needs of the learners. Learning style has positive and effective influence on learners and on instructional process. In the beginning, research with regard to learning style was focused on the relation between memory and oral and visual methods when Alfred Binet developed the first "intelligence test" that highlighted the role of individual differences in 1904. In 1907 a further step was taken by Dr Maria Montessori when she devised the Montessori Method which emphasized the role of materials in enhancing the learning outcomes. She believed that learners demonstrate well through their actions rather than answering questions to multiple sheets. Then there was a decline for more than a half century with regard to development of style. The decline was due to increasing role of IQ in learning for academic achievement.

It was in 1956, when Benjamin Bloom developed Bloom's Taxonomy, highlighting the differences in learning styles. In 1962, Myers-Briggs and Katherine Briggs stepped forward learning style through "Myers-Briggs Type Indicator (MBTI)". Until now onward, there are many learning styles models have been projected indicating the role of learning style. In 1984, David Kolb proposed a learning style model

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in which he linked learning styles with cognitive skills. The history of modern concept of learning style can be traced through the works of Jean Piaget (1968) and Carl Jung (1976) who are renowned psychologists of the 20th century. Such learning styles have an impactful persona as far as the embellishment of the students' academic accomplishments is concerned. As far as the development of learning style is concerned the role of VARK model that was devised by Neil D. Fleming in 1992 played an essential role as it addresses the needs of multiple types of learners i.e. visual, auditory, read write and kinesthetic.

WHY LEARNING STYLE?

It is a conventional practice to teach a whole class in a similar way or method. Although, students belong to same grade and age group in a class, but there are individual differences that are there among the students of a same class so, it is not possible to achieve optimal results with the same mode of teaching. This very important issue has given the concept of learning style that is being chosen as per the needs and requirements of the students. In this way, learning styles are effective and impactful way in order to engage the students belonging to diverse nature and capabilities to address their individual, social, personal and academic needs (Gadzella & Baloglu, 2002). In addition, learning style assists in controlling the entire process of instruction in a classroom to optimize learning at one hand and engage all the students in a way they are more interested or comfortable.

Felder and Silverman (1988) have put the idea that all learners can not be instructed through similar mode of teaching because some students learn best through visual, others have good taste of audio learning, some learn best through doing things in practical while some learn well through mere reading, writing and listening. There are other students which learn through interaction and group activities, while others have sharp memory and active logical and analytical skills. So, in order to meet the needs of each of the students, there is a dare needs to inculcate diverse learning styles in instruction on the part of teachers. Keeping this notion in view, Kennedy (2002) have summed up the role of teacher with regard to learning or teaching style as to enable students to satiate their needs To cultivate oneself as an intelligent, creative, independent, autonomous being.

It is imperative to highlight that each of the students learn best when instruction or learning process is according to his liking, needs and fulfilling his academic needs by focusing on the strengths he or she possessed as a learner. This can be aptly done through bearing in mind the differences each learner has from others, as each student has different potential. Heffler (2001) has highlighted the role of learning styles and learning as Learning is a process and production at the same time; it is a process because it is related to adaptation, it concentrates on the future, affects the students' social and cognitive skills, and it is a production because it affects the learner's behaviour during the process of learning. While in the view of Cano-Garcia and Hughes (2000) learning is synonym to thinking that is why styles are being consumed in order to keep the individual differences as well as the needs of the learners being involved in mind.

Cassidy (2004) is of the notion that learning process has an indispensable relation with the style of learning, as learners always prefer their own methods of learning in which they feel themselves comfortable. Learning styles have deep link with the efficacy of the learners, their learning output and in attaining the overall learning outcomes of an instructional process. Learning style is also termed as individual self preference to achieve the learning objectives in a befitting manner in addition to cognitive and personal development of the learners. Baldwin and Sabry (2003) have pointed out the

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significance of learning styles, as to them students are different from each so are the learning styles. Some students need more assistance, while others have more motivation to learn as compare to average students. They have more conceptual clarity than those learners who need extra help, so different learning styles are needed to address the students' needs.

Felder and Brent (2005) have highlighted the needs and essentiality of learning styles as …some students are comfortable with theories and abstractions; others feel much more at home with facts and observable phenomena; some prefer active learning and others learn toward introspection; some prefer visual presentation of information and others prefer verbal explanations. One learning style is neither preferred nor inferior to another, but is simply different, with different characteristic strengths and weaknesses (P. 2). Heffler (2001) has pinpointed that the way learners learn is determined by the learning style that suits his or her learning preferences, as learners learn best when they are taught through their opted learning style or mode of instruction. Style of learning is helpful for the learners to achieve their optimal learning outcomes. Keeping in view the above cited resources, it is concluded that learning styles are imperative tool to achieve better, impactful and required learning, cognitive and personal objectives other than learning outcomes.

HOW DIFFERENT LEARNING STYLES ADDRESS LEARNERS' NEEDS?

As cited time and again that all learners have distinctive way of processing information, having perceptions and in terms of mode of learning. As all learners have diverse backgrounds, contexts, social class and academic history, so it is imperative to devise different learning styles for different types of learners. For that purpose, there are different learning styles or learning models that have been proposed by different theorists, academicians and researchers which are meant to address or fulfil the needs of learners with regard to their preferred or choice of learning. Here are some illustrious learning models in terms of styles and how they address the needs of different types of learners has been discussed in the subsequent section of the essay under view.

VARK Model of Learning

It is one of the most illustrious models of learning that addresses the needs of learners which belong to visual, auditory, read/write and kinesthetic types of learners. It was proposed by Neil D. Fleming in 1992. Not only that, but it is regarded as a significant attempt to address the needs of various types of learners on one hand and to point out its effectiveness and simplicity on the other hand. One of the distinctive features of this model is that it engrosses almost every type of learners to address their academic needs. Fleming (2011) himself has talked about learning style and his own model to pinpoint its relevance as an individual's characteristics and preferred ways of gathering, organizing, and thinking about information. VARK is in the category of instructional preference because it deals with perceptual modes. Miller (2001) deemed VARK as something which categories the learners in terms of their sensory likeness.

Byrnes (2010) is of the view about this model of learning by deeming that the VAK model can be utilized to assist in incorporating different learning techniques into classroom instruction and activities (p. 4).VARK model of learning is footed on the ground that leads to productive and dynamic learning. This model or style of learning is in accordance with the needs, interests and preferences of different types of learners who hold the majority of learners. This dynamic of the model has been further indicated by Fleming (2011) VARK is in the category of instructional preference because it deals with perceptual modes (p.1). VARK model is meant to engross the needs of four types of learners to excel

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in their academic needs i.e. visual learners, auditory learners, read write learners and kinesthetic learners. These fours types of learners receive as well as process information termed as learning under the umbrella of the learning model VARK that indicates four learning styles.

Visual learners are those learners who learn when they see things and discover through the act of watching or seeing. They are usually keen to observe, and they prefer to watch films, snaps, pictures, paintings and drawing to enhance their learning. Their sense of sight is more dominating and active in the process of learning. They are more prone towards pictographic illustration of things to learn (Stash, 2007). Mayzlerand McGann (2010) is of the view that visual learners learn best when they witness something and their brain extracts the information and stores sequences of events. Piping (2005) deemed visuals learners as imaginative, creative and inventive. Auditory learners learn best when they hear something and jump at the concepts once they are exposed to hearing. They learn through audio lectures. They usually have sharp memory and can retain the information in the form of melody, a song or a poem (Drago& Wagner, 2004). But such learners are the ones who are easily disturbed or interrupted by a sound or noise and their attention is diverted (Murphy et al., 2004).

Kinesthetic learners are the ones who learn through touching, doing or moving that involves physical or bodily behaviour. Such learners have extraordinary balance as well as eye body coordination, which assist them in being active and agile. Such learners can't be idle or lazy; rather they are involved in physical activities. Even they express their feelings and emotions by means of bodily movement such as dance and acrobatic tricks. Bodily kinesthetic have the ability to understand and solve problems in the world through body or parts of the body (Armstrong, 2004). Activities such as miming, composing, drafting, acting, dancing and performing help such learners to be more motivated and persuaded towards their learning. Kinesthetic learners are quick, sharp and possess physical energy which assists them in becoming successful in academic as well as extracurricular activities such as athletic and games which keep their body and mind fit for learning.

Read write learners are those whose learning style centres on the repetition of written words. Such learners learn and process information when there are notes around them in the form of written material. Texts, signs and written words play a pivot role in their learning style. Learners who are good at reading and writing, they opt for this style of learning. They are quick and best in making notes, arranging study materials and imitating classroom lectures. Such learners also perform well in written exams (Murphy et al., 2004). This is the reason why such learners are termed as the ones these students are note takers. Keeping above-mentioned features of the VARK model of learning, it can be devised that it assists a great deal in addressing the academic needs of four types of learners. Visual learners, auditory learners, kinesthetic learners and read write learners and they are the beneficiaries of this model of learning in terms of devising their needs (Hussain, 2017).

David Kolb's Experiential Learning

In his model of learning, David Kolb proposed that learners learn in a continuous process and during that process they developed specific strengths. These strengths acquired during continuous process of learning later give preference in terms of the learning styles of the learners. David Kolb described these strengths as four learning styles, i.e. the accommodating learners that learn best through real experience or hand on practice and exposure to actual experience. The converging are the ones who are good while dealing with abstract ideas and things, but they also like to end with concrete things or ideas. Such learners are prone towards theories, but they want to testify through actual practice. The divergers learners are the ones who utilize practical as well as personal experience to formulate theories that could have wider range of applicability in real life.

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Assimilators are those learners who are at ease in dealing the abstract ideas and are interested in formulating their conceptual comprehension through development of new theories in due course of time. In all and all, it can be summed that David Kolb's experiential learning is a framework that focuses on the learning done through experience (Shiralkar, 2016). But it is significant to note that all experiences can not be meaningful and relevant to learners, so only meaningful and relevant experiences are linked with the mind set of the learners in terms of their category of learner for the enhancement of learning experiences (Gross & Rutland, 2017). While explaining diverse notion of experiential learning especially in ELT, David Kolb asserted the role of experience to construct knowledge in these words the process whereby knowledge is created through the transformation of experience (Kolb & Kolb, 2012).

To Kolb knowledge can be acquired through assimilating lessons while feelings are stimulated through experience. In order words, this process or cycle of acquiring knowledge by means of experience can be put as action/reflection and experience/abstraction (Kolb & Kolb, 2012). In a broader sense, David Kolb's model devised four stages of learning concrete experience, reflective observation, abstract conceptual framework and active experiment. In the first stage, learners are engaged in an experience to have learning, in the second stage the learners review from their own experience, in the third stage the learners utilize their acquired knowledge in order to testify and justify about their experience and the four stage is about how learners make use of their acquired experience to settle down future implications. Learning is also the ability to express and convey what has been acquired through experience (Li & Armstrong, 2015).

In addition, David Kolb was of the view that it is imperative to assess what type of the learner one is or dealing with in order to play to your strengths. So, teachers and learners both can benefit from this model of learning as it address the needs of various types of learners, those who believe in learning through practical experience, abstracts concept or development of new theories. In this regard, the David Kolb model can be taken as a process through which a learner constructs knowledge, skills, and value from direct experiences (Jacobs, 1999, p.51). As far the practical application of experiential learning is concerned it is based on classroom confinement approach in which students are asked to solve their problems, so it can be termed as a problem-solving approach or style of learning. The first three stages can be best practised in the classroom, while the fourth can be utilized in assignments and task based activities (Georgiou et al., 2008).

Honey and Mumford Model

Peter Honey and Alan Mumford developed yet another type of learning model which was meant to highlight how learning can be utilized in practical form, especially in the work place. As a result, they have formulated four learning styles to address the needs of the learners. They called their learning styles as activist, pragmatist, reflector and theorist. Their theory or model is widely in practice as it is utilized as an instrument to detect the preferred or opted style of the learning on the part of learners. It is equally good to probe the management practices by going into the general tendencies of the people other than the learning (Coffield et al., 2004). Honey and Mumford have developed a learning style questionnaire which is generally known as Learning Style Questionnaire (LSQ) which is deemed to the alternate of Kolb's Learning Style Inventory (Duff & Duffy, 2002).

Honey and Mumford LSQ has been consumed widely in management education and training in order to assess and measure how learners learn, which mode or style do they prefer and to estimate their level of learning in terms of their learning achievement. According to their LSQ, there are four types of learners whose needs have been addressed. Activist learners who are extravert, impulsive, seeker and sensational types of learners and who are always motivated to direct their attention towards learning as

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their core. Two, there are reflectors who are introvert, methodological and cautious who are in habit of meditation rather than having involvement actively like the first type of learners. Three, theorists learners are the learners who are objective, rational and intellectual type of learners who stand out others in their act of learning. Four, pragmatist type of learners are those who are realist, practical and expedient. They take the matters in actual and realist context (Furnham et al., 1999).

According to Honey and Mumford Model, activist learners are those learners who are always in search of new experiences. They tend to make their decisions intrinsically based on their experience and don't like to follow the set pattern of structured procedures. Theorists are the ones who believe in logic, idea or theory, and they are not very much interested in activating their energy towards exploration and activity. They discard the idea of emotions and intrinsic involvement. Pragmatist learners are those who are tended towards actual, real and practical aspects in real context. Their approach is down towards earth and is in actual context. In their learning process, they avoid reflection and any sort of deep comprehension and understanding. Reflector learners are keen observer who observe keenly and interested in describing their observation. In addition, they try to guess and predict the outcomes and are also able to understand the crux (Kappe et al., 2009).

In all and all, Honey and Mumford in their model developed in 1986 identified four learning styles or the distinctive modes the learners prefer or opt while involving in the process of learning. They added that the majority of the learners tend to only one or the two of these learning styles, and they stick to those and their learning activities centre on those styles or modes of learning. For that, they categorized learners into activists who learn by doing, and they believe in trying anything once (Honey & Mumford, 1986). They are so active in their action that they act first and later consider its consequences. Reflectors learn through observing and reflectivity, keeping all the dynamic and possible implications of an action in view. Theorists believe in having a theory behind every action, unlike activists. They are in need of model, facts and concept in order to analyse, synthesize and to discard subjective judgement. Pragmatist are keen to try out new things, they are impatient, open and down to earth learners (Maric et al., 2015).

Gregorc's Mind Model of Learning

Professor Anthony F. Gregorc is best known for his research about human consciousness and self awareness. He is also well known for his work that he did regarding learning styles. In continuous to this concept he developed a model of learning in 1984 which is known as mind model of learning. In this model, he has explained a workable plan to illustrate how mind work to learn. As a result of this model, he highlighted the four types of learning styles to explain how learners or an individual think, process mind and learn. Drysdale et al. (2001) put it like this way, a self report tool used to measure thinking and learning processes. It is designed to help individuals understand and recognize the channels by which they receive and process information efficiently (p. 274). This model has also categorized the learners in terms of how they perceive and process information. Gregorc has broken down the process of perceiving information into two subsets, i.e. abstract and concrete.

To perceive something in concrete mode means that the learners has registered something in his or her mind utilizing sensory abilities. That is why such learners seek information through sensing, feeling, doing or experiencing involving kinesthetic movements. While learners who are prone towards abstract perceiving involve imagination and visualization in order to process information. It usually involves which is not obvious or physical as in concrete experience. Such learners believe in things that not necessarily before them, that is why such learners like theories such as deductive reasoning. As they are unable to see things physically, so they tend to observe, analyse and make conclusion based on speculation. According to Gregorc human brain can perceive information in both ways as abstract or

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concrete experience, but there is a dare need to have particular strengths in order to process information which is called ordering. Ordering or processing of information has also been categorized into two subsets, i.e. sequential and random.

Sequential ordering is linear that involves sequence like step 1, 2, 3 and so on. In this ordering, logic is involved in sorting things out. Learners who are followers of sequential order are good at written exams and like to work on a project from beginning till end in a sequence. On the other hand, random ordering learners like to sort the relevant information in order to process them. Such learners are result oriented instead of following a sequence to start till end. They can skip, start from anywhere but are focused on the outcome. But in case of written exam or test, such learners may not be able to accomplish as well as sequential learners do. Gregorc (1979) himself summed up the crux of his model in these words Everyone has all of these qualities, but most people also have innate tendencies that 'tip' toward one aspect of a duality rather than the other; i.e. we are more concrete than abstract or more sequential than random (p. 19).

Seidel and England (1997) concluded their study by indicating that Concrete Sequential and Dual Sequential learners tend to major in the Sciences.... dual Random learners tend to do major in the Humanities and Abstract Random learners generally choose majors in the Social Sciences or Humanities (p. 18-19). Drysdale et al. (2001) conducted a study on more than 4500 students and come up with the idea that learners who are followers of abstract sequential order performed well ahead of other type of learners in their first year of college education. However, learners belonging to computer science, economics and engineering perform best through concrete sequential. Learners who are students of drama, art and physical education have good grade in concrete random, which is indicative of the multidimensional responses and nonlinear thinking (p. 285).

SUMMARY AND CONCLUSION

To conclude, it is summed up that learning style is the mode or manner through which someone attains, acquires, retains and utilizes imagination to acquire information or expertise. Different learning styles are essential or imperative because all learners can not learn in the same fashion or method because they have different preferences with regard to how to learn. Therefore, different models have been explored to assert the fact that different learning styles are essential to address the diverse needs of learners. VARK model addresses the needs of visual, auditory, read write and kinesthetic learners. Experiential model of learning addresses the needs of accommodating, converging, divergers and assimilators learners. Honey and Mumford LSQ addresses the needs of activists, reflectors, theorists and pragmatists' learners. Mind Model addresses the needs of abstract and concrete perceivers.

VARK is regarded as a significant attempt to address the needs of various types of learners. It engrosses the needs of four types of learners' i.e. visual learners, auditory learners, read-write learners, and kinesthetic learners. Visual learners learn when they see things and discover through the act of watching, auditory learners learn best when they hear something, kinesthetic learners learn through touching, doing or moving that involves bodily behaviour and read write learners' learning style centres around the repetition of written words. David Kolb's model of experiential learning focuses on the learning done through experience. It is meant to address the needs of four types of learners. Accommodating learners learn best through real experience, converging are the ones who are good while dealing with abstract ideas, the divergers learners utilize practical experience to formulate theories and the assimilators are at ease in dealing the abstract ideas to formulate new theories. David Kolb's model

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devised four stages of learning i.e. concrete experience, reflective observation, abstract concept and active experiment.

Honey and Mumford LSQ addressed the needs of four types of learners. Activist learners are who are extravert, impulsive, seeker, and sensational types of learners. Two, reflectors are introverts, methodological, and cautious. Three, theorist learners, are objective, rational, and intellectual. Four, pragmatist learners are realist, practical, and expedient. Activist learners are always in search of new experiences. Theorists believe in logic, idea or theory. Pragmatist learners are tended towards actual, real and practical aspects. Reflector learners are keen observer. Gregorc's Mind Model highlighted the four types of learning styles to explain how learners think, process mind, and learn. It breaks down perceiving information into two subsets, i.e. abstract and concrete. Concrete mode learners register something in mind utilizing sensory abilities. Abstract perceiving involve imagination and visualization. Ordering or processing of information has also two subsets, i.e. sequential and random. Sequential ordering is linear that involves sequence, while random ordering learners like to sort the relevant information.

REFERENCES

Allcock, S. J.,& Hulme, J. A. (2010) Learning styles in the classroom: Educational benefit or planning exercise? Psychology Teaching Review. 16(2), 67–79.

Armstrong, A. M. (2004). Instructional Design in the Real World: A View from the Trenches. United States: Information Science Publishing.

Baldwin, L., & Sabry, K. (2003). Learning styles for interactive learning systems. Innovations in Education & Teaching International, 40 (4), 325-340.

Byrnes, S. (2010). Assimilative Domain Proficiency and Performance in Chemistry Coursework (Doctoral dissertation). Available from ProQuest Dissertation and Theses databases. (UMI No.3397866).

Cano-García, F., & Hughes, E. (2000). Learning and thinking styles: An analysis of their interrelationship and influence on academic achievement. Educational Psychology, 20(4), 413-430.

Cassidy, S. (2004). Learning styles: An overview of theories, models, and measures. Educational Psychology, 24(4), 419-444.

Coffield, F., Moseley, D., Hall, E., & Ecclestone, K. (2004). Learning styles and pedagogy in post-16 learning: A systematic and critical review. Retrieved November 10, 2014 from http:// /www.LSRC.ac.uk

Drago, W. A., & Wagner, R. J. (2004). VARK Preferred Learning Styles and Online Education. Management Research News, 27(7), 1-13.

Drysdale, M. T. B., Ross, J. L., & Schulz, R. A. (2001). Cognitive learning styles and academic performance in 19 first-year university courses: Successful students versus students at risk. Journal of Education for Students Placed at Risk, 6 (3), 271–289.

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Web: www.jomeri.org | Email: editor@jomeri.org
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Duff, A., & Duffy, T. (2002). Psychometric properties of Honey & Mumford's Learning Styles Questionnaire (LSQ). Personality and Individual Differences, 33, 147–163.

Felder, R. M. & Silverman, L. K. (1988). Learning and teaching styles in engineering education. Engineering Education, 78 (7), 674–681.

Felder, R. M., & Brent, R. (2005). Understanding student differences. Journal of Engineering Education, 94(1), 57-72.

Fleming, N. (2011). Teaching and Learning Styles: VARK Strategies. Christchurch: N.D. Fleming . p. 128

Furnham, A., Jackson, C. J., & Miller, T. (1999). Personality, learning style and work performance. Personality and Individual Differences, 27(6), 1113–1122.

Gadzella, B. M., Stephens, R., & Baloglu, M. (2002). Prediction of educational psychology course grades by age and learning style. College Student Journal, 36, 62-68.

Georgiou, I., Zahn, C., & Meira, B. J. (2008). A systemic framework for case-based classroom experiential learning. Systems Research and Behavioral Science, 25(6), 807–819. Doi:10.1002/sres.858

Gregorc, A. F. (1979). Learning/teaching styles: Their nature and effects. In J. Keefe (Ed.), Student learning styles: Diagnosing and prescribing programs. Reston, VA: National Association of Secondary School Principals, p. 19-26.

Gross, Z., & Rutland, S. D. (2017). Experiential learning and values education at a school youth camp: Maintaining Jewish culture and heritage. International Review of Education, 63(1), 29–49. Doi:10.1007/s11159-016-9609-y

Heffler, B. (2001). Individual learning style and the learning style inventory. Educational Studies, 27(3), 307-316.

Honey, P.,& Mumford, A. (1986a) The Manual of Learning Styles , Peter Honey Associates.

Hussain, I. (2017). Pedagogical implications of VARK model of learning. Journal of Literature, Languages and Linguistics, 38(2422-8435), 5.

Jacobs, J. (1999). Experiential education: The main dish, not just a side course. Boulder, Colorado: Association for Experiential Education.

Kappe, F. R., Boekholt, L., den Rooyen, C., & Van der Flier, H. (2009). A predictive validity study of the Learning Style Questionnaire (LSQ) using multiple, specific learning criteria. Learning and Individual Differences, 19, 464–467.

Kennedy, P. (2002). Learning cultures and learning styles: Myth-understandings about adult (Hong Kong) Chinese learners. International Journal of Lifelong Education, 21(5), 432-445.

Kolb, A. Y., & Kolb, D. A. (2012). Experiential learning theory. In N. M. Seel (Ed.), Encyclopaedia of the Sciences of Learning. Boston: Springer. P. 1215–1219

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Larkin, T. & Budny, D. (2005). Learning styles in the classroom: approaches to enhance student motivation and learning. Paper presented at ITHET6th Annual International Conference.

Li, M., & Armstrong, S. J. (2015). The relationship between Kolb's experiential learning styles and big five personality traits in international managers. Personality and Individual Differences, 86, 422–426. Doi:10.1016/ j.paid.2015.07.001

MacKeracher, D. (2004). Making Sense of Adult Learning, (2nd Ed.). Canada: University of Toronto Press Incorporated.

Maric, M., Penger, S., Todorovic, I., & Djurica, N. (2015). Differences in learning styles: a comparison of Slovenian Universities. Procedia-Social and Behavioral Sciences, 197, 175-183.

Mayzler, A., & McGann, A. (2010). Tutor in a book: better grades as easy as 1-2-3. Avon, MA: Adams Media.

Miller, P. (2001). Learning Styles: the Multimedia of the Mind. Research Report. Retrieved from ERIC database. (ED. ED451140).

Murphy, R. J., Gray, S. A., Straja, S. R., & Bogert, M. C. (2004). Student learning preferences and teaching implications. :Educational methodologies. Journal of Dental Education, 68 (8), 859-866.

Pashler, H., McDaniel, M. & Rohrer, D. (2009) Learning styles: Concepts and evidence. Psychological Science in the Public Interest. 9, 105–119.

Piping, S. (2005). Penerapanteori multiple intelligence dalampembelajaran. JurnalPendidikanPenabur, 4 (5).

Scott, C. (2010) The enduring appeal of learning styles. Australian Journal of Education. 54(1), 5–17.

Seidel, L. E., & England, E.M. (1997). Gregorc's cognitive styles: Preferences for instructional and assessment techniques in college students. Washington, DC: Annual Convention of the American Psychological Society. (ERIC Document Reproduction Service No. ED414785.)

Shiralkar, S. W. (2016). IT through experiential learning: Learn, deploy and adopt IT through gamification. Berkeley, CA: Apress.

Stash, N. (2007). Incorporating Cognitive/learning Styles in a General Purpose Adaptive Hypermedia system (Doctoral dissertation). Available from SIKS Dissertation. (Series No. 2007-1)