

MATCHING AND MISMATCHING OF LEARNING STYLES AND TEACHING STYLES: A CONCEPTUAL PERSPECTIVE

(Kusum Lata Patel and Seema Singh, Research scholar & Professor, Faculty of Education,
B.H.U., Kamachha, Varanasi-10, U.P., India)

Abstract

Learning, as the most important concept in education, demands urgent attention. Individuals have different learning styles and awareness of these are important for teachers for maximizing learning success. The ways in which an individual acquires, retains, and retrieves information are collectively termed as individual's learning style. Most teachers tend to teach in the way they were taught or in the way they preferred to learn. Matching learning and teaching styles improves learning, attitudes and motivation. Sometimes conflicts might arise because of a mismatch between the teacher's teaching style and learner's learning styles, which might have negative consequences both on the part of the learner and teacher. This paper briefly discusses the matching and mismatching of learning styles of the students and teaching styles of the teachers.

Key-words: *Learning Styles, Teaching Styles*

Introduction

Now a days learning has very important role in our life. Since people have different learning methods and also various information processing ways, their styles of learning vary from person to person. The best way of learning of every person is his/her learning style. Cognitive, affective, and physiological structures that affect individual's perception, relationship with others, and behavior in learning environment, determine his/her learning style.

We learn by seeing and hearing, reflecting and acting, reasoning logically and intuitively, analyzing and visualizing. Teaching methods also vary accordingly. Some instructors lecture, others demonstrate or lead students to self-directory; some focus on principles and others on applications; some emphasize memory and others understanding. Since student population have become more diverse, the ability to teach to the needs of different learners has become increasingly important. Although, within time, the instructor gains experience that is useful to determine the possible working teaching method according to the needs of the students. However, if the teaching style of the instructors doesn't match with the students' learning styles, the students may get bored and inattentive in class, do poorly on tests, and get discouraged about the courses, the curriculum, and themselves (Felder & Henriques, 1995). In any case, the students' learning styles should guide and help to build the independent teaching styles of the instructor.

In order to improve the academic performance of all students, teachers use various teaching-learning strategies. The appropriate and effective use of learning strategies can greatly improve student achievement. Students may choose inappropriate learning strategies or may approach learning with few strategies and use only these ineffective strategies while tackling a task, even when their methods repeatedly lead to failures. For this reason, Pressley & Harris (2006) suggested that educators can implement "strategies instruction," an useful approach to teaching learning strategies. Strategies instruction can be embedded in content-area classes; it can be a part of the teaching-learning process.

Personal behaviors and characteristics in the teaching-learning process indicate the way educators teach (Grasha, 1996) and show that various teaching styles exist. Teachers vary in how they manage their classes, how they interact with their students, and how they view their roles as educators. When classroom teachers show learners how to select and use appropriate strategies, they display their own preferred teaching styles. Thus, teaching styles affect not only instructional strategies adopted by teachers but also students' learning abilities. Instead of relying on their preferred teaching style, teachers should understand that one style of instruction may not meet the needs of all students. Students differ in the way they approach the learning process and deal with various learning activities (Callahan, Clark, & Kellough, 2002). One good way to have teachers consider individual learning differences and recognize the need to modify their own teaching style is to have them learn from the student's perspective.

Concept of Learning Styles

Every individual irrespective of their ability or disability show preference for different learning conditions. These are called learning style or learning preferences. An individual's learning style is the way learner concentrates on, processes, internalizes, and remembers new and difficult academic information or skills. Each individual learn in different ways and that each individual has unique style of learning. Various educationists have defined learning styles differently. Learning styles has been defined as individual differences in the way information is perceived, processed and communicated (Haar, Hall, Schoepp, & Smith, 2002). Learning styles are concerned with differences in the process of learning and the theory centers on the content and products of learning (Silver, Strong & Perini, 1997). They are not fixed throughout life, but develop as a person learns and grows. Learning styles are cognitive, affective, and psychological traits that are relatively stable indicators of how learners perceive, interact with and respond to the learning environment (Keefe & Ferrell, 1990).

The concept of "learning styles" has been explored in several ways by many authors, yet the most representative definitions refer to two essential aspects; Firstly, the learning styles represents an individual's preferred ways of responding (cognitively or behaviourally) to learning tasks which change depending on the environment or context (Peterson, et al., 2009), and Secondly, the learning styles refers to the idea that individuals differ in regard to what type of instruction is most effective for them (Pashler, et al., 2008). Starting from these two perspectives, it has been noticed that the learning styles represent a complex issue, both for students and teachers. From the students' perspective, the learning style indicates a general preference for learning and encompasses cognitive, affective, psychomotor, and physiological dimensions (Knowles, et al., 2005). On the other hand, taking into account the teachers' perspective, the fact that students have different leaning styles represents a constant challenge, because the optimal instruction presupposes diagnosing individuals' learning styles and tailoring instruction accordingly (Pashler et al., 2008).

David Kolb, a cognitive theorist proposed an experiential learning model of learning style which was built on the view that experiences had a significant role in learning process and the information was formed by changes in experiences. Experience has been defined as individual's objective and subjective interaction with his environment. Kolb believe that the ideas are not constant and non changing factors and they may be formed again for several times by experiences. Kolb (1984) opined that individual learning styles result from a combination of two adjacent mode preferences in the experiential learning cycle and as a whole four styles. Diverger learning style is characterized as the one in which the learner is concerned with divergent ideas and is considered an imaginative learner. Divergers have a strong imaginative ability, are good at seeing things from

different perspectives, are creative and work well with people. Assimilator style learners are less focused on people and more interested in abstract ideas. Assimilators have abilities to create theoretical models, prefer inductive reasoning, and would rather deal with abstract ideas. Converger style is the one in which the learner prefers to deal with technical tasks rather than social issues. Convergents have a strong practical orientation, are generally deductive in their thinking and tend to be unemotional. Accommodator style learners enjoy carrying out plans. Accommodators like doing things, are risk takers, are in here and now, and solve problems intuitively.

Reid (1987) identifies six learning styles i.e. Visual, Auditory, Kinesthetic, Tactile, Group, and Individual, commonly referred as Perceptual Learning Styles. Visual learners prefer seeing ideas in writing. Auditory learners prefer listening. Kinesthetic learners prefer active participation. Tactile learners prefer hands-on work, e.g: handling materials or taking notes. Group learners prefer studying with others. Individual learners prefer studying alone. Gregorc (1979) identifies four learning styles: Concrete-sequential learners prefer direct, hands-on experience, want to order and a logical sequence to the tasks and follow directions well. Abstract-sequential learners like working with ideas and symbols, they are logical and sequential in thinking, and like to focus on the task without distractions. Abstract-random learners focus attention on the people and the surrounding, prefer discussions and conversations that are wide ranging and want time to reflect on experiences. The Concrete-random learners are experimental and risk-takers like to explore unstructured problems and use trial and error to work out solutions.

Dunn and Dunn (1989) suggest that there are five learning style stimuli and several elements within each stimulus: Environmental (sound, light, temperature, and room design), Emotional (motivation, persistence, responsibility, and structure), Sociological (learning alone, in a pair, with peers, with a teacher), Physiological (perceptual, intake while learning, chronological energy pattern), and Psychological processing (global or analytic, hemisphericity and impulsive or reflective). Reynolds (1992) presents a conceptual model for categorizing learning style characteristics. Which includes physical environment needs, social environment preference, time of day, motivation and values, cognitive styles and perceptual preference? Fleming (2001) defines learning style as “an individual's characteristics and preferred ways of gathering, organizing, and thinking about information. VARK is a learning style preference proposed by Fleming which deals with perceptual modes of learning. VARK stands for Visual (V), Aural (A), Read/Write (R) and Kinesthetic (K).

Learning styles, refers to the composite of characteristic “cognitive, affective and physiological factors that serve as relatively stable indicators of how a learner perceives, interacts with and responds to his or her learning environment” (Keefe, 1987). Learning styles are general approaches used by students in order to learn a new subject or to cope with a new problem (Oxford, Ehrman, & Lavine, 1991). Learning style is an individual characteristic way of responding to certain variables in the instructional environment (Lay Cock, 1978). Knowing and understanding learning styles helps individuals learn more efficiently (Silver, Strong, & Perini, 1997). It also allows an individual to capitalize on their strengths and improve self-advocacy skills. Once an individual learning style has been identified using assessment tools, there is a greater appreciation, deeper insight, and a better understanding by professionals of the numerous ways individuals learn.

Teaching style

Teaching style refers to the manner in which a teacher manages instruction and the classroom environment. It focus on teachers and their distinct approach to teaching. Differences in teaching styles may also impact on areas such as classroom arrangements, the organization and assessment of

activities, teacher interactions with students and pedagogical approaches. Butler (1984) defined teaching style as a collection of distinctive behaviors which place "mediation demands" upon the mind qualities of both the learner and the teacher. Gregorc (1979) indicated that a teaching style consists of a teacher's personal behaviors and the media used to transmit data to or receive it from the learner. Teaching style refers to educators' behaviors as they teach in the classroom (Genc & Ogan-Bekiroglu, 2004). Gregorc (1985) defined teaching style as a set of attitudes and actions that mediate student learning formally or informally. Teaching styles shape and guide the teaching-learning process, the ways teachers perceive and organize the content to be taught, and influence how they interact with students and how they manage classroom tasks.

A teacher possesses various qualities for effective teaching such as personal and professional qualities. Educators' personal qualities are considered persistent. According to Conti (1989), the overall traits and qualities that a teacher displays in the classroom and that are consistent for various situations can be described as teaching style. Fischer and Fischer (1979) similarly defined teaching style and stated that the teaching style of an instructor might persist even when he or she uses several different teaching techniques and methods.

Most teachers tend to teach in the way they were taught or in the way they preferred to learn. Sometimes conflicts might arise because of a mismatch between the teacher's teaching style and learner's learning styles, which might have negative consequences both on the part of the learner and teacher. For this reason, as Stebbins (1995) asserts teachers should know the general learning style profiles of the whole class, which will enable them to organise and employ instructional materials accordingly. Dunn and Dunn (1979) claimed that teachers' teaching styles correspond to their learning styles. Based on their personal learning experiences, teachers tend to teach students how they themselves learn the best and introduce learning strategies that have benefited their own learning. The same learning strategies, however, may not work well for all of their students. Therefore, they indicated that teachers should adjust their preferred way of teaching to teach each student.

Felder and Henriques (1995) showed that matching teaching styles to learning styles can significantly enhance academic achievement, student attitudes, and student behavior at the primary and secondary school level, and specifically in foreign language instruction. This is not to say that the best thing one can do for one's students is to use their preferred modes of instruction exclusively. Students will inevitably be called upon to deal with problems and challenges that require the use of their least preferred modes, and should be given practice in the use of those modes on a regular basis. However, frustration, and burnout may occur when students are subjected over extended periods of time to teaching styles inconsistent with their learning style preferences. Therefore, effective matching between teaching styles and learning styles can be achieved when teachers are aware of their learners' needs, capacities, potentials and learning style preferences in meeting these needs.

Matching and Mismatching of Learning and Teaching Styles

Recognition of students' learning styles and selection of appropriate teaching strategies accordingly is very crucial for effective teaching. A variety of approaches have been taken in research on a link between students' learning styles on the one hand and teaching styles on the other. Ford and Chen (2001) explored the relationship between matching and mismatching of instructional presentation styles with students' cognitive styles, that is, the area of matching of student and teacher styles. The results suggest that the matched-conditions group had better performance than the mismatched-conditions group only for students.

Reid (1987) stated that mismatches between learning and teaching styles often occurred and this mismatch resulted in bad effects on students' learning and attitudes to English. Willing (1988) noted that matching learning and teaching styles improved learning, attitudes and motivation. Felder (1995) suggested a method for overcoming the mismatch thus a balanced teaching style was proposed and suggested teachers to try to accommodate all learning styles. Peacock (2001) noted that when there was a match between teacher style and learner style, students were likely to work harder and benefit much more from their EFL (English Foreign Languages) classes. Peacock (2001) also investigated EFL teachers' teaching styles and EFL learners' learning styles at a Hong Kong University. A mismatch was found between both and suggested that EFL teachers should teach in a balanced style in order to accommodate different learning styles.

Zeeb's (2004) indicated that aligning learning styles of students with teaching styles of instructors could lead to an improvement in academic performance. It was also examined how junior high school students learned and how their teachers taught and found that there was a disconnect between students' learning styles and their teachers' teaching styles. Zeeb (2004) used the information obtained from assessing learning and teaching styles to help teachers modify their teaching styles to accommodate varying learning preferences, which resulted in improving students' test scores.

Zhou (2011) explained that a learner's achievement in any class was determined by factors such as the native ability, and the level of congruence between the students' learning styles and the teachers' teaching styles. Matching had a positive impact on the students' outcome and satisfaction whereas mismatching had a negative impact on the students' outcome and this result too many problems in learning (Ford and Chen, 2001).

Dasari (2006) and Moallem (2007) suggest that learners whose learning styles match with the given teaching style tend to retain information longer, retain more positive attitudes toward the subject, and become greater academic achievers than those who experience mismatches. A mismatch condition leads to a grossly inferior performance here learners learn less and express less satisfaction with the effectiveness of the teacher (Jones 1998).

Conclusion

Overall findings have indicated that it is crucial for teachers to know the result of matching and mismatching of the teaching styles of teachers and learning styles of the students. Matching of both enhance academic achievement, better performance student attitude and behavior and motivation. A mismatch between teaching styles of the teacher and learning styles of the learners' results in bad effects on student's learning and attitudes therefore seems to have detrimental effects on attainment, and could either impede or even impair the learning process.

References

1. Butler, K.A. (1984). **Learning and teaching style: In theory and practice**. Maynard, MA: Gabriel Systems.
2. Callahan, J.F., Clark, L. H., & Kellough, R. D. (2002). **Teaching in the middle and secondary schools (7th ed.)**. Upper Saddle River, NJ: Merrill Prentice Hall.
3. Conti, G.J. (1989). Assessing teaching style in continuing education. In E. Hayes (Ed.). **Effective teaching styles**, San Francisco: Jossey-Bass. Pp. 3-16.
4. Dasari, P. (2006). **The Influence of Matching Teaching and Learning Styles on the Achievement in Science of Grade Six Learners**. M.Ed. Dissertation, Unpublished.

Bloemfontein: University of the Free State.

5. Dunn, R.S., & Dunn, K. J. (1979). Learning styles/teaching styles: Should they can they be matched? **Educational Leadership**, **36**(4), 238-244.
6. Felder, R. & Henriques, E.R. (1995). Learning and Teaching Styles in Foreign and Second Language Education. **Foreign Language Annals**, **28** (1), 21-31.
7. Fischer, B.B., & Fischer, L. (1979). Styles in teaching and learning. **Educational Leadership**, **36**(4), 245-254.
8. Fleming, N.D. (2001). Teaching and learning styles: VARK strategies. **Christchurch**, New Zealand: N.D. Fleming.
9. Ford, N., & Chen, S.Y. (2001). Matching/mismatching revisited: an empirical study of learning and teaching styles. **British Journal of Educational Technology**.
10. Genc, E., & Ogan-Bekiroglu, F. (2004). Patterns in teaching styles of science teachers in florida and factors influencing their preferences. Retrieved March 14, 2010, from <http://www.eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=ED490781>.
11. Grasha, A.F. (1996). **Teaching with style**. Pittsburgh, PA: Alliance Publishers.
12. Gregorc, A.F. (1979). Learning/teaching styles: Potent forces behind them. **Educational Leadership**, **36**(4), 234-236.
13. Gregorc, A.F., (1985). **Inside Styles: Beyond the Basics**. Massachusetts: Gabriel Systems, Inc. Maynard.
14. Haar, J., Hall, G., Schoepp, P., & Smith, D. (2002). How Teachers Teach to Students with Different Learning Styles. **Clearing House**, **75** (3).
15. Keefe, J. (1987). **Learning style theory and practice**. Reston, VA: NASSP.
16. Kolb, D.A. (1984). **Experiential Learning: Experience as the Source of Learning and Development**. New Jersey: Prentice-Hall, Inc.
17. Keefe, J.W., & Ferrell, B.G. (1990). Developing a Defensible Learning Style Paradigm. **Educational Leadership**, **48**(2), 57-60.
18. Knowles, M.S., Holton, E.F., III, Swanson, R. A. (2005). **The adult learner (6th ed.)**, Boston: Elsevier.
19. Kolb, D. (1984). **Experiential Learning; Experience as the Source of Learning and Development**. EnglewoodCliffs, NJ: Prentice-Hall, Inc.
20. Lay Cock, V.K. (1978). Assessing Learning Characteristics. In Robert M. Anderson et al. (Eds). **Individualizing Materials for Special Children in the Main Stream**, Baltimore University: Park Press.
21. Moallem, M. (2007). Accommodating individual differences in the online learning environments: A comparative study. **Journal of Research on Technology in Education**, **40**(2), 217-245.
22. Oxford, R.L., M. Ehrman, R. Z. Lavine. (1991). Style wars: teacher-student style conflicts in the language classroom. In Magnan, S.S. (Ed.), **Challenges in the 1990s for College Foreign Language Programs**, Boston, MA: Heinle & Heinle.

23. Peacock, M. (2001). Match or mismatch? Learning styles and Teaching styles in EFL. **International Journal of Applied Linguistics**, 11(1), 1-20.
24. Pashler, H., McDaniel, Rohrer, D. & Bjork, R. (2009). Learning styles: Concepts and evidence. **Psychological Science in the Public Interest (Wiley-Blackwell)**, 9(3), 105-119. doi:10.1111/j.1539-6053.2009.01038.x.
25. Peterson, E.R., Rayner, S.G., Armstrong, S.J. (2009). Researching the psychology of cognitivestyle and learning style: Is there really a future?, **Learning and Individual Differences**, 19, 518-523.
26. Pressley, M., & Harris, K.R. (2006). Cognitive strategies instruction: From basic research to classroom instruction. In P. A. Alexander & P. H. Winne (Eds.), **Handbook of educational psychology (2nd ed.)**. Mahwah, NJ: Lawrence Erlbaum Associates. pp. 265-286).
27. Reid, J.M. (1987). The learning style preferences of ESL Students. **TESOL Quarterly**, 21(1), 87-111.
28. Reynolds, J. (1992). Learning and cognitive styles: Confusion Over definitions and terminology. **Virginia Counselors Journal**, 19(1), 22-26.
29. Silver, H.F., Strong, R.W. & Perini, M.J. (1997). Integrating Learning Styles and Multiple Intelligences. *Educational Leadership*, 55 (1). On-line Available: <http://www.ascd.org/author/el/97/sept/silver.html>
30. Stebbins, C. (1995). Culture-specific perceptual – learning – style preferences of postsecondary students of English as a second language. In J. M. Reid (Ed.) **Learning styles in the ESL/EFL classroom**. New York: Heinle and Heinle Publishers, pp. 108-117.
31. Visser, S., McChlery, S., & Vreken, N. (2006). Teaching style versus learning styles in the accounting sciences in the United Kingdom and South Africa: A comparative analysis. **Meditary Accountancy Research**, 14(2), 97-112.
32. Willing, K. (1988). **Learning styles in adult migrant education**. Adelaide: National Curriculum Resource Center.
33. Zeeb, M.S. (n.d.). Improving student success through matching learning and teaching styles. Retrieved May 24, 2010, from [http://www.creativelearningcentre.com/downloads/lsia/Zeeb%20LS2 research%20pilot%20edited%20US.pdf](http://www.creativelearningcentre.com/downloads/lsia/Zeeb%20LS2%20research%20pilot%20edited%20US.pdf).
34. Zhou, M. (2011). Learning styles and teaching styles in college English teaching. **International Education Studies**, 4(1), 73-77.