STUDENT LEARNING STYLES - AN ISSUE IN THE TEACHING AND LEARNING PROCESS

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ABSTRACT

There has been different research on learning styles. This paper reviews the literature relating to learning styles as one of the important issues in the teaching and learning process, studying some models of learning styles as a basic step in student learning styles investigation. Some implications of knowledge of learning styles in teaching and learning process are also discussed.

Keywords: Learning style, teaching style.

Educators generally agree that students have different learning styles or strategies and use different methods and brain channels to learn (Kömür, 2011). Recently, learning and teaching styles interactions in classroom settings have received considerable attention among educators. To contribute to the existing knowledge of educational issues, this paper reviews the literature relating to learning styles as one of the important issues in the teaching and learning process. In the following, definitions of learning styles are presented, followed by a classification of different types of learning styles. Implications of learning styles in teaching are also discussed.

Building teaching on the knowledge of learning

Teaching is only effective when learning occurs: the dynamics of teaching and learning are interactive and interwoven. Different theorists and researchers argue for different definitions of teaching. Facilitating student learning is the primary purpose of teaching (Hough & Duncan, 1970). More specifically, Jones et al (1987) suggest that helping learners to process information and to study independently and, more importantly, helping them to learn "how to learn", are the main goals of the teaching process. In the same vein, Thyne (1966) agrees that among different roles the teacher fills, such as examiner, vocational adviser, disciplinarian etc, what the teacher has first to be concerned with is to promote learning. Brown (1994) believes that teachers can have more opportunities to be successful in their profession if they know about the variables that are spun together to affect how and why people learn or fail to learn a second language; he suggests that an understanding of learning, therefore, can determine the teachers' philosophy of education, teaching styles, approach, methods and classroom techniques and it also assists teachers to develop effective teaching strategies. In summary, teaching cannot be defined separately apart from learning, and the recent focus in language learning has shifted to the learners' roles in the learning process.

1. Defining learning styles

Recent research has shown a strong interest in learners themselves, and learning styles have been extensively discussed with the belief that they positively or negatively affect the learners' ways of perceiving and processing information

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and especially the outcome of the teaching and learning process.

Defining learning styles:

There have been numerous theories and research studies on learning styles and they are ongoing. Learning styles have been defined as:

- Certain specified patterns of behavior according to which the individual approaches learning experience (Campbell et al., 1996);

- All the preferences of a learner in a learning process (Woolfork, 1998; Erden and Altun, 2006);

- The concentration and attention of any learner to process at the beginning of reviewing new material, and to ways of remembering the difficult and new information (Dunn, 1990);

- And the process by which the individual acquires, retains and retrieves new information or new skills (Kolb,1984; Reid, 1995, 1998; Felder, 1995).

As seen in the above definitions, learning styles can be viewed as the preferences chosen by individuals in perceiving and processing information and skills. Learning styles relate to individual characteristics and also to stability of learning behaviours. These indicate that human styles of perceiving and processing information are internal and do not easily change as a result of environmental factors. This means that even though teachers may present the same content for a whole group of learners, individuals still perceive information differently as a result of their personal learning styles. It also means that students learn somewhat independently from the ways the teachers present the subject. Therefore, knowledge about learning styles can provide teachers with options in the classroom that can enhance

students' learning (Burden, & Byrd, 2009) and thus increases their understanding of mental processes, and teachers can create and provide appropriate learning paths in terms of syllabus design, choice of materials and alternative assessments of proficiency (Tyacke, 1998). The definition proposed by Dixon & Woolhouse (1996) combines the common characteristics shared by the above definitions. It states that a learning style is considered as:

"A mode or series of behavior and attitudes that are combined together to form a characteristic model and manner that serves to facilitate and enable learning to take place for a person in a given situation" (p.17).

These definitions of learning style tend to vary and may cause confusion due to the different aspects of the nature of learning that researchers and theorists try to refer to. More clearly, Claxton and Murrell (1987), adapted from Curry (1983), use an onion metaphor to figure out "layers" of learning styles:

- The deepest and most stable level is the learners' personality.

- The next layer is information processing.

- The third layer is social interaction characteristics.

- The least stable and most susceptible to change is instructional preference.

Witkin's definition (1976), which classifies two learning types as field dependence and field independence relates to the core of the onion - the personality. Knowledge about variations of learning styles helps instructors in deciding the most appropriate ways to teach so that each student has the optimal opportunities to learn, because although teaching takes place with a class as a whole, learning must occur within each individual.

Following is a discussion of some views on learning styles that are popular and most related to the types of learners found in language classrooms in terms of personality and processing information as well as in terms of instructional preferences.

2. Classifications of learning styles

Researchers have classified learning styles according to different aspects and categories relating to: type of information; the modality through which information is most effectively received; how one progresses to understanding; and the kind of organization of information with which one finds oneself most comfortable - as suggested by Felder & Henriques (1995). Some dimensions of learning styles closely related to the level of how learners receive and process information most effectively will be discussed.

2.1. Learning styles relating to environment: Field dependence and field independence

Witkin (1976) classifies learners on the basis of the relationship between personal characteristics and environment. Learners who tend to rely upon the external environment are called **field dependents** (later, in order to sidestep the negative connotations of "field dependence", the term "field sensitive" is used). Those who tend to work on the environment are defined as relatively more **field independent**. Witkin forms the idea that learning styles might have effects on people's choice of career and on teachers' methods of teaching. Field dependent teachers prefer discussion methods of teaching and employ democratic procedures in the classroom, while the more field independent teachers prefer the lecture method and tend to be more direct in attempting to influence students.

2.2. Tackling problems: holist, serialist or versatile?

Pask (1976) presents a theory of learning styles which deals with information processing. He argues that the ways people think and tackle problems are different from one another. Some prefer comprehension learning, which involves building descriptions of what is known, and this type of learner is described as a **"comprehension learner".** Others tend to experience operational learning, which involves mastering procedural details, and these are described as **"operation learners".** Besides the above types of learners, there are other students who are readily able to adapt their learning strategy and use either comprehension learning or operation learning as appropriate to the requirements of the particular task. Pask describes these students as having a **"versatile**" style of learning. Referring to these learning style categories, Pask argues that the holists (i.e. comprehension learners) tend to build up the picture of the whole task, make more elaborate hypotheses, try to go further and link the new information with other topics, and in extreme cases, make use of their personal experience. The serialists (i.e. operation learners) focus more on details and processes, prefer step-by-step learning, concentrate on simple hypotheses, but neglect the broader perspective and the links with other topics. These learners are unlikely to make much use of personal experience in learning academic topics. Those who have versatile learning styles can use holist or serialist strategies as appropriate and in an effective sequence. However, the students' learning strategies may vary from task to task and they are influenced by their underlying, and relatively stable, learning styles. This type of classification relates to personal ways of processing information, i.e. learners may view and

process information differently from one another and the characteristics of their learning styles are somewhat personal, stable and internal.

2.3. Working styles in groups: independent, dependent, collaborative, competitive, participant, or avoidant?

Other research has studied students' classroom behaviour (Grasha, 1972; Reichmann and Grasha, 1974, cited in Claxton and Murell, 1987) and identifies the following types of learners in class. They are:

- Independent students, who prefer working on their own, and can decide what needs to be learned.

- Dependent students, who seek authority and support from the teacher.

- Collaborative students, who like to share ideas with others. These students enjoy working in groups and learn through interaction.

- Competitive students, who try to do better than others, try to compete with others to win rewards.

- Participant students, who like to attend the classroom and learn the content of the course. They participate with others when told to do so.

- Avoidant students, who do not work in class actively and do not like to study the content of the course.

Reichmann and Grasha suggest that the different types of students prefer different classroom activities. Independent students work well in a student-centred classroom with opportunities giving them the chance to think. Dependent learners appreciate a teacher-centred classroom. Collaborative students like to listen to lectures and work in group discussion. Avoidants feel difficulty in working in the classroom, and try to escape from the classroom activities; while participant

learners like lectures with discussion and enjoy listening to the teacher analysing and synthesising material. Competitive learners find teacher-centred instruction more beneficial. A research study conducted by Andrews (1981) confirms the reliability of this theory. Freshmen students in an introductory course, the subjects of the research, were randomly assigned to two types of instruction: instruction-centred and peer-centred. The results reveal that collaboratively-oriented learners found the peer-centred method most beneficial, while competitive students felt that they learned better with an instruction-centred pattern. Normally teachers can easily find these types of learners in their class through observation, and this can be the basic step for instruction preparation which directs the teaching variously to meet the students' needs and expectations.

2.4. Types of learners basing on experience

Kolb' model states an emphasis on the importance of experience to explain differences in learning (Kolb, 1984). This model puts learning styles into four types:

The divergers combine concrete experience and reflective observation. They ask why this is important to know and prefer explanations of how course material relates to their experience, interests, and future careers.

The assimilators combine reflective observation and abstract conceptualization; The learners of this type want to know what the concept is and tend to respond to information presented in an organized, logical fashion and benefit if they have time for reflection.

The convergers combine abstract conceptualization and active experimentation; These learnersl ask how this concept is applied. They prefer defined tasks and like to learn by trial-and-error.

The accommodators combine concrete experience and active experimentation. The accommodators wonder what the possibilities of this concept are. Learners of this type like applying course material in new situations to solve real problems.

The relevant body of literature has emphasised various learning styles relating to how learners study within a particular environment, and the ways they process information as well as the ways they themselves perform in the learning setting. Clearly, learners differ in styles of learning. What techniques, teaching methodology or styles can work best to meet learners' style preferences? The styles discussed above describe learners in general. An investigation specifically in the field of language teaching and learning, focussing on language learners, is needed for language teachers' consideration.

2.5. Types of language learners

Looking more closely at the relationship between the language classroom and learning preferences, Willing (1988) studied 517 adult learners studying English as a second language, using questionnaires which learners completed in the course of an interview. One important point of his findings was that learners could be typed as following:

Type 1:
"Concrete" learners tend to like games, pictures, films, video, using cassettes, talking in pairs and practising English outside class.

Type 2:
" Analytical" learners tend to like to study grammar, English books and reading newspapers; they like to study alone, finding their own mistakes and working on problems set by teachers.

Type 3:
"C o m m u n i c a t i v e" learners like to learn by watching, and listening to native speakers, talking to friends in English and watching television in English, using English out of class in shops, trains, etc, learning new words by hearing them and learning through conversations.

Type 4:
"Authority-oriented" learners prefer the teacher to explain everything, like to have their own textbook, to write everything in a notebook, to study grammar, to learn by reading, and learn new words by seeing them.

His suggestions for language teachers have to be considered; learners' types must be taken into consideration as the basis for classroom activities as well as for teaching. Obviously, language learners are different from one another in their preferred ways of learning a language, and this challenges the role of the teacher and his presentation of the subject. Nunan (1991) suggests that if the class consists of learners with a range of strategy preferences, then the teacher needs to provide a range of learning options and activities in class. This requires activity as well as creativity in the teaching process.

As reviewed above, learners can be typed into different groups according

to personal characteristics and to their ways of perceiving and processing information. Learning about students' learning styles can help instructors in finding appropriate ways to present their subjects so that their students can learn best. They serve as a basic theory for developing teaching method and also as explanation for teachers of the existence of different styles.

3. Teaching styles on the basis of learning styles

These categories used to classify teaching styles are very specific. McCarthy (1997) presents a less complex model developed on the basis of Kolb's (1984) learning style model to distinguish four types of teachers. The table below presents a summary of relevant characteristics of both learning and teaching styles.

Table: Learning and teaching styles according to kolb's and mccarthy's theories

KOLB'S LEARNING STYLE THEORY		McCARTHY'S LEARNING AND TEACHING STYLES THEORY		
Types	**Characteristics of learning style**	**Characteristics of learners**	**Dominant Method**	**Characteristics of teachers**
1 - divergent style	- emphasis on concrete experience and reflective observation	**Imaginative learners** - integrate experience - with the self - believe in their own experience - value insight thinking	- discussion - simulation	**Teacher type 1** - facilitate personal growth - help people become more self-aware - encourage auth enticity in their students
2 - assimilation style	- abstract conceptualisation - reflective observation - create theoretical models - more concern with ideas and abstract concepts	**analytic learners** - perceive information abstractly and process it reflectively - form theories and concepts - learn by thinking through ideas - enjoy traditional classroom	- informational - traditional teaching	**Teacher type 2** - transmit knowledge - believe that curriculum should further understanding of significant information and should be presented systemically - encourage outstanding students - like facts and details - seek to imbue a love of knowledge - dominant attitude tends to discourage creativity

| 3 - convergent style | - abilities of abstract conceptualisation and active experimentation
- problem solving, decision making and the practical application of ideas | **common sense learners**
- perceive information abstractly and process it actively
- integrate theories and practice
- learn by testing theories and applying common sense
- value strategic thinking
- need to know how things work, and edit reality | - Environment for students to try things out
- Teacher's role as coach providing facilitation | **Teacher type 3**
- are interested in productivity and competence
- teach students the skills to live independently
- see knowledge as enabling students to be capable of making their own way
- encourage practical application
- tend to be inflexible and self-contained and lack team-work skills |
| 4 - accommo - dative style | - concrete experience and active experimentation
- learning from "hands-on" experience
- getting things done, taking risks, assuming leadership | **Dynamic learners**
- perceive information concretely and process it actively
- integrate experience and application
- learn by trial and error
- believe in self-discovery
- are adaptable
- enrich reality | -teacher as evaluator-remediator | **Teacher type 4**
- interested in enabling student self-discovery
- try to help people act on their own visions
- curriculum should be geared to learner's interests
- encourage experimental learning
- like variety in instructional methods
- seek to energise their students
- tend to rashness and manipulation |

Promoting learning requires a knowledge of learning from teachers. Understanding how people acquire or learn as well as their attitudes towards the nature of the target language could certainly have a number of consequences in helping teachers to modify and adapt their teaching in particular contexts with given groups of learners.

4. Implications for learning and teaching

Researchers have emphasized the important roles of student learning style research (Claxton and Murrell, 1987; Dunn and Griggs, 1988) in student learning improvement stating that learning styles are individually stable and not readily subject to change, teachers therefore must vary their styles to match individual differences existing among learners. The teacher must know about the nature of learning and under what conditions learning can take place. "When students cannot learn the way we teach them, we must teach them the way they learn", says Dunn (1990). Melis & Monthienvichienchai (2004) said that knowledge of learning styles can be used to increase the self-awareness of students (and teachers) about the strengths

and weaknesses of their own learning and that of others.

In more details, Claxton & Murray (1987) recommended four ways to utilize the information on different learning styles in teaching and learning process.

First, teachers could conduct professional development activities on the use of learning styles in teaching and learning improvement.

Second, promote classroom research on student learning styles

Third, establish curricular experiences that focus on helping students learn how to learn

Fourth, take into account the candidate's understanding of teaching and learning practices.

In the same vein, other researchers (Felder and Silverman, 1988; Zapalska and Brozik, 2006), have also stressed the importance of varying teaching ways or using a multi-style approach in instruction to meet different student learning preferences that could help improving student understanding.

The paper has reviewed one of the sides of the picture of learning: the learners' side with the focus on the dimensions and categories of identifying their styles and also their preferred tendency in learning. The interactive roles of teaching and learning are also mentioned, with the summaries of studies and research. It has been suggested that teachers should spend their efforts developing their creative, flexible and multi-style teaching to respond to the diversity of learning styles in the classroom setting.

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