

The 4mat Model in English Language Teaching

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Abstract:

This paper aims at highlighting the 4MAT Model as a teaching procedure in teaching English Language for undergraduate students at colleges and Universities. Moreover, the current study tries to focus on using the 4MAT model as a framework for teaching and learning English as a Foreign Language based on the principles of learning methods and their relationship to the learning cycle. The results of the study indicate that the learning cycle is designed 4 MAT with four learning styles. Each quarter is appropriate for teaching methods, which were used depending on the dominance of the right or left hemisphere of the learner's brain in order to be suitable for all types of learners.

Key words: 4MAT Model, English Language, and undergraduate students, University teaching techniques

Cite as: AlSaleem, B. I. A.(2019). The 4mat Model in English Language Teaching. *Arab World English Journal*, 10 (4) 112 -120.

DOI: <https://dx.doi.org/10.24093/awej/vol10no4.9>

1. Introduction and Background

People who have one source of information and use this information according to one system cannot generate multiple solutions effectively. In social life, which is becoming more complex because of new technologies and means of communication, when people use different perspectives to find solutions to the problems they face difficulties in social life and thus generally acquire lifelong learning, successful interdisciplinary approaches can be applied. Therefore, teaching based on a multidisciplinary structure and qualified teachers who can implement this education are required in the educational process. The interdisciplinary approach is a process of integration, (Wragan, 2002).

Integration is the most challenging and critical component of the multidisciplinary process. Multidisciplinary integration is an assessment process involving analysis of relevant interdisciplinary objective (Mansilla, 2005; Lattuca, 2001). Integration is based on the analysis of discipline-based goals and perspectives or problem solving, followed by subsequent integration under different methodologies in the light of this analysis, (Lattuca, 2001). The integrated models and curriculum models developed on this perspective follow closely the constructivist perspective, (Davis & Knobloch, 2002), as education is more integrated, and more structured, (Wraga, 2002), Lettuce, 2005 discussed constructivism and interdisciplinary approaches together and defined it as "structural education science", (Lattuca, 2005). According to Lettuce, traditional teaching not only reduces the teaching responsibility of the teacher, but also extends the definition of education. Teaching is not only achieved by providing content, but also by designing experiences that encourage and ensure learning. Constructors assume that students have been given the information and beliefs necessary to form the basis for them to understand the world, no matter how inexperienced.

To encourage multidisciplinary teachers, multidisciplinary teaching must be based on the concept of constructivist education, and programs must be developed on the basis of this perspective. In this context, it is important to create models that combine structural methodology with a multidisciplinary perspective and provide results of practices related to these models. Models and approaches used in the implementation of the constructional approach in the teaching process include the 5E-learning model, project-based learning, problem-based learning, brain-based learning, collaborative learning, 4MAT teaching, and active learning. These models and approaches were developed to facilitate a learning environment that promotes the application of prior knowledge to new information about content and the use of results, McManus (2001).

Among the above models, the 4MAT teaching model is an integrated curriculum approach, enabling different strategies and teaching methods based on structural theory. This module also encourages students to develop their own understanding and perceptions. Using different learning strategies together in an integrated way makes learning more interesting, supportive, and more effective, (Merrill, 2001). Many studies have found that using an integrated curriculum instead of traditional teaching methods that adopt standardized strategies allows students to build knowledge in their minds more effectively, (Beane, 2016; Blair & Judah, 1990; Taylor, 2018; Lattuca, 2001). In addition, integrated teaching methods, such as 4MAT, facilitate effective and attractive learning and guide students to collaborative learning and relational thinking, (Kaewkiriya, 2017). The 4MAT-teaching model is usually used by teachers and helps them to carry out cooperative

activities. Therefore, in order to develop a strong multidisciplinary program, the use of this model is effective, because it includes the mentioned advantages and an integrated teaching approach, (Blair & Judah, 1990).

1.1. University teaching techniques

In order to ensure equal learning for an increasing number of university students, much attention has been focused on learning styles and their impact on the teaching and learning process. Despite its critics, the idea of learning style and its effects in higher education is not new, (Reynolds, 1997). In their seminal study on learning methods in higher education, other studies suggested that matching learning styles and teaching methods improve learning, (Beane, 2016; Nelson, 2013).

It is difficult to implement this matching approach, which may be the most common means of using learning methods to positively influence learning, especially in higher education, (Nelson, 1993). It is not surprising that the literature is rare regarding the extent to which teachers, particularly in higher education, systematically integrate the learning style theory into their education. This idea is supported by other studies, (Claxton & Murrell, 1987), which emphasizes that serious consideration is rarely paid for differences in learning styles and their impact on teaching and learning, with few attempts to make the methodology of incorporating learning methods into education.

Because traditional teaching methods and traditional methods are still ongoing in many of today's classes, another way to implement learning in higher education is to provide learning to university students. Claxton & Murrell (1987); Garcia-Otero & Teddlie (1992) reported that students' ambition for their learning patterns increased academic success in college courses. Even other studies showed that students' knowledge of their learning preferences improved the retention rate of college students, (Nelson, 1993; Ingham, 2003; Cutolo, A & Rochford, 2007).

1.2. What is 4MAT Model?

The 4MAT-teaching model is a conceptual framework for teaching and learning which is based on the work of John Dewey (Experimental Learning), Carl Young (Individual Theory), and most directly, David Kolb (Experimental Learning Theory). The premise is that individuals learn primarily in one of four different but supplementary ways based on how they perceive and manipulate information, (McCarthy & White & McNamara, 1987; McCarthy & McCarthy, 2006).

4MAT identifies four interrelated learning methods that depend on how we perceive and process new information. Our individual learning pattern results in naturally falling on this sequence. McCarthy (2006) has identified these four teaching methods as learners of imagination (one kind of learners); analytical learners (type two learners); common sense learners (type III learners); and dynamic learners (type IV learners). The following is a brief description of these learning styles from the perspective of learning and teaching:

- Innovative learners (type I) learn better through personal experience. They take advantage of the opportunities to find meaning in what they learn and enjoy sharing their beliefs, feelings and opinions with others.

They reflect nature and learn primarily through dialogue. They are skilled at taking perspective and are sensitive to the needs of others. As teachers, "lost learners" are facilitators, emphasizing personal connections to content through classroom discussions, group participation, and listening. Their priority in the classroom is individual student development.

- The analytical learning approach (type II) in a logical and organized way by examining details and details. As students, they often excel in traditional classrooms. Learners have an insight into new ideas and link new learning with other information they know to be true. Logically, they enjoy the formulation of theories and models.

They strive for accuracy and prefer teachers who do it too. As teachers, analytic learners are scientists, focusing on content through structured and logical lectures, notes, and readings.

- Sensitive learners (type III) learn to practice. When providing new information, they focus on practical applications immediately. They are active learners, preferring to get the right to work in the classroom. They hate tasks that have no clear purpose or application.

They learn better when they are provided with experimental learning opportunities. As teachers, Sense Learners are trainers who focus on providing students with opportunities to practice new skills.

- Dynamic learners (type IV) are active learners. They enjoy the risk and learn primarily through self-discovery. They like to link their learning to the things that matter to them in their lives. They enjoy gathering information and applying their learning in new ways. As teachers, dynamic learners challenge their students by creating realistic learning experiences in their classrooms and believe that the curriculum must be flexible and geared to the interests of individual students.

In the right sequence, these four learning styles provide a natural framework for teaching and learning. The use of the 4MAT model has been supported through research in primary, secondary and more recently in higher education classes, (Bair & Judah, 1990). As a representative of what Kolb calls integrated learning, the 4MAT learner model is taught through four main teaching methods, (Kolb & Kolb, 2005). Based on the original concept of KOLP methods in learning methods, 4MAT combines learning with brain-based processing strategies. 4MAT provides a systematic model of planning education that assumes that individuals learn in different, but identifiable ways and that interaction with a variety of diverse learning activities leads to higher levels of motivation and performance.

1.2. Applying 4MAT for university students

4MAT for college students aims to further enhance students' self-awareness of strengths and weaknesses in learning, towards a framework that students can use to adapt to a variety of teaching methods and disciplines required of college students today. Students begin a four-year course at the College for the first year of the semester by identifying their own learning style and then identifying and applying specific strategies they can use to improve their academic achievement, especially in cases where learning is inconsistent with their teaching style, (Taylor, 2018). Students

also learn how the 4MAT model can be used as a flexible framework for the natural learning cycle and to improve writing, reading, understanding and study skills.

The fact that student-centered educational models do not focus on what needs to be taught, but how they are taught raised studies on with learners' characteristics. The concept of learning methods has been shaped in this process. Acceptable learning methods have become choices for the learner during the learning process search topic for many psychologists and wishers since 1940, (Beane, 2018). Although learning methods are accepted, one of the most important indicators related to needs, but motivation, attitudes and expectations in the learning environment are not the only reason to learn to occur in different stages are even accepted as one of the most important ingredients of the educational learning process, (Lattuca, 2005). However, this concept has gained great importance to "Experimental Learning Theory" which Adopted Colb which is based on learning theories For Dewey and Lewin and Piaget, (Sahin & Celik, 2012). As an experimental learning theory, learning is a four-step process. This process continues in circles and makes the learner acquire new experiences, and the experiences gained make the learner into the following learning processes, (Sahin & Celic, 2012). Despite the fact that it is influenced by many learning methods, the 4 MAT (4 Methods of method applications) theoretically relies on Learning as in the Kolb learning course which rely on Learning Theory Demo, at 4 MAT, each quarter is classified as a visual student (type1), analytical learners (type 2), sensitive learners (type 3) and dynamic learners (type 4) . The McCarthy learning patterns are shown in Figure1. The vertical axis of the cycle shows the visualization of information and the horizontal axis shows the organization of information. The perception of the information dimension consists of a movement of concrete experience into abstract visualization. The organization of the information dimension consists of a movement from a reflective observation to an active experiment. According to McCarthy (2006), all students are done in a quarter of the course.

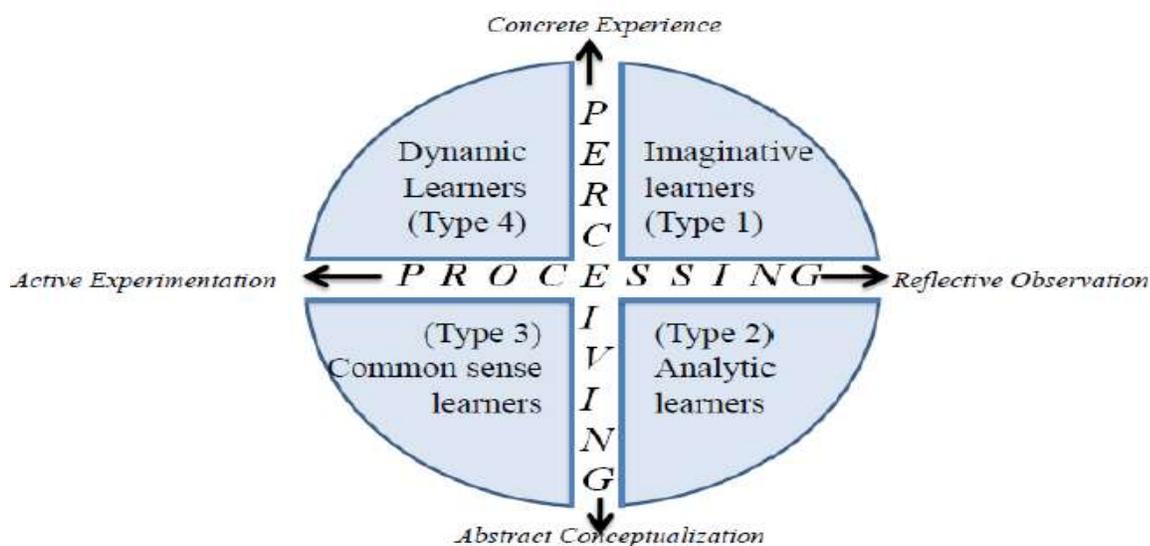


Figure1. McCarthy learning style

Source: McCarthy & McCarthy, 2006

In the class there are students of all four learning styles, so appropriate education should be provided to each student. A learning cycle is 4 MAT more important than any part of the course. Because every quarter of the year provides an appropriate learning environment for students this quarter, while also helping students orient themselves to other learning styles else where. Therefore, a learning environment is created in which students learn to use other people's learning methods. Studies have shown on ,(McCarthy & McCarthy, 2006) the differences between the functions of the right and left hemispheres of the brain,(Cutolo & Rochfold,2007) . The results of these studies indicate that the left hemisphere of the brain regulates logical and analytical ideas, while the right half of the brain works around intuitive and integral functions, (Aud,2012). These results have helped in the case that learning methods differ from each other to be acceptable, (Davis&Knobloch,2002). These studies have contributed to hemispheric dominance in the development of the teaching cycle 4 MAT. Therefore, the learning cycle is designed 4 MAT With 4 learning styles. Each quarter, appropriate teaching methods were used depending on the dominance of the right or left hemisphere. This course was completed in 8 steps,). The teaching model appears 4 MAT in Figure 2.

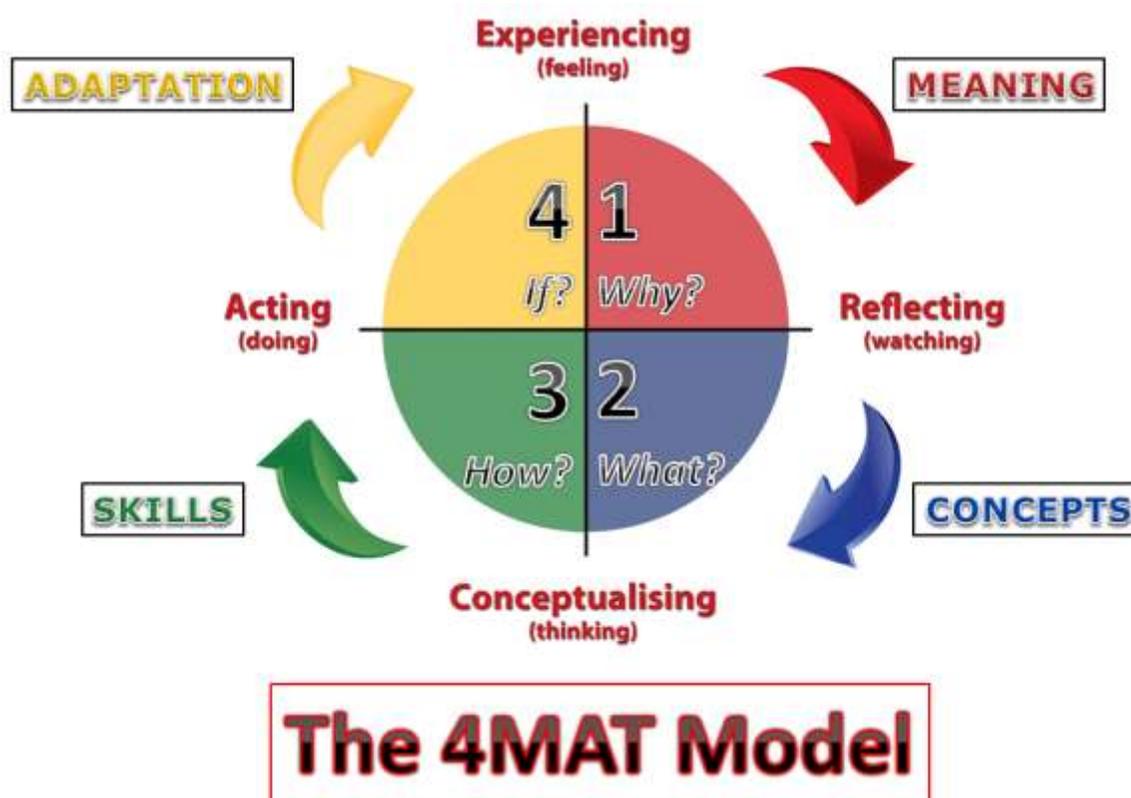


Figure 2. 4MAT learning style

In the second step, the analysis must be based on the experience provided by the teacher. Students begin to discuss what they have learned about the concrete experience presented in the first step. In this way, all students are interested in what other students see. Allow For students to reflect similar experiences by seeing, sharing and discussing. In the third step, before students are provided with specialized information, they must have their own

experiences. Therefore, they understand, perceive and perceive the concept, (McCarthy & McCarthy, 2006). In step four, the ability of students to create information and concepts is developed. The teacher introduces the subject to students and identifies concepts using different resources such as CDs. In Step 5, where students begin their activity, the concepts and formulas learned are applied and promoted and problems solved in which formulas are used, (McCarthy & McNamara, 1987). In Step 6, students will learn the information they have learned before. In this step where innovation begins, students acquire skills in how to use formulas, what they can do as part of specific concepts and how to interpret acquired information, (McManus, 2001). In step seven, students' activities are analyzed to create a step towards learning in the future. Pioneering students to undertake a project or task perform the techniques used in this step, (McCarthy & McCarthy, 2006). The eighth step where students perform themselves and share what they do with others is where practice and experience are integrated. This step, which differs from others, is the one in which students participate practices, they recognize the differences in their creativity, and the skill of everyone is important, (McCarthy & McNamara, 1987). The teaching model was 4 MAT which is designed according to hemispheres brain dominance with four basic learning styles source of research in various disciplines such as engineering, mathematics, microbiology, history, geography, science, music, English learning, and Engineering. Other researchers concluded in their studies that the model has positive effects on student attitudes, (Taylor, 2018; Ramirez, & Laurinco, 2015; Burkum, 2010). There are some studies depending on the teaching model 4 MAT in various disciplines.

Conclusion

The 4MAT-teaching model will have many contributions, especially in teaching English. Furthermore, thanks to the 4MAT Learning Loop, students will be able to understand new concepts and terminology, which is one of the biggest problems students face. In addition, the processes in the learning loop can be useful for students regarding the use of English terminology in real life. The 4MAT teaching model provides students with an opportunity to learn about knowledge and experience in a field that starts from concrete experiences. Therefore, teachers can consider the four learning methods in order to meet the needs of all students. First of all, teachers should learn the differences between the four learning styles. While maintaining the learning style of each student in their learning process, they should systematically expose all students to multiple learning techniques. In order to properly achieve appropriate teaching methods for different learning styles, university-level English teachers can include student-centered teaching models in a 4MAT loop such as problem-based learning, multiple intelligence theory, brain-based learning, constructive theory learning, and learning-based learning, Institutional learning, computer-assisted English teaching, and active learning.

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