

MULTIPLE INTELLIGENCES THEORY – A MILESTONE INNOVATION IN ENGLISH LANGUAGE TEACHING AT THE UNIVERSITY OF NIŠ MEDICAL SCHOOL

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Theory of multiple intelligences is considered an innovation in both teaching and learning English language because it helps students develop all the eight intelligences that are grouped as verbal/linguistic, logical/mathematical, visual/spatial, bodily/kinesthetic, musical/rhythmic, interpersonal, intrapersonal and naturalist. The aforementioned intelligences are thought to represent ways in which individuals understand and perceive the world, solve problems and learn. Correspondingly, by focusing on the problem solving activities, teachers, by implementing theory of multiple intelligences encourage students not only to build-up their existing language knowledge but also learn new content and skills. The implementation of the theory of multiple intelligences in teaching the English language at the University of Niš Medical School has had a positive impact on learning English language and increased students' interest in language learning. Generally speaking, this theory offers a better understanding of students' intelligence and a greater appreciation of their strengths. It provides numerous opportunities for students to use and develop all the eight intelligences not just the few they excel in prior to enrolling a university or college. *Acta Medica Medianae 2010;49(2):15-19.*

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Introduction

During the last century, the world of teaching witnessed the innovation in ELT approaches, methods and techniques such as the silent way, community language learning, total approach, interactive learning, task-based learning etc (1,2). The conventional teacher-centered model was replaced by the learner-centered model of instruction forcing educators to pay more attention to the impact the learners brought into the learning process. A contribution made, however, by the findings of Dr Howard Gardner, a distinguished American cognitive psychologist, during the nineties, was groundbreaking for foreign language learning. Gardner suggested from his research findings (1983, 1993) that human cognitive competence actually is pluralistic, rather than unitary in design thus setting the stage for multiple intelligences (MI) theory (3). The MI theory forced educators not only to come to a recognition of the diversity of the learners in their learning styles and learning potentials but also to appreciate the development of learning strategies on the part of the learners in the form of "individualized instruction" and "independent learning" (4,5). Nowadays, the MI theory has

been considered a milestone for educational innovation not only in the United States but throughout the world because language teaching has finally changed in such a way as to facilitate language learning by engaging both a faculty and students through constrained but meaningful learning choices and a sharp focus on productivity and high-quality language performance (2,4,5).

To this end, the implementation of the theory of multiple intelligences in the English language teaching at the University of Niš Medical School has become a milestone innovation in foreign language teaching. The primary objective during lectures has become to investigate and monitor students' performance and improvement in learning English as well as their overall performance on the final exam after the MI theory has been implemented in the English language course.

Methods

In order to gain a better understanding about how MI theory applies to lecture hall teaching, a lecture plan for the first year students of pharmacy at the University of Niš Medical School is displayed on the topic *OTC Counseling* and a part dealing with OTC core competencies.

Time Limitation: 3 consecutive periods

Student Level: Freshmen of the Department of Pharmacy at the University of Niš Medical School

Class Size: 80 students

Teaching Method(s): Whole language learning & task-based learning

First period: Classroom Activities

Approximate Time Intelligence(s)

1. Giving background knowledge about the topic and its importance for future pharmacists; reading a definition of OTC counseling, (5 mins.) Verbal/Linguistic (through lecture)

2. Brainstorming on prime questions, e.g. How does the definition coincide with the how-to communication? What is the purpose of OTC counseling? And/or What does it imply to you? (10 mins.) Verbal/ Linguistic (through informal speaking) Intrapersonal, and Interpersonal

3. Listening to a lecture to grasp the main ideas. (30 mins.) Verbal/Linguistic (through listening)

4. Oral reading for comprehension through the strategy of "topic sentence" detecting and commenting on statements about OTC counseling, SCHOLAR, QuEST process, Open and close-ended questions. (20 mins.) Verbal/ Linguistic (through reading and reading strategies)

5. Vocabulary learning through the strategy of guessing meaning from context or form. (10 mins.) Verbal/Linguistic (through vocabulary and vocabulary learning strategies)

Second period: Lecture Hall Activities

Approximate Time Intelligence(s)

1. Group discussing OTC counseling (e.g., by deductively expanding, inductively generalizing, etc.) and reviewing main idea(s) behind the concept. (15 mins.) Verbal/Linguistic, (through discussion) Interpersonal, and Logical/ Mathematical

2. Doing exercises on the OTC Situation Room either orally or in writing by working in groups and/or individually. (25 mins.) Verbal/Linguistic (through speaking & writing) and Interpersonal

3. Commenting on the concepts/ideas one agrees or disagrees about communication problems that can occur in the OTC area, and giving his/her reasons. (10 mins.) Verbal/ Linguistic (through oral presentation) and Intrapersonal

Third period: With the reference of activities listed at the back of the text, there are five different tasks to be completed, (10 mins. for the performance/presentation of each task). Students can choose

which task to work on either by joining a group or working independently

Task 1 (team building)

Look at the two drawings, concerning the OTC area situations in lieu with cultural differences. Discuss in group and report the similarities and differences that may exist between the East and the West, or make a verbal debate against each other. (Visual/Spatial, Interpersonal, Logical, and Verbal/Linguistic Intelligences.)

Task 2 (team building or individual work)

Students write and perform an OTC counseling situation. Others watch and comment (Bodily/ Kinesthetic, Visual/spatial and Verbal/ Linguistic Intelligences.)

Task 3 (team building)

Discuss in small group a problem or an embarrassing situation you may confront with due to cultural differences in OTC counseling, and come up with a solution by drawing a flowchart to show its procedure. (Logical/Mathematics and Visual/Spatial Intelligences.)

Task 4 (team building or individual work)

Search for some unique words, or body language developed in a culture that can be a cause of a problem to occur in the OTC area (Verbal/Linguistic and Bodily/Kinesthetic).

As a point of note it should be stressed that the outline of a lecture is not clearly fixed. It should be adjusted to students' language abilities and the eight intelligences. The teacher, therefore, monitors and singles out intelligences to be developed and worked on in class.

Results

Evaluation procedure experts say that there are two ways of evaluating students after the completion of a course: testing and assessing. Whereas, on the one hand, testing represents a singular act that is characteristic of teacher-centered classrooms, assessment, on the other hand, is defined of as a complex process distinctive of student-centered classrooms. Wherefore, testing is intended to determine what students have learned forcing them to memorize facts without really understanding the context and subject matter, assessment, nevertheless, is integrated with learning and instruction and is intended to stimulate further learning.

Table 1. The assessment of the English language final exam results

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| The University of Niš Medical School Department of Pharmacy Final exam results from February 2009 (after to the implementation of MI theory) Out of a total of 80 junior year students: | The University of Niš Medical School Department of Pharmacy Final exam results from June 2007 (prior to the implementation of MI theory) Out of a total of 80 junior year students: |
| 40 obtained grade 10 (outstanding) | 10 obtained grade 10 (outstanding) |
| 16 obtained grade 9 (excellent) | 5 obtained grade 9 (excellent) |
| 11 obtained grade 8 (very good) | 19 obtained grade 8 (very good) |
| 4 obtained grade 7 (good) | 16 obtained grade 7 (good) |
| 9 students obtained grade 6 (pass) | 17 students obtained grade 6 (pass) |
| No student failed | 13 students obtained grade 5 (fail) |

A common belief shared by many teaching professionals nowadays is that authentic assessment, which emphasizes assessing what students know (knowledge) and what students do (performance) from different perspectives aims to provide a complete picture of students' abilities, efforts and progress during the learning process (6). Moreover, the MI theory is opposed to the traditional view of education and standardized tests; it opts for multiple modes of assessment that will allow students to show their strengths for optimal performance. Accordingly, the knowledge assessment of the first year students of pharmacy after the MI theory has been implemented in the compulsory English language course is shown on Table 1.

Discussion

Traditionally speaking, intelligence has been defined in terms of intelligence quotient (IQ), which measures a narrow range of verbal/linguistic and logical/mathematical abilities a person receives at birth. Howard Gardner, however, in his book entitled "Frames of Mind: the Theory of Multiple Intelligences" (3) postulates an alternative definition of intelligence according to which intelligence is defined as 'the capacity to solve problems or to fashion products that are valued in one or more cultural settings' (5). Generally speaking, all human beings apply these intelligences to solve problems, invent processes, and create things in ways that are valued by a community or culture. Moreover, Gardner adds that humans possess a number of distinct intelligences that manifest themselves in different skills and abilities that result in many different ways of knowing, understanding and learning

about the world: "It is of the utmost importance that we recognize and nurture all of the varied of human intelligences, and all of the combination of intelligence. We are all so different largely because we all have different combinations of intelligences. If we recognize this, I think we will have at least a better chance of dealing appropriately with the many problems that we face in the world." (7) Gardner further argues that the big challenge facing the deployment of human resources "is how to best take advantage of the uniqueness conferred on us as a species exhibiting several intelligences" (8). As a result, he has singled out eight intelligences suggesting that there are probably many others that have not yet been able to test up to the present shown in Table 2 (7).

Up to this point, Howard Gardner's theory of multiple intelligences has had a profound impact on thinking and practice in education - especially in the United States and has found ready supporters amongst educationalists. How big this contribution is can be gauged from following comments in his introduction to the tenth anniversary edition of his classic work "Frames of Mind. The theory of multiple intelligences": "In the heyday of the psychometric and behaviorist eras, it was generally believed that intelligence was a single entity that was inherited; and that human beings - initially a blank slate - could be trained to learn anything, provided that it was presented in an appropriate way. Nowadays an increasing number of researchers believe precisely the opposite; that there exists a multitude of intelligences, quite independent of each other; that each intelligence has its own strengths and constraints; that the mind is far from unencumbered at birth; and that it

Table 2. The eight intelligences as defined by Howard Gardner

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| Verbal/Linguistic | Involves sensitivity to spoken and written language, the ability to learn languages, and the capacity to use language to accomplish certain goals. This intelligence includes the ability to effectively use language to express oneself rhetorically or poetically; and language as a means to remember information.. Writers, poets, lawyers and speakers are among those that Howard Gardner sees as having high linguistic intelligence. |
| Logical/Mathematical | Consists of the capacity to analyze problems logically, carry out mathematical operations, and investigate issues scientifically. In Howard Gardner's words, it entails the ability to detect patterns, reason deductively and think logically. This intelligence is most often associated with scientific and mathematical thinking. |
| Visual/Spatial | Involves the potential to recognize and use the patterns of wide space and more confined areas. |
| Bodily/Kinesthetic | Entails the potential of using one's whole body or parts of the body to solve problems. It is the ability to use mental abilities to coordinate bodily movements. Howard Gardner sees mental and physical activity as related. |
| Musical/Rhythmic | Involves skill in the performance, composition, and appreciation of musical patterns. It encompasses the capacity to recognize and compose musical pitches, tones, and rhythms. According to Howard Gardner musical intelligence runs in an almost structural parallel to linguistic intelligence. |
| Interpersonal | Is concerned with the capacity to understand the intentions, motivations and desires of other people. It allows people to work effectively with others. Educators, salespeople, religious and political leaders and counselors all need a well-developed interpersonal intelligence. |
| Intrapersonal | Entails the capacity to understand oneself, to appreciate one's feelings, fears and motivations. In Howard Gardner's view it involves having an effective working model of ourselves, and to be able to use such information to regulate our lives. |
| Naturalist | Enables human beings to recognize, categorize and draw upon certain features of the environment. It 'combines a description of the core ability with a characterization of the role that many cultures value'. |

is unexpectedly difficult to teach things that go against early 'naive' theories of that challenge the natural lines of force within an intelligence and its matching domains." (3) What is even more important he says is "eight kinds of intelligence would allow eight ways to teach, rather than one. And powerful constraints that exist in the mind can be mobilized to introduce a particular concept (or whole system of thinking) in a way that students are most likely to learn it and least likely to distort it. Paradoxically, constraints can be suggestive and ultimately freeing." (5) The MI theory, therefore, provides a way of understanding intelligence, which teachers can use as a guide for developing classroom activities that address multiple ways of learning and knowing (9). Accordingly, teachers and policymakers in North America have responded positively to Howard Gardner's presentation of multiple intelligences because the theory makes students think and learn in many different ways at the same time providing educators with a conceptual framework for organizing and reflecting on curriculum assessment and pedagogical practices. In turn, it has led many educators to develop new approaches that might better meet the needs of the range of learners in their classrooms (10). Therefore teaching strategies as proposed by MI theory transfer some control from teacher to students by giving students choices in the ways they will learn and demonstrate their learning. By focusing on problem-solving activities that draw on multiple intelligences, these teaching strategies encourage students to build on existing strengths and knowledge to learn new content and skills (5). It is also a way for a teacher to gain a deeper understanding of students' learning preferences and a greater appreciation of their strengths. Moreover, students are likely to become more engaged in learning as they use learning modules that match their intelligence strengths. Additionally, students' regular reflection on their learning broadens their definitions of effective and acceptable teaching and learning practices. Students' increased engagement and success in learning stimulates a teacher to raise his/her expectations, initiating a powerful expectation-response cycle that can lead to greater achievement levels for all. Thus, the theory of multiple intelligences offers a way for the teacher to examine and form best teaching techniques and strategies in the light of differences in each student. To this end, the English teacher becomes aware of the fact that students bring with them specific strengths, unique learning styles and different learning potentials.

There are four ways of using MI theory in every lecture hall in order to enhance and channel both students' intelligence and language abilities (11). The MI theory is used as: 1. a tool to help students develop a better understanding and appreciation of their own strengths, learning preferences and the preferred intelligences of English language learners; 2. a tool to develop a better understanding of learners' intelligences at the same time broadening teachers' awareness of their students' knowledge and skills and enables

them to look at each student from the perspective of strengths and potential; 3. a guide to provide a greater variety of ways for students to learn and to demonstrate their learning and confidence; 4. a guide to develop lesson plans that address the full range of student needs (11,12).

Correspondingly, the implementation of MI theory in teaching English language course at the University of Niš Medical School has brought many positive changes in the lecture hall. For instance, students are assigned to complete a project, individually or in groups, in order to demonstrate their understanding of the topic. The teacher also offers a choice of projects, such as descriptive essay writing, resume and business letters/emails writing, preparing seminar presentations etc. The objective is not to teach to specific intelligences or to correlate intelligences with specific activities, but rather to allow learners to employ their preferred ways of processing and communicating new information. Such an approach, has shown that students become more engaged in and enthusiastic about discussing specific topics; the students gain a better understanding of the topics discussed when they express their opinion in ways that are comfortable for them; and their analytical thinking strategies improve as discussion debate becomes a tool for completion of projects they are interested in when their voice is heard.

With the MI theory applied in the English language teaching at the University of Niš Medical School, students become aware that different people have different strengths and that each person has a substantial contribution to make. This fits perfectly with the project-based learning where students divide tasks based on individual strengths in a group. For example, one student might feel confident about planning, another might prefer to do the writing, and a third might feel able to present the project to the whole class. Team-building becomes necessary and makes individual characteristics of each student emerge as well as ability to use counseling over the counter (13). During the compulsory English language classes at the University of Niš Medical School students are, consequently, taught to develop and generate intelligence in diverse ways and on more levels. To this end, the lecture hall activities/tasks are tailor-made to suit and/or enhance the following: students' needs, strengths, levels, learning styles, learning strategies, learning potentials, the nature of the subject matter. Since it is a two-way process the teacher's personality and teaching rationales, his/her MI profile, teaching styles etc. are also monitored and developed to suit the needs specific teaching approaches and methods that appeal to particular intelligences or combinations of intelligences; plan a variety of activities from different resources (including the use of internet, MPP) for specific lectures or classes with multiple intelligence theory in mind (e.g. focus on diversity, learning process, and the transferring of learning to life beyond the lecture hall, etc.); provide students with different learning

strategies necessary for lifelong learners; put emphasis on multiple forms of assessment rather than traditional standardized testing that students find the least challenging and consider out dated (5,14).

What should also be pointed out is that the teacher need not include activities for developing all the eight multiple intelligences within each lesson. On the contrary, the teacher should expand lecture hall activities for the neglected intelligences enhancing them to surface and develop by way of examining and analyzing students' language performance for a period of time.

Conclusion

While there may be some significant questions and issues around Howard Gardner's notion of multiple intelligences, it still has had utility in education by helping a significant number of educators to question their work and encourage them to look beyond the narrow confines of the dominant discourses of the four skills development (reading, writing, listening and speaking), curriculum, and testing. Nonetheless, implementation of the MI theory in the English language classes at the University of Niš Medical School has had a positive influence on both teaching and learning English language and has enhanced students' interest in the language up to the present. Rather than functioning as a prescribed teaching method, curriculum, or technique, the MI theory applied in

ELT at the University of Niš Medical School is a way of understanding students' intelligence, which the teacher can use as a guide to develop lecture hall activities that address multiple ways of learning and understanding. The MI theory offers a richly diversified way of understanding and categorizing human cognitive abilities, and combinations of abilities, heightening awareness of what makes learning possible and effective for individual students. Moreover, teaching strategies grounded by the MI theory offers students choices in the ways they will learn and demonstrate their learning. By focusing on problem-solving activities that draw on multiple intelligences, these teaching strategies encourage learners to build on existing strengths and knowledge to learn new content and skills. To this end, the implementation of the MI theory in the English language teaching at the University of Niš Medical School offers a better understanding of students' learning preferences and a greater appreciation of their strengths. Students likely become more engaged in learning as they use learning modules that match their intelligence strengths that, in addition, increase students' engagement and success in learning. Generally speaking, implementation of the MI theory into the English language course at the University of Niš Medical School provides numerous opportunities for students to use and develop all eight intelligences not just the few they excel in prior to matriculation.

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