

Multiple Intelligences-based Language Curriculum for the Third Millennium

Adel Dastgoshadeh¹ and Kaveh Jalilzadeh²

¹English Language Department, Sanandaj Branch, Islamic Azad University, Sanandaj

²English Department, Islamic Azad University, Science and research Branch, Tehran, Iran

Abstract. Gardner coined the phrase "multiple intelligences" (MI) that started a paradigm shift in education (Armstrong, 2000). The one-size-fits-all curriculum lessons which the educational world had become accustomed to did not seem so appropriate after understanding that the multiple intelligence theory suggested that human beings all have different and unique intelligences and learning strengths and weaknesses. Through the integration of multiple intelligences into teaching strategies, teachers can improve the learning environments and increase innovations across the curriculum. Using multiple intelligences is providing an opportunity for improving teaching strategies by adopting eclectic teaching styles to integrate curriculum, instruction, and assessment. The third millennium is the era of multi, that is, multimodalities, multiidentities, multiliteracies, multicultures, multilingualism, and therefore multiple intelligences that would be a theory not only survives healthily but also accounts for many of the upcoming problems in language learning in particular and education in general. Using the theory of multiple intelligences, ESL teachers can adopt multiple methods to assist students in enhancing cognitive, social, and emotional abilities.

Keywords: Multiple intelligences, the third millennium, language curriculum, educational syllabus

1. Third millennium

Rodgers (2003) proposed ten scenarios which may, individually and collectively, shape the teaching of second languages in the next decades of this new millennium. The methodological predictions are as follows: 1. *Teacher/Learner Collaboration* 2. *Method Synergistics: Cross breeding elements of various methods to find those practices which best support effective learning* 3. *Curriculum Developmentalism* 4. *Content-Basics:* 5. *Multi-intelligencia:* Basing instruction on a "multiple-intelligences" view, in which different approaches play to different learner talents 6. *Total Functional Response* 7. *Strategopedia* 8. *Lexical Phraseology* 9. *O-zone Whole Language:* 10. *Full-frontal Communicativity:* Engaging all aspects of human communicative capacities- expression, gesture, tone, and so forth- in support of second language learning.

The contributions of Gardner's theory, that is, multiple intelligences to the development of a new language curriculum accounting for the necessities of the era of multi are highly acknowledged.

2. Definitions of Intelligence

Gardner (1983, cited in Armstrong, 1994) originally defined intelligence as "the ability to solve problems or to create products that are valued within one or more cultural settings" (p. 60-61). This definition has since been refined, and Gardner (1999) proposes that intelligence can actually be defined as "a biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture" (p. 33-34). The eight criteria he uses to determine whether intelligence truly fits this definition come from biological and logical analysis, developmental psychology, and traditional psychological research.

(Gardner, 1999) set forth the following criteria:

1. Potential isolation by brain damage, which refers to the degree to which the capabilities are separate or modular.

2. Evidence from exceptional individuals, such as mentally retarded savants and child prodigies, which shows that “it is possible for a person to have exceptional or precocious abilities in one particular field, whilst the same person’s level of performance in other domains is no better than average”

3. An identifiable core operation or set of operations, which means that the ability under consideration should be based on some basic information processing mechanisms (such as pitch in musical intelligence).

4. A distinctive mental history, which refers to different levels of the ability and the developmental history one has to go through to reach high levels of expertise.

5. An evolutionary history and evolutionary plausibility.

6. Support from experimental psychological tasks.

7. Support from psychometric results and findings.

8. Having the potential of being coded in symbolic systems or notations.

3. Philosophical foundations

MI refers to a learner-based philosophy that characterizes human intelligence as having multiple dimensions that must be acknowledged and developed in education. Gardner (1999) argued that the reason for proposing the multiple intelligences theory was not to oppose the existence of general intelligence, known as (*g*), but to emphasize the interaction of heredity and environment. Gardner (1983, cited in Gardner, 1999, p. 33) broadened the concept of intelligence to include psychological, neuropsychological, and cross-cultural constructs. He pointed out that using the traditional view of human intelligence as a single mental ability, educators limit human capabilities to a narrow scope through emphasizing school performance that depends only on psychometric instrument.

4. Types of intelligences

Gardner researched and concluded that there are nine intelligences which are used regularly throughout our lives. And they include the linguistic intelligence, the logical-mathematical intelligence, musical intelligence, the bodily-kinesthetic intelligence, spatial intelligence, the personal intelligences have been separated out and renamed “interpersonal intelligence” and “intrapersonal intelligence, the eighth intelligence, a spiritual intelligence and an existential intelligence. However, these intelligences do not fit well with the eight criteria he developed to determine whether or not something is, actually, a type of intelligence.

5. MI and curriculum development

Curriculum theory is founded upon a set body of knowledge students are expected to learn and a school system that structures and designs curriculum toward that end. This traditional approach to curriculum and learning is built upon state-mandated curriculum standards and assessments. However, there are critics of this approach who argue that the diversity of students (e.g., their individual differences such as gender, race, ethnicity, and socioeconomic status) must be considered. (Rodgers, 2003).

Multiple intelligences (MI) theory has become widely recognized as a useful framework for teachers making sense of their observations that different students have different strengths and learn in different ways. MI theory includes the traditional academic intelligences of linguistic and logical mathematical intelligences as well as spatial visual, musical, bodily kinesthetic, interpersonal, intrapersonal, and naturalist intelligences.

MI theory's basic tents are as follows:

1. MI as a tool to cater to different students’ intellectual strengths

2. Students’ awareness of their own strengths and weaknesses in learning

3. The strengths of the multiple intelligences theory are that teachers can integrate art, music, physical education, and culture into the curriculum (Armstrong, 2003). Students' respect for one another's learning strengths

Cuban (2004, cited in Kelly, 2006p. 390) lauds MI theory as having "had the greatest influence on educators' beliefs and talk about differences in children's intelligence, moderate to high influence on the formal curriculum and instructional materials, and least influence on mainstream teaching and assessment practices"—and changes in educator beliefs, curriculum and materials, and the mainstreaming/inclusion process for students with special needs are all in line with MI theory—MI was spreading and becoming widely used in education.

Warnod (2002, p. 3) emphasizes integrating the multiple intelligences approach with the science curriculum. Teaching to the theory of multiple intelligences is becoming a way of life in all types of classrooms. Through the integration of multiple intelligences into teaching strategies, teachers can improve the learning environments and increase innovations across the curriculum. Various teaching techniques to develop multiple intelligences include brainstorming sessions, mind maps, concept charts, individual and choral reading, and computer integration in the curriculum (Campbell, 2003).

Putting the theory of multiple intelligences into practice depends on using various levels in the curriculum through developing multiple learning activities in the lesson plans and the assessment policy (Gardner, 2005).

An advantage of using multiple intelligences for improving teaching strategies is adopting eclectic teaching styles to integrate curriculum, instruction, and assessment (Armstrong, 2000). Emphasizing a continuum of integration, Fogarty and Pete (2004, cited in Chen 2006) described various levels of curriculum integration including the webbed, sequential, immersed, threaded, and the connected models. According to Fogarty and Pete, the focus of the webbed model, for example, is on creating a web relationship between curriculum and instruction. The curriculum, as the center of a continuum, articulates the objectives and the standards of the course. ESL teachers can use the curriculum as the main network station to allow multiple intelligences instruction to be connected with the curriculum continuously.

Fogarty and Pete (2004) argued that the dynamic relationship between curriculum and instruction is constant, revolving around assessment based on student demographics, societal needs, and technological changes. When curriculum and instruction are integrated, teachers can design various language skills to help students enhance academic and social achievements. Campbell (1996) describes only five of the large number and variety of formats that can be- and often are- used by teachers to create MI-friendly learning environments. These five formats are *multiple intelligence-based lesson designs*, in which lessons are designed and implemented, with supporting activities that meet the needs and strengths of the different intelligences; *interdisciplinary curriculum*, in which connections between the different courses or disciplines are made by combining such things as a sense of community, naturalistic intelligence, linguistic and spatial intelligence all in the same exercise. ; *student projects*, in which students have choice and can actually put into action what they have learned in a manner friendly to their intelligence; *appropriate assessments* geared to the variety of intelligences—allowing a student to show what he or she has learned, in the best way he or she can show it; and *apprenticeships*, in which students work with individuals to learn a skill or craft. These should be guided by students' talents, strengths, and interests—a critical component for the early adolescent stage of development.

Armstrong (2000) proposes the following seven-step procedure to create lesson plans or curriculum units using MI theory as an organizing framework: 1. *Focus on a Specific Objective or Topic*. 2. *Ask Key MI Questions*. 3. *Consider the Possibilities*. 4. *Brainstorm*. 5. *Select Appropriate Activities*. 6. *Set Up a Sequential Plan*. 7. *Implement the Plan*.

Lazear (1991, cited in R&R, 2002, p. 118) proposes a mental sequence as a type of syllabus design based on MI:

Stage 1: awaken the intelligence: through multisensory experiences

Stage 2: amplify intelligence: volunteering objects and events of their own choosing

Stage 3: Teach with/for the intelligence: it becomes the focus of teaching

Stage 4: Transfer the intelligence: reflect on the learning experiences to out-of-class world.

Allowing pupils to have a choice of projects is integral to the curriculum. The curriculum is structured and planned and then modified through pupil input. This approach results in "teacher-guided" rather than "teacher-driven" education.

6. Empirical studies on Integration of MI in curriculum

Examining the phenomenon of multiple intelligences, teachers can benefit from integrating the theory into ESL courses through adopting an eclectic approach for effective teaching (Arnold, 2004 p. 119). Using multiple intelligences, teachers can help students achieve the required standards in learning English.

According to Nobel (2004) teachers can use multiple intelligences multimedia to help students achieve language standards through aligning curriculum, instruction, and assessment. Students can enhance multiple intelligences while performing various learning activities such as creating a database for classifying words and phonetic patterns. Teachers can use cooperative structures for interactive lessons to integrate reading, writing, listening, and speaking. Enhancing cooperative learning tasks such as project-based activities and problem-based learning is helpful for students to develop multiple intelligences (Fogarty & Stoehr). Hagtvet (2009) emphasized that by integrating technology into learning, teachers were able to enhance active learning. Warnod (2002, p. 8) argued that by incorporating technology into the multiple intelligences teaching strategies, teachers could enhance students' independent learning.

Another point of strength is that using the theory of multiple intelligences is an important step towards creating a learning community, in which teachers encourage multiple intelligences for learning. The literature provided evidence regarding the importance of making social adjustment in the diverse learning environments to increase ESL student linguistic ability (Hagtevet, 2009, p. 102).

7. Guidelines for including MI

Chen (2006) stated that the implementation of multiple intelligence instruction in to the curriculum would be beneficial to all students. In order for Multiple Intelligence instruction to be an advantage for students, the following is needed:

- School curriculum directors need to implement a MI program in their schools.
- Teachers need adequate staff development training on the MI technique.
- After extensive staff development training, teachers would incorporate multiple intelligence instruction into the grade curriculum.
- To promote and ensure productive student growth and improvement, teachers and parents need to form an alliance. The school would provide opportunities that will develop response to the multiple intelligence instructions, as well as provide an opportunity for teacher/parent interactions.

Four requirements are need to be met from Gardner's perspective: 1. teacher development, 2. community participation, 3. assessment, and 4. curriculum change.

8. Assessment

Developing new assessment policies to incorporate multiple intelligences into curriculum and instruction, Lazear (2004 cited in Chen, 2006 p.13) developed an assessment policy that integrates various rubrics instead of using the linguistic traditional assessment. The multiple intelligences rubrics that Lazear developed involve assessing higher-order intelligence. The multiple intelligences rubrics include (a) visual-spatial intelligence to integrate visual schemas; (b) bodily-kinesthetic intelligence to enhance dramatization; (c) naturalist intelligence to encourage such activities as classification, observations, and simulations; and (d) musical-rhythmic intelligence to integrate reading concepts into phonetics and link music and rhythm with linguistic concepts.

Chen, (2006) integrated multiple intelligences with portfolio assessment in a seventh grade English class in comparison with a traditional class and detected significant differences in student achievement test

performance, learning motivation, and classroom climate. This plan emphasizes coherence of instructional goals and materials across levels, and demands pedagogical innovation and multiple approaches to assessment. Most important, teachers are required to weave assessment into instruction and provide chances for students to utilize evaluation skills as a learning task. Of all nontraditional approaches to instruction and assessment, portfolio use, aligned with theories of constructivism and multiple intelligences, seems to show the greatest promise in enhancing diverse dimensions of learning and developing multiple intelligences as well as promoting learner autonomy.

Assessments should not simply be tests, homework assignments, textbook pages, or worksheets. Both multiple intelligences and differentiated instruction allow for varied assignment forms and projects. Whenever possible, assessments should be graded based on rubrics that the students have access to from the beginning of the assignment. Campbell (2003) suggested charts, posters, diagrams, dramatic presentations, composing songs, portfolios, self-assessments, peer assessments, journals, debates, photographic essays, artwork, and interviews as possible assessments.

Another factor is that teachers can use authentic assessment rather than emphasize standardized tests. Gardner (1983, cited in Gardner 2005) opposed developing aptitude tests to measure intelligence. Gardner argued that using intelligence and aptitude tests, educators do not help students enhance social or communicative skills.

9. Conclusion

The rapid pace of technology advances, and the increasing amount of knowledge gained by its support will continue to push schools toward change and adjustments in curriculum guides. Students are becoming avid learners of increasingly complex concepts.

Therefore, education delivery based upon MI competes with traditional teaching in terms of meeting the needs of a broad spectrum of learners. As the global community evolves technologically, the delivery and quality of education should be evolving comparatively.

Using the theory of multiple intelligences, ESL teachers can adopt multiple methods to assist students in enhancing cognitive, social, and emotional abilities. We argue for the crucial role of multiple intelligences-based language curriculum as it accounts for even the contextual and cultural differences teachers might encounter in teaching students brought up in various social, and cultural environments.

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