

Applying Multiple Intelligence Theory in the Foreign Language Classroom ¹

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Approach any subject in at least five ways; through narrative; through logical-quantitative approaches; through philosophical, "foundational" inquiries; from an aesthetic point of view; and in ways that create and draw upon student experience.

Howard Gardner, Frames of Mind

Introduction

You don't have to be a foreign language teacher very long before you begin to realize that your students are different, have different strengths, and learn differently. During my first year of teaching, I was very surprised to learn that the young man who was having the most trouble in my English class was the outstanding math student, and the young woman who was my "star" English student was failing in the math class. Another one of my students was failing both math and English but was the best all around athlete in baseball, tennis, and soccer, that the school had ever seen. Still, other students were doing remarkably well in all of their subjects. These students all had different strengths. I didn't realize it then, but these students were manifesting different intelligences. If you had asked me then to tell you which of these students was the most intelligent, I couldn't have answered the question. Intelligence holds a certain mystique in Western society. People are awed by their perception of it in others, perhaps even becoming defensive at the thought that their own intelligence might not measure up. I became interested in the theory of multiple intelligences initially because it alleviated some of my fears associated with the traditional view of intelligence.

Howard Gardner (1983), the originator of the multiple intelligence theory, claims that people are intelligent in different ways. Gardner believes that traditionally our Western culture has defined intelligence too narrowly. He questions the validity of measuring intelligence as the traditional IQ test

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(see Binet in Boring, 1950) by taking people out of their natural environments and asking them to do isolated tasks as a measure of intelligence. Gardner believes that intelligence has more to do with our capacity for solving problems in natural environments. As a language educator, all of these concepts make sense to me.

Some EFL educators may already know about Gardner's theory. They may even be able to name the seven intelligences and give examples of how they have used intelligences in their own lives. It has been my observation, however, that few EFL educators actually consider the seven intelligences in lesson planning and in curriculum development. The purposes of this paper are to introduce EFL teachers to the theory of multiple intelligences, help educators understand their own MI profile, explore how the theory manifests itself in the EFL classroom, and demonstrate how to use MI theory in planning language lessons and developing curriculum.

The seven intelligences

Gardner (1983) grouped human capabilities into seven categories which he called "intelligences". He also says that there may be more than seven intelligences.

Linguistic intelligence. People who are linguistically intelligent have the ability to use words effectively both orally and in writing. They are also effective in using language in a variety of ways, such as to remember information, to convince others to help them, and to talk about language itself. For example, the young woman who was the "star" English student during my first year of teaching had strong linguistic intelligence.

Logical-mathematical intelligence. People who use numbers effectively and reason well have strong logical-mathematical intelligence. The top students in the math class that I remembered from my first year in teaching had strong logical-mathematical intelligence.

Spatial intelligence. This intelligence includes a sensitivity to form, space, color, line and shape. It also includes the ability to graphically represent visual or spatial ideas. The famous architect, Frank Lloyd Wright, is an excellent example of an individual with a highly developed spatial/visual intelligence.

Bodily-kinesthetic intelligence. A person with this kind of intelligence has the ability to express ideas and feelings with the entire body. This ability includes such physical skills as coordination, flexibility, speed and balance. The world famous basketball player, Michael Jordan, is an example of an individual with highly developed bodily-kinesthetic intelligence. Many professions, such as dance, acting, surgery, and auto mechanics require and attract individuals with a highly developed bodily-kinesthetic intelligence.

Musical intelligence. One of the first persons I think of when I think of musical intelligence is Mozart. This intelligence manifests itself in people who are very sensitive to rhythm, pitch, and melody. The intelligence is demonstrated by people who have an intuitive, global understanding of music as well as by people whose understanding is more technical.

Interpersonal intelligence. If you have the ability to sense another person's moods, feelings, motivations, and intentions, you have a highly developed interpersonal intelligence. Interpersonal intelligence includes the ability to respond effectively to other people in some pragmatic way, such as administrators who are good at getting their colleagues to participate in projects and events.

Intrapersonal intelligence. If you understand yourself, if you know your strengths and weaknesses, your moods, desires, and intentions, you have strong intrapersonal intelligence.

How do you define an intelligence?

Gardner set up certain tests of criteria that each intelligence had to meet in order for it to be considered an intelligence and not just an aptitude, talent or skill. Weinreich-Haste (1985) claims that many people are surprised at some of the categories because they have never thought about these areas as being related to "intelligence." They think of the areas more as talents or aptitudes. In order to address this misconception, Gardner identified basic "signs" that each intelligence must exhibit in order to be considered an intelligence and not a talent or aptitude (Armstrong, 1994). Armstrong (1994) and Christison (1995) provide a synthesis of Gardner's work on identifying intelligences.

1. *An intelligence has been isolated through brain damage.* When people suffer brain damage as a result of an injury, one intelligence is often dam-

aged. For example, if a person has damage to Broca's area (the left frontal lobe), linguistic intelligence may be greatly damaged. The individual may have great trouble reading, writing, and speaking. Yet, the person might still be able to do math, dance, sing, etc. Gardner is actually proposing the existence of seven autonomous brain systems.

2. *Exceptional individuals.* In some people, we can see intelligences operating at high levels. Some individuals can calculate multidigit numbers in their heads or be able to play a musical composition after hearing it only once. Savants are people who demonstrate amazing abilities in one intelligence while other intelligences are very low.
3. *Developmental History.* Each intelligence has its own developmental history--its time of arising in childhood, its time of peaking during one's lifetime, and its time of gradual decline. Musical intelligence, for example, peaks early, but linguistic intelligence can peak very late.
4. *Evolutionary History.* Each intelligence has roots in the evolutionary history of man. For example, archaeological evidence supports the presence of early musical instruments. The cave drawings of Lascaux are good examples of spatial intelligence.
5. *Psychometric Findings.* We can look at many existing standardized tests for support of the theory of multiple intelligences. The Weschsler Intelligence Scale for Children includes sub-tests that focus on several of the different intelligences.
6. *Psychological Tasks.* We can look at psychological studies and witness intelligences working separately. For example, subjects may master a specific skill, such as an arithmetic problem, but they may still not be able to read well. Also, individuals may have a superior memory for words but not for faces.
7. *Core Operations.* Each intelligence has a set of core operations. For example, with musical intelligence, a person needs to be able to discriminate rhythmic structures and be sensitive to pitch.
8. *Symbol System.* Each of the seven intelligences in Gardner's theory is able to be symbolized. There are spoken and written languages; graphic language, computer languages, musical notation systems, and ideographic languages.

If another intelligence were to be added to Gardner's list, it would need to be considered in light of each of the above eight signs. The more of the signs that applied, the stronger the possibility would be that the area in question would be another intelligence.

Key points about MI theory for EFL teachers and foreign language learners

According to Gardner (1983), each person has all seven intelligences to varying degrees. This does not mean that we may be highly developed in all seven areas. We may be highly developed in one or two intelligences, moderately developed in several, and even underdeveloped in one or two. Each intelligence functions in ways unique to each person; no one is the same as anyone else. In his book, *More Like Us*, James Fallows (1990) points out that there is no reason to assume that intellect is distributed on a bell-curve. Varied intelligence strengths can be manifested in a variety of ways in our classrooms.

Intelligences are dynamic. We all have the capacity to develop all seven intelligences to a reasonably high level. This is very encouraging for both EFL teachers and learners. We want to help our EFL students develop their intelligences--including linguistic intelligence--though a combination of the right environmental influences and quality instruction. Both of these are factors that we can help to control.

Intelligences work together in complex ways. This is true because no intelligence exists by itself. The world is full of successful people who are successful not because of linguistic or logical -mathematical skills but because of other qualities they possess. EFL learners benefit from a classroom environment that draws on many different intelligences. I think of several traditional EFL activities such as "Twenty Questions" or "Strip Story" (Christison and Bassano, 1995). Both EFL teachers and learners feel that learning takes place with these activities. I offer the suggestion that these activities are popular because several intelligences are needed to carry out each activity.

Teacher Multiple Intelligence Profiles

Armstrong (1995) believes that before we apply any model of learning in the classroom, we should apply it to ourselves as educators. Therefore, the first step in using MI theory in the classroom is to first determine our own

multiple intelligence profile. If you have not taken a MI inventory recently, or if you have never taken one, I encourage you to take a few moments and take the MI inventory that I have designed for foreign and second language teachers in Appendix A.

As you learn more about your own multiple intelligence profile, you will become more confident in the choices you make that affect your teaching. The purpose of taking an MI inventory is to connect your life experiences to the ideas presented in multiple intelligence theory. The types of learning activities you choose as a teacher are often directly related to the totality of your experiences and in turn can affect the multiple intelligence profile of your EFL students. As an EFL teacher or teacher educator, you may naturally choose language teaching, activities that complement your own multiple intelligence profile. There is nothing wrong with this. The best position to be in is to be making informed choices about the activities you use in the lessons you recreate.

EFL Learners MI Inventory.

Recent research supports the idea that learners benefit from instructional approaches that help them reflect on their own learning (Marzano, 1988). Helping them do this with multiple intelligences is a three-step process. First, learners need to be introduced to multiple intelligence theory. Armstrong (1990) offers some excellent suggestions for teaching MI theory to students such as a multiple intelligence version of a favorite EFL activity called "Find someone who. . . ." and a "Multiple Intelligence Pizza". "Find someone who. . . ." is good for adults and the "MI Pizza" is good for children. The second step for students is taking a multiple intelligence inventory. In Appendix B, I offer you an Inventory for EFL learners. My suggestion is that you use the inventory in sections rather than in its entirety so that language learners will not be overwhelmed by the language information. The third step in the process is for learners to summarize their profiles, share them with classmates and teachers, and work together to prepare a profile for the class. You can compare your profile as a teacher with your students' profiles as learners.

Applying MI Theory to lesson planning and curriculum development

Although Howard Gardner was not designing a curriculum or preparing a model to be used in schools with his multiple intelligence theory

(Hoerr, 1995), educators have taken the theory, put it together in different ways, and applied it to their lesson planning and program and curriculum development.

I have found two activities very helpful in applying multiple intelligence theory in my own classrooms. Both of them are reflective in nature. First, I looked at the activities that I typically included in my lessons. I then categorized these activities according to the different intelligences. These lists are not meant to be exhaustive nor are they exhaustive for activities I use in my own teaching: they are merely examples of the kinds of activities that might encourage the development of the particular intelligence in question.

Linguistic Intelligence: lectures, small and large group discussions, reading articles and books, completing worksheets, word games, student speeches, storytelling, listening to cassettes of lectures, journal keeping.

Logical-mathematical Intelligence: scientific demonstrations, logic puzzles and games, problem solving involving calculations, logical-sequential presentation of subject matter.

Spatial Intelligence: charts, maps, diagrams, painting or collages, using mind maps or graphic organizers, using videos, slides, movies, visualizations activities.

Bodily-Kinesthetic Intelligence: creative movement, hands-on activities, field trips, crafts, creating bulletin boards, cooking and other kinds of "mess" activities.

Musical Intelligence: singing, playing recorded music, playing live music like piano or guitar, group singing, Jazz Chants, playing mood music while students work.

Interpersonal Intelligence: cooperative groups, conflict mediation, peer teaching, group brainstorming.

Intrapersonal Intelligence: independent student projects, reflective learning activities, self-teaching programmed instruction, personal journal keeping, personal goal setting, individual projects.

Another idea I have found helpful is to track my teaching style as applies to MI theory. I created the chart below to assist myself.

Lesson Planning: Using Multiple Intelligence Theory in your lesson planning and teaching.	
Directions: Make notations to remind you of how and when you use each intelligence in your lessons in the coming week. At the end of the week check to see if you have focused on the seven different ways of knowing during the week. What changes, if any, do you want to make in your teaching? Why? Why not? You will need one sheet for each course or class you decide to track.	
Course/class _____	
Week _____ from _____ to _____	
Verbal/Linguistic	Bodily Kinesthetic
_____	_____
_____	_____
_____	_____
Logical/Mathematical	Interpersonal
_____	_____
_____	_____
_____	_____
Visual/Spatial	Musical/Rhythmic
_____	_____
_____	_____
_____	_____
Intrapersonal	

I reviewed the results from one of my classes and was surprised. During that two-week period I did not use any activities in my classes that focused on helping my students develop their logical/mathematical intelli-

gence or their musical intelligence. There are several things I could have done with this information. I could have simply considered the information interesting and taken no action to change, or I could use the information to explore other ways of introducing new information and planning my lessons. I made a decision to do the latter. I tried to think of ways to include these two intelligences in my teaching.

In order to include opportunities for students to develop their musical intelligence, I taught my students the tunes and words to two very simple folk songs, "Skip to my Lou" and "Down in the valley." In a later lesson, I asked students to work in groups, take the information from the chapter, make a song, and put the words to one of these tunes. The students seemed to enjoy the activity very much. Most of the student groups performed the new songs for the entire class. They also commented to me later that the technique made it easy to remember the content.

Trying this new activity felt like a big risk for me. However, when I saw how much my students learned from each other, how much they enjoyed it, and how successful they felt about the activity, I also felt successful. It was my choice to explore additional possibilities in my lesson planning.

This experience helped me in my awareness of how MI theory informed language teaching and learning in my classroom. My decisions about activities as they relate to MI theory were made by choice and not by accident. I also learned some important facts about the relationship between the learning activities I chose and my own MI profile. I realized that I often choose activities that support my own experiences as a learner. I began to wonder about the impact this had over the long haul for my students who may have different MI profiles. Once I became better informed about MI theory and my own profile, I could begin to look at the learning activities I chose for my classes from this multiple intelligences frame of reference.

The most important point about multiple intelligence theory is simply to get started. It is not necessary to address all seven of the intelligences in all of your lessons or in every concept or fact you teach. (Gardner, 1994, 1995). What is important is that you understand the theory, your own MI profile, how it informs your teaching, and how to consciously apply it in your lesson planning and curriculum development.

It takes some patience, time, imagination and creativity to bring a new theory into your teaching. Work from your own personal strengths. It is my experience that you will be rewarded by enthusiastic learners. The growth you witness in yourself and your students will be surprising. In my experience, the rewards are worth the effort.

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Appendix A

A Multiple Intelligence Inventory For Teachers

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Directions: Rank each statement below 0, 1, or 2. Write 0 in the blank if the statement is not true. Write 2 in the blank if you strongly agree with the statement. A score of 1 places you somewhere in between. Compare your scores in different intelligences. What is your Multiple Intelligence Profile? What is your highest score? Your lowest?

Linguistic Intelligence

- 1. I like to write articles and have them published.
- 2. I read something almost everyday that isn't related to my work.
- 3. I often listen to the radio or to cassette tapes of lectures, books, etc.
- 4. I always read the billboards and advertisements when I am on the freeway.
- 5. I enjoy doing crossword puzzles.
- 6. I use the OHP, posters, and quotations frequently in my lesson planning and presentations.
- 7. If I hear a song a few times, I can usually remember the words.
- 8. I am a good letter writer.
- 9. Students spend most of their time reading and writing in my classes.
- 10. I send copies of things I have read to other people.
- 11. I own many books.
- 12. I have written something that I really like.

Musical Intelligence

- 1. I have a very expressive voice in front of my class, varying in intensity, pitch, and-emphasis.
- 2. I often use music and chants in my lesson plans.
- 3. I can tell if someone is singing off-key.
- 4. I know the tunes to many different songs.
- 5. I play a musical instrument.
- 6. If I hear a new song once or twice, I can usually remember the tune.
- 7. I often sing in the shower.
- 8. Listening to music I like and am in the mood for makes me feel good.
- 9. When I hear a piece of music, I can easily harmonize with it.
- 10. I have no trouble identifying or following a beat.

Logical-mathematical Intelligence

- 1. I feel more comfortable believing an answer is correct if it has been measured or calculated in some way.
- 2. My classes are consistent; my students know what to expect in terms of rules and routines.
- 3. I use problem-solving activities in my classes.
- 4. I loved math classes in school.
- 5. I can calculate numbers easily in my head.
- 6. I love playing card games such as gin rummy or bridge.
- 7. I love brain teaser games.
- 8. When I cook, I measure things exactly.
- 9. I am interested in new developments in science.
- 10. I believe that most things have a logical and rational explanation.

Spatial Intelligence

- 1. I pay attention to the colors I wear and colors other people wear.
- 2. I take lots of photographs on trips and vacations.
- 3. I own a camera and use it often.
- 4. When I enter a classroom, I notice whether the positioning of the students and teacher supports the learning that is to take place.
- 5. I like to read articles with many pictures.
- 6. I like to use video in my lessons.
- 7. I am partial to textbooks with illustrations, graphs, charts and pictures.
- 8. It is easy for me to find my way around in unfamiliar cities.
- 9. I like to draw.
- 10. I like doing puzzles and mazes.

Bodily-Kinesthetic Intelligence

- 1. I like to go on rides at the amusement parks.
- 2. I like to dance.
- 3. I engage in at least one sport.
- 4. I do activities in my classes that require that my students get out of their seats and move around.
- 5. I like to do things with my hands, such as knit, weave, sew, carve, or build models.
- 6. I often get my best ideas when I am jogging, walking vacuuming, or doing something physical.

- 7. I find it most helpful to practice a new skill rather than to read about it or watch a video.
- 8. I love being in the outdoors.
- 9. I find it hard to sit for long periods of time.
- 10. Most of my hobbies involve physical activity of some sort.

Interpersonal Intelligence

- 1. I would prefer going to a party rather than spending the evening home alone.
- 2. When I have problems, I like to discuss them with my friends.
- 3. Students in my classes have input into the choice of content and learning processes.
- 4. People often come to me with their problems.
- 5. I am involved in social activities several nights a week.
- 6. I like to entertain friends and have parties.
- 7. I have more than one close friend.
- 8. I love to teach or show someone how to do something.
- 9. I am comfortable in a crowd or at a party with many people I don't know.
- 10. I consider myself a leader and often assume leadership roles.

Intrapersonal Intelligence

- 1. I regularly spend time meditating.
- 2. I consider myself independent.
- 3. I keep a journal and record my thoughts.
- 4. I frequently create new activities and materials for my language classes.
- 5. When I get hurt or disappointed, I bounce back quickly.
- 6. I have hobbies or interests that I enjoy doing on my own.
- 7. I am concerned about self-concept and self-esteem for my students.
- 8. I give my students quiet time and thinking time, time to reflect on what they are doing.
- 9. I would rather adapt lessons and create my own rather than use lessons directly from a book.
- 10. I can articulate the main values that govern my life and describe the activities that I regularly participate in that are consistent with these values.

Appendix B

Multiple Intelligence Checklist for EFL Students

Directions: Rank each statement 0, 1, or 2. Write 0 if you disagree with the statement. Write 2 if you strongly agree. Write 1 if you are somewhere in between.

Linguistic Intelligence

- 1. I like to read books, magazines, and newspapers.
- 2. I consider myself a good writer.
- 3. I like to tell jokes and stories.
- 4. I can remember peoples names easily.
- 5. I like to recite tongue twisters.
- 6. I have a good vocabulary in my native language.

Logical-Mathematical Intelligence

- 1. I often do arithmetic in my head.
- 2. I am good at chess and/or checkers.
- 3. I like to put things into categories.
- 4. I like to play number games.
- 5. I love to figure out how my computer works.
- 6. I ask many questions about how things work.

Spatial Intelligence

- 1. I can read maps easily.
- 2. I enjoy art activities.
- 3. I draw well.
- 4. Movies and slides really help me learn new information.
- 5. I love books with pictures.
- 6. I enjoy putting puzzles together.

Bodily-Kinesthetic Intelligence

- 1. It is hard for me to sit quietly for a long time.
- 2. It is easy for me to follow exactly what other people do.
- 3. I am good at sewing, woodworking, building, or mechanics.
- 4. I am good at sports.

- 5. I enjoy working with clay.
- 6. I enjoy running and jumping.

Musical Intelligence

- 1. I can hum the tunes to many songs.
- 2. I am a good singer.
- 3. I play a musical instrument or sing in a choir.
- 4. I can tell when music sounds off-key.
- 5. I often tap rhythmically on the table or desk.
- 6. I often sing songs.

Interpersonal Intelligence

- 1. I am often the leader in activities.
- 2. I enjoy talking to my friends.
- 3. I often help my friends.
- 4. My friends often talk to me about their problems.
- 5. I have many friends.
- 6. I am a member of several clubs.

Intrapersonal Intelligence

- 1. I go to the movies alone.
- 2. I go to the library alone to study.
- 3. I can tell you some things I am good at doing.
- 4. I like to spend time alone.
- 5. My friends find some of my actions strange sometimes.
- 6. I learn from my mistakes.