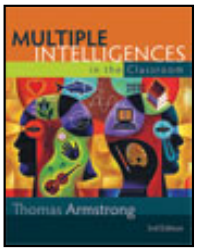
Multiple Intelligences in the Classroom

by Thomas Armstrong



Chapter 4. Teaching Students about MI Theory

> Give me a fish and I eat for a day.
>
> Teach me to fish and I eat for a lifetime.

One of the most useful features of MI theory is that it can be explained to a group of children as young as 1st graders in as little as 5 minutes in such a way that they can then use the MI vocabulary to talk about how they learn. While many other theories of learning contain terms and acronyms not easily understood by adults, let alone children (e.g., INFP in the Myers-Briggs typology, which refers to an "Introverted, Intuitive, Feeling, Judging" person) the eight intelligences of MI are linked to concrete things that young and old alike have had experience with: words, numbers, pictures, the body, music, people, the self, and nature.

Research in cognitive psychology applied to education has supported the notion that children benefit from instructional approaches that help them reflect upon their own learning processes (Marzano et al., 1988). When children engage in this kind of metacognitive activity, they can select appropriate strategies for problem solving. They can also serve as advocates for themselves when placed in new learning environments.

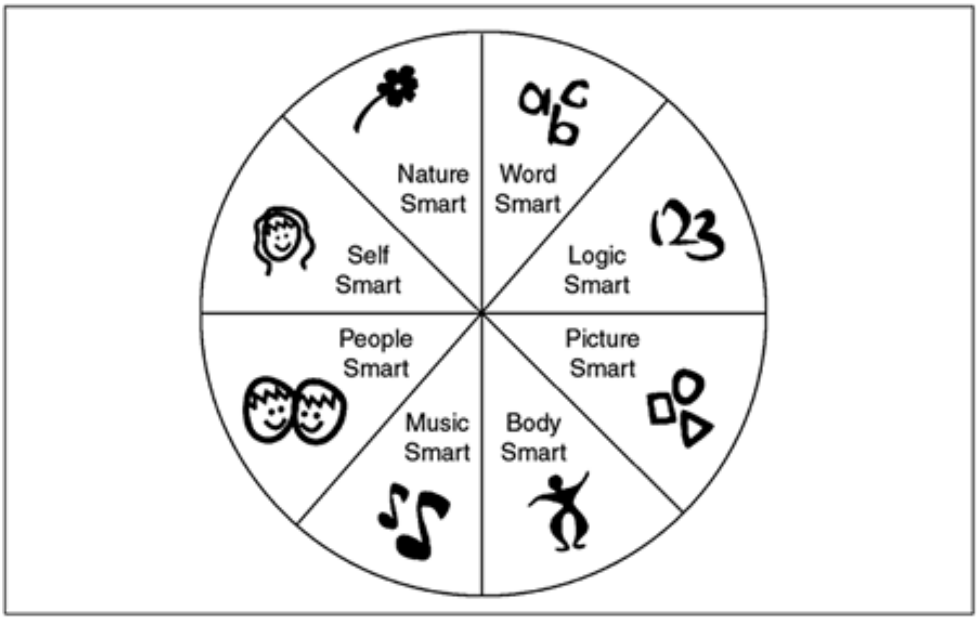
Five-Minute Introduction to MI Theory

How does a teacher present the theory of multiple intelligences to a group of students? Naturally, the answer to that question will depend in part on the size of the class, the developmental level of students, their background, and the kinds of instructional resources available. The most direct way to introduce MI theory to students is simply to explain it to them. When I go to a new classroom to demonstrate how to teach a multiple intelligence lesson, I always begin with a 5-minute explanation of the theory so students have a context for understanding what I am doing there. I usually begin by asking, "How many of you think you're intelligent?" I've discovered that there seems to be an inverse relationship between the number of hands that go up and the grade level that I'm teaching—that is, the lower the grade level, the more hands go up. This reminds me of NYU professor Neil Postman's remark that "children go into school as question marks and leave school as periods." What do we do in the intervening years to convince children that they're not intelligent?

Regardless of the number of hands that go up, I usually say, "All of you are intelligent—and not just in one way. Each of you is intelligent in at least eight different ways." I draw an "MI Pizza" (a circle divided into eight slices) on the blackboard and then begin to explain the model.

"First, there is something called word smart." I use simple terms to describe the intelligences, since words like "linguistic" are a mouthful for many children. As shown in Figure 4.1, I also accompany each term with a graphic symbol to spatially reinforce it. Then I ask questions. "How many people here can speak?" Usually, I'll get a lot of hands with this question! "Well, in order to speak you have to use words, so all of you are word smart!" "How many people here can write? You're using words here also, so again, you're all word smart." Essentially, I ask questions that build inclusion. I steer clear of questions that might exclude lots of students, such as "How many of you have read 15 books in the past month?" This is a learning model not for deciding which exclusive group one is a member of, but for celebrating all of one's potentials for learning. Otherwise, teachers might be preparing the way for students to say, "I just learned in school today that I'm not linguistically intelligent," or "I don't have to read this book, because I'm really not word smart."

Figure 4.1. MI Pizza



Here are the simple terms for each of the intelligences and some questions that I use in my presentations:

- *Linguistic*—Word Smart (see questions above)
- *Logical-mathematical*—Number Smart or Logic Smart: "How many of you can do math?" "How many people here have done a science experiment?"
- *Spatial*—Picture Smart: "How many of you draw?" "How many of you can see pictures in your heads when you close your eyes?" "How many of you enjoy watching television and films or playing video games?"
- *Bodily-kinesthetic*—Body Smart, Sports Smart, or Hand Smart (each term represents a different aspect of this intelligence): "How many of you like sports?" "How many of you enjoy making things with your hands, like models or Lego structures?"

- *Musical*—Music Smart: "How many of you enjoy listening to music?" "How many of you have ever played a musical instrument or sung a song?"
- *Interpersonal*—People Smart: "How many of you have at least one friend?" "How many of you enjoy working in groups at least part of the time here in school?"
- *Intrapersonal*—Self Smart: "How many of you have a secret or special place you go to when you want to get away from everybody and everything?" "How many of you like to spend at least part of the time working on your own here in class?"
- *Naturalist*—Nature Smart: "How many of you enjoy being out in nature?" "How many of you have ever had a butterfly collection, an insect collection, a collection of leaves from trees in your neighborhood, a collection of shells, or some other kind of collection of natural things?" "How many of you have pets or enjoy spending time with animals?"

You can develop your own questions to illustrate each intelligence. Just make sure they build in inclusion and give all children a chance to initially see themselves as intelligent. You can also give examples of what Howard Gardner calls the "end-states" of each intelligence—that is, people who have developed an intelligence to a high level of competence. These examples provide students with models to be inspired by and to aspire to. Pick famous figures and heroes from each student's own world. Examples might include

- Authors of children's literature that the class has been reading (Word Smart)
- Famous scientists students have studied in class (Number Smart or Logic Smart)
- Illustrators of children's literature, famous cartoonists, and filmmakers (Picture Smart)
- Famous sports heroes and actors (Body Smart)
- Famous rock stars, rappers, and other musicians (Music Smart)
- TV talk show hosts and politicians (People Smart)
- Famous entrepreneurs ("self-made" people) (Self Smart)
- Animal experts and nature explorers (Nature Smart)

Activities for Teaching MI Theory

Naturally, you'll want to go beyond a simple verbal explanation of the model, and you should strive to teach the model in all eight intelligences. There are a number of ways of introducing the model or of following up your five-minute introduction with reinforcing activities and supplementary experiences. Here are some examples:

Career Day: If you regularly bring members of your community into the classroom to talk about their jobs, begin to contextualize this activity within a multiple intelligence framework. Bring in an editor to talk about the kinds of "word smart" activities he uses, a tax accountant to speak about how being "number smart" helps her to help people, or an architect to explain the usefulness of being "picture smart" in her career. Other Career Day guests might include an athlete (body smart), a professional musician (music smart), a counselor (people smart), a person who has started a business (self smart), or a veterinarian (nature smart). Keep in mind

that each career usually involves several intelligences and that you might want to discuss how each role brings together a combination of intelligences in a unique way. These presentations are extremely important in emphasizing to students that each of the intelligences plays a vital part in people's success in the world. You may want to speak beforehand with the guests about the model so they can work it into their presentations. Or you can simply follow up their appearances by relating what they said or did to one or more of the eight intelligences.

Field trips: Take students to places in the community where each of the intelligences is particularly valued and practiced. Destinations might include a library (word smart), a science lab (logic smart), a crafts factory (body smart), a radio station that plays music (music smart), a graphic design studio (picture smart), a public relations firm (people smart), a psychologist's office (self smart), and a zoo (nature smart). Again, seeing these intelligences in context gives students a more accurate "real-life" picture of MI theory than they could ever get in a classroom setting.

Biographies: Have students study the lives of well-known people proficient in one or more of the intelligences (see Gardner, 1993c). Subjects for study might include Toni Morrison (word smart), Marie Curie (logic smart), Vincent Van Gogh (picture smart), Roberto Clemente (body smart), Yo-Yo Ma (music smart), Martin Luther King Jr. (people smart), Sigmund Freud (self smart), and Jane Goodall (nature smart). Make sure the people studied are representative of your students' cultural, racial, gender, and ethnic backgrounds. (See Chapter 13 for more multicultural examples of famous people and Chapter 11 for examples of famous people in each intelligence who overcame specific disabilities.)

Lesson plans: Teach an eight-way lesson on a particular subject or in a specific skill area (see Chapter 5 for guidelines on creating MI lessons). Explain beforehand to students that you are going to teach this material using each of the eight intelligences and that they should pay particular attention to *how* each of the eight intelligences is covered. After the lesson, ask students to describe your use of each intelligence. This activity requires students to reflect upon the kinds of processes necessary for each intelligence and reinforces their metacognitive awareness. You may also want to ask them which particular method or methods they preferred. In this way, you help students begin to understand which strategies they prefer to use when learning something new.

Quick experiential activities: An experiential way of introducing MI theory is to have students complete eight activities, each of which draws primarily upon the use of one intelligence. For instance, you might have students do some writing ("write down a few lines from a poem that you know"), math ("tell me how long ago a million seconds ago was"), drawing ("draw a picture of an animal"), running ("go outside and run to the end of the block and back"), singing ("let's all sing 'Row, Row, Row Your Boat' together"), sharing ("turn to a partner and share something nice that happened to you this week"), self-reflecting ("close your eyes and think about the happiest moment in your life—you won't have to share it with anybody"), and observing nature ("look out the window and notice all the living things and natural formations you can see"). Adjust the activities to the ability level of your students, choosing activities that just about everyone can do and giving those who can't do them

modified versions of the activities. You can use this approach either before or after explicitly describing the "eight kinds of smart." Make sure to ask students which activities they prefer, and remember to relate each activity to one (or more) of the eight intelligences.

Wall displays: Walk into a typical U.S. classroom and you'll often find a poster of Albert Einstein on the wall. Einstein is probably a good representative of multiple intelligences because he used several of them in his work, including spatial, bodily-kinesthetic, and logical-mathematical. Rather than just displaying this one poster, however, consider hanging eight posters on the wall, each representing a person especially proficient in one of the intelligences (see Gardner, 1993c, and the "Biographies" section in this chapter for suggested names). Or hang a banner reading "Eight Ways to Learn" or "This Is How We Learn in School" and display photos of students in the school using each of the intelligences.

Displays: Show products made by students in the school that required the use of each of the eight intelligences. Examples might include essays, stories, or poems (word smart); computer programs (logic smart); drawings and paintings (picture smart); musical scores (music smart); three-dimensional projects (body smart); cooperative projects (people smart); individual projects (self smart); and simulations of ecosystems (nature smart). The products could be displayed on a shelf, in a glass case, or on a table and rotated regularly so all students have a chance to display their achievements. Make sure each product is labeled with the intelligence or intelligences required to produce it.

Readings: For high school students, you can assign readings from any of the growing number of books and articles on the theory of multiple intelligences, including chapters from *Frames of Mind* (Gardner, 1993a) or *7 Kinds of Smart* (Armstrong, 1999a). Upper elementary and middle school students can read *You're Smarter Than You Think: A Kid's Guide to Multiple Intelligences* (Armstrong, 2003). Appendix B includes many more suggested readings.

MI tables: Set up eight tables in the classroom, each clearly labeled with a sign referring to one of the eight intelligences. On each table, place an activity card indicating what students are to do. At the word smart table, students can do a writing activity; at the number smart table, a math or science activity; at the picture smart table, a drawing activity; at the body smart table, a building activity; at the music smart table, a musical activity; at the people smart table, a cooperative activity; at the self smart table, an individualized activity; and at the nature smart table, an activity that involves observing an animal or plant. Divide the class equally into eight groups, assigning each group to a particular table. Have the groups work at the activity for a designated amount of time (perhaps five minutes), and then use a musical signal (e.g., a bell) to indicate that it's time to move to the next table (move clockwise). Continue until all students have been to each table and experienced each activity. Afterward, talk about students' preferences, relating each activity to its primary intelligence. (Chapter 7 deals more specifically with how to set up activity centers that reflect a multiple intelligence perspective.)

Human intelligence hunt: If you are introducing MI theory at the beginning of the school year, when students still don't know each other very well, a "human intelligence hunt" is a

useful way to teach students experientially about the eight kinds of smart while helping them get to know one another better. It is based on the premise that each of us is a "treasure chest" filled with special gifts. These gifts are our intelligences. Sometimes, though, we're unaware of other people's gifts, so we have to go on a "treasure hunt"—in this case, an "intelligence hunt"—to discover each other's special talents. Each student receives a list of activities like those in Figure 4.2. On a signal such as a bell, students take the activity sheet along with a pen or pencil and find other students in the room who can do the activities listed. There are three basic rules:

1. Students must actually *perform* the activities listed, not simply say they can do them.
2. Once a student performs an activity to the "treasure hunter's" satisfaction, he or she should initial the blank space next to the appropriate activity on the "treasure hunter's" sheet.
3. "Treasure hunters" can ask a person to perform only one activity; therefore, to compete in the treasure hunt, a student must have eight different sets of initials.

You can modify the activities listed in Figure 4.2 to include activities geared to your students' aptitudes and abilities. For instance, if you're working with very young students, you may want to use the song "Old MacDonald Had a Farm" rather than Beethoven's Fifth Symphony. You can even create a hunt based entirely on pictures, which would involve students finding people in the class who particularly enjoy doing the kinds of activities depicted in each picture. After the activity, remember to link each task to a different intelligence and to talk about what students learned about one another's gifts or intelligences.

Figure 4.2. Human Intelligence Hunt

Find someone who can:

- Hum some of Beethoven's Fifth Symphony (Music Smart)
- Do a simple dance step (Body Smart)
- Recite four lines from a poem (Word Smart)
- Explain why the sky is blue (Logic Smart)
- Briefly share a recent dream (Self Smart)
- Draw a picture of a horse (Picture Smart)
- Honestly say she is relaxed and comfortable relating to other people during this exercise (People Smart)
- Name five different types of birds (or trees) that are found in the immediate area (Nature Smart)

Board games: You can create a homemade board game based on the eight intelligences. Get

a manila file folder and a magic marker and create the common board game format of a winding roadway divided into many small squares. Assign each intelligence a color and then place an appropriately colored intelligence symbol on each square of the game board. You may use the symbols in Figure 4.1 or make up your own. Then create eight sets of two-by-three-inch game cards from eight colors of paper that match the colored symbols on the game board. On each set of game cards, type or write activities that involve using a specific intelligence. Here, for instance, are some activities for picture smart at the primary level:

- Draw a picture of a dog in less than 30 seconds.
- Find an object in the shape of a circle in the class.
- Tell us your favorite color.
- Describe four blue things you see in the room.
- Close you eyes and describe the pictures in your mind.

Make sure most of the activities are within the capabilities of your students. Then get a pair of dice and some miniature plastic figurines as game pieces, and start playing! Alternatively, there are commercially available games that include activities that cover most of the multiple intelligences (e.g., the board game Cranium).

MI stories, songs, or plays: Be creative and make up your own story, song, or play for teaching the idea of multiple intelligences (your students can help you). You might, for example, create a story about eight children, each an expert in a particular intelligence, who don't get along very well and who are forced into an adventure that requires them to travel to distant magical lands. In each part of the story they encounter challenges that require the unique intelligence of a particular child. For example, the children come to a land where, in order to be understood, people have to communicate through singing, so the musical child guides them through this land. In another land, they fall into a hole and get out through the bodysmart child's expertise. At the end of the story, they are able to accomplish their task (perhaps to retrieve a golden jewel) because they have drawn upon the talents or intelligences of all eight children.

This story can then be used as a metaphor for classroom behavior: we need to respect and find ways of celebrating the unique talents and gifts of each student. A story like this one could be put on as a play, a puppet show, or a musical and performed for other students in the school.

There are undoubtedly many other activities that would help teach students about the theory of multiple intelligences. The development of such experiences should be an ongoing process throughout the year. After you have introduced a few activities, it may be helpful to prominently display a poster listing the eight intelligences, perhaps in the form of the MI Pizza. When something happens that seems to relate to one or more of the eight intelligences, you can then use the poster to help emphasize the relationship. For example, if several students express a strong desire to work together on a project, you can point out that they want to use their "people smarts." For a student who has created a particularly apt visual illustration for an assignment, you can suggest that she really employed her "picture smarts" in the work. By

modeling the practical uses of MI theory frequently in the daily activities of the classroom, you will help students internalize the theory and you should begin to see them use its vocabulary to make sense out of their own learning processes.

For Further Study

1. Drawing upon the material in this chapter or activities of your own choosing, develop a way to introduce the theory of multiple intelligences to your students. Note their initial reactions. Follow this up with supplementary activities. How long does it take before students begin to use the terms themselves? Note two or three examples of how students used the theory to explain their learning processes.
2. Create a mini-unit or special course for students on "learning about learning" that includes instruction in the theory of multiple intelligences. Include readings, exercises, activities, and strategies designed to help students understand their thinking styles so that they can learn more effectively.
3. Design a special wall display, bulletin board, or exhibit area where the eight intelligences are honored and celebrated. Include posters of famous people, photos of students engaged in MI activities, examples of products made by students in each of the intelligences, or all of these things.
