



teaching learning committee
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Multiple Intelligences in the College Classroom

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Howard Gardner is Professor of Education and Adjunct Professor of Psychology at Harvard University, Adjunct Professor of Neurology at the Boston University School of Medicine, and former Co-Director of Harvard Project Zero. Gardner is best known as the father of “multiple intelligences”, the idea that human intelligence is much more diverse and complex than previous single intelligence models would suggest. Gardner is the author of nineteen books, hundreds of articles and a series of video tapes. In addition, there are dozens of books written by practitioners who explain how to put Gardner’s ideas into practice in the classroom.

In this short paper, I would like to introduce the reader to the work of Howard Gardner and the work of authors who have expanded his ideas into classroom applications. In addition, I will provide several examples of how I have made use of multiple intelligences teaching in my classroom here at MSU-Bozeman.

The basic premise of Gardner’s multiple intelligence (MI) model, is that previous attempts by psychometricians to measure intelligence have been so muddled by cultural and historical perspective that they have missed the essence of human intelligence. An excerpt from Gardner’s MI Millennium video (2002):

It is important to understand that the IQ test [Alfred Binet] was developed to figure out who would have trouble in school in Paris in 1900...But, I can assure you, that if IQ tests had been made up by business people, they would have very different kinds of items on them. They wouldn’t care if you could recite numbers backwards, but they might want to know whether you can tell what a good deal is, whether you take risks, whether you’re entrepreneurial...And if we had developed intelligence tests in different eras – the Paleolithic era, the New Stone Age, the feudal era, or the Renaissance – intelligence tests would be different. [The point is] they always have a local and historical limitation on them.

Howard Gardner (2002)

In an attempt to find a way to think about human intelligence that supersedes culture and history Gardner has created the Multiple Intelligence Model which consists of eight intelligences. Below is a simple chart that outlines the eight intelligences Gardner professes (in his most recent book *Intelligence reframed: Multiple intelligences for the 21st century* (1999) Gardner discusses the possibility of a ninth intelligence – “spirituality” – but then backs away from that idea in his 2002 video).

Intelligence Area	Is strong in:	Likes to:	Learns best through:	Famous examples:
Verbal-Linguistic	Reading, writing, telling stories, memorizing dates, thinking in words	Read, write, talk, tell stories, memorize, work at puzzles	Reading, hearing and seeing words, speaking, writing, discussing and debating	T.S. Eliot, Maya Angelou, Virginia Woolf, Abraham Lincoln
Math-Logic	Math, reasoning, logic, problem-solving, patterns	Solve problems, question, work with numbers, experiments	Working with patterns and relationships, classifying, categorizing, working with the abstract	Albert Einstein, John Dewey, Susanne Langer
Spatial	Reading, maps, charts, drawing, mazes, puzzles, imaging things, visualization	Design, draw, build, create, daydream, look at pictures	Working with pictures and colors, visualizing, using the mind's eye, drawing	Pablo Picasso, Frank Lloyd Wright, Georgia O'Keefe, Bobby Fischer
Bodily-Kinesthetic	Athletics, dancing, acting, crafts, using tools	Move around, touch and talk, body language	Touching, moving, processing knowledge through bodily sensations	Charlie Chaplin, Martina Navratilova, Magic Johnson
Musical	Singing, picking up sounds, remembering melodies, rhythms	Sing, hum, play an instrument, listen to music	Rhythm, melody, singing, listening to music and melodies	Leonard Bernstein, Wolfgang Amadeus, Mozart, Ella Fitzgerald
Interpersonal	Understanding people, leading, organizing, communicating, resolving conflicts, selling	Have friends, talk to people, join groups	Sharing, comparing, relating, interviewing, cooperating	Mohandas Gandhi, Ronald Reagan, Mother Theresa
Intrapersonal	Understanding self, recognizing strengths and weaknesses, setting goals	Work alone, reflect, pursue interests	Working alone, doing self-paced projects, having space, reflecting	Eleanor Roosevelt, Sigmund Freud, Thomas Merton
Naturalist	Understanding nature, making distinctions, identifying flora and fauna	Be involved with nature, make distinctions	Working in nature, exploring living things, learning about plants and natural events	John Muir, Charles Darwin, Luther Burbank

Taken from: Developing students' Multiple Intelligences by Kristen Nicholson-Nelson (p. 13) (1998)

Gardner's central theme is intelligence is not a single construct but that rather the notion that individuals' have strengths in at least one and probably several of the intelligence categories. Therefore to categorize someone that is not strong in mathematical ability as "not intelligence" is a fallacy because that same person may in fact be very "intelligent" in another area. Anyone that is intelligent in any area should be considered intelligent.

As a college professor, I have found this model extremely useful in my classroom teaching. Below I will outline some of the ways I have made use of the model:

- 1) This model helps me be more respectful of the skills and strengths of all of my students, even if they do not perform well in my particular course which may demand a particular intelligence

Example: I teach a personal and family finance course which demands a great deal of mathematics. Many of the students who take that course are not strong in the area of math/logic but I can appreciate the fact that they are bright and capable persons in other areas.

- 2) This model reminds me to ask myself the following eight questions to try and encompass the preferred learning styles and intelligences of my students. For clarification of the idea, I list some tactics I use in my classes in parenthesis.

- ❖ **How can I include reading, writing, speaking? (texts, outside readings, short answer and essay assessments, presentations)**
- ❖ **How can I include numbers, classification, critical thinking and calculations? (word problems, statistics and demographic use, applications of the theory we discuss in class)**
- ❖ **How can I include visuals, colors, art, graphs, and pictures? (bring in art that depicts the topic I am discussing, power point presentations with graphics)**
- ❖ **How can I include movement, exercise, drama and crafts? (role playing, hands-on building of theoretical models on butcher block paper, sorting of cards (for example, I write tax deductions and tax exemptions on cards giving each student a card and ask them to group themselves into the correct group))**
- ❖ **How can I include music, sounds, rhythms, and dance? (start classes with music such as "Money" by Pink Floyd or "Tax Man" by the Beatles)**

- ❖ **How can I include group work, peer sharing, and discussion? (in-class group work such as asking students to explain a concept to their neighbor, asking students to generate examples from a lecture point, asking neighbors to work on a math problem together to check for understanding of the formula)**
- ❖ **How can I include private learning time and student choice? (giving students choices in their assessments – i.e., you can write a paper or give a presentation or conduct a series of interviews, asking for students to bring in real life examples from the media – allowing them time to reflect on what we have discussed in class)**
- ❖ **How can I relate this lesson to nature? (compare and contrast animal families to human families, discuss how animals deal with risk, uncertainty, planning for the future)**

3) I use the model to have students explain their intelligences to me and I explain myself to the class. Using the multiple intelligence model (I also make use of the “*True Colors*” model (Miscisin, 2001) and Perkins, Jay and Tishman’s (1993) critical thinking dispositions model) I ask students to identify their own intelligences and learning preferences so that I can match my teaching methods to their needs (the book “*So each can learn: Integrating learning styles and multiple intelligences*”(Silver, Strong & Perini, 2000) has reproducible questionnaires that can be used to gather this information) .

What I consistently find is that while my preferences for learning are lectures, readings and problem solving, I am virtually alone with those preferences. Most students (in Health and Human Development) report that they have intelligences in interpersonal and intrapersonal skills. This clarification of preferences lets the class know that I recognize that my preferences aren’t the same as theirs. To that end, I find them more understanding of my love for reporting statistics and assigning readings and in turn, I try to think of teaching methods and assignments that allow for small group interaction and personal reflection out of respect for their intelligences.

4) I teach many courses on “how to teach”, some through the Department of Education and some through the Department of Health and Human Development (since most human services involve some sort of communication to patients/clients/customers).

I explicitly use the model as a way for students to think about their future person to person interactions. I find that it teaches self-awareness and respect for others and instills the idea that the burden of learning does not lie only on the shoulders of the learner. Rather, it is the responsibility of the teacher to relay information as best they can – even if that means relaying it in such a way that is antithetical to the teacher's own preferred learning style.

There are a myriad of references for those interested in implementing multiple intelligence ideas into their classrooms. I have found it very rewarding and can only imagine that same would be true for anyone else that implements these ideas. The list below is a suggested reading list (it also serves as the bibliography for this short paper).

Armstrong, T. (2000). *Multiple intelligences in the classroom*. Association for Supervision and Curriculum Development: Alexandria, VA

Campbell, L., Campbell, B., & Dickenson, D. (1999). *Teaching and learning through multiple intelligences* (2nd ed.). Needham Heights, MA: Allyn and Bacon.

Gardner, H. (2002). *MI: millennium*. Into the classroom media: Los Angeles, CA

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Miscisin, M. (2001). *Showing our true colors*. True Colors, Inc. Publishing: Riverside, CA

Nicholson-Nelson, K. (1998). *Developing students' multiple intelligences*. Scholastic: New York

Perkins, D., Jay, E., & Tishman, S. (1993, January). *Beyond abilities: A dispositional theory of thinking*. Merrill-Palmer Quarterly, 39(1) 1 -21.

Silver, H. F., Strong, R. W., & Perini, M. J. (2001). *So each may learn: Integrating learning styles and multiple intelligences*. Association for Supervision and Curriculum Development : Alexandria, VA