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Workshop: Tapping into Multiple Intelligences

Explanation | Demonstration | Exploration | Implementation | ✓ Get Credit

Welcome to **Tapping into Multiple Intelligences**. Hopefully, you'll tap into a few of your own intelligences to learn about this important theory. Start here in the **Explanation section**, which is all about the CONCEPT. Then go on to **Demonstration**, where we move from CONCEPT to CLASSROOM!

Read the transcript from the online chat with Howard Gardner

Transcript

🔘 **What is the theory of multiple intelligences (M.I.)?**
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What is the theory of multiple intelligences (M.I.)?

> *An intelligence is the ability to solve problems, or to create products, that are valued within one or more cultural settings.*
>
> — Howard Gardner
> FRAMES OF MIND (1983)

Howard Gardner claims that all human beings have multiple intelligences. These

multiple intelligences can be nurtured and strengthened, or ignored and weakened. He believes each individual has nine intelligences:

1 **Verbal-Linguistic Intelligence** -- well-developed verbal skills and sensitivity to the sounds, meanings and rhythms of words

2 **Mathematical-Logical Intelligence** -- ability to think conceptually and abstractly, and capacity to discern logical or numerical patterns

3 **Musical Intelligence** -- ability to produce and appreciate rhythm, pitch and timber

4 **Visual-Spatial Intelligence** -- capacity to think in images and pictures, to visualize accurately and abstractly

5 **Bodily-Kinesthetic Intelligence** -- ability to control one's body movements and to handle objects skillfully

6 **Interpersonal Intelligence** -- capacity to detect and respond appropriately to the moods, motivations and desires of others.

7 **Intrapersonal Intelligence** -- capacity to be self-aware and in tune with inner feelings, values, beliefs and thinking processes

8 **Naturalist Intelligence** -- ability to recognize and categorize plants, animals and other objects in nature

9 **Existential Intelligence** -- sensitivity and capacity to tackle deep questions about human existence, such as the meaning of life, why do we die, and how did we get here.

What Do You Think?

Howard Gardner[1] defined the first seven intelligences in FRAMES OF MIND (1983). He added the last two in INTELLIGENCE REFRAMED (1999). Gardner is a psychologist and Professor at Harvard University's Graduate School of Education, as well as Co-Director of [Harvard Project Zero].

1. Buzzwords

Based on his study of many people from many different walks of life in everyday circumstances and professions, Gardner developed the theory of multiple intelligences. He performed interviews with and brain research on hundreds of people,

including stroke victims, prodigies, autistic individuals, and so-called "idiot savants."

According to Gardner,

- All human beings possess all nine intelligences in varying amounts.
- Each person has a different intellectual composition.
- We can improve education by addressing the multiple intelligences of our students.
- These intelligences are located in different areas of the brain and can either work independently or together.
- These intelligences may define the human species.

To help understand how you learn best, take this short Multiple Intelligences Self-Inventory. There are just a few questions to answer, which should take approximately five minutes to complete.

Interactivity

Click here to see our Multiple Intelligences animation

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How does this theory differ from the traditional definition of intelligence?

Gardner's multiple intelligences theory challenged traditional beliefs in the fields of education and cognitive science.

According to a traditional definition, intelligence is a uniform cognitive capacity people are born with. This capacity can be easily measured by short-answer tests.

According to Howard Gardner, intelligence is:

- The ability to create an effective product or offer a service that is valued in a culture;
- A set of skills that make it possible for a person to solve problems in life;
- The potential for finding or creating solutions for problems, which involves gathering new knowledge.

An educational system based on national standards and efficient, relatively cheap, universal multiple choice testing is central to the traditional concept of intelligence. In practice a student's score on an **I.Q.**[2] test or **WISC**[3] ranks his or her strengths and weaknesses. It qualifies students for special services (such as programs for the gifted or for those with learning disabilities). An unfortunate use of IQ tests in schools is that it often results in labeling students.

2. [Buzzwords]   3. [Buzzwords]

Many educators, researchers, students and parents have long rejected multiple choice testing as a measure of intelligence. Multiple intelligence theory has served as a rallying point for a reconsideration of the educational practice of the last century.

Traditional view of "Intelligence"	"Multiple Intelligences" Theory
Intelligence can be measured by short-answer tests: Stanford-Binet Intelligence Quotient Wechsler Intelligence Scale for Children (WISCIV) Woodcock Johnson test of Cognitive Ability Scholastic Aptitude Test	Assessment of an individual's multiple intelligences can foster learning and problem-solving styles. Short answer tests are not used because they do not measure disciplinary mastery or deep understanding. They only measure rote memorization skills and one's ability to do well on short answer tests. Some states have developed tests that value process over the final answer, such as PAM (Performance Assessment in Math) and PAL (Performance Assessment in Language)
People are born with a fixed amount of intelligence.	Human beings have all of the intelligences, but each person has a unique combination, or profile.
Intelligence level does not change over a lifetime.	We can all improve each of the intelligences, though some people will improve more readily in one intelligence area than in others.
Intelligence consists of ability in logic and language.	There are many more types of intelligence which reflect different ways of interacting with the world
In traditional practice, teachers teach the same material to everyone.	M.I. pedagogy implies that teachers teach and assess differently based on individual intellectual strengths and weaknesses.

Teachers teach a topic or "subject."

Teachers structure learning activities around an issue or question and connect subjects. Teachers develop strategies that allow for students to demonstrate multiple ways of understanding and value their uniqueness.

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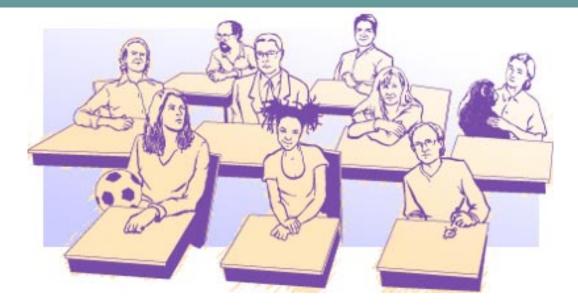Explanation   Demonstration   Exploration   Implementation   Get Credit

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What do multiple intelligences have to do with my classroom?

There are numerous ways to express oneself, and probably even more ways to gain knowledge and understand the universe. Individuals are capable, the theory of multiple intelligences advocates, of deep understanding and mastery in the most profound areas of human experience. Even long before the theory emerged and was named in 1983 by Howard Gardner, numerous teachers fostered the intelligences of their students.

Think of it this way: J.K. Rowling, Richard Feynmann, Lauryn Hill, Julian Schnabel, Mia Hamm, Colin Powell, Deepak Chopra, Jane Goodall, and Gary Larson are students on your seating chart.

- J.K. is writing the next Harry Potter adventure on scraps of paper.
- Richard is daydreaming the equations enabling a quantum computer.
- Lauryn softly hums the tunes for the sequel to "The Miseducation of Lauryn Hill."
- Julian has painted brilliant fall leaves on each windowpane.
- Mia can't wait to get to PE.
- Colin has organized the school's charity fund drive.
- Deepak provides in-class spiritual counseling.
- Jane adds a new animal to the class menagerie daily.
- Gary scrawls witty absurdities in the margins of his notebook.

The next time you have a chance to reflect on your class, imagine your students as individuals who have fully realized and developed their intelligences.

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How has M.I. theory developed since it was introduced in 1983?

Multiple intelligence theory has evolved and been embraced widely. After the publication of FRAMES OF MIND in 1983 (See our Resources), Howard Gardner became a celebrity among many teachers and school administrators. In addition to writing many more books and articles on multiple intelligences theory, Gardner has served as a consultant to a variety of school districts. The multiple intelligences movement now includes publishers, symposiums, Web sites, "how-to" manuals, educational consultants who consider themselves "M.I. specialists", as well as a number of critics.

Howard Gardner and others have revised and expanded the theory

Howard Gardner, formulator of the theory, continues to be its chief spokesperson. He has been acclaimed as the most influential educational theorist since **John Dewey**[4].

4. Buzzwords

Gardner has written and published 18 books and hundreds of articles. Chief among them are:

- FRAMES OF MIND (1983) introduced the theory of multiple intelligences.
- THE DISCIPLINED MIND: WHAT ALL STUDENTS SHOULD UNDERSTAND (1999) proposes a pedagogical approach centered around profoundly important topics and shows how they might be taught with a "multiple intelligence" approach.
- INTELLIGENCE REFRAMED: MULTIPLE INTELLIGENCE FOR THE 21st CENTURY (1999) reports on the evolution of and revisions to the theory of multiple intelligences.

Among the many prominent professors, teacher educators, consultants and expert teachers who have made valuable contributions to the field of multiple intelligences are:

Stephen Jay Gould, Vincent Astor Research Professor of Biology at NYU, most recently authored FULL HOUSE: THE SPREAD OF EXCELLENCE FROM PLATO TO DARWIN. His National Book Award-winning THE PANDA'S THUMB, and National Critic's Award-winning THE MISMEASURE OF MAN are among his many other distinguished works in the areas of science, evolution and human intelligence.

Robert J. Sternberg, IBM Professor of Psychology and Education at Yale University proposes a Triarchic Theory of Intelligence, which is complementary to M.I. His book in the area of cognitive psychology is BEYOND IQ: A TRIARCHIC THEORY OF INTELLIGENCE.

Carolyn Chapman is a consultant and trainer who has authored IF THE SHOE FITS . . . : DEVELOPING MULTIPLE INTELLIGENCES IN THE CLASSROOM and co-authored MULTIPLE ASSESSMENTS FOR MULTIPLE INTELLIGENCES. She and Lynn Freeman, another consultant, wrote MULTIPLE INTELLIGENCES CENTERS AND PROJECTS.

Ellen Weber, Director of Secondary Education at Houghton College, is one of this workshop's experts. She is the author of recent works STUDENT ASSESSMENT THAT WORKS: A PRACTICAL APPROACH and ROUNDTABLE LEARNING: BUILDING UNDERSTANDING THROUGH ENHANCED M.I. STRATEGIES.

Thomas Armstrong is an author and speaker whose books include MULTIPLE INTELLIGENCES IN THE CLASSROOM, AWAKENING YOUR CHILD'S NATURAL GENIUS, and AWAKENING GENIUS IN THE CLASSROOM.

Jane Carlson-Pickering developed the M.I.Smart! Program for the Chariho Regional School District. She teaches a graduate course about multiple intelligences at Rhode Island College. She is also one of this workshop's experts.

Countless educators have incorporated multiple intelligence theory into their work.

The multiple intelligences approach encourages teachers to regard intellectual ability

more broadly. Teachers are able to see that visual arts, music and dance can be just as valuable to students' understanding of the world they live in as traditional academic subjects. Numerous teachers and administrators have applied aspects of multiple intelligence theory in their classrooms and schools.

Through the serious and in-depth study of just a few subjects, rather than a minimal amount of attention to many subjects, Howard Gardner believes that students will develop a passion for exploring truly profound ideas.

Transcript

Click above to view a video of Howard Gardner talking with students at the Ross School in New York about the advantages of a curriculum that "connects".

The multiple intelligences movement includes book and software publishers, symposiums, literally thousands of Web sites (We provide our selected best choices in the workshop's M.I.Resources section), "how-to" manuals, and educational consultants.

What Do You Think?

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Who are the critics of this theory and what do they say?

E.D. Hirsch Jr., author of CULTURAL LITERACY: WHAT EVERY AMERICAN NEEDS TO KNOW (1988), and others have argued that multiple intelligence theory doesn't encourage educators to teach "core knowledge" -- a common collection of "essential facts that every American needs to know."

Hirsch and Gardner most recently "debated" the state of education today in the New York Times (9/11/99). Each submitted an article responding to the issue of what and how students should be taught. You can find information about the article in the M.I. Resources section of this workshop.

Responding to advocates of core cultural knowledge, Gardner proposes that the K-12 curriculum be organized around the most fundamental questions of existence. Possible courses of study that he recommends would examine in depth profound topics such as Darwin's theory of evolution and the Holocaust. In his book THE DISCIPLINED MIND: WHAT ALL STUDENTS SHOULD UNDERSTAND, Gardner writes, "students should probe with sufficient depth a manageable set of examples so that they come to see how one thinks and acts in the manner of a scientist, a geometer, an artist, an historian."

Advocates of psychometric evaluation who criticize M.I. include Linda S. Gottfredson, Richard Lynn, Hans Eysenck, and Charles Murray. Linda Gottfredson, a sociologist by training, is currently professor of educational studies at the University of Delaware.

She states that most mainstream psychologists have concluded that there is such a thing as "g", or general intelligence. In other words, Gottfredson argues that all of us do differ in intelligence and this difference can be scrupulously measured.

Critics of the theory say that:

- **It's not new**. Critics of multiple intelligence theory maintain that Gardner's work isn't groundbreaking -- that what he calls "intelligences" are primary abilities that educators and cognitive psychologists have always acknowledged.

- **It isn't well defined**. Some critics wonder if the number of "intelligences" will continue to increase. These opposing theorists believe that notions such as bodily-kinesthetic or musical ability represent individual aptitude or talent rather than intelligence. Critics also believe that M.I. theory lacks the rigor and precision of a real science. Gardner claims that it would be impossible to guarantee a definitive list of intelligences.

- **It's culturally embedded**. M.I. theory states that one's culture plays an important role in determining the strengths and weaknesses of one's intelligences. Critics counter that intelligence is revealed when an individual must confront an unfamiliar task in an unfamiliar environment.

- **It defeats National Standards**. Widespread adoption of multiple intelligence pedagogy would make it difficult to compare and classify students' skills and abilities across classrooms.

- **It is impractical**. Educators faced with overcrowded classrooms and lack of resources see multiple intelligence theory as utopian.

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What are some benefits of using the multiple intelligences approach in my school?

1 Benefit

You may come to regard intellectual ability more broadly. Drawing a picture, composing, or listening to music, watching a performance -- these activities can be a vital door to learning -- as important as writing and mathematics. Studies show that many students who perform poorly on traditional tests are turned on to learning when classroom experiences incorporate artistic, athletic, and musical activities.

Take music, for example. As educator, David Thornburg of the Thornburg Institute notes,

"The mood of a piece of music might communicate, clearer than words, the feeling of an era being studied in history. The exploration of rhythm can help some students understand fractions. The exploration of the sounds of an organ can lead to an understanding of vibrational modes in physics. What caused the great scientist Kepler to think of the motions of planets in musical terms? Astronomy students could program a synthesizer to play Kepler's 'music of the spheres' and explore history, science, math and music all at once."

2 Benefit

You will provide opportunities for authentic learning based on your students' needs,

interests and talents. The multiple intelligence classroom acts like the "real" world: the author and the illustrator of a book are equally valuable creators. Students become more active, involved learners.

3 Benefit

Parent and community involvement in your school may increase. This happens as students demonstrate work before panels and audiences. Activities involving apprenticeship learning bring members of the community into the learning process.

4 Benefit

Students will be able to demonstrate and share their strengths. Building strengths gives a student the motivation to be a "specialist." This can in turn lead to increased self-esteem.

5 Benefit

When you "teach for understanding," your students accumulate positive educational experiences and the capability for creating solutions to problems in life.

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How can applying M.I. theory help students learn better?

Students begin to understand how they are intelligent. In Gardner's view, learning is both a social and psychological process. When students understand the balance of their own multiple intelligences they begin

- To manage their own learning
- To value their individual strengths

Teachers understand how students are intelligent as well as how intelligent they are. Knowing which students have the potential for strong interpersonal intelligence, for example, will help you create opportunities where the strength can be fostered in others. However, multiple intelligence theory is not intended to provide teachers with new IQ-like labels for their students.

Students approach understanding from different angles. The problem, "What is sand?" has scientific, poetic, artistic, musical, and geographic points of entry.

Students that exhibit comprehension through **rubrics**[5], **portfolios**[6], or demonstrations come to have an authentic understanding of achievement. The accomplishment of the lawyer is in winning her case through research and persuasive argument, more than in having passed the bar exam.

5. **Buzzwords**   6. **Buzzwords**

Students become balanced individuals who can function as members of their culture. Classroom activities that teach to the intelligences foster deep understanding about the essential questions of life, such as: Where do we come from? What's the world made of? What have humans achieved? What can we achieve? How does one lead a good life?

Transcript

Howard Gardner asks students at the Ross School to ponder a question.

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How can I find out more about M.I. theory?

There is certainly no shortage of books, articles and Web sites.

To help you on your journey as you explore this topic we have compiled an annotated list of M.I. Resources.

In addition to participating in this online workshop, you are encouraged to contact nearby schools that are already implementing M.I. theory into their programs. To help find such schools, you can start by contacting the Department of Education at a local university or college.

Many undergraduate and graduate schools of education publicize M.I. initiatives on their Web pages.

There are numerous elementary, middle and high schools - public and private - which focus their Web pages on M.I.

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