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Understanding Multiple Intelligences: Best Practice: Effective programs meet the needs of people with diverse intelligences

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EDUCATION ABOUT THE ENVIRONMENT

BEST PRACTICES REVIEW SERIES

Topic: Understanding Multiple Intelligences

Best Practice: Effective programs meet the needs of people with diverse intelligences.

Have you ever wondered why someone who is very smart has trouble using a map? Why one person can follow a map, but is confused by written instructions? Howard Gardner devised an explanation with the theory of multiple intelligences, presented in his 1983 book Frames of Mind.

Prior to Gardner, it was generally believed that intelligence was a single entity that was inherited, and that human beings - initially a blank slate - could be trained to learn anything, provided that it was presented in an appropriate, logical way. Thus, school and testing systems were designed around the subjects of reading and math, as was the iconic test of intelligence: the IQ test.

But Gardner questioned the idea that intelligence is a single entity and that it can be measured simply using IQ tests. Rather, he argued that each of us perceives and processes information in multiple ways. And our learning styles reflect these multiple intelligences, with some of us learning more easily by seeing, others by hearing, and others by doing. In fact, Gardner identified eight ways in which humans demonstrate their intellectual ability.

"While we all have these intelligences, individuals differ for both genetic and experiential reasons in their respective profiles of intellectual strengths and weaknesses" (Gardner 2003). Unfortunately, many of us aren't often allowed to pursue in-depth the knowledge that most interests us in ways that fully utilize our greatest abilities. In fact, many students may end up with negative experiences and labels as schools and standardized testing continue to "lead us away from embracing the variant nature of human cognition" (Eisner, 2004).

To be as inclusive as possible, our programs should be tailored to and/or include multiple learning styles.

Additional Resources and Information

Gardner, H. 2003. Multiple Intelligences after Twenty Years. Address to American Educational Research Association.

Gardner, H. 1983. Frames of Mind: The Theory of Multiple Intelligences. Basic Books, NY.

Herd, P, and C McAuliffe. 1995. Learning Naturally Using Multiple Intelligences. Greenwood Laboratory School, Missouri.

NPS Junior Ranger Program – Guide to Learning Styles and Child Development

http://www.nea.org/teachexperience/braik030626.html

http://www.childdevelopmentinfo.com/learning/multiple_intelligences.htm

http://www.thomasarmstrong.com/

www.familyeducation.com Test Your Child's Talents page

http://cookps.act.edu.au/mi_visual.htm The Multiple Intelligences Theory.

The Eight Intelligences

Intelligence	Indicators/Skills	Best Practices	Who relies on this intelligence?
Spatial: ability to represent the spatial world internally in your mind. These learners tend to think in pictures and create vivid mental images to retain information.	Those who turn first to the graphs, charts, and pictures; who like to "web" their ideas, and enjoy videos and movies.	DVDs, PowerPoint, pictures, maps, and models. Present information in visual form, encourage visualization of the concept.	Spatial intelligence can be used in the arts or in the sciences, by painters, sculptors, architects, engineers, and anatomists.
Linguistic intelligence: capacity to use language to express yourself and to understand other people. These generally elegant speakers think in words rather than pictures.	Writing, story telling, teaching; those who enjoy convincing others of their point of view.	Reading materials and lecture; allow demonstration of understanding via oral presentation or written account.	Those who always have a story to tell and quickly learn other languages; can include speakers, politicians, comedians, lawyers, writers.
Logical/Mathematical: think conceptually in logical and numerical patterns. These learners understand the underlying principles, the way a scientist or a logician does; or can manipulate numbers, quantities, and operations, the way a mathematician does.	Problem solvers; those who can handle long chains of reason and perform complex mathematical calculations, as well as work with geometric shapes.	Categorize/classify the information presented; count, measure, and break down into logical units.	People who "live" baseball statistics or who carefully analyze the components of problems. Also: scientists, doctors, lawyers, economists, detectives, mathematicians, scientists, computer programmers, and accountants.
Bodily/Kinesthetic: use all or part of the body (hands, fingers, arms) to solve a problem or create something. Can control body movements and handle objects skillfully. These learners express themselves, learn, and process information through movement.	Creators or builders; those who enjoy acting, dancing, and activities that are "hands-on" or "crafty."	Allow to express ideas through movement, role playing, creating models, dramatization, construction, and hands on experimentation.	People in athletics or the performing arts, particularly dance or acting. Also: craftspeople, sculptors, and mechanics – people who rely on use of their hands.
Musical/Rhythmic: ability to think in music and hear patterns, recognize them, remember them, and perhaps manipulate them. Many of these learners are extremely sensitive to environmental sounds.	Listening, singing, remembering melodies.	Use songs and music, put information in rhythms, adapt information to a melody.	People who constantly tap out intricate rhythms on the desk with their pencil. People who have a strong musical intelligence don't just remember music easily -- it's so omnipresent they can't get it out of their minds.
Interpersonal: ability to relate to and understand others. These learners try to see things from other people's point of view to understand how they think and feel. They have an uncanny ability to sense feelings, intentions, and motivations.	Seeing multiple points of view, listening, using empathy, co-operating with groups.	Work in teams, peer teaching, write team papers or accounts.	It's an ability we all need, but is at a premium if you are a teacher, clinician, salesperson, or politician. Anybody who deals with other people in "helping positions" has to be skilled in the interpersonal sphere.
Intrapersonal: ability to self-reflect and be aware of one's inner state of being, a well-developed self-knowledge. These learners try to understand their inner feelings, dreams, relationships with others, and strengths and weaknesses.	Reflecting and analyzing self; awareness of inner feelings, desires, dreams, and understanding role in relationship to others.	Individualized projects; allow to work alone. Self-paced instruction, conduct silent reflections on nature pictures, keep a journal, evaluate own strength/weakness in science.	Those who have a good understanding of themselves and tend not to screw up because they know what they can do and what they can't do. And they tend to know where to go if they need help. Poet, autobiographer, artist, counselor, psychologist, philosopher
Naturalist: ability to discriminate among living things (plants, animals, be sensitive to other features of the natural world (clouds, rock configurations), and have an understanding of natural phenomena.	Those that recognize and classify features of the environment; remember outdoors features, are comfortable outdoors.	Hands-on examination and questioning of the natural world; sorting, classifying by type, list characteristics of the feature; work alone or in teams.	Clearly of evolutionary value as hunters, gatherers, and farmers; central to: botanists, chefs, florists, gardeners, and outdoor educators; also those that can identify makes of cars, sneakers, makeup, and utilize other kinds of pattern recognition.