



# BULLETIN

## Nurturing Multiple Intelligences

by

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It is becoming more widely recognized that intelligence is not a unitary, fixed entity. IQ scores give a narrow conception of intelligence. In fact, the question "How smart is your child?" is being replaced by the question "How is your child smart?"

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Perhaps the most famous proponent of the concept of multiple intelligences is Howard Gardner of Harvard University. In his book *Frames of Mind* (1983), Gardner proposed the existence of seven intelligences. He used the word "intelligence" rather than "talent" or "aptitude" advisedly; he wished to emphasize the point that all seven were of equal status, not subordinate to the IQ. All seven met a number of criteria: presence of a developmental history and a definable end state, existence of prodigies and savants, use of a distinct symbol system, existence of a set of core operations, and the ability to be isolated by brain damage. Gardner continues to investigate additional areas of expertise (such as cooking, spirituality, humor, emotion, and others) for the existence of even more intelligences.

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Key to the theory of Multiple Intelligences are several principles. First, all people possess all seven intelligences, but the pattern of strengths and weaknesses differentiates among us. Second, most people can develop all of the intelligences to an adequate level of competency. This is why intentional nurturing of all seven is so important. Third, the intelligences work together in complex ways. For example, persons high in interpersonal intelligence must also have high degrees of linguistic intelligence. Fourth, there are many ways to be intelligent in each category. This has implications for identification of giftedness; our assessment tools must be expanded to broader conceptions of intelligence.

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The remainder of this Bulletin will present an overview of each of the seven intelligences and how to nurture them. First to be considered will be the two areas that have been traditionally thought to be indicative of intelligence: the linguistic and logical/mathematical intelligences. Not only are these the main areas that are tapped by our current "intelligence" tests, but they are also the ones most emphasized, taught, assessed and, in general, valued in schools.

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Intelligences	Concerned With	Expert	Games	Challenging School	Activities Home
<b>Linguistic</b>	words, humor, language	Shakespeare, T.S. Eliot	Scrabble, Balderdash	debate, radio, Jr. Great Books, school newspaper	storytelling, foreign language tapes, writing plays
<b>Logical/ Mathematical</b>	numbers, reasoning, abstract patterns	Marie Curie, Einstein	Monopoly, cribbage, Yahtzee, Crack the Case	critical thinking activities, Socratic questioning, creating experiments	logic puzzles, codes, mysteries
<b>Spatial</b>	images, forms, visualization	I. M. Pei, Picasso	Pictionary, chess, Welltris	tangrams, concept maps, OM nonverbal problems, art	orienteering, cartooning, optical illusions, Legos
<b>Musical</b>	sounds, rhythms	Mozart, Elton John	Simon, Name that Tune	band / chorus, mnemonics	jump rope jingles, Morse Code
<b>Bodily/ Kinesthetic</b>	movement	Baryshnikov, Joe Montana, Marcel Marceau	Charades, Twister	sports, drama, cheerleading, woodworking	juggling, mime, dance, sign language
<b>Intrapersonal</b>	knowledge of self, intuition	Freud, Buddha	The Ungame	Psychology for Kids, independent study, goal setting	diary, self-tests (as in <i>Psychology Today</i> )
<b>Interpersonal</b>	cooperation, empathy, leadership	Martin Luther King, Gandhi	Family Feud, Life	simulations, role plays, peer mediation	scouting, volunteer work, clubs

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### **Linguistic Intelligence**

□ This intelligence concerns the ability to use language effectively, perhaps as an orator, poet, editor, politician, humorist, or interpreter. As the medium of communication, this intelligence is valued and nurtured in schools, and students cannot be successful in school without a moderate degree of linguistic intelligence. High degrees of linguistic intelligence can facilitate the expression of other intelligences, whereas difficulties in this area can present barriers for the other intelligences.

Activities challenging to children high in linguistic intelligence might include studies of dialectical variants in expression (soda in the East = pop in the Midwest, drinking fountain = bubbler, etc.), studies of foreign (ancient or modern) languages, or investigations of the origins of slang expressions.

### **Logical/Mathematical Intelligence**

The second of the intelligences typically emphasized by schools, this intelligence includes not only the ability to use numbers but reasoning ability and scientific thinking ability. The current efforts to develop critical thinking skills also dovetail with this intelligence. Any activity which relies on the development of a logical sequence of steps is utilizing this intelligence. Careers which draw on this intelligence include mathematician, accountant, scientific researcher, and computer programmer.

□ To challenge children in the logical/mathematical field, activities might include Socratic questioning, designing original experiments, and solving or creating mysteries.

### **Spatial Intelligence**

□ Spatial intelligence involves the ability to visualize, along with sensitivity to color, line, shape, and form, and skill in manipulating them. Also included is the capacity to sense where one is in space or a geographical sense of direction. The expression of this intelligence may take many forms, from the skills of a good hunting scout to the talents of a sculptor to the vision of an artist or architect.

□ Challenging activities which employ spatial intelligence include concept mapping, three dimensional modeling, and creating picture metaphors. Picture metaphors are visual representation of ideas or concepts; for example, a drawing which shows how the 13 colonies were like an amoeba, or diagrams of how the body's organs may be compared to different animals.

### **Bodily/Kinesthetic Intelligence**

This intelligence relates to the ability to use one's entire body to express ideas and feelings (as in dance, acting, or mime), the skill to move one's body in intricate and purposeful ways (as in gymnastics, swimming, or basketball), and/or the capacity to create with one's hands (as in surgery or carpentry). Persons skilled in this intelligence seem to know exactly how to make their bodies perform optimally.

Activities to nurture the development of bodily/kinesthetic intelligence include learning sign language, creating dance or aerobics routines, and developing body maps. Body maps involve using body parts to represent other domains: the points of the compass (your head is north--what is east?), a map of the U.S. (your right hand is Maine--what is your left foot?), two-digit multiplication (multiply right knee by right shoulder, and then left shoulder).

## Musical Intelligence

Musical intelligence involves the ability to perceive, discriminate, transform, and express musical or rhythmic forms. Adults with musical intelligence might be music critics, composers, or performers. Rap and mnemonic devices used as memory enhancers (i before e except after c) also include this intelligence.

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To challenge students to develop this intelligence, some activities might include creating original raps or mnemonics to remember facts, creating discographies, or composing musical essays. Discographies are collections of songs relating to historical events or other topics (rain, poverty, clouds, etc.) Musical essays are comprised of brief excerpts of songs or compositions designed to express the composer's thoughts or feelings on

## Intrapersonal Intelligence

Persons who are adept at intrapersonal intelligence have a high degree of self-knowledge and the ability to act adaptively on the basis of that knowledge. This includes self-discipline, self-understanding, and self-esteem; essentially they have taken to heart the admonition to "know thyself." Great philosophers and psychologists have this talent.

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Nurturing this intelligence involves providing time and opportunity for reflection and solitude. Journaling is often employed, as well as contemplation of how events or topics are personally relevant.

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## Interpersonal Intelligence

Interpersonal intelligence implies the ability to perceive and make distinctions in moods, intentions, motivations, and feelings of others. People with a high degree of this intelligence can read body language accurately, and are skilled in leadership. They can "work and play well with others."

Ways to nurture this intelligence include the use of cooperative learning, leadership training, and people sculpting. People sculpting uses people's bodies to represent parts of an idea or concept, such as a group sculpture of a skeleton, a typewriter, or a function in math.

## How the Intelligences Interrelate

Most complex activities require the simultaneous use of several intelligences. A football quarterback, for example, uses bodily/kinesthetic intelligence to pass and run; spatial intelligence to plan plays within the confines of the field; and interpersonal intelligence to lead the other players. A scientist uses logical/mathematical intelligence to plan an experiment; bodily/kinesthetic intelligence to carry out intricate lab procedures; and linguistic intelligence to report her results. In school, the majority of subjects can be approached using three or more intelligences.

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The chart on the next page summarizes the seven intelligences, and suggests ways to develop them at school and at home.

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