

Table of Contents

Foreword	vii
Acknowledgments.....	viii
Introduction.....	ix
Chapter 1: If the Shoe Fits	1
Chapter 2: Verbal/Linguistic Intelligence	23
Lesson Example 1: Say It	46
Lesson Example 2: The Debate Game	48
Lesson Example 3: The Author Game	49
Chapter 3: Musical/Rhythmic Intelligence	55
Lesson Example 1: Mac-A-Lena	69
Lesson Example 2: The Sound Machine	71
Lesson Example 3: The Beat Goes On	72
Lesson Example 4: Create the Beat	73
Lesson Example 5: The Music of Mozart	75
Chapter 4: Logical/Mathematical Intelligence	81
Lesson Example 1: Connections by Shape	94
Lesson Example 2: Pattern Hunt	95
Lesson Example 3: Silver Bells With Rap	97
Lesson Example 4: Coin Play	98
Lesson Example 5: Kidney Bean, Jelly Bean	100
Chapter 5: Visual/Spatial Intelligence	107
Lesson Example 1: Story on a Rope.....	123
Lesson Example 2: Pictured Predictions	124
Lesson Example 3: Create-A-Creature	126
Chapter 6: Bodily/Kinesthetic Intelligence	133
Lesson Example 1: Walk-A-Story	143
Lesson Example 2: Feelings in My World	144
Lesson Example 3: Act the Word	145
Lesson Example 4: Kapheim’s Musical Molecules	147

Chapter 7: Naturalist Intelligence	153
Lesson Example 1: Chambers of the Heart	163
Lesson Example 2: The Amazing Brain	164
Lesson Example 3: Puzzle Pieces	165
Chapter 8: Intrapersonal Intelligence	171
Lesson Example 1: Me T-Shirt	185
Lesson Example 2: If the Shoe Fits	186
Lesson Example 3: Portrait of ... as a Young	188
Lesson Example 4: My Strengths	189
Chapter 9: Interpersonal Intelligence	195
Lesson Example 1: Make a Team	205
Lesson Example 2: Know Your Job	207
Lesson Example 3: The Dinosaur Problem	208
Lesson Example 4: Symbol Search	210
Chapter 10: Integrating Multiple Intelligences into the Curricula	217
Chapter 11: The Grading Dilemma	237
Bibliography	249
Index	251

CHAPTER

1



If the Shoe Fits...

There are many misconceptions about intelligence. One misconception, disproven by modern research, is that all intelligence is fixed. That misconception argues that individuals die with the same intelligence with which they are born. Another one, also disproven by modern research, is that there is only one intelligence. Other misconceptions that spring from these two are likewise challenged by modern research.

Many scholars of intelligence have contributed to the debunking of these misconceptions as they have explored the inner frontiers of the human brain. Reuven Feuerstein, Jacob Rand, and their associates pioneered the work on cognitive modifiability through cognitive mediation. Roger Sperry investigated the different ways the right and left sides of the brain process information. Paul McLean provided the insights into the triune brain. Robert Sternberg, Stephan Ceci, and David Feldman have studied the development of different types of intelligence. The development of each intelligence depends on how the individual is nurtured. Howard Gardner and his colleagues developed the theory of multiple intelligences. In this theory, Gardner holds that every individual possesses several different and independent capacities for solving problems and creating products.

Just what is this thing called “intelligence” by these “brain” people? According to Gardner, “. . . a human intellectual competence must entail a set of skills for problem solving—enabling the individual to *resolve genuine problems or difficulties* that he or she encounters and, when appropriate, to create an effective product—and must also entail the potential for *finding or creating problems*—thereby laying the groundwork for the acquisition of new knowledge . . . the ideal of

what is valued will differ markedly, sometimes even radically, across human cultures, within the creation of new products or posing of new questions being of relatively little importance in some settings” (Gardner, 1983, p. 60–61).

In the traditional view of intelligence, the notion is that the individual’s single capacity is fixed. Following the definition of fixed intelligence established by Binet, single, fixed intelligence consisted of the ability to use language and do mathematics. Whole educational systems were built on Binet’s understanding. His tests marked the student for life. The IQ test results showing how well or poorly a young person could analyze language or mathematics made an indelible and immutable mark. From this single score, a permanent tattoo, the student’s path was set.

After Feuerstein and his colleagues had disproven Binet’s notion of the fixed intelligence, Gardner and his peers developed the theory of many intelligences. The first important key to understanding Gardner’s theory is that intelligences are of consequence in a particular cultural setting. After years of studying the cognitive development of normal, gifted, and brain-damaged young people at the Boston University School of Medicine, the Veteran’s Administration Medical Center of Boston, and Harvard’s Project Zero, and after the study of problem solving in cultures around the world, Gardner postulated his theory of multiple intelligences. He groups the eight intelligences into three categories.

The *language-related* intelligences, verbal/linguistic and musical/rhythmic, he describes as “object free.” These two intelligences reflect the structure of individual languages. For instance, some linguists consider the Japanese language to have a very analytic form. This form enables them to perform analytic tasks more easily. On the other hand, the French language is image filled. Thinking in pictures helps develop the verbal capabilities.

The second category he calls personal forms (interpersonal and intrapersonal intelligences). In this category he includes the *personal-related* intelligences that reflect the powerful restraints inherent in the personal vision of self, expectations of others, accepted norms of thinking or acting, and cultural pressures. What an individual wants to become competes with a multitude of discordant voices that may make major changes in that goal.

The third category he calls *object related*. In this category he includes bodily/kinesthetic, visual/spatial, logical/mathematical, and naturalist intelligences. The object-related intelligences are subject to the structure and function of the objects that the individual must work with for solving a problem or making a product. How the learner uses canvas and brushes is going to be different from how he uses clay and a scalpel.

It is essential to remember that the definition of intelligence highlights problem solving and product making as the most important elements. This suggests that intelligence is more than what we can observe in a person’s action and speech. What seems most important is the decision-making processes that occur before the actions. For instance, when a basketball player comes down the floor and makes great moves to the basket that leave everyone else watching in amazement, what mental operations triggered those moves? When a concert violinist stuns her

audience with her choice of technique, why did she decide on that precise sequence? Ultimately, it is these nuances of choice that define the intelligence.

The Eight Intelligences

There were many candidates for “intelligences” that met his definition. However, after applying numerous criteria, only seven intelligences remained. He has since added an eighth intelligence.

VERBAL/LINGUISTIC INTELLIGENCE



The verbal/linguistic intelligence is concerned with the uses of language. People with this intelligence possess a particularly strong sensitivity to the meanings of words and a skilled aptitude for their manipulation. According to Gardner, these people have “the capacity to follow rules of grammar, and, on carefully selected occasions, to violate them” (1983, p. 77). On yet another level—the sensory level—those with a heightened verbal/linguistic intelligence are able to communicate effectively by listening, speaking, reading, writing, and linking. They also have a strong awareness of the varying functions of language, or more specifically, its power to stimulate emotions. Poets, authors, reporters, speakers, attorneys, talk-show hosts, and politicians typically exhibit verbal/linguistic intelligence.

MUSICAL/RHYTHMIC INTELLIGENCE



As Gardner describes, “There are several roles that musically inclined individuals can assume, ranging from the avant-garde composer who attempts to create a new idiom, to the fledgling listener who is trying to make sense of nursery rhymes (or other ‘primer level’ music)” (1983, p. 104–105). Each of us holds musical capabilities to some degree, the difference is that some people have more skill than others. No matter what range of talent, we all possess a core of abilities necessary for enjoying a musical experience. These consist of the musical elements of pitch, rhythm, and timbre (the characteristic elements of a tone). People with a more highly developed musical/rhythmic intelligence are singers, composers, instrumentalists, conductors, and those who enjoy, understand, or appreciate music.

LOGICAL/MATHEMATICAL INTELLIGENCE



The logical/mathematical intelligence incorporates both mathematical and scientific abilities. Mathematicians are typically characterized by a love of working with abstraction and a desire for exploration. They enjoy working with problems that require a great deal of reasoning. A scientist, however, is “motivated by a desire to explain physical reality” (Gardner, 1983, p. 145). For scientists, mathematics serves as a tool “for building models and theories that can describe and eventually explain the operation of the world.” Mathematicians, engineers, physicists, astronomers, computer programmers, and researchers demonstrate a high degree of logical/mathematical intelligence.