

MULTIPLE INTELLIGENCES AND CHRISTIAN EDUCATION

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As we enter the new century, we are about to begin the process of changing what, during the 20th Century, was the primary understanding of human intelligence. For more than a century psychologists and educators assumed that our ability to learn comes from one uniform cognitive capacity. Researchers began testing the theory of that uniform cognitive capacity and, at the turn of the century, Alfred Binet, a French psychologist, came up with one way to measure intelligence. He formulated a test capable of measuring a child's capacity to learn—the Intelligence Quotient or IQ test. The original purpose of Binet's test was to discover student's intellectual shortcomings. In United States, this test caught on immediately but in another way to rank students. The average score of the Intelligence Quotient (IQ test) is 100. A student with a score of 131 is considered to be gifted, and a score of 81 places a student in special education.

Another way the IQ test was used, was the famous Scholastic Aptitude Test or SAT, which analyzes mathematical and grammatical knowledge and abilities. The use of this test can determine whether or not a college accepts a student.

North American education has used a battery of intelligence tests from kindergarten through university to create a paradigm of uniform schooling. This system proves to be cost-efficient, although it has disserved millions of people during this century. Many researchers, educators, and parents have expressed reservations about the use of such tests since they do nothing to judge a student's potential; they merely demonstrate if a child is good or not at standardized tests.

In 1983, Howard Gardner, an educator and neuropsychologist launched his theory of Multiple Intelligences in a book titled *Frames of Mind: The Theory of Multiple Intelligences*. Gardner, who is the John H. and Elizabeth A. Hobbs Professor in Cognition and Education at the Harvard Graduate School of Education, Adjunct Professor of Psychology at Harvard University, and Adjunct Professor of Neurology at the Boston University School of Medicine claimed the following in his theory:

1. Human beings have evolved to have several distinct intelligences and not one general intelligence;
2. Each intelligence is relatively independent or semi-autonomous of the others; although they work together.
3. Any significant achievement involves a blend of intelligences, and these intelligences are valued by cultures around the world, though not always to the same degree.

In his book, Gardner identified seven distinct intelligences; however, in 1996, he added an eighth one. If Gardner's theory is correct, then there is a challenge for education in general and also for Christian education as we go about the teaching ministry of the church in the next century.

THE EIGHT INTELLIGENCES

The following is a brief compendium of the eight intelligences that Gardner proposed in his

theory.

Verbal - Linguistic Cognitive Domain

Verbal - Linguistic intelligence is the ability to exhibit language development to its fullness. It is a way of knowing and comprehending the world through the use of language and verbal symbols. Activities such as silent reading, playing word games, writing materials, making up stories and poetry, getting involved in oral debates, formal speaking, creative writing, and solving complex verbal jokes are the primary ways of learning for this type of domain. People oriented toward the verbal-linguistic domain are good at verbalizing, spelling and writing well; reading comprehension is above the norm.

In order for this type of intelligence to develop, people need to develop the following skills:

- skills in the use of words for expressive and practical purposes
- skills in writing and reading
- skills, abilities, and interest in writing poems, stories, books, and letters

Logical - Mathematical Cognitive Domain

Logical - Mathematical intelligence is the ability to exhibit exceptional powers in the use of deductions and observations associated with mathematics and science. People oriented toward this type of intelligence are capable of dealing with inductive and deductive thinking, use of numbers and patterns. They tend to be systematic and very analytical in their way of thinking and project logical rationale or argument for what they do or think. They feel the need to know how things work, enjoy creating their own puzzles, develop interest in new inventions, enjoy complex mathematical and calculus operations, and problem solving.

In order to develop this type of intelligence, people need to develop the following skills:

- skills in problem solving, and logical reasoning
- curiosity for investigation, research, and statistical analysis
- skill in mathematical operations such as addition, subtraction, and multiplication

Visual - Spatial Cognitive Domain

Visual - Spatial intelligence is the ability to form mental models of spatial worlds. It relies on the sense of sight and the ability to put things in terms of the space and the position they occupy in relation to others. People oriented toward this type of intelligence possess a special capacity to visualize and think in terms of images. They also rely on imagination to develop real world pictures. They become good in working with colors, drawing, illustrating ideas, painting, sculpture, playing with textures, reading maps, graphs, chess, etc.

In order to develop this type of intelligence, people need to develop the following skills:

- skills in use of mental imagery
- skills in designing, create, painting, and drawing
- skills in sketching plans and assembling things
- skills in imagining and inventing things

Bodily - Kinesthetic Cognitive Domain

Bodily - Kinesthetic intelligence is the ability to use physical movement and the body, or parts of the body, to understand, interpret, or create innovative products, solve problems, or play games. Knowing and learning appears to be best achieved by hugging, dancing, touching, smelling, testing, creating, inventing things with the hands, and role playing. Bodily - kinesthetic persons are good with activities that engage the body in movement or in activities that require excellent body coordination. People who use this cognitive domain tend to be extraordinary in sports, gymnastics, weaving, woodworking, model building, and mimicking. They tend to be movers, meaning that the way they learn is by continuously moving the body.

In order to develop this type of intelligence, people need to develop the following skills:

- ability to control the movements of the whole body for physical activities
- skills in using the body for activities such as balancing, coordination, and sports
- hand dexterity and skills for detailed activities and small work
- expressive use of the body in rhythmic and imitative ways

Musical Cognitive Domain

Gardner's theory on musical intelligence points to persons who employ the brain in perception and production of music. Music inclined intelligence deals with recognizing tonal patterns, sounds, beats, and rhythm in appreciation of music and sounds in the environment. Usually they spend time in creating music with anything they can put their hands on, like banging on pots, moving to the beat, or singing songs they created. Musical oriented people are very sensitive to sounds created in the environment such as: rain on the roof, the chirp of a cricket, birds' songs, water, air, and animal sounds. They excel in singing or making instrumental music if opportunity to learn is given to them. They can also hear different speech accents or speech patterns and can easily mimic them. Music oriented intelligence can learn to distinguish specific instruments within a musical ensemble or orchestra or develop the ability to sing different voices in a melody.

In order to develop this type of intelligence, people need to develop the following skills:

- sensitivity to music, rhythm, and tunes
- skills in playing musical instruments
- effective use of the voice to sing in tune, alone or with other people
- enjoyment in listening to music

Interpersonal Cognitive Domain

Interpersonal intelligence deals with the capacity to value and respond to motives, moods, and objectives of others. It helps us to value and appreciate human differences and recognize others' feelings and intentions. It also enables us to understand the differences in our neighborhoods and around the world. Basically, this intelligence helps us understand and work with others. People who exert this type of intelligence work easily with other people, like to be in groups, and feel lost when they are by themselves. They learn by the interaction with others. Generally they have lots of friends, love team activities, and work very well in teams. Often they are very skilled in conflict resolution and mediation. They like to engage others in discussion and draw them into group activities. Interpersonal people like to be leaders of groups, know how to read group needs

and understand subtle social cues in groups.

In order to develop this type of intelligence, people need to develop the following skills:

- sensitivity to and understanding of other people's moods, feelings, and points of view
- ability to maintain good relationships with family, friends, and people in general
- take leadership among other people by solving problems, influencing decisions, and overseeing group relationships

Intrapersonal Cognitive Domain

Intrapersonal intelligence deals with the understanding of self, including goals, feelings, anxieties, strengths, and awarenesses that guide personal behavior. Intrapersonal intelligence learners appear to function in direct opposition to the interpersonal. People who are predominantly intrapersonal like to work by themselves, and hold themselves as the focal point. They are self-reflective and always aware of their inner feelings and the need for space for themselves. Their motivation comes from within; they do not expect external rewards. They are strong-willed and self-confident, often with well-thought-out opinions. Many times they are seen as distant or weird. As students, they tend to learn better by themselves, completing personal schedules, and keeping personal diaries or journals.

In order to develop this type of intelligence, people need to develop the following skills:

- awareness of one's ideas, gifts, and skills
- awareness of personal goals
- ability to control one's feelings, moods, and emotional responses
- ability to regulate one's mental activity, behavior, and personal stress

Naturalistic Cognitive Domain

This is the intelligence Gardner added to his original list. This intelligence speaks to the sensitivity to the world around us—living things, stones, clouds, plants, trees, insects, and all types of manifestations in nature. People strong in naturalistic intelligence like to recognize and classify elements of the natural world. They enjoy collecting items from nature, studying them, learning from them, and grouping them. They like to pay attention to subtleties in appearance, texture, form, sounds, structures, and differences among individuals of the same group. They also like to observe and organize patterns in nature. Many of our ancestors learned to develop this type of intelligence for survival purposes like hunting, farming, recognizing carnivorous animals, poisonous snakes, edible plants and fruits, as well as those to be avoided. It also helped them find natural cures for illnesses.

In order to develop this type of intelligence, people need to develop the following skills:

- understanding of animal behavior, needs, and characteristics
- ability to work with plants
- knowledge of natural living energy forces

Implications:

What are the implications of Gardner's theory for education and for church education?

First, we can no longer use only two of the intelligences to classify individuals in our school system, which is what the IQ test has been doing for many years. Furthermore, we can no longer

continue measuring reading, writing, science, and mathematics as the only way to place students in colleges or not, especially when the field they want to pursue addresses a different intelligence from the one for which they have been tested. Schools need to address the various ways in which students learn and not continue to lump everyone in the same system. Racial and ethnic persons place a different emphasis on ways of learning than the common rules that have been used for everybody. Standardized tests should be revisited as we approach the new century.

For church education, I believe we have to take seriously this theory which can have profound effects on worship, preaching, and teaching. We are about to see the first Christian education curriculum to take into account Gardner studies. The *Bible Quest* curriculum has been designed to use Gardner's Multiple Intelligence Theory. This curriculum is trying to address this issue by engaging the participants in activities that relate to varied intelligences and allow learners to choose those that better respond to their way of learning or cognitive domain.

For further reading from Howard Gardner:

The Disciplined Mind: What All Students Should Understand, New York: Simon & Schuster, 1999.

Intelligence Reframed: Multiple Intelligences for the 21st Century, New York: BasicBooks, 1999.

Multiple Intelligences: The Theory in Practice, New York: BasicBooks, 1993

The Mind's New Science: A History of the Cognitive Revolution, New York: BasicBooks, 1985

Frames of Mind: The Theory of Multiple Intelligences, New York: BasicBooks, 1983