Howard Gardner, Multiple Intelligences

Who knew that a young boy born in 1943 in Scranton, PA, would become one of the main well known theorists in today's society (Multiple Intelligences, 2002). Growing up, Howard, really enjoyed being studious and doing well in school, however, he enjoyed playing piano the most. He claims that music has always been a very important aspect in his life. Majoring as a developmental psychologist and neuropsychology, Gardner started his research towards what is today known as, the Theory of Multiple Intelligences (Howard Gardner, 2008).

Twenty-books translated into twenty-six languages and several hundred articles later, Howard Gardner's work with multiple intelligences has had a profound impact on thinking and practice in education (Multiple Intelligences, 2002). "An important part of understanding is knowing who we are and what we can do… Ultimately, we must synthesize our understanding for ourselves," states Howard (Multiple Intelligences, 2002, p.1). Ideas that he really puts into question is that intelligence is a single entity, that it results from a single factor, and that it can be measured simply from IQ tests.

He has also challenged the work of Piaget, proving that he has evidence to show that at any one time a child may be at very different stages that are interconnected (Multiple Intelligences, 2002). As Gardner became more deeply involved in the study of the mind, he re-evaluated Piaget's theories. Ultimately, Gardner found Piaget's theories to be too narrow of an explanation of how the human mind works. Gardner did not believe that there was one form of cognition that cut across all human thinking. It was Gardner's belief that theories such as Piaget's were incomplete in explaining all aspects

of the human mind, and how a person's experiences and society play a roll in their intelligence. These missing explanations inspired Gardner to construct his own theory, known today as the Theory of Multiple Intelligences (Paik, N.D.).

There are many other theorists that agree with Gardner about how individuals differ in intelligences and abilities. Spearman, Cattell and Horn, and Carroll all have comparable views to Gardner and believe that not all people gather and use information in the same way (Woolfolk, 2007). Robert Stenberg's triarchic theory of successful intelligence also has strong correlations to Gardner's theory of multiple intelligences. Stenberg's theory discusses how successful intelligence is based off of one's own definition of success within their sociocultural context. Both Gardner and Stenberg believe that intelligence should be measured in a variety of ways, and not just from a mental abilities test. A person's experiential, cultural, and motivational factors all play a role in defining their intelligence. Stenberg's theory also backs Gardner's in the belief that humans have multiple intelligences (Woolfolk, 2007).

Dr. Howard Gardner developed the theory of multiple intelligences in 1983. This theory, explained in his book, *Frames of Mind: The Theory of Multiple Intelligences,* originally involved seven intelligences. Now there is an eighth and possible ninth intelligence added to his theory. They are separate abilities that can be used to learn and solve problems in the world are sometimes referred to as different potential pathways to learning. They can be applied in the classroom in a variety of ways where numerous behaviors can be executed.

The first intelligence is linguistic intelligence, which is the capacity to use language to express what is on your mind and to understand other people. It is a

sensitivity to the meaning and order of words. Ormrod (2006), in the textbook entitled Educational Psychology: Developing Learners, lists the intelligences and examples of relevant behaviors that could be seen in a classroom. Linguistic intelligence can be developed through making persuasive arguments and writing poetry. Both of these activities are examples of using language and vocalizing ones' opinions or feelings.

The second intelligence is logical - mathematical intelligence and is defined as an understanding of the underlying principles of some kind of casual system, or to manipulate numbers, quantities, and operations. Students can solve mathematical problems quickly in a timed exercise or test, generate mathematical proofs, which requires critical thinking and reasoning, or formulate and test hypotheses using of the scientific method and experimentation (Ormrod, 2006, p. 145).

Musical intelligence involves the ability to understand, create, and think in music. People with musical intelligence can hear, recognize and even manipulate patterns in music. A typical classroom application would be learning to play a musical instrument. Students may also compose works and learn about the basic theory and makeup of music (Ormrod, 2006, p.145).

The next intelligence, bodily or kinesthetic intelligence, is the capacity to use your whole body or parts of your body to solve a problem, make something, or put on some sort of production or activity. People with bodily/kinesthetic intelligence are able to use their bodies in a skilled way for self-expression or toward a goal. This intelligence can be matured through many large motor skill activities like dancing, playing basketball, or any other organized or instructed physical activity.

Spatial intelligence "is the ability to 'think in pictures,' to perceive the visual world accurately, and recreate it in the mind or on paper" (Guigon, 1998). It is the ability to represent the spatial world internally in one's mind. Activities such as drawing a mental image or comparing and contrasting objects that appear to be alike help develop this kind of intelligence (Ormrod, 2006, p. 145). People with spatial intelligence are commonly referred to as visual learners.

The next two intelligences, interpersonal intelligence and intrapersonal intelligence, deal with thoughts and behaviors of oneself and those of others. They are more personal and require reading others' and one's own behaviors. Interpersonal intelligence is the ability to understand other people and their moods, desires, and motivations (Guigon, 1998). It is possible to read another's mood and thus influence how they behave (Ormrod, 2006, p.145). The other intelligence noted above, intrapersonal intelligence, involves dealing with one's own thoughts and behaviors. Intrapersonal intelligence is an understanding of one's own emotions. It involves knowing oneself, what one can do, what one wants to do, and how one reacts to things (Guigon, 1998). When doing so, it is important to encourage students to acquire self-knowledge to learn how to better relate with others and identify their motives (Ormrod, 2006, p.145).

Lastly, the eighth and most recently adopted intelligence is naturalist intelligence. It involves sensitivity to nature and the environment as well as an ability to discriminate among living things like plants and animals (Guigon, 1998). Identifying, classifying, and participating in real life applications are ways to develop this intellignece. An example would be learning how to classify plant or animal species and then taking a field trip to a nature park to experience the certain aspects of nature they were learning about (p. 145).

A ninth intelligence, existential intelligence, is being considered. Existential intelligence deals with the ability to pose questions about life, death, and ultimate realities (Guigon, 1998).

Multimedia is another effective way to target each of the eight - or possibly nine - intelligences described above. Students are often required to learn in a certain manner; for example, many schools "have honored a certain kind of mind – ideally, one that combines language and logic – and tried to select individuals who excel in these forms" (Gardner & Veenema, 1996, p. 70). But, as research continues to reveal that students learn in different ways, "it makes little sense to treat everyone in a one-size-fits-all manner" (Gardner & Veenema, 1996, p. 70). Technology can aid in this process by allowing children to exhibit their understandings by means of media and representations that make sense to them" (Garnder and Veenema, 1996, p. 72). Textbooks, while presenting facts, are often limited to the creativity and modes in which this information is expressed. In other words, they are clear-cut and leave little room for interpretation. An example seen in the article "Multimedia and Multiple Intelligences" by Shirley Veenema and Howard Gardner uses the example of a civil war battle. Textbooks often describe such historical experiences very simply, but in reality, there are many aspects left out. Technology, especially through CD-ROMs and other interactive software, "attempts to deal directly with misconceptions and stereotypical habits of thought" that result from such representations. If technology is used wisely and strives to address the needs of students, it will hopefully continue to help students more effectively learn.

Pros and Cons of Using the Multiple Intelligence Theory

Teachers have experienced different feelings about using the Multiple Intelligence Theory in the classroom. Some feel it works well in the classroom, and others feel the theory wouldn't work well. They may have tried it and saw how it works or they may have not even wanted to try it because they feel it would not work in their classroom. The pros and cons expressed here are the ways teachers and other people feel about using the multiple intelligence theory in the classroom.

Some teachers that use the theory feel it is a good way to give students opportunities to learn and develop in all of the different intelligences. They like how it gives the students the ability to excel in all of the areas instead of just the areas they do well in (Theory of multiple intelligences, 2008). Other people like how it is a positive way to look at the students' potential. It encourages teachers to use many different ways to teach a lesson to include the intelligences in a way that will help the students. These lessons would focus on the student's diverse abilities so the students can understand the lesson better. They feel students would benefit from the theory because it is getting the student to think about a certain topic in many different ways, and it would expand their thinking process (Ormrod, 2006).

Also it is felt that the students would be more involved and enjoy learning when the lesson is being taught in a way they understand and enjoy. The theory is looking at the strengths and weaknesses the child has in certain areas. Some teachers like the way it allows them to produce a more individualized education to meet the needs of each child (Theory of multiple Intelligences, 2008). This approach allows the teacher to see which intelligences each student succeeds in or lacks in. Teachers use what they find to help make the lessons more focused towards the child's needs. Some people like how the

teachers can use more than one intelligence together to give the students a wider range of abilities in each area. Others feel using the intelligence theory is a way to help the teachers work with the student's diverse abilities (Ormrod, 2006).

While some teachers feel the theory is a good idea, there are some that feel it wouldn't work in a classroom. Some feel using the multiple intelligence theory in the classroom will narrow the gifted and talented programs because the theory looks at students as being equally gifted but in different ways. It is looking at the students on a more equal level so they think no one child would be looked at as more gifted than another student (Theory of multiple intelligences, 2008). Some feel that is not right to say that students are good in one intelligence and not in another. Another criticism is people are afraid that teachers will excuse the child from trying in the areas that they don't do well in. They feel the teacher will just let the student work in the areas that they exceed in and not make them worry about the ones they struggle in (Theory of multiple intelligences, 2008).

Others feel that the way Gardner uses the word intelligence is not right. They feel Gardner replaces the word intelligence where most people would use the word ability. They also feel intelligence only looks at the cognitive and mental ability and that the definition of intelligence is too narrow (Theory of Multiple intelligences, 2008). There are many issues about using the word intelligence in this theory.