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### Multiple Intelligence Theory in the Classroom

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**Regis University**  
School for Professional Studies Graduate Programs  
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MULTIPLE INTELLIGENCE THEORY  
IN THE CLASSROOM

by  
Carolann Ellingson

A Research Project Presented in Partial Fulfillment  
of the Requirements for the Degree  
Master of Education

REGIS UNIVERSITY

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## ABSTRACT

Howard Gardner first proposed his theory of Multiple Intelligence theory in 1983. Over the past two decades this theory has made its way into classrooms and has gained positive attention. However, with the restrictions of set curriculums and standardized testing, Multiple Intelligence theory has faced obstacles implementing fully into the classroom. To effectively apply this theory into the classroom there needs to be openness to differences within the classroom and how students learn. The goal of this project was to present a project that will be a useful tool for beginning and experienced teachers. The strategies presented in this project are meant to help foster a positive learning environment for every classroom. Limitations and recommendations were also presented for future research.

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## Chapter 1

### INTRODUCTION

Gardner (1983) introduced his theory of Multiple Intelligence (MI) over 20 years ago. Although some educators have taken an interest in this theory, not all have realized the benefits of this theory. In Gardner's theory, he proposed that individuals possess at least seven different intelligences that should be developed and stimulated in an appropriate learning environment. Also, Gardner pointed out that traditional schools only test students based on the linguistic and logic-mathematical intelligence. Therefore, an individual who does not test strong in these areas will not be given a true representation of their personal intelligence. The incorporation of MI theory into the classroom will be a benefit to both educators and students in regard to both academic standing and an increase in students' confidence.

#### Statement of the Problem

Today, many educators in the classroom tend to perceive intelligence as based, solely on linguistic and logical-mathematical intelligence. However, Gardner (1983, as cited in Blythe & Gardner, 1990) developed a theory in which he conceptualized seven intelligences that should be incorporated into the classroom. In most schools, academic achievement is addressed primarily through linguistic and logical-mathematical assessments; however, assessments should be well rounded to allow students to express their intelligence through other activities. Therefore, there is a need for the increased use of MI theory in the classroom through daily activities and projects.

## Purpose of the Project

The purpose of this project will be to present educators with information that shows how Gardner's (1983) MI theory can be incorporated into the classroom to help develop students' intelligences. Mettetal, Jordan, and Harper (1997) cited March and Shavelson (1985), who demonstrated that, when MI theory is incorporated into the classroom, there is improvement in standardized test scores as well as students' self-esteem. The author of this project intends to show how the use of MI theory in the classroom can help students to fully develop their different types of intelligences. Students, who can identify their strengths and weaknesses in the classroom, will become more successful learners.

## Chapter Summary

It is this researcher's position that the use of MI (Gardner, 1983) theory in the classroom will help to improve student learning and allow students more freedom to participate in activities they will enjoy. Also, teachers need to be aware of different learning styles through MI theory, not only on their own level but for the students as well. When students are aware of their own learning style as well as other classmates, they will develop a passion and desire to achieve because they will be involved in activities that meet their interest levels. Learning does not have to be based only on a textbook. It is important for teachers to become aware of students' capabilities and provide activities where students will succeed. In Chapter 2, the Review of Literature, this researcher will present the background material to support these positions to make a case for MI theory to be used in the classroom. In Chapter 3, the procedures used to develop effective learning strategies in the classroom based on MI theory will be detailed.

## Chapter 2

### REVIEW OF LITERATURE

Educators will always be introduced to new theories about how to improve learning and classroom instruction. Some theories will leave the classroom as quickly as they entered, while other theories will tend to have a lasting impact on teachers and students. Gardner introduced his Multiple Intelligence (MI) theory more than 20 years ago in 1983. Although his intention was not for the theory to be applied to the classroom, it soon made its way into the practice of many educators. Since Gardner did not intend for his theory to be a classroom practice, he did not develop a curriculum to be followed. However, over time, educators have taken it upon themselves to try to determine the best MI curricular practices. Although teachers try to implement the theory into their practice, the process of student assessment has not paralleled these efforts. The purpose of this project is to inform teachers about the different learning styles of children and help equip them with the resources needed to properly instruct their students. Students who are properly instructed will be more successful both inside and outside of the classroom.

#### Multiple Intelligence Theory

Gardner (1983) first proposed his theory of intelligence in his book, *Frames of Mind*. Gardner intended for his theory to be of interest among his colleagues but was pleasantly surprised by educators' interest. In this book, Gardner challenged readers to think about intelligence in a new way and not by the old definitions with which most were familiar. The seven intelligences that Gardner labeled are: (a) linguistic, (b)



musical, (c) logical-mathematical, (d) spatial, (e) bodily-kinesthetic, (f) intrapersonal, and (g) interpersonal intelligence. The individual with linguistic intelligence has a strong ability to understand the meaning of words, the rules of grammar, as well as awareness of sounds, rhythms, inflections, and tone spoken with words (Gardner, 1983). This intelligence seems to be equally shared within the human species. Professions that are based on strong linguistic abilities are: (a) lawyers, (b) political leaders, (c) teachers, and (d) writers. Most often, the development of language develops in the early stages of childhood with babbling which progresses toward formation and eventually into meaningful sentences. The linguistic learner prefers reading, writing, playing word games, and has a good memory for names, dates, and places (Teele, 1996). Also, this student has a well developed vocabulary, uses language fluently, spells accurately and easily, and often learns to read more easily through a phonics approach.

The individual with musical intelligence has the ability to read and compose music (Teele, 1996). Frequently, this intelligence is seen at a very early age. With musical intelligence, one can listen and understand the structure of music. Gardner, (1983) cited Copone (1939) who stated that,

The intelligence listener must be prepared to increase his awareness of the musical material and what happens to it. He must hear the melodies, the rhythms, the harmonies, and the tone colors in a more conscious fashion. But above all he must, in order to follow the line of the composer's thought, know something of the principles of musical form. (p. 103)

Musical learners are sensitive to sounds in their environment, which allows them to enjoy listening to music when they study or read. This learner has an enhanced learning environment when rhythm is incorporated into the lesson through: (a) clapping hands, (b) snapping fingers, (c) chanting words, or (d) moving rhythmically.

The individual with logical-mathematical intelligence is present in one's relationship with objects, ordering and reordering, and in assessing amounts (Gardner, 1983). Logical-mathematical intelligences can understand the function of an object as well as similarities within objects, for example, the ability to classify objects with similar properties. Most logical-mathematical learners tend to work in professions that are focused on numbers. This intelligence requires skill in calculation, logical reasoning, and problem solving which is necessary for complex problem solving and mental mathematics problems (Shearer, 2004). The logical-mathematical learner enjoys patterns and relationships, has the desire to test things, enjoy solving problems, and reason logically and clearly (Teele, 1996). This student learns best when material is presented in an orderly, logical, and systematic way.

Spatial intelligence is the ability to accurately observe the visual world and to remake features of one's visual experience, even if there is no physical stimuli present (Gardner, 1983). The spatial learner may be required to create forms or manipulate those that have been given. Spatial learners like to look at an object from another perspective or see it from another angle. Spatial learners enjoy art activities or reading maps, charts, and diagrams; they reflect through images and pictures, are strong visually, and can complete jigsaw puzzles easily (Teele, 1996). Pictures provide strong visual cues for this learner which reveal contextual clues to words and assist in learning to read or spell.

With bodily-kinesthetic intelligence, one has the ability to manipulate one's body in highly distinguished and talented ways for means of expression or goal directed reasons (Gardner, 1983). With this intelligence, one is able to proficiently work with objects that use both fine motor skills with hands and fingers as well as gross motor skills

of the body. Individuals who have a high bodily-kinesthetic intelligence tend to excel in dance, acting, sports, choreography, and the direction of movies or plays (Shearer, 2004). The bodily-kinesthetic learner learns through bodily sensations when the environment provides experiences to move and act things out, especially through physical activities and hands on learning projects (Teele, 1996).

Lastly, the personal intelligences are divided into intrapersonal and interpersonal intelligence. With interpersonal and intrapersonal, one has the ability to identify and label feelings in order to understand and guide behavior (Gardner, 1983). Specifically, with intrapersonal intelligence, one can distinguish feelings of pleasure and pain in order to become more involved or to withdraw from a particular situation. Also, with this intelligence one can identify and apply symbols to complex sets of feelings. Persons with intrapersonal intelligences have a strong ability for: (a) truthful self-appraisal, (b) goal setting, (c) self-monitoring/correction, and (d) emotional self-management (Shearer, 2004). Individuals in professions with a high intrapersonal intelligence tend to be: (a) pilots, (b) police officers, (c) writers, and (d) teachers. The intrapersonal learner prefers to work alone as this learner is aware of strengths, weakness, and inner feelings (Teele, 1996). Also, this learner may be very opinionated when controversial topics are discussed. With interpersonal intelligence, one has the ability to determine and identify other individuals' mood, temperament, motivation, and intention (Gardner). With this intelligence, one can read behaviors even when they are hidden in order to act upon that knowledge in order to guide a group of individuals who need order. Individuals with successful interpersonal intelligence tend to become political leaders, religious leaders, skilled parents and teachers, as well as the helping professions such as therapists,

counselors, or shamans (Teele, 1996). The interpersonal learner works best in cooperative or collaborative groups and is involved in many social activities.

### History of Intelligence

The term, intelligence, is associated with school, tests, and the probability that one will succeed. According to Gardner (1999), Binet was a well known psychologist, who was asked by the French Ministry of Education to create a test to help detect who would encounter problems with school. Binet questioned youth of different ages to predict who would succeed in school based on which questions were answered correctly or incorrectly. The answers that separated most clearly the differences between the two groups became the first intelligence test. Binet created an instrument that has affected some part of millions of lives throughout the world.

Gardner (1999) reported that Binet had college faculty in England and Germany help design the concept and use of the intelligence test as an instrument. Intelligence testing became known as IQ tests; that is, intelligence quotient, and IQ describes the ratio between mental age and chronological age. Eventually, the intelligence test was utilized in the United States to distinguish between normal and gifted children and to determine who was fit to serve in the army. During the 1920s, intelligence tests were used in educational systems on a regular basis in the U.S. as well as most of Western Europe.

Gardner (1999) reported the criticism of intelligence tests and pointed out the cultural bias associated with them, as well as the difficulty to establish a person's intellectual level based on a short oral or paper and pencil test. Over the years, psychometricians have tried to fight the cultural bias by the removal of obvious items

from the test, but there is no way to remove certain biases that are present within the test itself. For example, a person's background will affect his or her ability to deal with being placed in an unfamiliar location, the professional appearance of the test instructor, and having to deal with an unfamiliar printed test booklet. The bias presented becomes even stronger when a person knows that his or her academic ability is being measured along with the consideration of their racial or ethnic group. Intelligence tests were developed to measure talent in people regardless of their background.

Through the decades of intelligence testing, Gardner (1999) observed that one success of this test is that it is no longer administered throughout the schools. For the most part, intelligence testing is controlled and, typically, it is administered in regard to a possible problem, such as a learning disability, or a selection process, such as a program for gifted children. The restriction of testing came about because of legal issues based on decisions that could be made in the educational system based on IQ scores.

There will be an ongoing issue about the notion of intelligence and how it should be measured (Gardner, 1999). Members of the psychometric community continue to develop new forms of standardized tests. The members of the psychometric community are looking for the biological basis of intelligence to determine if there is a gene or group of genes that may affect intelligence, a particular neural structure for intelligence, or notable brain wave patterns that differentiate the intelligent from the less intelligent. There are other changes in intelligence, as well, that will most likely occur with the change in current times and culture. Those who can manipulate a computer, work with numbers and symbols, and use other kinds of operations to devise plans, tactics, or strategies may determine how intelligence is perceived in the coming years.

The measures of intelligence have undergone considerable changes since the first test was devised, and undeniably, there will continue to change.

### Multiple Intelligence and the Brain

Research continues to evolve as to how the brain is formed and the ways in which it works (Wesson, 2001). Specifically, the brain is studied to determine what parts of the brain are used for thinking, learning, memory, and if the brain changes over a person's life span. In the field of education, the brain is an important component to determine what can be done in schools and the home to develop and improve learning.

People do not process information in exactly the same way because each person's brain cells have been uniquely arranged (Wesson, 2001). An example of this is when students submit written assignments; each submitted assignment will be different from the other assignments. Each student processed the information differently and then produced a different example of what each student interpreted.

The brain has more than 1 trillion nerve cells while neurons compose almost 100 billion of them (Wesson, 2001). Neurons serve as the foundation for the cerebral cortex, and they function as the main communicator of the brain. Neurons control the sensory systems required to take in data, they influence the frontal lobes for decision making systems for information processing, and neurons manage the motor systems for decisions on the actions or movements one makes.

A neuron is made up of three main parts which are: (a) the main cell body, (b) the dendrites, and (c) the axon (Wesson, 2001). Dendrites look like antenna that extend from the neuron and receive communication signals from other neurons. Dendrites increase when they are used, and when they are placed in a stimulating environment.

However, they will decrease from neglect or impoverishment including: (a) low stimulation, (b) poor nutrition, (c) high levels of fear, (d) or other negative resources.

Gardner (1983) proposed his theory of MI in which he identified seven different intelligences; each matches a primary area in the brain (Wesson, 2001). Different intelligences will be unable to develop naturally unless the proper environmental settings are present to encourage a specific talent to develop and grow. Increased levels of stimulation and regular learning opportunities, at the appropriate time, will lead to a growth in the density of the neural connections and more brain functioning to allow for an undeveloped talent. In the ideal situation, a person's gifts, skills, talents, and aptitudes will grow through repeated stimulation as often as possible with the help of the right set of genes.

Displayed in Table 1, as provided by Gardner (1993, as cited in Shearer, 2004), is an incomplete framework to assist in the investigation between MI and the functions of various cerebral systems.

#### The Truth about MI theory

Gardner first published his book, *Frames of Mind*, in 1983, where he introduced his theory of MI for the primary use of other psychologists (Gardner, 1995). He was greatly surprised at the vast interest displayed by many educators. Since the introduction of the theory, there are numerous interpretations of what MI is and how it can be applied in schools. There are six myths that Gardner has come across, and he has attempted to explain the reality of his theory.

Table 1\_

*Cerebral Systems Associated with Each of the Multiple Intelligences*

Intelligence	Cerebral Systems
Kinesthetic	Cerebral motor strip Thalamus Basal ganglia Cerebellum
Musical	Right anterior temporal Frontal lobes
Spatial	Right hemisphere, parietal Posterior Occipital lobe
Logical-mathematical	Left parietal lobes and adjacent temporal and occipital association areas Left hemisphere for verbal naming Right hemisphere for spatial organization Frontal system for planning and goal setting
Linguistic	Left hemisphere, temporal and frontal lobes
Intra and Interpersonal	Frontal lobes as integrating station between internal and external states/people
Existential	Hypothesized as specific regions in the right temporal lobe

*Note:* Shearer (2004)



The first myth is that, since seven intelligences have been identified, there should be seven tests to assess each intelligence in order to determine valid scores for each area (Gardner, 1995). Gardner explained that the concept of intelligences was a result of acquired knowledge about the human brain and cultures, not the product of test scores. Gardner maintained that intelligence should be determined through direct experience as opposed to paper and pencil tests. When testing is required, it is important to assess the individual in a comfortable atmosphere with which he or she is familiar.

The second myth is that intelligence is the same as a domain or a discipline (Gardner, 1995). Gardner feels that intelligence is a new kind of construct, and it is not the same as a domain or a discipline. Gardner described intelligence as a biological and psychological capability. A person's capacity to demonstrate intelligence is a consequence of the experiential, cultural, and motivational factors that affect an individual. However, a domain is set within a culture to identify a particular set of activities, often classified by a detailed symbol system and its operations. In a domain, often, individuals actively engage in a cultural activity on their own accord. For example, physics, chess, gardening, and rap music are all domains associated with the Western culture.

The third myth is that an intelligence is equal to a learning style, cognitive style, or working style (Gardner, 1995). Gardner reported that the idea of a style indicates that an individual can apply a broad approach equally to every content, whereas, an intelligence is an ability to process information that is geared to a particular subject in the world.

The fourth myth is that MI theory is not experiential (Gardner, 1995). Gardner based his theory wholly on research evidence that can be revised on the foundation of new experiential findings. Gardner cited his book, *Frames of Mind* (1983), in which he declared that hundreds of empirical studies were reviewed in his book and the intelligences were acknowledged and explained on the basis of empirical findings. Also, Gardner states that MI theory continues to be researched in both laboratory settings and field research.

The fifth myth is that MI theory conflicts with: (a) general intelligence, (b) influences from heredity, or (c) environmental factors that influence intelligence (Gardner, 1995). According to Gardner, MI theory raises concerns with the realm and potential of general intelligence but not the existence of general intelligence in itself. Also, in MI theory, there is no position on the hereditary influences of specific intelligences. Gardner's intent was to look beyond what the traditional general intelligence tests reveal about a person's intellectual level.

The sixth myth is that MI theory is so broad that it lowers the meaning of intelligence (Gardner, 1995). Gardner rejected this statement and argued that the standard definition of intelligence is what constricts the societal view of intelligence by isolation of intelligence into a scholastic performance. Also, Gardner feels that the current definition of intelligence is for those who are talented in the form of linguistic and logical mathematical domains.

#### The Establishment of a MI School

The integration of MI (Gardner, 1983) into a school curriculum can be a challenging task. Teele (1996) described four domains that can be incorporated into a

school that affect the basics in an elementary setting. These four domains have been linked to the seven multiple intelligences in order to develop a quality learning environment that is committed to the belief that all students can and will learn. Teele (1996) and Moos (1979) described the four domains as: (a) physical setting, (b) organizational factors, (c) relationships, and (d) social climate. Each of the four domains interacts with each other continually. A restructure of the educational system can establish a personalized learning environment and will provide a social atmosphere that is student centered.

The first domain is the physical setting of the school (Teele, 1996). The ideal school setting should encourage learning through a school wide acceptance and commitment to MI (Gardner, 1983) theory and reflects the differences in which students learn. The school setting should have a personalized tone where students' and teachers' differences are recognized, acknowledged, and respected. Classrooms should be set up to allow group learning, individualized instruction, and small and large group work in a welcoming atmosphere. Also, arrangements should be set up with access to a variety of different resources and materials to allow students to grow and develop through all of the seven intelligences. Integration of MI theory into the classroom encourages students to understand their abilities as well as their classmates and shows students their strengths in order to foster the learning process and work on their weaknesses (Greenhawk, 1997). Also, the use of MI builds confidence within students which encourages them to take educational risks.

The second domain consists of the organizational factors, which is composed of the philosophy of the school, curriculum, instruction, and assessment (Teele, 1996). The

philosophy of the school should maintain that student interests are the core of the decision process, and education is the responsibility of everyone involved in the school. Also, everyone has individual gifts and talents unique to them that can contribute to the school. The curriculum and instruction are based on the inclusion of MI (Gardner, 1983) strategies into lessons where methods are filled with content, themes, purpose, meaning, and are interactive to engage the talents and abilities of all students. Students should be taught how to process information in their strongest MI domain rather than one that is weaker. Also, course material is learned through problem solving, critical and creative thinking, and applying knowledge that encourages success through comprehension to analysis, evaluation, and production of information. Lastly, assessments focused on the growth and progress of each student, and methods for setting future educational goals. Individual student assessments can be shown through exhibitions, productions and performances, objective standardized tests, and individual records of student achievement.

The third domain of the school is the relationships that are built which include: (a) students, (b) teachers, (c) parents, (d) the principal, (e) the community, (f) the school board, and (g) the district office (Teele, 1996). Students should have the ability to determine meaning in their learning and are able to demonstrate their knowledge through participation in: (a) interactive, (b) cooperative, (c) collaborative, (d) multi-grade, or (e) cross-curricular learning situations. Students should build a sense of belonging and consideration for others and respect for one another, view others as unique individuals where they can praise and compliment one another, and combine their talents and abilities to help as tutors in their own classroom as well as other classrooms. Teachers

should serve as role models to instruct, facilitate, coach, and guide the learning process while they share their own different talents, gifts, and resources with students through team teaching, exchanging classes, planning, and sharing with others in different grade levels. Teachers should be willing to take risks in an effort to reach all students knowing they are sources of information, researchers, and mentors to their students. Parents should serve as partners to the school and be committed to being actively involved in school activities, volunteer in classrooms, and share their own differences with the school in order to meet the needs of all the students. Parents and teachers should stay informed about MI (Gardner, 1983) and what that means for their child to help design an individualized education plan. In Blythe and Gardner's (1999) description of their ideal school, observations of the students should be documented by both teachers and parents regarding how students progress through various projects and tasks in the classroom, on field trips, as well as at home. Also, students document their own preferences to complete their file. Eventually, as the child progresses through elementary school his or her strengths will be assessed as well as preferences in order to choose three apprenticeships that will be pursued within the school and community in the years to come.

The school principal is the primary leader for the establishment of change in the school and should: (a) provide a vision of leadership, (b) inspire freedom, (c) uphold individuality, and (d) encourage creativity (Teele, 1996). The principal should: (a) encourage an instructional program that allows students and staff to succeed; (b) offer a sense of family and belonging; (c) exhibits a positive, caring attitude; (d) and promote teamwork, collaboration, and sharing of resources and talents. The community shares in

this process, in that, it should provide opportunities with businesses to help students make connections between school and work and help with the transition process from school to career. Students should be given opportunities through local businesses to take on apprenticeships to gain experience and identify skills needed for work. Also, student achievements should be recognized through various community resources. Blythe and Gardner (1999) emphasized relationships built through the community by modeling learning through nonschool facilities, including museums that promote a new and engaging approach to learning. Also, opportunities throughout the community that engage students allow them to explore unfamiliar situations, as well as apprenticeships offered give students a sense of purpose that is free to explore. Finally, the members of the school board and district office should believe in the concept of MI (Gardner, 1983) and give the school staff freedom to make changes without unnecessary hindrances from the school board or district office (Teele, 1996). The staff in the school is encouraged to become self-reliant, independent, unique, and individualized, while they uphold the concepts of the district team. Members of the school board and district are responsible to provide opportunities for students to learn skills that will help them to be successful and make the transition from school to society and the work force.

Lastly, the fourth domain is the social climate (Teele, 1996). The ideal atmosphere of the school should consist of a positive and supportive environment that is focused on the strengths of all students and teachers throughout the school. In addition, students should be treated with fairness, consistency, a sense of purpose, and realistic expectations which will motivate high achievement. A team of teachers, students, parents, the principal, the school board, the district office, businesses, and the community

should be created to form a community of learners. The relationships created among all members of the school should promote collaboration, collegiality, cooperation, mutual trust, respect, a sense of belonging, and a team spirit.

The development of a MI (Gardner, 1983) school is a task that continues to grow and change as teachers learn more about the theory and how to implement it into the classroom (Greenhawk, 1997). Teachers in an elementary school in Maryland introduced a MI curriculum into their classroom and found positive results. Students began to understand their own learning style as well as their classmates. Also, students retained more knowledge through the use of MI projects in the classroom. A group of students in fifth grade created their own business and were easily able to explain the effects of economic principles including supply and demand. As students and teachers in this school became more comfortable and knowledgeable about the MI curriculum, teachers began to allow older students to decide how they would learn, process, and display their knowledge. For example, a fifth grade class created a museum in the school of famous people. To gather information, students had the option to watch video tapes, use the Internet, or read books about the selected people. When the children were given a choice, it was reported they were more willing and excited to do the research. Students were then encouraged to organize the information through graphic organizers, mind maps, or tape recorders. The teacher proceeded to have the children present their information through three different intelligences. The teacher reported the children had more self-direction through the project and were more confident in trying new skills.

## MI in the Classroom

With the growing interest and acceptance of MI (Gardner, 1983) theory with educators, some teachers have attempted to take the theory and apply it to their classroom to determine what results would be produced. Mettetal, Jordan, and Harper (1997) described the effects in a traditional school where a new curriculum was based on the principles of MI (Gardner 1983, 1993, both cited in Mettetal et al.). The researchers assessed the attitude of the students, parents, and teachers toward MI theory, in general, as well as toward the implementation of the curriculum in school. The implementation of MI in the classroom had positive results with teachers, students, and parents. The impact of the concept of MI was at first stronger than the actual curriculum. The process of learning about this theory changed the thought process of both teachers and students. Teachers were able to determine ability differently now, while students were excited that the concept supported their diverse talents. Self-esteem changes in the elementary years from a universal evaluation to a more separate concept. The implementation and acceptance of MI theory in the classroom could improve the developmental process in order to give students more opportunities to feel confident about their abilities.

Goodnough (2004) documented the experiences of a ninth grade science teacher when he used MI (Gardner, 1983) theory as a foundation to make decisions about how he would organize learning experiences for a space and astronomy unit. The results from the study showed the students showed an increased level of participation during class and enjoyed the MI approach to learning. The teacher felt that students gained valuable experience from their participation in the process of metacognition, well-organized



learning strategies, and an understanding of the process of what occurred in the classroom.

Students reported they enjoyed using MI theory in classroom activities, they benefited from having a choice in learning activities, and they enjoyed working with other students on assignments (Goodnough, 2004). Through the course of this study, the teacher became more aware and responsive to the students' various learning needs. Also, the teacher felt that use of a more student centered classroom allowed for more positive interactions with students and increased learning opportunities. The findings from this study were consistent with Gardner's MI theory (1983, as cited in Goodnough), that an open mind to intelligence allows teachers the ability to investigate their beliefs about student ability and science instruction. Also, the use of MI in the classroom allows educators to create a different learning experience for students.

#### Future Assessment of MI Schools

Every educational system is required to have an assessment tool (Teele, 1996). Presently, most assessments are a formal paper and pencil test. As research continues to grow about learning styles and the theory of MI (Gardner, 1983), assessment procedures should develop as well. The primary focus of an assessment is to further the progress of learning and teaching with an increased ability to assess student performance. Statistics needed to determine the progress of a school should come from a student centered evaluation that measures the learning capabilities of all students. Student assessments should include and promote production, creation, and performance. Examples of different forms of assessment include: (a) student portfolios or records of achievement; (b) scientific investigations; (c) performance assessment; (d) open-ended questions; (e)

student self-assessment; (f) un-timed, integrated, or active testing; (g) standardized testing; and (h) product/problem based projects. These should include independent problem solving with instruction and assessment. The measurement of student learning and progress can take the form of products that are developed, demonstrate, or create as well as the use of problem solving skills. The incorporation of MI theory into the classroom through the form of assessment allows students to show their progress through: (a) classroom portfolios, (b) video or musical productions, (c) exhibits, (d) classroom demonstrations, (e) peer reviews, (f) debates, (g) panel discussions, (h) celebrations of learning, (i) simulations, (j) forums, (k) dioramas, (l) sculptures, or (m) problem-solving situations.

In a study conducted by Hickey (2004), five middle school teachers developed a new MI (Gardner, 1983) curriculum for their classes and implemented it in their classroom. The results showed increased enthusiasm and motivation for student learning during various class projects. One teacher rearranged her classroom to reflect student learning choices and found this helped with the students who were strong in interpersonal intelligence. Also, this teacher arranged her class so the intelligences were balanced among groups and felt it helped with student production. A music teacher who participated noticed that students felt relief with the option of showing what they learned through art, dance, or writing. The overall conclusions from this study showed that allowing students choices in activities was an essential part of the MI based learning theory. Hickey felt that schools who are supportive of MI curriculum give teachers more confidence to develop curriculum units and motivation to continue to use the MI theory. When students become aware of their own strengths in learning, MI is validated for

students and teachers. However, not all students will participate in alternative learning styles. Although choices will be offered, some students will continue to use traditional visual/linguistic formats. Teachers found that, often, support for the MI curriculum took time from colleagues and students. Positive results are most often achieved when the majority of the school is involved in the MI process.

In another study by Kornhaber (2004), research was gathered over a 10 year period from a number of schools that adopted MI (Gardner, 1983) theory throughout their school. The results showed that, with the adoptions of MI in their curriculum, many of the schools reported improvements in standardized test scores. This improvement could have been because more students were involved in the process of covering the curriculum. Another improvement throughout schools was increased student behavior which was thought to improve because more students were engaged in activities that were not associated with the typical linguistic and logic-mathematical curriculum. Students were more engaged into the activities because the curriculum now valued a varied of learners. Parent participation increased among the schools as well as improvements among students with learning disabilities. Most likely, these students improved because their strengths were recognized, not only their weaknesses.

In order to have a successful MI (Gardner, 1983) program, it is important to understand how MI works. Obviously students are a core part of the MI approach, but just as important are the educators who implement this program. In a study conducted by Shearer (2004), his first step was to have teachers complete their own MI profile to gain a personal experience into the approach and better understand their approach to teaching. Teachers described the benefits of knowing their MI profiles, and how that impacted their

own teaching style. Teachers realized the MI profile was not just a label but a highly expressive narrative of their intellectual and creative life. Also, students shared a positive experience when their own profiles were done. Students were finally aware of their strengths and not just their weaknesses. Teachers reported that the MI approach allowed them to give students other options when it came to studying that were focused on students' particular strengths as opposed to traditional forms of studying. Conclusions in this study show that the MI approach increases self understanding as well as giving teachers individual profiles of students' MI talents. The implementation of MI theory into classrooms requires some teachers to change their views about intelligence while, for other teachers, it confirms what they have instinctively known about the uniqueness of all students. As quoted in Shearer, Cambell (1999) stated,

Most of us become educators out of a desire to enhance the quality of life for children and youth. We work diligently to help students grow, develop, and learn. Throughout our years in teaching, we seek out new curriculum and methodologies, trying one approach after the other, hoping to discover those that are the most effective. Perhaps, the most surprising finding from our study of MI schools is that restructuring is not necessarily achieved through external programs, resources, facilities, or district or state mandates. Indeed, meaningful restructuring first takes place within the minds of teacher and their beliefs about the nature and possibilities of their students. From there, all else follows (p. 97). (p. 158)

### Chapter Summary

The background of MI (Gardner, 1983) theory and how it can be applied in schools was presented in this chapter. It is clear that the incorporation of MI into the curriculum will require a strong commitment to the theory from both teachers and administrators. It is important for educators to understand that the effective application of MI theory into the classroom will equip students with the tools and encouragement to

become successful learners both in the classroom and outside of the classroom. In Chapter 3, this author will provide a method to utilize the theory in this project.

## Chapter 3

### METHOD

The purpose of this project was to use Gardner's (1983) MI theory to identify different styles of learning in students and implement a variety of learning strategies for teachers to present information and allow for flexibility of assessment. One of the main objectives was to specifically make educators aware of the benefits of the implementation of Gardner's MI theory which targets seven different intelligences and allows students to be aware of their own learning style in order to be successful. The research information was presented through an in-service presentation.

#### Target Population

This presentation was intended for both beginning teachers as well as experienced teachers. Both groups of teachers bring a varied background of knowledge due to their individual levels of experience. Experienced teachers, who are unaware of different learning approaches or seek new approaches to their current teaching style, have reasonable needs for information about and adaptation to the MI approach. Unexperienced teachers need support in these same issues except with a broader knowledge base of teaching strategies and how to handle various issues that arise in the everyday routine of teaching. Therefore, the focus of this project for experienced teachers was focused on implementation of a new teaching environment, while the focus for beginning teachers was on the development of effective teaching strategies.

## Goals of the Project

The purpose of this project was to provide teachers with strategies to create a functional classroom as well as a few examples of lesson plans that will enable students to learn to the best of their capacity. Recommendations were provided to help teachers model new strategies on how to learn and use resources in the classroom, the school, and community to help students achieve success through Gardner's (1983) MI theory. Teachers were informed on various strategies as well as research that support the implementation of MI theory into everyday classroom practices. Teachers were able to develop a hands on approach to the MI theory and its classroom practices to effectively implement new ideas into the classroom to ensure success for their students.

In Chapter 4, the learning strategies based on each intelligence were presented to help teachers understand the different intelligences and create projects for their students to be successful in the classroom. The goal of these strategies was to inform teachers of what is appropriate for each student and their individual needs in the classroom as well as informing students about their individual needs so they can seek out knowledge based on their own needs. Understanding each intelligence and how to meet the needs of an intelligence helps teachers to be more effective in the learning process not only for themselves but also for their students.

## Procedures

In order to accomplish these goals and purposes, a review of literature was completed on MI theory (Gardner, 1983) and its implementations in the classroom. Through this review, different approaches were identified about each intelligence in order to successfully implement MI into the classroom. The literature used in this project was

selected on the basis of a series of criteria. First, the literature deemed appropriate was based on credible quantitative or qualitative research studies. Second, the literature used for this project primarily addressed Gardner's (1983) theory as implemented in the classroom, and other theories were not included. Lastly, the literature used in this project was from reputable authors within the field. Through the review of selected research, appropriate strategies were chosen to help incorporate the seven intelligences into the classroom. These strategies were presented in the form of a presentation, along with handouts.

#### Peer Assessment

After completion of the presentation, this author asked experienced teachers and colleagues to review and provide informal feedback about possible suggestions to be made. The suggestions will be addressed in Chapter 5.

#### Chapter Summary

The focus of the project is on teachers who want to understand the learning process thoroughly and understand that there are multiple ways to interpret ideas as well as multiple ways to reflect on information. The literature was reviewed to provide teachers with information on how to develop strategies in the classroom that will increase the learning experience for both teachers and students. The outcome of the final project was to create a presentation for teachers to help develop their skills and create a welcoming classroom atmosphere that will be successful for all students.



## Chapter 4

### PROJECT

Multiple Intelligence theory was introduced by Howard Gardner in 1983.

Gardner developed his theory with the intention to broaden the definition of intelligence. Most individuals perceive intelligence to be based on schools, tests, and the notion that one will succeed. Gardner criticized this definition, claiming there is a strong cultural bias associated with intelligence tests as well as the difficulty in determining a person's intellectual level based on a short oral or paper and pencil test (Gardner, 1999).

Gardner developed this theory based on the identification of seven different intelligences, each matching a primary area in the brain. Gardner points out that one's environmental setting will have a strong influence as to how one develops.

Neurological connections will increase with the appropriate amount of stimulation and regular learning opportunities at the appropriate time (Gardner 1983). The following slide show will describe each intelligence, provide strategies to teachers on how to use MI theory, as well as provide some lesson plans as to how to implement this theory into a classroom.

## Multiple Intelligence Theory

- What is multiple intelligence?
- How can one use this theory in the classroom?
- What would a MI school look like?



In this presentation the questions above will be answered. Howard Gardner identified his theory of Multiple Intelligence about 20 years ago. In the past two decades Multiple Intelligence has grown to become a successful tool when used in classrooms. Research shows that when using this theory successfully in the classroom, students become more engaged in the lesson, behavior issues decrease, and student confidence increases. Multiple intelligence is a theory that will continue to evolve and grow as more educators continue to use it and explore the possibilities.

## Seven Intelligences

By: Howard Gardner

- Linguistic Intelligence
- Musical Intelligence
- Logical-Mathematical Intelligence
- Spatial Intelligence
- Bodily-Kinesthetic Intelligence
- Intrapersonal Intelligence
- Interpersonal Intelligence



Gardner's theory of Multiple Intelligence (MI) includes seven different intelligences. They are linguistic, musical, logical-mathematical, spatial, bodily-kinesthetic, intrapersonal, and interpersonal. Through the development of Gardner's theory, educators have become aware that traditional school systems mainly test based on a linguistic and logical-mathematical intelligence. Due to the bias of school testing, an individual who does not test strongly in these two areas will be unable to give an accurate determination as to what their actual intelligence is. The inclusion of MI theory in the classroom will be a benefit for educators and students. When MI is included into lesson plans, both academic standing and student confidence will increase.

## Linguistic Intelligence

- Strong understanding of
  - Word meaning
  - Rules of Grammar
- Awareness of
  - Sounds
  - Rhythms
  - Inflections
  - Tones



Linguistic intelligence has a strong ability to understand the meaning of words, the rules of grammar, as well as awareness of sounds, rhythms, inflections, and tone spoken with words. The development of language usually begins in the early stages of childhood. The first process starts with babbling which progresses into the formation of sentences and eventually into meaningful understanding of words and the function of a sentence. Most lesson plans and tests are composed strongly of linguistic activities and materials. Students who do not test highly in this area are often at a disadvantage to the rest of the class.

## Linguistic

- Reading
- Writing
- Playing with games
- Strong memory with names, dates, and places



Gardner states the linguistic learner has a well developed vocabulary, will use language fluently, spells accurately and easily, and will often use the phonics approach to learn to read more easily. An individual with a strong linguistic preference for learning prefers to read, write, play word games and has an excellent memory for names, dates, and places. Strong linguistic learners gain abilities that will be helpful in the professions of lawyers, political leaders, teachers, and writers.

## Musical Intelligence

- Ability to read and compose music
- Sensitive to sounds in environment
- Increase learning environment when rhythm is incorporated
  - Clapping hands
  - Snapping fingers
  - Chanting words
  - Moving rhythmically



Musical intelligence is sensitive to sounds in one's environment. This learner has a strong ability to read and compose music, and understand the structure of how music is created. The musical learner does not need music in their environment in order to learn but it can be helpful to them in order to focus. This learner will enhance their learning environment when rhythm is incorporated into the lesson. Ways to incorporate rhythm are clapping hands, snapping fingers, chanting words, or moving rhythmically.

## Logical Mathematical Intelligence

- Can understand the function of an object as well as similarities within objects
- Have strong ability to
  - Calculate
  - problem solve
  - Reason logically



Logical-mathematical intelligence has an increased understanding in the function of an object as well as similarities within the object. This learner is easily able to understand one's relationship with the object, able to order and reorder objects, and assess amounts within objects. The logical-mathematical learner acquires skill in calculation, problem solving, and logical reasoning. These learners enjoy complex problem solving and mental mathematics problems.

## Logical Mathematical

- Enjoys patterns and relationships
- Desire to test and problem solve
- Information should be presented in a systemically and logical way



The logical mathematical learner prefers working with patterns and relationships, has a desire to test things, and enjoy problem solving. This student will learn most effectively when material is presented in an orderly, logical, and systematic way. Logical-mathematical learners are likely to work in occupations that are focused around numbers.



## Spatial Intelligence

- Ability to accurately observe the visual world and remake features of one's visual experience without the presence of physical stimuli



Spatial intelligence has the ability to accurately observe the visual world and to remake the features of one's visual experience, even without the presence of physical stimuli. Spatial learners enjoy looking at an object from other perspectives to see it from another angle. This learner will create new forms or manipulate those that have been created already.

## Spatial

- Art activities
- Visuals
- Reading
  - Maps
  - Charts
  - Diagrams



Spatial learners benefit from art activities or reading maps, charts, and diagrams.

This learner is visual and is able to reflect through images and pictures. Picture clues provide strong visual cues that will allow for association of contextual clues in order to assist in learning to read or spell.

## Bodily-kinesthetic Intelligence

- Ability to manipulate one's body in highly distinguished and talented ways for means of expression or goal directed reasons
- Proficiently work with objects that use fine motor and gross motor skills



Bodily-kinesthetic intelligence is one who has the ability to manipulate one's body in highly distinguished and talented ways for means of expression or goal directed reasons. Bodily-kinesthetic learners have strong fine and gross motor skills. This learner will be able to competently work with objects that use both fine motor skills with hand and fingers as well as gross motor skills of the body to accomplish a desired goal or objective.

## Bodily-kinesthetic

- Like to work with manipulatives
- Dance
- Acting
- Sports
- Choreography
- Directing



Bodily-kinesthetic intelligence is reflective to people who tend to excel in dance, acting, sports, choreography, and the direction of movies or plays. The bodily-kinesthetic learner learns through bodily sensations when the environment provides experiences to move and act things out, especially through physical activities and hands on learning projects.

## Intrapersonal Intelligence

- One can distinguish feelings of pleasure and pain in order become more involved or withdraw from a situation
- This learner prefers to work alone



Lastly, the interpersonal and intrapersonal intelligences have the ability to identify and label feelings in order to understand and guide behavior. Intrapersonal intelligence is characterized by the ability to distinguish feelings of pleasure and pain in order to become more involved or to withdraw from a particular situation. This intelligence allows one to identify and apply symbols to complex sets of feelings.

## Intrapersonal

- Ability to self-appraise
- Set goals
- Self monitor
- Tend to work alone



Individuals with a strong intrapersonal intelligence have ability for: truthful self-appraisal, goal setting, self-monitoring/correction, and emotional self-management.

Professions that reflect those with a strong intrapersonal intelligence tend to be: pilots, police officers, writers, and teachers. The intrapersonal learner prefers to work alone as this learner is aware of his strengths, weakness, and inner feelings. Also, this learner may be very opinionated when controversial topics are discussed.

## Interpersonal Intelligence

- One has the ability to determine and identify other individual's mood, temperament, motivation, and intention
- This learner tends to enjoy working in groups



Gardner defines interpersonal intelligence as the ability to determine and identify other individuals' mood, temperament, motivation, and intention. With this intelligence, one can read behaviors even when they are hidden in order to act upon that knowledge in order to guide a group of individuals who need order. Professions that have strong interpersonal intelligence tend to become political leaders, religious leaders, skilled parents and teachers, as well as the helping professions such as therapists, counselors, or shamans. An interpersonal learner tends to work best in cooperative or collaborative groups and is involved in many social activities.

## Setting of MI in Schools

- Commitment to the MI theory
- Acceptance of individualization
- Variety of resources and materials
- Classrooms should encourage
  - Group learning
  - Individualized instruction
  - Small & large group work



Although there is not a set curriculum to Gardner's MI theory, there are standards that have been developed to help encourage this theory into schools and curriculum. First, there should be a universal commitment and acceptance to MI theory that displays the differences within students. Schools should provide a variety of resources and materials that will allow students to grow and develop using all seven different intelligences. Also, classrooms should encourage a setting that will allow for group learning, individualized instruction, and small and large group work. Integration of MI theory in the classroom allows a process for students to work on their own strengths and understand their abilities with their classmates as well as promote a learning process where weaknesses can be recognized with the intention to improve on them.



## Focus of MI in Schools

- Student interests
- MI is the focus of curriculum & instruction
- All intelligences should be recognized
- Assessments should be focused growth and progress of students



The second standard of incorporating MI into schools is encouraging student interest to be the center part of the decision making processes as well as everyone has equal responsibility in the education process. MI will be a main part of curriculum development and instruction, focusing on everyone's individual gifts and talents contributing to the school. Curriculum will also consist of content, themes, purpose, meaning, and are interactive toward all student needs. Students should be able to process information through their strongest MI intelligence rather than one that is weaker. Also, assessments should focus on the growth and progress with activities such as exhibitions, productions and performances, objective standardized tests, and individual records of student achievement.

## Community within MI schools

- Relationships should be built within
  - Students
  - Teachers
  - Parents
  - The principal
  - The community
  - The school board
  - The district office



The third standard with incorporating MI within schools is the relationships that are built with all that are involved. When students are building relationships they are able to determine meaning in their learning environment, build a sense of belonging, respect for others, gain individuality, and combine talents and abilities to help others. Teachers are able to become role models to instruct, facilitate, coach, and guide the learning process while recognizing their own talents and gifts. Teachers are also able to team teach and exchange classes with other grades. Parents become partners to the school and actively participate in school activities, volunteer in classrooms, and share their own talents with the school in order to meet the needs of the students. The principal becomes the primary leader to (a) provide a vision of leadership, (b) inspire freedom, (c) uphold individuality, and (d) encourage creativity. The community should provide opportunities with businesses to help students make connections between school and work. Community involvement allows students to explore unfamiliar situations as well as

apprenticeships that will offer a sense of purpose and gain experience needed for work in the future. Lastly, the members of the school board and district office should give the school staff freedom to make changes without unnecessary hindrances. The school staff is encouraged to become self-reliant, independent, unique, and individualized, while they uphold the concepts of the district team. The school board and district in return are responsible to provide opportunities for students to learn skills that will help them be successful in the future as well as provide a comfortable transition from school to society and the work force.

## Environment of MI in School

- Positive and supportive environments
- Encouraging fairness, consistency, sense of purpose, and realistic expectations
- Team atmosphere



Lastly, the fourth standard of a MI school is the environment within the school and community. The atmosphere of the school should provide a consistent positive and supportive environment that is focused on the strengths of the students and teachers. Students should always be treated with fairness, consistency, a sense of purpose, and realistic expectations. When these factors are set in place, students will gain a desire to succeed. Also, a team should be created within the school consisting of the teachers, students, parents, the principal, the school board, the district office, businesses, and the community to form a group of learners. The relationships within this team should encourage collaboration, collegiality, cooperation, mutual trust, respect, a sense of belonging, and a team spirit.

The following two examples of lesson plans can be used in a second grade classroom. Both are examples of how multiple intelligence can be incorporated into curriculum.

## Resources

- Multiple Intelligence of Reading and Writing: Making Words Come Alive

By: Thomas Armstrong

- Multiple Intelligence in the Classroom

By: Thomas Armstrong

- You're Smarter Than You Think

By: Thomas Armstrong



Along with Gardner who has written various books on Multiple Intelligence, Thomas Armstrong is a well known author in the Multiple Intelligence Community. Armstrong has written numerous books in regards to Multiple Intelligence and how to use this theory successfully. *Multiple Intelligence of Reading and Writing: Making Words Come Alive* is a book intended for the use of both teachers and parents to help develop grammar, spelling, word decoding, and reading comprehension. *Multiple Intelligence in the Classroom* is focused more toward teachers to help develop lesson planning, teaching strategies, assessment, special education, cognitive skills, and more. Lastly, *You're Smarter Than You Think* is a book geared more toward elementary and middle school students to help explain the basics of multiple intelligences theory in easy to understand language that empowers them to make the most of their learning potential in school and in life.

# Thank you



Thank you for your time to view this presentation. In closing there are multiple ways to teach students of all ages. Awareness of learning styles will help to guide teaching strategies and lesson planning. The more awareness there is to Multiple Intelligence will help to shape a different education system that is focused less on linguistic and logical-mathematical learning styles and more on multiple learning styles and assessments.

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## Lesson 1

### Martin Luther King Day 2<sup>nd</sup>-3<sup>rd</sup> Grade

**Duration:** 60 minutes (can be broken into two separate plans)

**Objectives:** The student will be able to:

1. Understand how Martin Luther King Jr. was an effective leader who spoke out for civil rights demanding fair laws for all people.
2. Understand King's dream of a world free of hate, prejudice, and violence
3. Understand peace and how to live in a world regardless of race
4. Words to introduce
  - a. Discrimination
  - b. Prejudice
  - c. Race

**Transition:** Children will be returning from music class. Children will come in and sit down in desks (previous expectation from school year). Students will be told they will be continuing to talk about Martin Luther King Jr. and asked to have a seat on the carpet to start the activities.

**Materials Needed:** Chart from previous day reviewing MLK  
Book: Let's Talk about Race  
By: Julius Lester  
Construction paper  
Crayons

**Pre-Assessment:** Children will be asked to remember what they have learned about MLK so far this week. Students will be asked to review the chart from the previous day hanging on the chalk board.

Students will be asked if they have ever heard of the words:  
-discrimination  
-prejudice  
-race

## Lesson

1. Overview of MLK (Sitting in circle)
  - a. Introduce this lesson by reviewing what we have learned about MLK. Review chart made previous day.
  - b. Ask why they think we celebrate this day?



- c. Ask for any examples of being treated unfairly for being a different (race, gender, age, etc) how did that make you feel (no names in your example).  
\* Linguistic, Interpersonal, Intrapersonal
2. Introduce the words discriminate and prejudice
  - a. What do these words mean?
  - b. Have you ever felt discriminated or witnessed an example?
  - c. Introduce Race
    - i. What are different races?
    - ii. We were created equal on the inside, but have different characteristics on the outside-talk about various differences and how that makes each one of us unique and special.  
\* Linguistic, Interpersonal, Intrapersonal
3. Read Let's Talk About Race
  - a. Talk about book.
  - b. How are you like your friend? How are you different?
  - c. Talk about differences on the outside make each of us unique, what would the world be like if we were all the same.
  - d. Tie in MLK's dream for the world.
  - e. What are your dreams for the world, family, friends, other people  
\* Linguistic, Spatial, Interpersonal, Intrapersonal

**Guided Practice** (have children return to seats)

1. Tell children we are going to trace our hand.
2. Ask children to think about how they can use their hands to help someone or help change something in the world?
3. Trace hands on construction paper.
4. Write sentence about your dream to help change the world using your hands.
5. While children are working on their project play the clip of MLK's "I Have a Dream speech" from the internet,  
[www.americanrhetoric.com/speeches/mlkihaveadream/htm](http://www.americanrhetoric.com/speeches/mlkihaveadream/htm)  
\*Spatial, Interpersonal, Intrapersonal, Bodily-Kinesthetic, Linguistic, Musical

**Closure:**

Let the children know if they have not thought of a dream to think about one for homework, and finish their hand for homework and bring it in tomorrow. Review the concept of having a dream for the world and how our thoughts can change the world.

**Assessment:**

Have students share what they wrote about the dream they have for the year. Talk about what they can do to start accomplishing their dreams.

## **Lesson 2**

### **Martin Luther King/Timelines**

**Duration:** 45 minutes

**Objectives:** The student will be able to:

1. Understand who Martin Luther King was and his dream for the World
2. Understand what a Timeline is and how we use them

**Transition:** Children will be returning from music class. Children will come in and sit down in desks (previous expectation from school year). Students will be told they will be continuing to talk about Martin Luther King Jr. as well as timelines. Have the children go sit on the carpet to start the activities.

**Materials Needed:** Chart reviewing MLK  
Book: My Brother Martin  
By: Christine King Farris  
Construction paper  
Glue  
Chart Paper for Timeline  
Examples of Timelines (calendar, day timer, lesson plans, etc.)

**Pre-Assessment:** Children will be asked to remember what they have learned about MLK so far this week. Students will be asked to review the chart from the previous day hanging on the chalk board.

#### **Lesson:**

1. Talk about MLK.
  2. Review some facts the children have learned.
  3. Read the story My Brother Martin By: Christine King Farris.
  4. Review some of the facts in the story.
- \* Linguistic, Interpersonal, Intrapersonal

#### **Guided Practice:**

1. What is a timeline?  
Vocabulary – timeline, sequence, past, present, future
2. Why do we use timelines? (This is how we record and represent time).
3. Show examples of timelines – calendar, day timer, lesson plans, etc.
4. Put together a timeline on the months of the year.
  - this can be a whole group activity or in groups of 2-4
  - have the months of the year already cut out and have the children glue/tape the months down on a piece of paper and review
5. Review the life of MLK and put events of his life in order.

- to extend this activity make the timeline current and have the children add in some events that have occurred in their life such as when they were born, when they started school, etc.

\* Spatial, Interpersonal, Logical-mathematical, bodily-kinesthetic, Linguistic

**Closure:**

Ask the children why they think timelines are important in our life and our history.

**Assessment:**

Print out the event of a normal day from beginning to end (ex: wake up, eat breakfast, go to school, lunch, etc.) Have the children put the events of a day in order from start to finish. This can be done individually or with a partner.

### Chapter Summary

The use of Multiple Intelligence in curriculum will be a benefit for students, teachers, and the school. Extending activities to accommodate more intelligences will encourage students to be more involved in classroom lessons. Teachers need to remember that there are multiple ways of teaching and learning material. It is important to know one's class and extend activities based on the needs of each student in the classroom. Academic standing and confidence within students will increase when students are enjoying what they are learning and understanding the material.

## Chapter 5

### DISCUSSION

Multiple Intelligence theory has evolved to help give students more opportunities within the classroom. As this theory continues to grow and more educators use the various teaching styles students will be increasingly successful. One important aspect of teaching is to assess your classroom every year. Students are different and will learn differently. Successful teachers will recognize this and adjust their lessons to meet the needs of their classroom regularly. Although Multiple Intelligence theory is one aspect to teaching, keeping an open mind will allow for growth within the students as well as with teachers.

One final part of this project was to have three experts in this field review Chapter 4 and provide feedback. The three professionals selected included a 4<sup>th</sup> grade classroom teacher in a public school, a preschool teacher in a Montessori school, and an occupational therapist who works with special needs students in public schools. The following is a summary of their comments.

The classroom teacher overall enjoyed the project and was inspired by the concepts MI theory presents. This teacher has been teaching for about 3 years and felt that, being a new teacher, this project allowed her to put more thought into lesson planning as well as learning styles. She stated that although she was aware of the basic learning styles, the way Gardner expanded on each style allowed her to realize the positive impact it can have on students. Lastly, this teacher really enjoyed the concept

about providing opportunities between school districts and society and would like to see school districts find a way to integrate this successfully.

The second person to review the project was the occupational therapist. In her experience she stated that the MI approach is closely correlated to the special education program, therapeutic services and accommodations provided to students to enhance their skill level. She also feels that school districts are starting to bridge the gap between general education and special education through consultation, continuing education along with staff development in-services. Teachers also are recognizing the fact that paper and pencil tasks are not the only way to teach and are open to new strategies to grab their student's attention.

The last teacher to comment on the project was the preschool teacher who works in a Montessori school. This teacher felt the project again was beneficial to teachers. Her biggest comment was directed to school districts and how they mandate certain curriculums with schools that teachers have to follow. This can have the potential to hinder a classroom depending on the needs of the classroom and what exactly is in the curriculum. This teacher feels that there should be more openness to the curriculum that is taught within schools. The other comment that this teacher made was about finding a way to move away from standardized testing. This form of testing can have a negative impact on classrooms and learning styles. Gardner's theory is positive in that assessment is open depending on how students learn the information and choose to express what they know.

Overall, the comments from the teachers that reviewed the project were all positive. The classroom teacher was the most inspired by the information, which was pleasing because she essentially was part of this author's target audience. Her comments about being enlightened and having her eyes opened to the positive impact to these different learning styles is exactly what needs to happen within classrooms. The second thing that was interesting was the comments from the occupational therapist. Although she was aware of these learning styles and does frequently use these techniques with her students it was gratifying to hear that classroom teachers and school districts are starting to catch on to this theory. What is displeasing is that for the most part, a student has to be labeled by the special education department in order to have exposure to these different learning styles and teaching techniques. If educators subscribe to Gardner's theory that students learn differently, then no one should have to be labeled and pulled out of their main classroom in order to receive the teaching strategies that he/she needs.

#### Limitations

Although there is a vast amount of information in this project, there are some limitations. One limitation is this is the beginning stages for a long term study. In order to determine if Gardner's theory will work in every classroom, more long range studies will have to be done. The other limitation is many districts impose certain curriculums that have to be followed. Therefore, many teachers may not have the opportunities to try out these new ideas. Lastly, states enforce too much standardized testing in order to gain results of academic performance. Until these standardized tests are changed, it will be extremely hard for educators to truly understand one's academic level. Even though

these limitations are present, this project is a strong foundation for the implementation for Multiple Intelligence theory into the classroom.

### Recommendations

It is the recommendation of this author that further research in the field of Multiple Intelligence theory is needed. It is important to understand that students learn differently and teachers need to be prepared with the skills to teach them. Also, there needs to be further research in standardized testing and what those test scores are revealing. Future research could be used to determine if there are better ways to test students than standard paper and pencil tests.

### Chapter Summary

Multiple Intelligence theory is one way to implement the advantages of different learning styles. It is important for teachers to understand that students will learn material differently; therefore we need to provide opportunities for them to succeed. Teachers will be successful in their classroom if they are open to the differences that each student brings to the classroom. Students should be complemented for their different ideas and ways to learn material instead of limited to only a few ways to express what they know. Future research will hopefully guide educators away from standardized testing and allow for students to express themselves in multiple ways including the way they will be the most successful.



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