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MULTIPLE INTELLIGENCE IN TEACHING LEARNING PROGRAM

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ABSTRACT

This study is aimed at explaining the multiple intelligences in the society, especially in teaching learning program. Every students may be have different intelligent in their selves. So, we as an educator must be known about the differences of the multiple intelligences so we can be known their interested. Linguistics intelligence refers to words smart, whereas the students is cleverer in arranged the words.

Logical-mathematical intelligence is related to number, Spatial intelligence is related to picture smart, bodily-Kinesthetic intelligence is related to body smart, musical intelligence is related to music smart, interpersonal intelligence is related to people smart, intrapersonal intelligence is related to self smart and naturalist intelligence is related to nature smart.

Keywords: *intelligence, multiple intelligence, teaching learning*

Multiple Intelligences

The theory of multiple intelligences was developed in 1983 by Dr. Howard Gardner, professor of education at Harvard University. It suggests that the traditional notion of intelligence, based on I.Q. testing, is far too limited. Instead, Dr. Gardner proposes eight different intelligences to account for a broader range of human potential in children and adults. These intelligences are:

- **Linguistic intelligence** ("word smart")
- **Logical-mathematical intelligence** ("number/reasoning smart")
- **Spatial intelligence** ("picture smart")
- **Bodily-Kinesthetic intelligence** ("body smart")
- **Musical intelligence** ("music smart")
- **Interpersonal intelligence** ("people smart")
- **Intrapersonal intelligence** ("self smart")
- **Naturalist intelligence** ("nature smart")

Dr. Gardner says that we should also place equal attention on individuals who show gifts in the other intelligences: the artists, architects, musicians, naturalists, designers, dancers, therapists, entrepreneurs, and others who enrich the world in which we live. Unfortunately, many children who have these gifts don't receive much reinforcement for them in school. Many of these kids, in fact, end up being labeled "learning disabled," "ADD (attention deficit disorder," or simply underachievers, when their unique ways of thinking and learning aren't addressed by a heavily linguistic or logical-mathematical classroom. The theory of multiple intelligences proposes a major transformation in the way our schools are run. It suggests that teachers be trained to present their lessons in a wide variety of ways using music, cooperative learning, art activities, role play, multimedia, field trips, inner reflection, and much. The good news is that the theory of multiple intelligences has grabbed the attention of many educators around the country, and hundreds of schools are currently using its philosophy to redesign the way it educates children. The bad news is that there are thousands of schools still out there that teach in the same old dull way, through dry lectures, and boring worksheets and textbooks. The challenge is to get this information out to many more teachers, school administrators, and others who work with children, so that each child has the opportunity to learn in ways harmonious with their unique minds.

8 Multiple Intelligences

1. **Linguistic Intelligence.** The understanding of the phonology, syntax, and semantics of language, and its pragmatic uses to convince others of a course of action, help one to remember information, explain or communicate knowledge, or reflect upon language itself. Examples include the storyteller, orator, poet, editor, and novelist. Involves reading, writing, speaking, and conversing in one's own or foreign languages. It may be exercised through reading interesting books, playing word board or card games, listening to recordings, using various

kinds of computer technology, and participating in conversation and discussions.

2. **Bodily-Kinesthetic Intelligence.** The ability to control one's bodily motions and the capacity to handle objects skillfully. Examples of those proficient in this intelligence include the actor, mime, craftsperson, athlete, dancer, and sculptor. Involves physical coordination and dexterity, using fine and gross motor skills, and expressing oneself or learning through physical activities. It may be exercised by playing with blocks and other construction materials, dancing, playing various active sports and games, participating in plays or make-believe, and using various kinds of manipulatives to solve problems or to learn.
3. **Spatial Intelligence.** The ability to perceive the visual world accurately, to perform transformations and modifications upon one's initial perceptions, and to be able to re-create aspects of one's visual experience (even in the absence of the relevant physical stimuli). Examples include the architect, mapmaker, surveyor, inventor, and graphic artist. Involves visual perception of the environment, the ability to create and manipulate mental images, and the orientation of the body in space. It may be developed through experiences in the graphic and plastic arts, sharpening observation skills, solving mazes and other spatial tasks, and exercises in imagery and active imagination.
4. **Musical Intelligence.** The ability to understand and express components of music, including melodic and rhythmic patterns, through figural or intuitive means (the natural musician) or through formal analytic means (the professional musician). Examples include the composer, pianist, percussionist, music critic, and singer. Involves understanding and expressing oneself through music and rhythmic movements or dance, or composing, playing, or conducting music. It may be exercised by listening to a variety of recordings, engaging in rhythmic games and activities, and singing, dancing, or playing various instruments.
5. **Logical-Mathematical Intelligence.** The understanding and use of logical structures, including patterns and relationships, and statements and propositions, through experimentation, quantification, conceptualization, and classification. Examples include the scientist, mathematician, logician, computer programmer, and statistician. Involves number and computing skills, recognizing patterns and relationships, timeliness and order, and the ability to solve different kinds of problems through logic. It may be exercised through classifying and sequencing activities, playing number and logic games, and solving various kinds of puzzles.
6. **Intrapersonal Intelligence.** The ability to access one's own emotional life through awareness of inner moods, intentions, motivations, potentials, temperaments, and desires, and the capacity to symbolize these inner experiences, and to apply these understandings to help one live one's life. Examples include the psychotherapist, entrepreneur, creative artist, and shaman. Involves understanding one's inner world of emotions and thoughts, and growing in the ability to control them and work with them consciously. It may be exercised through participating in independent projects, reading illuminating books, journal-writing, imaginative activities and games, and finding quiet places for reflection.
7. **Interpersonal Intelligence.** The ability to notice and make distinctions among other individuals with respect to moods, temperaments, motivations, intentions, and to use this information in pragmatic ways, such as to persuade, influence, manipulate, mediate, or counsel individuals or groups of individuals toward some purpose. Examples include the union organizer, teacher, therapist, administrator, and political leader. Involves understanding how to communicate with and understand other people and how to work collaboratively. It may be exercised through cooperative games, group projects and discussions, multicultural books and materials, and dramatic activities or role-playing.
8. **Naturalist Intelligence.** The capacity to recognize and classify the numerous species of flora and fauna in one's environment (as well as natural phenomena such as mountains and clouds), and the ability to care for, tame, or interact subtly with living creatures, or with whole ecosystems. Examples include the zoologist, biologist, veterinarian, forest ranger, and hunter. Involves understanding the natural world of plants and animals, noticing their characteristics, and categorizing them; it generally involves keen observation and the ability to classify other things as well. It may

be exercised by exploring nature, making collections of objects, studying them, and grouping them.

How to Teach or Learn Anything 8 Different Ways

One of the most remarkable features of the theory of multiple intelligences is how it provides *eight different potential pathways* in learning. If a teacher is having difficulty reaching a student in the more traditional linguistic or logical ways of instruction, the theory of multiple intelligences suggests several other ways in which the material might be presented to facilitate effective learning. Whether you are a kindergarten teacher, a graduate school instructor, or an adult learner seeking better ways of pursuing self-study on any subject of interest, the same basic guidelines apply. Whatever you are teaching or learning, see how you might connect it with

- words (linguistic intelligence)
- numbers or logic (logical-mathematical intelligence)
- pictures (spatial intelligence)
- music (musical intelligence)
- self-reflection (intrapersonal intelligence)
- a physical experience (bodily-kinesthetic intelligence)
- a social experience (interpersonal intelligence), and/or
- an experience in the natural world. (naturalist intelligence)

Of primary importance in the construction of MI theory is Gardner's use of a set of eight criteria that need to be met in order for each intelligence to qualify for inclusion on his list (Gardner, 1983). What makes MI theory stand out from a number of other theories of learning and intelligence is the existence of this set of criteria, and the fact that it encompasses a widely diverse range of disciplines all pointing to the relative autonomy of these eight intelligences. The criteria are

- **Susceptibility to Encoding in a Symbol System.** Gardner suggests that each intelligence has its own unique set of symbol systems. For example, linguistic intelligence includes a wide range of languages such as English, French, Spanish, and Russian, while logical-mathematical intelligence employs number systems and computer languages, and interpersonal intelligence draws upon a diverse group of gestures, facial expressions, and postures to represent moods, intentions, and ideas.
- **Support from Psychometric Findings.** Gardner indicates that if one looks at the subtest scores from standard intelligence tests, or at the quantitative measures for logical, linguistic, artistic, social, emotional, or kinesthetic aptitude tests, evidence suggests a general lack of correlation between scores in different intelligence areas, thus pointing to the relative independence of each intelligence.
- **An Evolutionary History and Evolutionary Plausibility.** A look at the archeological evidence suggests that each of the eight intelligences appears to have been used during prehistoric times by early *homo sapiens*, and most likely were used at even earlier stages of evolution, as evidenced by the presence of these intelligences in other members of the animal kingdom (e.g., musical intelligence in birds, spatial intelligence in bees, interpersonal intelligence in ants).
- **A Distinctive Developmental History and a Definable Set of Expert "End-State"Performances.** Each of the eight intelligences provides numerous examples of high-level achievement in individuals who are at the peak of their discipline (for example, Marie Curie, Georgia O'Keeffe, Virginia Woolf, Martin Luther King, Jr., Auguste Rodin, Jane Goodall, Sigmund Freud, Kiri Te Kanawa), and there appear to be specific stages that individuals go through in traveling along the path from a novice to a master in each domain.
- **The Existence of Savants, Prodigies, and Other Exceptional Individuals.** For each intelligence, there are individuals who have incredible abilities in that particular intelligence and yet appear to be highly underdeveloped in some or most of the other intelligences. For example, the literature includes examples of "savants" who can calculate rapidly in their minds and yet have subnormal IQ scores, those who read difficult text without understanding it (hyperlexia), and five-year-old children who can draw at a gifted adult level, but have significant social impairments such as autism.
- **An Identifiable Core Operation or Set of Operations.** Each intelligence has a definable set of operations that can be enumerated with specificity and taught to another person. For example, bodily-kinesthetic operations may include the ability to imitate the physical

movements of others or the capacity to master established fine-motor routines for building a structure. For musical intelligence, operations might involve sensitivity to pitch or the ability to discriminate among different rhythmic patterns.

- **Support from Experimental Psychological Tasks.** Psychological studies of transfer, where subjects are taught a skill and then are expected to automatically transfer that learning to a different domain, show that abilities generally don't transfer from one intelligence to another. For example, becoming a better reader will not necessarily make one a better math student, or learning to kick a soccer ball will not necessarily make it easier to paint a picture or relate well to another person. This general lack of transfer suggests the relative autonomy of each of the eight intelligences.
- **Potential Isolation by Brain Damage.** Disease or injury to certain areas of the brain appears to selectively impair specific intelligences while leaving the others intact. For example, an injury to Broca's area in the left frontal lobe of the brain can devastate a person's ability to speak or read, but that individual will often be able to paint, hum a tune, skate, or smile at another person because these functions are associated with unimpaired areas of the brain. However, an individual with damage to the right temporal lobe may lose the ability to carry a tune while retaining the ability to speak, read, and write. Roughly speaking, here are major areas of the brain that are associated with each of the eight intelligences:
  - *Linguistic:* left temporal and frontal lobes
  - *Logical-mathematical:* left frontal and right parietal lobes
  - *Spatial:* occipital and parietal regions (especially of right hemisphere)
  - *Bodily-kinesthetic:* cerebellum, basal ganglia, motor cortex
  - *Musical:* right temporal lobe
  - *Interpersonal:* frontal lobes, temporal lobe (especially right hemisphere), limbic system
  - *Intrapersonal:* frontal lobes, parietal lobes, limbic system
  - *Naturalist:* left parietal lobe (important for discriminating "living" from "nonliving things")

This last criterion showing how the eight intelligences correspond to different areas of the brain is of particular importance for us as we next look at the experience of reading and writing, and how these activities are mediated by neurological events in the brain.

SUGGESTION

In teaching learning program, the MI is very important to know the specialization of the students. In case, student that choose sport program in the college must have the "bodily kinesthetic" more than the others intelligence. Students that choose science program, it is because their logical mathematical is higher than the other intelligence. In every student, they may be having more than one intelligence in their selves. One people or student can be having two or more intelligences. For example, students in sport faculty, he/ she have a bodily kinesthetic in his/herself, but despite, he/she can play guitar (musical intelligence), he/she have a well socialization (intrapersonal intelligence), so in this case we can stated that every human have multiple intelligence in their selves, although it is not all (8 multiple intelligences). As an educator, if we know and understand about the MI itself, it is become easier to teach or handle our class because of the variations of student (every student is unique). Last, we as an educator don't have to teach or learn something in all eight ways (8 MI), just see what the possibilities are, and then decide which particular pathways interest us the most, or seem to be the most effective teaching or learning tools. The theory of multiple intelligences is so intriguing because it expands our horizon of available teaching/learning tools beyond the conventional linguistic and logical methods used in most schools (e.g. lecture, textbooks, writing assignments, formulas, etc.).

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