

HOWARD GARDNER'S: MULTIPLE INTELLIGENCES THEORY

INTRODUCTION

- According to Howard Gardner, “intelligence is the ability to solve problems, or to create products, that are valued within one or more cultural settings.” He has propounded the theory of multiple intelligence.
- His pluralistic view of intelligence gives a broad base to the concept of intelligence and its measurement by providing a multiple frame.
- He asserted that human intelligence or cognitive competence can be better described as a set of an individual’s multiple abilities, talents and mental skills related to multiple numbers of domains of knowledge in a particular cultural setting.
- He came up with eight independent types of intelligence that grow and develop differently in different people, depending upon their hereditary characteristics and environmental experiences.
- Gardner called them independent as each intelligence is a relatively autonomous intellectual potential which is capable of functioning independently of the others.

THEORY OF MULTIPLE INTELLIGENCES

- The theory of multiple intelligences is Howard Gardner’s theory that proposes that people are not born with all of the intelligence they will ever have.
- It says that intelligence can be learned throughout life.
- Also, it claims that everyone is intelligent in at least seven different ways and can develop each aspect of intelligence to an average level of competency.
- *He believes each individual has nine intelligences.*
- **The nine intelligences included in Gardner’s theory are:**
 1. Verbal / Linguistic Intelligence
 2. Logical / Mathematical Intelligence
 3. Visual / Spatial Intelligence
 4. Bodily/ Kinesthetic Intelligence
 5. Musical / Rhythmic Intelligence
 6. Interpersonal Intelligence
 7. Intrapersonal Intelligence

- 8. Naturalistic Intelligence
- 9. Existentialistic Intelligence



1. VERBAL-LINGUISTIC INTELLIGENCE

Word Smart refers to an individual's capacity to use language communication and is good at playing games such as Scrabble, cross word puzzles etc. (Examples: Poets, journalists, broadcasters, lawyers, teachers, novelists and writers). These individuals are skillful in verbal and language skills (reading, writing, speaking).

Ability to use words and language. These learners have highly developed auditory skills and generally elegant speakers. They think in words rather than pictures.

Their skills include

Listening, speaking, writing, storytelling, explaining, teaching, using humor, understanding the syntax and meaning of words, remembering information, convincing someone of their point of view, analyzing language usage.

Possible career interests

Poet, journalist, writer, teacher, lawyer, politician, translator.

Characteristics of Verbal-Linguistic Intelligence

- i. Writes better than the average of age
- ii. Spins tall tales or tells jokes and stories
- iii. Has a good memory for names, places dates or trivia
- iv. Enjoys word games
- v. Enjoys reading books
- vi. Appreciates nonsense rhymes, puns, tongue twisters etc.
- vii. Enjoys listening to the spoken word
- viii. Has a good vocabulary
- ix. Communicates to other in a highly verbal way.

2. LOGICAL / MATHEMATICAL INTELLIGENCE

Number Smart refers to an individual's capacity to think and analyze logically, use numbers effectively, solve problems scientifically, and discerns relationships and patterns between concepts and things (Example: Mathematicians, engineers, architects and scientists). These individuals learn best through the opportunity to experiment, search for patterns and make their own discoveries. They typically enjoy games of strategy such as chess, bridge and various card games.

Dr. S. Arockiasamy, SXCE

Ability to use reason, logic and numbers. These learners think conceptually in logical and numerical patterns making connections between pieces of information. Always curious about the world around them, these learners ask lots of questions and like to do experiments.

Their skills include

Problem solving, classifying and categorizing information, working with abstract concepts to figure out the relationship of each to the other, handling long chains of reason to make local progressions, doing controlled experiments, questioning and wondering about natural events, performing complex mathematical calculations, working with geometric shapes.

Possible career paths

Scientists, engineers, computer programmers, researchers, accountants, mathematicians.

Characteristics of Logical/Mathematical Intelligence

- i. Ask a lot of questions about how things work
- ii. Computes arithmetic problems in his / her head quickly
- iii. Enjoys math class
- iv. Enjoys playing chess, checkers, or other strategy games
- v. Enjoys working on logic puzzles or brain teasers
- vi. Enjoys putting things in categories or hierarchies
- vii. Likes to experiment in a way that shows higher order cognitive thinking processes
- viii. Thinks on a more abstract or conceptual level than peers
- ix. Has a good sense of cause-effect for age
- x. Enjoys solving puzzles
- xi. Plays with numbers (counting)

3. VISUAL / SPATIAL INTELLIGENCE

Art Smart refers to the capacity to think visually and orient oneself spatially. In addition, spatially intelligent people are able to graphically represent their visual and spatial ideas (Examples: artists, decorators, architects, surveyors, inventors, and guides).

Ability to perceive the visual. These learners tend to think in pictures and need to create vivid mental images to retain information. They enjoy looking at maps, charts, pictures, videos, and movies.

Dr. S. Arockiasamy, SXCE

Their skills include

Puzzle building, reading, writing, understanding charts and graphs, a good sense of direction, sketching, painting, creating visual metaphors and analogies (perhaps through the visual arts), manipulating images, constructing, fixing, designing practical objects, interpreting visual images.

Possible career interests

Navigators, sculptors, visual artists, inventors, architects, interior designers, mechanics, engineers.

Characteristics of Visual / Spatial intelligence

- i. Reports clear visual images
- ii. Reads maps, charts and diagrams more easily than text
- iii. Daydreams more than peers
- iv. Enjoys art activities
- v. Draws figures that are advanced for age
- vi. Likes to draw, view movies, slides or other visual presentations
- vii. Enjoys doing puzzles
- viii. Gets more out of pictures than word while reading
- ix. Builds interesting three-dimensional constructions for age

4. BODILY / KINESTHETIC INTELLIGENCE

Body Smart refers to the capacity of using one's own body skillfully as a means of expression or to work skillfully to create or manipulate objects (Examples: dancers, actors, athletes, sculptors, surgeons, mechanics, and craftspeople). They learn best by doing-through active learning, movement, and hands on activities.

Ability to control body movements and handle objects skillfully. These learners express themselves through movement. They have a good sense of balance and eye-hand co-ordination. (e.g. ball play, balancing beams). Through interacting with the space around them, they are able to remember and process information.

Their skills include

Dancing, physical co-ordination, sports, hands on experimentation, using body language, crafts, acting, miming, using their hands to create or build, expressing emotions through the body.

Possible career paths

Athletes, physical education teachers, dancers, actors, firefighters, artisans.

Characteristic of Bodily / Kinesthetic intelligence

- i. Excel in one or more sports
- ii. Moves, twitches, taps or fidgets while seated for a long time in one spot
- iii. Clearly mimics other people's gestures or mannerisms
- iv. Enjoys running, jumping, wrestling or similar activities or good fine-motor coordination in other ways
- v. Has a dramatic way of expressing himself / herself
- vi. Reports different physical sensations while thinking or working
- vii. Enjoys working with clay or other tactile experiences

5. MUSICAL / RHYTHMIC INTELLIGENCE

Music smart refers to the capacity to appreciate a variety of musical forms in addition to using music as a vehicle of expression. Musically intelligent people are sensitive to rhythm, melody, and pitch (Examples: singers, musicians, and composers).

Ability to produce and appreciate music. These musically inclined learners think in sounds, rhythms and patterns. They immediately respond to music either appreciating or criticizing what they hear. Many of these learners are extremely sensitive to environment sounds (e.g. crickets, bells, dripping taps)

Their skills include

Singing, whistling, playing musical instruments, recognizing tonal patterns, composing music, remembering melodies, understanding the structure and rhythm of music.

Possible career paths

Musician, disc jockey, singer, composer

Characteristics of Musical / Rhythmic Intelligence

- i. Remembers melodies of songs
- ii. Has a good singing voice
- iii. Plays a musical instrument or signs in choir or other group
- iv. Has a rhythmic way of speaking and/ or moving
- v. Unconsciously hums to himself / herself
- vi. Taps rhythmically on the table or desks as he / she works

Dr. S. Arockiasamy, SXCE

- vii. Sensitive to environmental noise
- viii. Discriminates among sounds
- ix. Has a good sense of pitch
- x. Remembers tunes and sound patterns
- xi. Is good at picking up sounds, remembering melodies, noticing pitch/ rhythms, and keeping time.

6. INTERPERSONAL INTELLIGENCE

People Smart to refers to the capacity to appropriately and effectively respond to other people and understand their feelings (sales people, social directors, travel agents). These individuals are sensitive and attuned to other's feelings, moods, desires and motivations.

Ability to relate and understand others. These learners try to see things from other people's point of view in order to understand how they think and feel. They often have an uncanny ability to sense feelings, intentions and motivations. They are great organizers, although they sometimes resort to manipulation. Generally they try to maintain peace in group settings and encourage co-operation. They use both verbal (e.g. speaking) and non-verbal language (e.g. eye contact, body language) to open communication channels with others.

Their skills include

Seeing things from other perspectives (dual-perspective), listening, using empathy, understanding other people's moods and feelings, counseling, co-operating with groups, noticing people's moods, motivations and intentions, communicating both verbally and non-verbally, building trust, peaceful conflict resolution, establishing positive relations with other people.

Possible career paths

Counselor, salesperson, politician, business person

Characteristics of Interpersonal intelligence

- i. Enjoys socializing with peers
- ii. Seems to be a natural leader
- iii. Gives advice to friends who have problems
- iv. Seems to be street smart
- v. Belongs to clubs, committees, or other groups' organizations
- vi. Has two or more close friends
- vii. Has a good sense of empathy or concern for others

Dr. S. Arockiasamy, SXCE

- viii. Others seek out his / her empathy or concern for others
- ix. Others seek out his / her company
- x. Displays skills of leadership
- xi. Is good at understanding people
- xii. Is good at organizing communicating, and sometimes manipulating people.

7. INTRAPERSONAL INTELLIGENCE

Self-Smart refers to the capacity to accurately know one's self, including knowledge of one's own strengths, motivations, goals, and feelings (Examples: entrepreneurs, therapists, etc). These individuals understand and know themselves well.

Ability to self-reflect and be aware of one's inner state of being. These learners try to understand their inner feelings, dreams, relationships with others, and strengths and weaknesses.

Their skills include

Recognizing their own strengths and weaknesses, reflecting and analyzing themselves. Awareness of their inner feelings, desires and dreams, evaluating their thinking patterns, reasoning with themselves, understanding their role in relationship to others.

Possible Career Paths

Researchers, theorists, philosophers

Characteristics of Intrapersonal intelligence

- i. Displays a sense of independence or a strong will
- ii. Has a realistic sense of his / her strengths and weakness
- iii. Does well when left alone or to play or study
- iv. Marches to the beat of a different drummer in his /her style of living and learning
- v. Has an interest or hobby that he / she doesn't talk much about
- vi. Has a good sense of self direction
- vii. Prefers working alone to working with others
- viii. Is able to learn from his / her failure and successes in life
- ix. Has high self-esteem
- x. Can express strong like or dislike of particular activities
- xi. Is aware of strengths and weaknesses
- xii. Works toward ambition

8. NATURALISTIC INTELLIGENCE

Expertise in the organization and classification of the numerous species – the flora and fauna of an individual's environment. This also includes sensitivity to other natural phenomena (eg. cloud formations and mountains) and in the case of those growing up in an urban environment, the capacity to discriminate among nonliving forms such as cars sneaker and music CD covers.

Characteristics of Naturalistic Intelligence

- i. Enjoys nature
- ii. Caring for pets
- iii. Likes to be out doors rather than indoors
- iv. Is able to recognize flora and fauna
- v. Collects rocks, shells, insects and knows the differences
- vi. Likes boating, rock climbing and hiking
- vii. Understands different weather patterns

9. EXISTENTIALISTIC INTELLIGENCE

They are concerned with cosmic or existential issues. They seek experiences in religious mythology, inclination towards life and death. They are able to relate themselves with cosmos or the infinite. They are interested in ultimate realities. Aristotle, Einstein, Plato, Socrates, all Indian yogis and saints like Rishi Aurobindo, Vivekananda, Yogananda, Ramathirthaetc are having this kind of intelligence.

In this way, Gardener's theory of multiple intelligence provides a broad and comprehensive view of human abilities. All these intelligence are to be developed independently.

Characteristics of Existentialistic Intelligence

- i. People are highly introspective and attuned to their inner selves.
- ii. They have a firm understanding of their own personal beliefs, preferences and convictions.
- iii. They enjoy school activities that allow them a choice of activities.
- iv. They prefer to express themselves and their opinions as opposed to memorizing facts and information.
- v. They are frequently motivated and good at evaluating their own work.

EDUCATIONAL IMPLICATIONS OF MULTIPLE INTELLIGENCE

- i. The level of teaching must be at reflective level in order to develop multiple intelligence among the learners.
- ii. Co-curricular and curricular activities will develop multiple intelligence.
- iii. By guiding the adolescents in to spiritual, we can develop moral intelligence among them.
- iv. All round developmental programmes can be organized in schools.

ROLE OF TEACHER IN MULTIPLE INTELLIGENCES

1. Teachers can cultivate *linguistic intelligence* by adopting creative writing, brainstorming activities, formal speaking, poetry, reading, story-telling/story-creation, verbal debate, lecture, discussion, journal writing, cooperative learning, word origins and vocabulary in the classroom
2. *Logical-mathematical intelligence* can be strengthened by encouraging the use of computer programming languages, critical thinking activities, linear outlining, science fiction scenarios, logic puzzles and logical/sequential presentation of subject matter.
3. Teachers can foster *musical intelligence* by integrating environmental sounds, instrumental sounds, music composition/creation, music performance, percussion vibrations, rhythmic patterns etc.
4. *Spatial intelligence* can be fostered by utilizing charts, graphs, diagrams, graphic organizers, videotapes, colour coding systems, art activities, doodling, microscopes and computer graphics software, active imagination, colour/texture schemes, drawing, mind mapping, painting, sculpting etc.
5. Teachers may encourage growth in *bodily-kinesthetic intelligence* through the use of touching, feeling, movement, improvisation, hands-on activities, facial expressions and physical relaxation exercises, body language/physical gestures, body sculpture/tableaus, dramatic enactment, folk/creative dance, gymnastic routines, human graphs, inventing, role playing/mime, using manipulative, hand signals, pantomime, real life situations, puzzles and board games, activities, role-playing, action problems, sports and games etc.
6. *Interpersonal intelligence* can be encouraged by designing lessons that include group work and by planning cooperative learning strategies, collaborative skills teaching,

Dr. S. Arockiasamy, SXCE

empathy practices, giving feedback, group projects, intuiting others' feelings, person-to-person communication, role playing, group brainstorming etc.

7. Teachers can assign the following activities to awaken students *intrapersonal intelligence* viz. know thyself procedures, meta-cognition techniques, mindfulness practices, emotional processing, focusing/concentration skills, higher-order reasoning, independent studies/projects, silent reflection methods, thinking strategies, reflective teaching, interviews, reflective listening etc.
8. *Naturalistic intelligence* can be inculcated by adopting the following methods; developing an outdoor classroom, making celestial observation, using scientific equipments for observing nature, initiating projects on the food chain, water cycle or environmental issues etc.