

ENHANCING MULTIPLE INTELLIGENCE IN THE CLASSROOM

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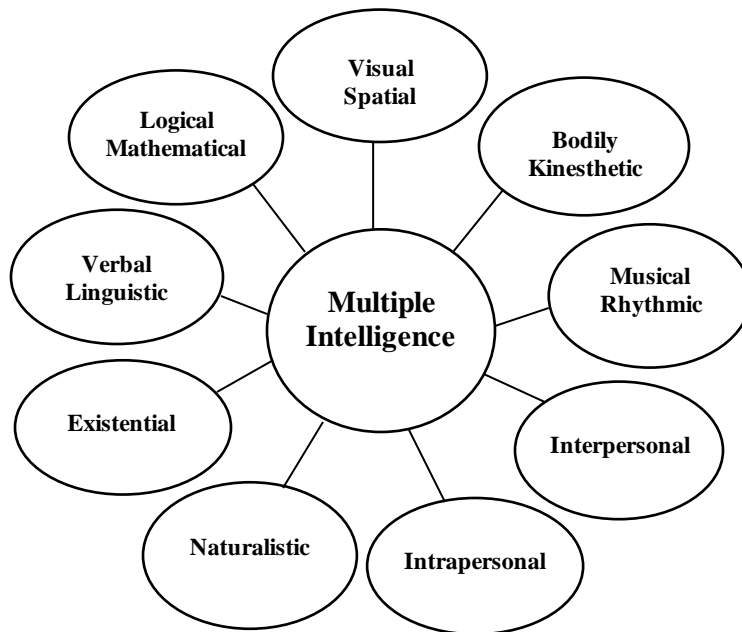
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INTRODUCTION

The intelligence of an individual is denoted by his/her power or capacity. It differs from one individual to another. Intelligence may be defined as “power of good responses from the point of view of truth or fact”. According to Gardner, studying about intelligence is a systematic, multi-disciplinary and scientific act drawing inferences from psychology, biology, neurology, sociology, anthropology and from arts and humanities. This resulted in the emergence of his theory of Multiple Intelligences (MI) as presented in his book *Frames of Mind* (1983). He says that intelligence is much more than IQ because a high IQ in the absence of productivity does not equate to intelligence. In his definition “intelligence is a bio-psychological potential to process information that can be activated in cultural settings to solve problems or create products that are of cultural value in society”. Gardner defines intelligence in a much broader way than psychometricians who considered intelligence as a simple entity described psychometrically with an IQ score.

THEORY OF MULTIPLE INTELLIGENCE

Howard Gardner’s theory of multiple intelligence makes people think about ‘IQ’ about being “smart”. The theory is changing the way some teachers teach. According to Howard Gardner (1983) “intelligence is the ability to solve problems or to create products, which are valued within one or more cultural settings”. Gardner believes that there is no general intelligence rather, multiple, distinct intelligences. He claims that all human beings have multiple intelligence. This multiple intelligence can be nurtured and strengthened or ignored and weakened. Gardner believes each individual has the following intelligences and the smartness in different areas.



Multiple Intelligence theory stated that all nine intelligences are necessary to create an effective function society. Therefore, teachers are supposed to think that all intelligences are equally important, while traditional teaching systems attach much more importance to the use of mathematical and verbal skills. Thus, according to the Multiple Intelligence theory, educators should recognise and impart a wider range of knowledge and skills to the students. Everyone is born possessing the nine intelligences. Nevertheless, all students come into the classroom with different sets of developed intelligences. This means that each student has his/her own unique set of intellectual strengths and weaknesses. These sets determine how easy or difficult it is for a student to learn information when it is presented in a particular manner. Nevertheless, teachers can teach students how to use their more developed intelligence to help them understand a subject that usually uses their weaker intelligence. For example, a teacher can suggest that a very clever child in mathematics learn about revolutionary wars by calculating historical years. Because, every student has a different learning style, he or she cannot be evaluated in a unified way. Therefore, teachers need to create an "intelligence file" for each student. Understanding the learning situation of each student can help teachers correctly evaluate more suitable and efficient teaching methods for students.

AREAS OF MULTIPLE INTELLIGENCE

Verbal Linguistic Intelligence

Verbal linguistic intelligence is the ability to read, write and communicate with words. This type of human intelligence is responsible for all kinds of linguistic competencies. It can be best broken down into components like syntax, semantics and pragmatics. If a student has this

intelligence, he probably likes playing word games, making up poetry and stories, getting involved in discussions with other people, debating, formal speaking, creative writing and telling jokes. They also manipulate language through reading, writing and discussing, communicate effectively and use auditory skills, and have a good vocabulary, write clearly, spell easily, and think in words. The best examples are authors, journalists, poets, orators, politicians, salespeople, translators, comedians and other professionals like lawyers. These students are likely to be precise in expressing themselves and irritated when others are not.

The strategies and materials namely, lectures, debates, large and small group discussions, worksheets, manuals, brainstorming, writing activities, word games, sharing time, storytelling, speeches, reading to class, talking books and cassettes, extemporaneous speaking, journal keeping, choral reading, individualized reading, memorizing linguistic facts, tape recording one's words, using word processors, publishing etc. can be employed in teaching-learning to enhance verbal linguistic intelligence.

Logical Mathematical Intelligence

This type of intelligence is responsible for all types of abilities, talents and skills in areas related to logic and mathematics. It can be broken down into components like deductive reasoning, inductive reasoning, scientific thinking including solving of logical puzzles carrying out calculations and the like. Students who are generally active when presented with a problem are logical and mathematical learners. The brain acts like a computer when trying to work out problems. They have the ability to understand numerical relationships and patterns. This intelligence may be the entrance to the super highway of learning. Students are logic/math smart when they think in numbers, patterns and algorithms. They often working on patterns, math problems, strategy games or brain teasers and experiments. Professionals like mathematicians, philosophers and physicists are found to exhibit this type of intelligence in abundance.

The strategies and materials namely, mathematical problems on the board, Socratic questioning, scientific demonstrations, logical problem-solving exercises, creating codes, logical puzzles and games, classifications and categorizations, quantifications and calculations, computer programming languages, scientific thinking, logical-sequential presentation of subject matter, Piagetian cognitive stretching exercises, etc. can be employed in teaching-learning to enhance logical mathematical intelligence.

Visual Spatial Intelligence

This type of intelligence is concerned with the abilities, talents and skills involving the representation and manipulation of spatial configuration and relationship. People using this

intelligence are art or space smart. They possess artistic capabilities, have an eye for detail and colour, spatial awareness, and enjoy painting and sculpting. Many of us as adults make use of this kind of intelligence in the sphere of our work. For example, painters may be seen to demonstrate spatial intelligence through their use of space when applying pigments to canvas. This is also true of professionals like land surveyors, architects, engineers, mechanics, navigators, sculptors and chess players who are found to rely upon the spatial intelligence in their own way. Students are visual/spatial when they think in pictures and images, are good with spatial relations, have a good eye for detail and colour, see solutions to problems, learn through visuals, and like to draw and create. Students with extreme levels of this intelligence may be caught doing mazes, puzzles, or just drawing and daydreaming. Spatial students enjoy rearranging their desk, watching music videos, and creating art.

The strategies and materials namely, charts, graphs, diagrams, maps, photography, videos, slides and movies, visual puzzles and mazes, 3D construction kits, art appreciation, imaginative storytelling, picture metaphors, creative daydreaming, painting, collage, visual arts, idea sketching, visual thinking exercises, graphic symbols, using mind-maps and other visual organisers, computer graphics software, visual awareness activities, optical illusions, colour cues, telescopes, microscopes and binoculars, visual awareness activities, draw and paint, picture literacy experiences etc. can be employed in teaching-learning to enhance visual spatial intelligence.

Bodily Kinesthetic Intelligence

Bodily kinesthetic intelligence is the capacity to use whole body - the hand, fingers and arms - to solve a problem, make something or produce something. It is the ability to perform skillful and purposeful movements. A person with well-developed bodily kinesthetic intelligence usually explores the environment and objects through touch and movements, enjoys concrete learning experiences such as field trips, model building or participating in role play, games, sensitive and responsive to physical environments and physical systems, demonstrate skill in acting, athletics, dancing, sewing etc. The best examples are athletes, dancers, actors, craft-persons, gymnasts, sports-persons, pianists and surgeons or people in the performing arts. These people may find it difficult to sit still for long periods of time and are easily bored. Students are body smart when they are highly coordinated, use gesture and body language, take things apart and fix them, learn through hands on activities, enjoy acting and role playing, and enjoy dancing and athletics. For the development of this kind of intelligence, there is need for hands on

investigations and experiential learning situations. This develops better beyond the classroom walls in outdoor fieldtrips, excursions, etc.

The strategies and materials namely, creative movement, mime, hands-on thinking, field trips, competitive and cooperative games, physical awareness and relaxation exercises, crafts, body maps, cooking, gardening, manipulatives, virtual reality softwares, physical education activities, communicating with body language, tactile materials and experiences, body answers, etc. can be employed in teaching-learning to enhance bodily kinesthetic intelligence.

Musical Rhythmic Intelligence

This type of intelligence covers the abilities, talents and skills pertaining to the field of music. It may be well demonstrated through one's capacity for pitch discrimination, sensitivity to rhythm, texture and timbre, ability to hear themes in music and in its most integrated forms, the production of music through performance or composition. Individuals with this intelligence are sensitive to sound. Students are music smart when they have a good sense of rhythm and melody, like to sing, hum, chant and rap, enjoy listening to music, read and write music, learn through music and lyrics, and enjoy creating music. It is visible in a quite large proportion in professional like musicians, composers, singers and conductors. If educators include music and rhythm as an integral part of the curriculum and help youngsters to exercise and reinforce this intelligence, then it develops and blossoms.

The strategies and materials namely, singing, humming, whistling, playing recorded music, playing live music on piano, guitar and other instruments, group singing, mood music, music appreciation, playing percussion instruments, rhythms, songs, raps, chants, using background music, linking old tunes with concepts, discographies, creating new melodies for concepts, listening to inner musical imagery, super memory music, etc. can be employed in teaching-learning to enhance musical rhythmic intelligence.

Interpersonal Intelligence

Interpersonal intelligence is the ability to understand and work with others. It involves learning through interaction with people. Social interactions in day-to-day life are qualitatively maintained with it. Some examples are teachers, sales people, politicians and religious leaders. Anybody who deals with other people has to be skilled in the interpersonal sphere. This is the person-to-person way of knowing. It is the knowing that happens when we work with and relate to other people, often as part of a team. These persons probably have lots of friends, showing a great deal of empathy for others and exhibit a deep understanding of others points of view. They probably love team activities of all kinds and are good team members. These people are sensitive to other people's feelings and ideas. Moreover, they are likely to be skilled at drawing

others out into a discussion. They are also probably skilled in conflict resolution, mediation and finding a compromise when people are in radical opposition to one another. To develop this intelligence, the interaction between students and the teacher should be enhanced and interactions among students should be encouraged. This intelligence thrives on active learning within the social context of the classroom.

The strategies and materials namely, cooperative groups, interpersonal interaction, conflict mediation, peer teaching, board games, cross-age tutoring, group brainstorming sessions, peer sharing, community involvement, apprenticeships, simulations, academic clubs, interactive software, social gatherings as context for learning, people sculpting, etc. can be employed in teaching-learning to enhance interpersonal intelligence.

Intrapersonal Intelligence

Intrapersonal intelligence is the ability to know oneself, his cognitive strengths, styles and mental functioning. It refers to what one can do, what one wants to do, how one reacts to things and which things one avoids. They tend to know what they cannot do. Also, they know where to go if they need help. It thus provides insight to one's total behaviour. It is the ability for self-analysis and self-reflection. It involves our awareness of the inner world of the self, emotions, values, beliefs and spirituality. Philosophers, yogis and saints demonstrate it. People who have this intelligence are often strong willed, self-confident and have definite opinion on almost any issue. If this intelligence is one of the strong points of a person he may like to work alone and sometimes he may shy away from others. They have creative wisdom and their insights are highly intuitive. They are inwardly motivated rather than expecting external reward to keep them going. Other people will often come to them for advice and counselling. To develop intrapersonal intelligence, the students should be aware of their strength and weaknesses. Journals, logs and portfolios for self-evaluation help them enhancing intrapersonal intelligence.

The strategies and materials namely, independent study, feeling-toned moments, self-paced instruction, individualized projects and games, private spaces for study, one-minute reflection periods, personal connections, options for homework, choice time, self-learning programmed material, self-esteem activities, journal keeping, goal setting sessions, etc. can be employed in teaching-learning to enhance intrapersonal intelligence.

Naturalistic Intelligence

Naturalistic intelligence is the latest addition to Gardner's intelligence in 1997. It refers to the ability to recognise and classify plants, minerals and animals, including rocks and grass and all varieties of flora and fauna. The ability to recognise cultural artefacts like cars or sneakers may also depend on the naturalistic intelligence. They have an awareness of the natural world

phenomena, discriminate natural items like animals, insects, birds, fish, rocks, minerals, plants, or non-natural items like cars. Individuals with this intelligence learn best when the content is related to the natural world. Farmers, botanists, conservationists, biologists and environmentalists would display this. It involves the full range of knowing all that occurs in and through our natural environment. People possessing this intelligence discover subtle changes in the environment. It flourishes in an environment that connects the learner with nature. Special projects to beautify the class, school or community will bring out the naturalist's skill.

The strategies and materials namely, nature observation, conservation practices, environment feedback, creation of habitats, sensory stimulation exercises, caring for animals and plants, collecting and classifying natural objects and organisms, etc. can be employed in teaching-learning to enhance naturalistic intelligence.

Existential Intelligence

Gardner recently disclosed the existence of this intelligence area. Existential intelligence means individuals who exhibit the proclivity to pose questions about life, death and ultimate realities. It includes learning through seeking answers to fundamental questions of being like – Where do we come from? What happens when we die? People possessing this intelligence will also be interested in cosmic or existential issues. They seek experiences in religious mythology, inclination towards life and death. They are able to relate themselves with the cosmos or the infinite. They are interested in ultimate realities. Aristotle, Einstein, Plato, Socrates, all Indian yogis and saints like Rishi Aurobindo, Vivekananda, Yogananda and Ramathirtha are having this kind of intelligence. The characteristics of people with existential intelligence are highly introspective and attuned to their innerselves. They have a firm understanding of their own personal beliefs, preferences and convictions. They enjoy in school activities that provide them with a variety of experiences. They prefer to express themselves and their opinions as opposed to memorising facts and information. They are frequently motivated and are good at evaluating their own work. In the learning environment, this kind of intelligence flourishes if the students are provided opportunities to ask 'why' and 'what if' kind of questions.

The strategies and materials namely, charity work, puzzle games, questions and answers game, read about other cultures, draw or paint a scene from a story, write an opinion essay on a certain topic, guess, imaginative play, etc. can be employed in teaching-learning to enhance existential intelligence.

IMPORTANCE OF MULTIPLE INTELLIGENCE

The idea of multiple intelligence as a ‘powerful medicine’ for the shortcomings that is existent in the educational system. The teachers used it as a teaching approach, method or strategy or as an assessment tool; they agreed on that instruction should be tailored according to the multiple intelligence of the students. The following illustration of the points that give value and importance to the application of multiple intelligence theory in the educational settings.

- *Multiple Intelligence theory as a tool to achieve more success:* Teachers are strongly motivated to help all students to learn. Therefore, they have explored multiple intelligence theory as a tool that makes more students learn and succeed.
- *Multiple Intelligence makes learning more enjoyable:* Student learn better if they like what they are learning and enjoy it. It is hard for the students to learn without interest. When students do not like what they learn, they feel bored and tired even if they are able to learn well and succeed in the final exam. Therefore, it is better to create an enjoyable classroom. Teachers can create such an encouraging atmosphere in the classroom.
- *Multiple Intelligence cares for individual differences in learning:* Multiple intelligence is greatly required so as to deal with the different students who have different minds. It will involve all the students with their different personalities to have more chance for learning and achieving success in spite of this differences that cannot be considered.

The teacher should take individual differences among students seriously and understand how their minds are different from one another and then help them to use their minds well. If the strengths and weaknesses of the students are analysed properly, then the teacher can use their strength to develop them. This not only stimulates their development but also makes them happy because everyone enjoys working in their areas of strength. Awareness about the multiple intelligence theory will motivate the teachers to find more ways of helping all the students in their classes.

APPROACHES TO MULTIPLE INTELLIGENCE

The teacher while teaching in classroom can focus on multiple intelligences by making students realise how smart they are by providing them with different outlets of learning. More time in planning and preparation might be necessary when using Gardner’s theory. Howard Gardner presents two suggestions, “Take them on outings to a children’s museum or to some other setting that provides a rich experience, like a playground with many kinds of games and watch them carefully. Second, give a short questionnaire about their strengths to the students and their parents and if possible, their teachers from the previous year”. Linda Campbell author of

Teaching and Learning through Multiple Intelligences describes the following five approaches to adding Multiple Intelligences into the classroom.

1. **Lesson design:** Some schools focus on lesson design. This might involve team teaching (teachers focusing on their own intelligence strengths), using all or several of the intelligences in their lessons, or asking student opinions about the best way to teach and learn certain topics.
2. **Interdisciplinary units:** Secondary schools often include interdisciplinary units on certain topics.
3. **Student projects:** Students can learn to initiate and manage complex projects when they are creating student projects.
4. **Assessments:** Assessments are devised which allow students to show what they have learned. Sometimes this takes the form of allowing each student to devise the way he or she will be assessed, while meeting the teacher's criteria for quality.
5. **Apprenticeships:** Apprenticeships can allow students to gain mastery of a valued skill gradually, with effort and discipline over time.

In using these five ideas, students may decide to express his or her knowledge of that content in one of many different ways (i.e., puppetry, model making, classroom demonstrations, songs, and plays). The vast amount of time now dedicated to meeting local, state, and national mandates makes it very difficult for even the most ingenious practitioners to devote much time to multiple intelligence activities. The challenge, at least in the short run, is to absorb multiple intelligence thinking into the daily routine, rather than to devote extra time that few have to such pursuits.

IMPLICATIONS OF MULTIPLE INTELLIGENCE

Multiple intelligence improves a man's learning potential. When a person learns, he/she not only uses one of these intelligences, but combinations of all nine intelligences. The multiple intelligence approach acknowledges the individual differences while enabling students to meet the demand of the lessons. Students are thus able to accomplish their school work and engage well in lesson activities. Moreover, there is a stimulation of their mind, thought processes, interests and highlights the individual's talents and abilities which can be developed for further growth. Teachers themselves can enjoy and shape lessons according to the students' capabilities. In other words, it caters to the different needs of the students in the class. Teachers can use every day events and real-life situations to improve the way their students learn. The approach, not only develops the students' ability to speak, listen, write and read and it further magnifies their

ability to sing, draw, think and express. In short, it helps to cultivate a student's full potential. The nine intelligences are thus able to synthesise and improve the student as a whole.

CONCLUSION

Multiple intelligences encourage the development of creativity and problem-solving skills. Teachers can provide opportunities for students to express themselves artistically, engage in open-ended projects, and tackle real-world problems using their unique intelligences. The theory of multiple intelligence is so popular provides teachers with a conceptual framework for organising and reflecting on curriculum assessment and pedagogical practices. In turn, this reflection has led many teachers to develop new approaches". By applying the theory of multiple intelligences in the classroom, Teachers take into consideration the different types of learners they might have in their class, reinforce all types of intelligences in every student, and allow for an individual learning process that will ultimately enable each learner to utilise his or her specific abilities and demonstrate learning. Teachers should use diverse teaching strategies, materials, and resources that address multiple intelligences to reach all learners effectively. They should also use multiple assessment methods, offer a flexible learning environment, and provide opportunities for students to explore their strengths and interests. The implementation of multiple intelligence theory can lead to a more inclusive, engaging, and effective learning environment that meets the diverse needs of all learners.

REFERENCES

- Andrea L. Heming (2008). *Multiple intelligences in the classroom*. Fall: Western Kentucky University.
- Armstrong, T. (2000). *Multiple Intelligences in the Classroom* (2 ed.). Alexandria, Virginia, USA: Association for Supervision and Curriculum Development.
- Brualdi Timmins, A. C. (1996). *Multiple intelligences: Gardner's theory*. Practical Assessment, Research, and Evaluation, 5(1), 10.
- Charles Peeler Jefferson, W. (2007). *The implementation of multiple intelligences in the classroom to enhance student learning*. Menomonei: University of Wisconsin-Stout.
- Gardner, H. (1991). *The unschooled mind: How children think and how schools should teach*. New York: Basic Books.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.
- Gardner, H. (1993). *Multiple intelligences: The theory in practice*. New York: Basic Books.
- Gardner, H. (1999). *Intelligence reframed*. New York: Basic Books.

- Gardner, H. (2000). *The disciplined mind: Beyond facts and standardised tests, the K-12 education that every child deserves*. New York: Penguin Putnam.
- Gardner, H. (2010). *Multiple intelligences*. Retrieved from <http://www.Howardgardner.com/MI/mi.html>
- Howard Gardner's Theory of Multiple Intelligences, Northern Illinois University, Faculty Development and Instructional Design Centre, Retrieved from https://www.academia.edu/28068080/Howard_Gardners_Theory_of_Multiple_Intelligences
- Lazear, David (1992). *Teaching for Multiple Intelligences*. Fastback 342 Bloomington, IN: Phi Delta Kappan Educational Foundation. (ED 356 227) *Scientists*, 1(2), 1-12.
- Mangal, S. K. (2007). *Advanced educational psychology*, New Delhi: Prentice-Hall of India Private Limited.
- Mahmoud Mohammad Sayed Abdullah (2008). *Multiple ways to be smart: Gardner's theory of multiple intelligences and its educational implications in English teaching and oral communication*, Egypt: Assiut University.
- Reena V. Nair (2010). Multiple intelligence a broad vision of education, *Edutracks*. 9(6). Retrieved July 31, 2023, from <http://schoolofeducators.com/2008/07/multiple-intelligences-strategies-in-the-classroom/>
- Retrieved July 31, 2023, from <https://whatdoesmamasay.com/existential-intelligence-activities/>