Research Paper Education

Multiple Intelligence: A Broad Vision of Education

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KEYWORDS

There are multiple ways of learning and knowing. The brain has memory systems for rote learning and spatial memory and performs many functions simultaneously. Each brain has profile of Multiple Intelligence-Verbal, Mathematical, Visual, Interpersonal, Musical, Bodily, Naturalist and Existentialist. These are the many ways of receiving information and expressing ourselves. Multiple Intelligence theory allows one to assess the talents and skills of the whole individual rather than just the verbal and mathematical skills. This theory provides a more holistic and natural profile of human potential. Gardener first identified and introduced seven different kinds of intelligence in his book titled "Frames of Mind and later on added the next two.

Types of Multiple Intelligence
Following are the five nine types of Multiple Intelligence:
1. Visual/Spatial Intelligence
This includes learning visually and organizing ideas spatially. Seeing concepts in action in order to understand them, E.g. Leonardo Da Vinci. He sketched thousands of drawings of scientific phenomena, architectural renderings and renowned anatomical studies by including the minute details. To encourage people with this intelligence, visual and performing arts must share center stage with other academic and vocation activities.

2. Logical/Mathematical Intelligence
This is learning through reasoning and problem solving. It includes and problem solving. It includes representing data, reasoning skills. E.g. Albert Einstein. His theory of relativity $E=MC^2$ symbolically represents a complex series of computations regarding the theory of the universe. The implications of this intelligence call attention to the need for rigorous curricula and vigorous instruction in the area of critical thinking, mathematics, logic etc.

3. Verbal/Linguistic Intelligence
It embodies the ideas of speaking and listening and learning takes place through speaking and writing. E.g. Neil Armstrong. His statement "That's a small step for man, one giant leap for mankind"-words like these become emblazoned in one's memory as a spoken rhetoric of power, strength and vigor. To explore this type of intelligence, there is a need to recognize, appreciate the skills like reading fact and fiction, writing memos, notes letters, news release etc.

4. Musical/Rhythmic Intelligence
This includes learning through knowing, sharing, expressing perceiving and creating pitch and patterns for the human mind. In this kind of intelligence, learning takes place through various patterns, rhythms and music involving all the senses. E.g. Mathematical tables learnt by students in school through repetition. If educators include music and rhythm as an integral part of the curriculum and help youngsters to exercise and reinforce to exercise and reinforce this intelligence, then it develops and blossoms.

5. Bodily/Kinesthetic Intelligence
Learning through muscle memory obtained from experiences. It promotes understanding through concrete experiences. E.g. Gymnasts, sportspersons or fingers of a pianist flying across the piano's keys. For the development of this kind of intelligence, there is need for handsome investigations and experiential learning situations. This develop better beyond the classroom walls outdoor fieldtrips, excursions etc.

6. Interpersonal/Social Intelligence
This involves learning through interaction with people. It promotes collaboration and cooperation while working with other and involved give and take of communication empathizing with others. E.g. Mother Teresa-who devoted her life to others? 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.

7. Intrapesonal/Introspective Intelligence
It represents frames of mind which learners internalizes learning through thoughtful connections then transfer it to novel situation through reflective application. E.Jung, Freud etc. It is also learning through feelings, values an attitude. To develop intrapersonal intelligence, the students should be aware of their strengths weaknesses. Journals, logs and portfolios for self-evaluation and dialogue with others help the students in this.

8. Naturalist/Physical World Intelligence
This involves learning through categorization; classification etc. represents observation and distinctions made in the natural world. E.g. environmentalists. People possessing this intelligence discover subtle changes in the environment. Naturalist intelligence 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 skills.

9. Existential Intelligence
This includes learning through seeking answers to fundaments questions of being like-where do we come from? What happens when we die? People possessing this intelligence will also be interested in cosmic issues. E.g. Confucius, Socrates, Plato etc. 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 present day scenario in schools regarding the intelligence of students is pathetic. Some intelligent students are considered to be good and some intelligent ones are termed 'bad'. The most disheartening fact is that children will grow up being told that they are not intelligent and are therefore not of great worth. Not only schools but people working in organizations and business are judged by inappropriate criteria and are written off as being worthless by the employers.

Multiple Intelligence in the Classroom Atmosphere
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 analyzed 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 students in their classes.

Some other ways in which the Multiple Intelligence theory can be implemented in the classroom are: the concept of team teaching can be involved in the teaching methodology. The method of introducing interdisciplinary units at the high school level is another way E.g. Learning a lesson about our universe in the English class. Assigning projects to students will allow them to work in teams and they learn to initiate and manage complex projects while working together. Assessments are to allow students to show what they have learnt. The student can also device the way s/he will assessed while keeping in mind the teacher's criteria for quality. Apprenticeships allow students to gain mastery over a skill gradually with effort. If this is included in the student's schooling experience, then s/he will gain practical experience.

A number of schools in North America have structured their curricula based on Multiple Intelligence theory. But there is a perception among many people and institutions that intelligence can be measured on a single scale and that a person could be judged to have high, low or average intelligence. Because of this perception among people, Multiple Intelligence has not been implemented in other parts of the world.

All intelligences are needed to lead life well. Teachers need to attend to all intelligences and opt for depth in one type of intelligence. To implement the Multiple Intelligence theory in classroom, the curriculum should not be too rigid and there should be more than one form of assessment.

People who have viewed intelligence as a single scalable quality will find Gardener's work problematic as there is substantial amount of research to demonstrate the existence of a general intelligence factor. The common criticism against Gardener's work is that his theories derive strongly from his intuitions and reasoning rather than from empirical research.

Educational Implications of the Multiple Intelligence Theory

1. Need a shift towards holistic, experimental learning leading to lifelong skills and equal opportunities for all.
2. Unloading of an overloaded curriculum.
3. Necessity for the life skills of thinking and cooperating which will be needed throughout the life.
4. Necessity for learner centered schools.
5. Integrated curriculum: There are many ways of integrating curriculum. According to H.H. Jacobs some of them are:

a) Connected way:

In a subject area the course content is connected topic to topic, concept to concept and one year's work to the next etc. E.g. the teacher relate the concept of fractions to decimals and later relates to money grades etc.

b) Nested way:

In each subject area multiple skills are targeted (social skill, thinking skill and content specific skill.) E.g. teacher designs a unit on photosynthesis to target consensus seeking, sequencing and plant life cycle.

c) Sequenced way:

Topics of study are arranged to coincide with one another. Similar ideas are taught in separate subjects. E.g. the English teacher presents a historical novel depicting a particular perios while history teacher teaches the same historical period.

Conclusion

Though there may be some significant questions and issues around Multiple Intelligence theory it still has had utility in education. It has helped many teachers to look beyond the narrow confines of curriculum and testing and assist people to live their lives well.

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