

Integration of Gardner's Multiple Intelligences: Uncovering Potential in Education System

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Abstract: “Intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with his environment (Wechsler, 1944). Traditionally intelligence was measured through IQ tests, but these tests only measured single type of intelligence. While the prevalent intelligence tests were designed to measure only limited areas of intelligence, primarily math's and linguistics. This pinpoints towards the significance of multiple intelligence theory in the present day education system as this theory proposes that there are nine types of intelligence, namely, “linguistic intelligence”, “logical/mathematical intelligence”, “spatial intelligence”, “musical intelligence”, “bodily/kinesthetic intelligence”, “interpersonal intelligence”, “intrapersonal intelligence” “naturalist Intelligence” and “existential Intelligence”, instead of one and all intelligences work jointly in a unique manner. The present paper pinpoints towards the education implications of multiple intelligence theory such as greater accessibility, diverse learning needs, tool to achieve more success, makes learning more enjoyable etc. and encourages the teachers across the country to incorporate the same in their teaching. The paper concludes that the need of the hour is to adopt an inclusive pedagogy that addresses and accommodates the various intelligences and will help in the uncovering the hidden potential of all the students.

Key Words: Integration, Gardner, Multiple Intelligence, Educational System

Introduction

The real asset of any country is its human resources. Education plays a very pertinent role in the transformation of human being to human resources. In fact, education is the only medium through which the actualization of potential of individuals can be realized. Education is a tri-polar process with teacher, students and social environment as its three poles. The teacher

plays a very significant role not only in transaction curriculum and but also in bringing about evolution of balanced personality. But there exists wide individual differences among individuals with respect to performance, some individuals perform well while others linger on or do not succeed. Though there are various other factor such as interests, attitude, knowledge, skills, etc. that contribute towards their performance or achievement, still there is another attribute termed as intelligence that makes a differences. The term intelligence has been defined differently by various psychologists. During Ancient India intelligence was called as “Viveka” by rishis and seers. Stoddard (1943) found “intelligence as the ability to undertake activities that are difficult, complex and abstract and which are adaptive to a goal and are done quickly and which have social value and which lead to the creation of something new different”. Then Wechsler in 1944 defined “intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with his environment”. Later Gardner and Hatch (1986) defined “intelligence as the ability or skill to solve problems or to fashion products which are valued within one or more cultural settings”. (as cited by Legg and Hutter, 2007)

Traditionally intelligence was measured through IQ tests, but these tests only measured single type of intelligence. While the prevalent intelligence tests were designed to measure only limited areas of intelligence, primarily maths and linguistics. So this pinpoints towards the significance of multiple intelligence theory in the present day education system as this theory proposes that there are nine types of intelligence, instead of one, and all intelligences work jointly in a unique manner. The theory of multiple intelligences was proposed by Dr. Howard Gardner in 1983 and was published in first book “Frames of mind: The theory of Multiple Intelligences”. Indeed, Howard Gardner, a psychologist and co-director of Harvard University’s “Project –Zero,” the mission of which was to “understand and enhance learning, thinking and creativity in the arts, as well as humanistic and scientific disciplines, at the individual and institutional levels,” through extensive research on human beings have “Multiple Intelligences”. Initially, Gardner clearly reported seven types of intelligences which the learners may utilize in order to gain knowledge. Gardner mentioned these types of intelligence as, “linguistic intelligence”, “logical/mathematical intelligence”, “spatial intelligence”, “musical intelligence”, “bodily/kinaesthetic intelligence”, “interpersonal intelligence”, and “intrapersonal intelligence”. Later in 1999 Gardner added two more types of intelligence, namely “naturalist Intelligence” and “existential Intelligence”. (as cited by

Andrioti,2010). The core idea underlying multiple intelligences was to enable people identify their weaknesses and strengths, so that they work on their weaknesses and strengthen their strengths. Gardner's indicated that "there are nine main intelligences, and there is also the possibility to add more". The nine type of intelligence as proposed by Gardner are:

1. Linguistic intelligence: "Linguistic Intelligence is the ability to use words effectively in writing, reading and speech" (Gardner, 1999).
2. Logical/mathematical intelligence: "Logical/mathematical intelligence is the ability of reasoning, analyzing and dealing with numbers" (Gardner, 1999).
3. Spatial intelligence: "Spatial intelligence is related to the ability to recognize the world and space and present information visually" (Gardner, 1999).
4. Musical intelligence: "Musical intelligence is parallel in structure to verbal-linguistic intelligence and that it is reflective composition and appreciation of musical patterns" (Gardner, 1999).
5. Bodily/kinesthetic intelligence: "Bodily/kinesthetic intelligence is related to physical ability. People with strong bodily/kinesthetic intelligence can control their movements and their body and excel in physical activities such as dancing" (Gardner, 1999).
6. Interpersonal intelligence: "Interpersonal intelligence is related to a person's ability to communicate with others; including the ability to build relationships with other people and interact effectively with them" (Gardner, 1983).
7. Intrapersonal Intelligence: "Intrapersonal Intelligence is the ability to understand and communicate within a person's self. It involves the ability to express personal goals, needs, and emotions and recognize what needs People who are strong in intrapersonal intelligence learn best individually and prefer working alone"(Gardner,1999).
8. Naturalist intelligence: "Naturalist intelligence was added later to the previous intelligences and is related to nature. People who are strong in this intelligence are connected to nature, know the weather, like animals and plants and learn best when they are in a nature setting, not in a classroom" (Gardner, 1999).
9. Existential intelligence: "Existential intelligence is the ability to question about the existence of human, death, the meaning of life and the reason for existence" (Gardner, 1999).

Gardner specifically justified the multiple intelligences theory through several positions; firstly the intelligences indicate distinct classes of profession. Secondly, the prodigies with exceptional talent in certain area, while manifesting normal intelligence in other areas. Thirdly, the evidence with respect to brain damaged cases of individuals whereby certain specific intelligences may be affected and lastly, an evolutionary development argument in which different types of intelligence were required at different levels of evolution. (as cited by Alpey,2014).

As education in India is undergoing a tremendous change, our traditional teacher centred classrooms are being changed to learner-centred, activity- centred and ICT- oriented. The methods followed at varied levels viz. elementary, secondary and higher education do not contribute much towards the development of intelligences as stated by Gardner. Application the theory of Multiple Intelligences in any learning environment enriches the lives of both students and teachers by broadening the range of options for both. It offers opportunities for students to take greater responsibility for their learning and for the teacher to become facilitators of learning, rather than the sole providers of knowledge in the classroom. In present day education system, there is an overwhelming emphasis on verbal/linguistic and logical/mathematical intelligences and as a result, students' diverse learning needs and styles are not being met (as cited by Stanford, 2003). Many researchers and teachers advocate for students' rights and equal opportunities to participate in an inclusive environment.

Educational implications

In general, schools give more importance to linguistic and logical abilities, and relatively little credits to other abilities. In a way it reflects the perception of our society that prefer scientists, doctors and engineers in comparison to dancers, musician etc. The following section, pinpoints towards the education implications of multiple intelligence theory and encourages the teachers across the country to incorporate the same in their teaching.

1. **Greater Accessibility:** The potential of multiple intelligence theory to build the intelligence of all members of society is a very much in line with the current emphasis of universal education. The theory suggests that all individuals have natural talents that could be refined at higher education. It challenges the notion that only the linguistic or mathematically talented people will benefit from higher education. In order to improve the accessibility in higher education the criteria of admission for

higher education needs to be re-examined, that tends to identify students with linguistic or logical-mathematical intelligences. The potential for identifying students with unique intelligences focuses on revising the admission criteria; otherwise it will limit the potential of the society as a whole. In fact multiple intelligence theory implies that we need to reconsider admissions standards, assignments and examination as it limits ones capacity to identify, develop and reward intelligent individuals. By encouraging students to take control of their learning and by making them aware of their primary intelligences can make significant difference in their educational experiences. Probably then, those students who have never anticipated being college graduates due to their inability to conform to traditional logical/mathematical and linguistic standards will achieve success and will look forward to a bright future as college graduates.

2. **Diverse Learning Needs:** Another important implication of multiple intelligences in education system is that it helps in catering to the needs of diverse learners. By adopting multiple intelligence approaches, teachers can identify the needs, potentials and talents of students and can thus customize content, process and product according to their respective needs. Teacher can adopt various methods of teaching learning such as, collaborative learning; project based learning, community learning, experimental learning and many more and thus can enhance the unique intelligences of students such as intrapersonal, interpersonal, spatial, naturalistic etc.
3. **Tool to achieve more success:** The majority of classroom consists of varied of students in terms of academic achievement, some are toppers, others average and a few losers too, if multiple intelligences is taken into consideration increases the opportunity for students to learn and succeed, giving adults more ways to grow professionally and personally (as cited by Hoerr,2000).Ayesha and Khurshid (2013) revealed that there is a positive relation in “multiple intelligence” and “academic achievement”. Further Ahavan, Zainalipour, Jamri and Mahmoodi (2016) studied the relation in “multiple intelligences” and problem solving styles and its role in the academic achievement of high school students and found that multiple intelligences had a positive relation with academic achievement.
4. **Makes learning more enjoyable:** Students tend to take more interest in learning, if they like what they learn, indeed they enjoy such learning. Through multiple

intelligence approach, teachers can create such an enjoyable atmosphere in the class. “Students learn best when they enjoy what they are doing. Giving them the opportunity to display their talents, learn new skills without fear of embarrassment or failure, and laugh in the process makes the learning experience rewarding for both teacher and student” (Bailey, 1999).

5. **Cater to individual differences in learning:** Gardner (2006) argued that due to the multiple intelligences individuals are truly human beings. Each has a unique profile of intelligences of varying strengths and no particular intelligence is considered superior to other types. According to Gardner (2003), “all intelligences are required for an individual, in order to participate, act purposefully and creatively in the society”. Berman, (2001) rightly pinpointed that all students are different, even twins also have their own speciality. It is evident that we will never reach all the learners, whatever approach to teaching we adopt, unless we teach multi- modally and cater for all the intelligences in our lessons. Gardner asserted that individual differences reflect multiple intelligences of human beings; and through these intelligences an individual tries to understand the world, these are personal strengths through which a person comprehends the world (as cited by Arnold and Fonseca, 2004). What multiple intelligences theory offers is not only significant from a theoretical perspective, but also has important practical implications for teaching practice. Teachers should consider various multiple intelligences of the students during their teaching; and should encourage the students to use their varied intelligences in their learning (Gen, 2000). Larsen-Freeman (2000) suggested that by improving quality of teaching and learning, both teacher and learner should take into account their own different multiple intelligences. Regarding their career, learners’ multidimensionality should be celebrated and all intellectual abilities may be enhanced (Cohen, 2003).
6. **Assessment and evaluation:** Since times immemorial assessment and evaluation system has been a crucial part of education system. The traditional testing methods are inherently biased in favour of students with strong linguistic testing and mathematical skills. A student good in kinaesthetic learning might not display the fullest potential in linguistic talents. According to Gardner (n.d.), “I believed that we should get away altogether from test and correlation among tests and look instead at more naturalistic sources of information about how people around the world develop

skills important to their way of life". (as cited by Armstrong, 2009). Multiple intelligences imply that teachers should adopt several modes of assessment to evaluate the students inclusively. Multiple intelligences theory promote large number of resources that can be used by teachers to get the right overview of students performance checklists, implementation tasks, anecdotal records, self-assessment reports, independent group projects, creative tasks, collecting information through different agents such as teachers, peers, relatives etc.(as cited by Maurya and Agarwal, 2018)

Conclusion

Gardner's Multiple intelligences greatly emphasizes on cognition and promotion of all the varied human intelligences and enables individuals to deal appropriately with the difficulties while facing the real world. It has the potential to revolutionize the entire education system with its innovative approach of teaching and learning process at all the levels of education be it primary, secondary or higher education. Though there are some challenges also in successful implementation of multiple intelligences, but they can be addressed properly with the combined effort of students, teachers, policy makers, government, administrator and other stakeholders. Thus it can be concluded that at all levels of education an exclusive pedagogy is in being practiced that caters to a very small proportion of population, whose primary intelligence is logical/mathematical or linguistic/verbal. Indeed, the need of the hour is to adopt an inclusive pedagogy that addresses and accommodates the various intelligences and thus caters to a fairly larger proportion of population of students.(as cited by Andrioti, 2010). In fact the appropriate integration of Gardener's multiple intelligence theory in the education system as a whole will help in the uncovering of hidden potential of all the students.

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