

Relationship between Socio Economic Variables and Multiple Intelligences of School Students: A Review Study

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INTRODUCTION

In today's education, Intelligence is the most important factor which affects success of students in academics and in life. Intelligence means the way with which an individual deals with facts and situation. Intelligence is the collective or the worldwide capacity of the individual to act purposefully, to think logically and to deal efficiently with the environment. With the rapid change in technology and in highly competitive world the performance of the individual as a person, as a citizen, as a worker and as a student largely depends upon the intelligences he/she possess. Also there is a challenge in the education field regarding the difference of student advancement. In the world, no two individuals even are indistinguishable. There are various challenges like concentration, memory, thinking ability, intelligence, learning style, method and environment faced by students in order to achieve their life goals.

Every Child is having different level of intelligence. Intelligence can be define as ability to learn with speed and accuracy, ability to logically solve problems and ability to make adjustment in the society. Howard Gardner proposed the multiple intelligence theory to more precisely illustrate the concept of intelligence and to find out whether methods which claim to measure intelligence are in fact scientific (1983). As per Gardner's theory apart from just an intelligence persons have many types of intelligence, like kinesthetic, logical, natural, spatial-visual and intrapersonal intelligences. With the help of these intelligences individual can get all available skills and capacities they have.

Numerous external environmental factors like income, working status and qualification of the parents, number of siblings and nature of family they live in and other demographic factor like age and gender also affect the student's intelligence.

The present study will review various studies related to multiple intelligences and its relationship with socio-economic variables with especial reference to school students.

Rationale and Significance of the Study

Intelligence can be defined as individual's own capability to adjust as per the situation, whereas multiple intelligence to the ways to adjust with the situation. Every individual consists of one or more of the intelligence among the well-known nine categories. Hence we can say that everyone is intellectual. It is easy for student and teacher both, to learn and teach a concept through any one of the multiple intelligence, which is more suitable for them. That is why study on Multiple Intelligence is important for providing opportunities to the students to obtain skills and information and for problem solving, planning learning experiences. A variety of factors influences the multiple intelligences like age, gender, occupation and educational qualification of parents, school curriculum, teacher's attitude etc.

Considering all these things, the present paper will review if any, the relation between multiple intelligences of students and socio economic variables.

Conceptual Framework:

Intelligence

Intelligence is defined as our intellectual potential; which we are born with; can be measured, and an ability that is difficult to change. Intelligence involves the ability to think abstractly, reason, plan, solve problems, understand intricate ideas, study speedily, and gain knowledge from experience. To a certain extent it reflects a broader and deeper capability for comprehending our surroundings (Ackerman et al., 2005). After this, other views of intelligence have also come out. One of those is the theory of multiple intelligences proposed by Howard Gardner.

Multiple Intelligence

Gardner proposed the most acceptable theory of multiple intelligences including the development of cognitive capacities in normal individuals based on neuropsychological as well as psychometric evidences (Gardner, 1979; Hatch & Gardner, 1983). Initially Gardner described six types of intelligences, now there are nine known intelligences at present including (i) linguistic, (ii) spatial, (iii) logical, (iv) interpersonal, (v) intrapersonal, (vi) naturalistic, (vii) kinesthetic, (viii) musical, and (ix) existential (Colom et al. 2010). Analysis of multiple intelligences and potential of students can help teachers to personalize their lessons and methods of assessment (Malkus et al. 1988, Krechevsky & Gardner 1990).

As per Multiple intelligence theory each person has capacities in all nine intelligences. According to Davidson et al. (1996) individual has capacity to learn and develop all nine intelligences if given proper support and directions.

Gardner developed the Multiple Intelligences as an alternative theory to traditional understandings of intelligence and IQ testing. Gardner (1985) proposes that an IQ exam does not adequately assess an individual based on assumption that assessing an individual's intellectual potential is complicated, and that areas of expertise or skill will be valued differently based on their societal and cultural context. Additionally, teaching to mastery of traditional testing methods does not account for different skill sets and inclinations (Gardner, 2011).

Linguistic intelligence is skill and interest close to words, grammar in the perspective of written and spoken language.

Musical intelligence is ability and interest in music. It may be in Formal or informal aspect of music. People who are good at music theory and rhythm are told as good at formal aspect of music. Individuals who feel the music and perform without any musical education are told at informal aspects (Armstrong, 2009).

Logical-Mathematical intelligence is defined by Armstrong as "the ability to use numbers effectively...and reason well" (2009). Skill in logical-mathematical concepts is mostly dominated by the ability to recognize patterns and relationships between numbers. According to Armstrong (2000) logical ability develops into strong abstract thinking skills that may or may not circle around numbers; for example prediction, approximation, classification.

Visual-Spatial intelligence is the ability to accurately understand and mentally steer the surrounding world. If individual is able to accurately recall objects and spaces in different context, match/compliment patterns, shapes, or colors, and able to sense the direction, then he/she is said to be high on visual/spatial intelligence.

Bodily-Kinesthetic intelligence is a deep insight of what individual can make, communicate, or alter using the hands and body. Individual with this ability is good at athletics, balance, woodworking, and pottery, as well as dance or acting (Armstrong, 2009).

Interpersonal intelligence can be defined as the capacity to understand the moods, motivations, and intentions of others, and "effectively respond" according to Armstrong (2009). People with this intelligence use their understanding of facial expressions, gestures, and patterns of behavior to influence those around them, and work more effectively in teams and social settings.

Intrapersonal intelligence is the ability to self-regulate and deep sense of self. The sense of self is a complex combination of emotions, motivations, needs esteem, and many other factors such as perceived abilities and social relationships, within the mind of an individual. It is a skill to be able to recognize, analyze, and adapt one's sense of self, regulating feelings and desires productively (Armstrong, 2009).

Naturalistic intelligence relates particularly to skill and interest in nature and the natural world. Individuals with strong naturalistic intelligence are apt towards outdoor professions and hobbies, and understand the process of the natural world well, including direction, storm warnings, tides and seasons, or tracking. Additionally, this may manifest as an interest in the products of the natural world, including a desire to have or work with natural light, natural materials, or have strong relationships with animals (1985).

Existential intelligence is the capability to be insightful to or have the competence to conceptualizing in depth question about human existence and the meaning of life like why are we born? Why do we die? What is consciousness? Or how did we get here? It seeks connections to actual world and allows learner to see their place in the big picture and to observe their roles in the classroom, society and the world.

Gardner emphasizes that each person possesses all intelligences in a continuum from the lowest to highest extreme; can develop all intelligence to sufficient level with proper support and education. He also emphasized that intelligences work together in complex ways. (Businessballs.com)

"According to Gardner (2006) the multiple intelligences theory can be concludes as:

1. All persons own the full range of intelligences: that is what makes human beings.
2. No two individuals can have precisely the same intellectual profile even the identical twins also.
3. It is not like that having strong intelligence mean that individual necessarily acts intelligently."

Applications of MI Approach:

Gardner's multiple intelligences theory is applicable in various school or academic related tasks. Like it can be applied for planning and organizing material for taking lesson, selection of subject related activities, and associated evaluation and syllabus designing strategies. It helps students to built and enhance their strengths which increase their confidence to develop areas in which they are not as strong.

Review of Literature:

Few researchers tried to find out the correlation between intelligence and SES and found moderately or significant relation. Like Niesser et al., 1996 and Sirin 2005 conducted to study this relation.

Socio-economic status affects intelligence has been proved by researchers in multiple adoption studies in which poor children were adopted by high socioeconomic status parents and resulted as increase in intelligence (Schiff et al., 1978 ; Capron & Duyme, 1989)

A research has been conducted on "interactive effects of intelligence and socio-economic status of students and homework on the achievement of students" by Deshpande in 1986. It was found a significant relationship between intelligence and academic achievement. Although no relation can be establish in intelligence and socio-economic status.

The relationship between intelligence and academic achievement has been found positive in a study conducted by Mehrotra in 1986. Although he tried to find out the relationship between intelligence, socio-economic status, anxiety, personality adjustment and academic achievement of high school students but found no significant relation with other variables.

Critical examination of the influence of socio-economic status on academic achievement of higher secondary students in rural and urban areas of Kanpur was done by Misra (1986) and a positive relation between intelligence and academic achievement has been found.

Armstrong (1987) suggested different ways of helping children to learn more intelligently after studied in detail related to the Multiple Intelligences. He focused on the parents and suggested the various techniques and methods to teach kids efficiently based on Multiple Intelligence concepts.

Gardner emphasized on other talents and abilities instead of focusing on only verbal and mathematical ability as per conventional education system, in the research about the educational implications of the theory of Multiple Intelligences, carried out by Gardner and Hatch (1989)

In a research conducted by Snyder in 2000, "the relationship between learning styles based on multiple intelligence and academic achievement of High school students", a positive correlation between student's grade point averages and the categories of persistence, visual, self-motivated, prefer to work alone and prefer to work with sound. Results found a positive correlation between linguistic intelligence and the scores, logical- mathematical intelligence and the scores. There was a positive correlation between grade point average and bodily-kinesthetic intelligence for female students.

The relationship between Multiple Intelligences and Achievement in mathematics of secondary school pupils has been studied by Chandra (2002). The major finding of the study is that all components of Multiple Intelligence are positively and significantly related to mathematics achievement.

A study conducted by Loori in 2005 to find out the differences in intelligence preferences of ESL male and female students. Significant differences between male's and female's preferences of intelligences have been found out. Females preferred intrapersonal intelligence whereas males preferred logical mathematical intelligence.

Sasidharan (2007) reviewed the various papers and present a paper on interrelationship of different dimensions of Multiple Intelligences among secondary school students. The purpose was to determine how the different dimensions of the Multiple Intelligences are interrelated based on gender, locality and socio-economic status. No differences among the dimensions of Multiple Intelligences based on gender except for Linguistic intelligence and Musical intelligences have been found. There were differences among different dimensions of Multiple Intelligences based on locality and Socio-Economic Status.

The interrelationship between social demographic factors and Multiple Intelligences among college students has been investigated by Parker and Candace in 2007. The purpose was to examine the interrelationships among four social demographic variables and Multiple Intelligences among 475 first year college students. Results discovered that college students preferred interpersonal and linguistic intelligences. Differences existed in Multiple Intelligences between gender and race groups.

Neto (2008) conducted a research on "sex differences in self- estimation of Multiple Intelligences among Portuguese adolescents". The sample size was 242 adolescents who estimated their own and their parents IQ scores on each of Gardner's Multiple Intelligences. Males rated higher on overall, Mathematical, Spatial,

Intrapersonal, and Naturalistic IQ compared to females. Also it has been found that Verbal, Logical, and Intrapersonal Intelligence were significant predictors for self and parents overall IQ estimations.

Shazda, G. et al., (2011) in their research analyzed the multiple intelligence levels of academics of physical education and sports students according to some demographic factors. Significant differences were found in the visual and musical intelligence in male and female. Significant correlation was found between student's self-perceived, logical - mathematical intelligence, musical intelligence and their Parent's Education. A negative correlation has been found between students self-perceived Intelligence and their parent's education.

Erkan & Ozturk (2013) tried to study the effect of gender, mother's and father's educational qualification on multiple intelligences of kindergartners from different socioeconomic background. The sample size was total of 208 six year old children from kindergarten. 3 elementary schools represent the lower, middle and upper socioeconomic status selected randomly. It has been found that socioeconomic background creates a difference in children's multiple intelligences.

Gulap Shahzada (2013) conducted a study to find out the relationship between mother's education and students' multiple intelligences. It has been found a significant correlation between mother's education and students' verbal/linguistic, logical/mathematical and musical intelligence.

Stumm & Plomin conducted a longitudinal research to find out the relation between growth of intelligence and socio-economic status in 2015. The findings of study shows that children with low socioeconomic status has very low intelligence at age of 2 years and this gap has been increased in 16 year age as compared to children with high socio-economic status.

A study on "Effect of Family Variables on Multiple Intelligences of Secondary School Students of Gujarat State" has been conducted by Gupta (2016) to study the intelligence of children and the impact of family variables on their intelligences. It has been inferred that few family and environment related variables affect the intelligences of students positively while few do not have any impact.

Shala & Grajcevcic studied past researches and concepts related to socioeconomic status as a deciding factor for development in early childhood in 2016. Considering various theories and frameworks, socioeconomic status affects family dynamics, parental techniques, parental investment and access to resources indispensable for development. Low socioeconomic status restricts development in children. The theoretical review confirms that poor socioeconomic status block the development of children while parents with high socioeconomic status are able to provide the necessary preconditions for development. Child's intelligence, brain, language and behavioral development etc. are affected by socio-economic status.

Conclusion

Education is very important pillar in growth and development of any country. Multiple Intelligence theory provides a guide for teachers and trainer to assess and develop more and more abilities in students by exploring alternative teaching and assessment strategies. This meticulous review suggests that very few studies are there related to Multiple Intelligences in Indian context.

Also it is well known fact that in India there is much difference in socio economic status of people. Various socio-economic variables like educational level of each parent, working status of parents, income and occupation status, no. of siblings may affect the level of multiple intelligences. Very few studies have been conducted to find out the relationship between multiple intelligence and socio economic variables even in India.