

MULTIPLE INTELLIGENCES OF PROSPECTIVE TEACHERS IN RELATION TO GENDER, LOCALITY, AND LEVEL OF TEACHER EDUCATION

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ABSTRACT

The aim of the current study is to investigate how prospective teachers' multiple intelligences relate to their gender, place of residence and level of teacher education. The 326 prospective teachers in the sample were selected from the W.G. district's three B.Ed. and three D.Ed. colleges of education. Armstrong created the Multiple Intelligence Inventory. This instrument is a confirmed, scientifically designed assessment of multiple intelligences. This self-report questionnaire has 80 items that assess eight distinct multiple intelligence factors. There are five possible answers: "Never," "Rarely," "Sometimes," "Often," and "Always." A score of 5 for "Always," 4 for "Often," 3 for "Sometimes," 2 for "Rarely," and 1 for "Never" should be assigned to each statement. Scores might vary from 80 to 400. The Multiple Intelligence Inventory has a Cronbach's alpha score of 0.897, indicating a high degree of reliability. Results indicated that prospective teachers' multiple intelligences vary significantly depending on their gender and level of teacher education. The multiple intelligences of prospective teachers are not much affected by their locality.

Keywords: Intelligences, Multiple Intelligences and Prospective teachers

Introduction

The whole or global ability of a person to act with intention, reason logically, and interact with the world around them is known as intelligence. The performance of an individual as a human, a citizen, a worker, and a student in this technologically advanced and competitive society is primarily dependent upon his intellect. A child's IQ varies greatly. Gardner's notion of multiple intelligences offered new educational opportunities. The educational innovations that have emerged to challenge the limited approach to learning are arranged and synthesized by the notion of many intelligences.

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A vast range of simply implementable teaching tactics are made possible by this approach in the classroom. Each youngster has distinct and varied abilities and aptitudes, which enhance their problem-solving process. Therefore, research on multiple intelligences was crucial for offering students opportunities to solve problems in real-world scenarios, design products using their interests and strengths as a guide, and acquire knowledge and skills. It also helped to plan learning experiences around abstract themes and integrate students' cultures and experiences into the curriculum while branching out into other related subjects.

Multiple Intelligence

The idea of multiple intelligences was created by Harvard University psychologist Howard Gardner, and it was originally published in Frames of Mind: The Idea of Multiple Intelligences (Gardner, 1983). Gardner (1999) defined intelligence as the amalgamation of biological and psychological traits that allow people to solve problems or produce goods that are valued in several cultures. Humans use and develop both natural and learned mental skills via education, which is known as multiple intelligence. They combine elements of the social, biological, and physical domains. A well-known contribution of Howard Gardner is his many intelligent ideas. He observed two presumptions: (1) intelligence is a single, universal ability that all people possess to some degree, and (2) intelligence can be measured using linguistic standardization tools like short-answer paper-and-pencil examinations. According to Gardner's multiple intelligence theory, there are seven different types of intelligence: interpersonal and intrapersonal, linguistic, musical, logical-mathematical, spatial, and bodykinaesthetic. He thinks that rather than demonstrating a single, adaptable intellect, humans are involved in expressing several intelligences.

Characteristics of Multiple Intelligence

The qualities must satisfy each of the following seven requirements to be considered intelligent:

- 1. 1. Prodigies, autistic savants, stroke sufferers, and other remarkable populations are seen in relative isolation.
- 2. Possess a clear developmental path.
- 3. Have some evolutionary biology foundation.
- 4. Retained in systems of symbols.
- 5. Backed by data from IQ psychometric testing.
- 6. Actually, beneficial and significant in specific cultural contexts.

During the performance, the many intelligences work together and help one another. Academic accomplishment is not connected with musical intelligence, although verbal/linguistic mathematical intelligence is modest. Interpersonal, interpersonal, existential, intrapersonal, naturalistic, and bodily/kinaesthetic intelligence are all correlated every week. Theoretically, multiple intelligences offer a basis for identifying pupils' unique skills and aptitudes. This study recognizes that although not every kid will be brilliant in language or arithmetic, children may excel in other subjects like music, spatial awareness, or interpersonal skills. This method of approaching and evaluating learning enables a greater variety of pupils to engage in classroom learning effectively.

Types of MI:

- A. Bodily-kinaesthetic Intelligence: The technical term "kinaesthesia," which refers to a sensation for any movement, is whence the word "kinaesthetic" gets its meaning. "Body smart" refers to those who possess bodily-kinaesthetic intelligence. They do exceptionally well in tasks requiring physical aptitude, endurance, and coordination. These people may be gifted athletes or dancers, or they may be drawn to professions involving a lot of physical exertion, such as acting, coaching, or physical education. Their physical agility, balance, manual dexterity, and eye-body coordination are all well-developed. Bodily kinaesthetic intelligence is demonstrated by several professions such as dancers, actors, demonstrators, athletes, divers, sportspeople, soldiers, firefighters, PTIs, performance artists, ergonomists, osteopaths, fishermen, drivers, craftsmen, gardeners, cooks, acupuncturists, healers, and explorers.
- B. Interpersonal Intelligence: Interpersonal skills are what make "People smart" people. They are probably quite sociable and have great people skills. Understanding oneself and having a functional functioning model of oneself is the essence of interpersonal intelligence. Therapists, HR specialists, mediators, leaders, counsellors, legislators, educators, salespeople, psychologists, instructors, physicians, organizers, advertising experts, coaches, and mentors are examples of persons that possess this kind of intelligence. Intelligent people can read others' emotions from their facial expressions, convey emotions through body language, deliberately influence others' emotions, and mentor or counsel others. Their emotional intelligence is strong. They might handle interpersonal interactions, dialogue, collaboration, and teamwork.

- C. Intrapersonal Intelligence: "Self-smart" people are intrapersonal. They make wise selections in life because they have a remarkable awareness of their own emotions, wants, and beliefs. They are astute individuals who comprehend one's place in the world, in connection to others, and terms of one's own need for and response to change. It has something to do with self-monitoring in particular, and metacognition in general. Self-aware individuals always consider their own goals and growth alternatives while making decisions. They rely on introspection and self-realization. They also have emotional intelligence and achieve self-actualization. They can communicate, decipher conduct, sense how others are feeling, and comprehend how individuals relate to one another and their circumstances.
- D. **Musical Intelligence:** People who are rhythmic and musical are "music smart." They exhibit skills like writing music and dancing, as well as performing musical instruments. They like and compose music, demonstrating a sense of and sensitivity to rhythm and tone. People who are knowledgeable about music can identify its patterns and comprehend the connection between sound and emotion. Proficiency in music can lead to professions such as vocal coaches, party planners, conductors, lyricists, rappers, dancers, music educators, and voice coaches.
- E. Naturalistic Intelligence: "Nature smart" refers to naturalists. Things in the natural environment catch their attention and pique their curiosity. They have a keen interest in flora, wildlife, and natural events and are very skilled in recognizing patterns and categorization. According to Gardner, a naturalist is someone who can identify and categorize items. They like studying the traits of the natural world and can recognize and explain the many plant and animal species in their immediate environment. Gardner said that those who hunt, farm, garden, or work in other naturalistic fields would all possess high levels of naturalistic intelligence, as well as people who are adept at recognizing patterns in art, poetry, and social science. A marketer using naturalistic intelligence highlights the little variations between rival items. They exhibit a high degree of logical reasoning, the capacity to classify items based on clear similarities and differences, the ability to recognize seasonal variations, and the ability to collage pebbles, beetles, or shells.
- F. **Existential Intelligence:** It may be defined as having the capacity to think about and address more profound or significant questions regarding human existence, such as what life is all about and why we are born. We die, but why? What is awareness? or how do we

get here? It is the ability to address complex issues about the existence of humans, such as what life is all about and why we die. What place do I have in the world? To help learners, understand their place in the larger scheme of things and their duties in the classroom, society, and the world or cosmos, this intelligence looks for links to the actual world. Theorists, religious thinkers, and philosophers all demonstrate existential intelligence. They exhibit the capacity to comprehend the philosophy of life, to synthesize and summarise concepts, and to recognize the importance of kindness, truth, and beauty.

Need and Importance of the Study:

Intelligence is the capacity to recognize a problem, fix it, or create something beneficial for several others. According to Howard Gardner's hypothesis of multiple intelligences, individuals possess different strengths and combinations of these types of intelligence. Every one of us can get better at one area of intellect than another. In today's environment of rapid technological development, several intelligences are essential. Students can start to comprehend how brilliant they are by applying the Multiple Intelligences idea (Sivakumar & Arunachalam, 2012). The most significant contribution of multiple intelligence theory to education is the suggestion that instructors should broaden their toolkit in ways beyond the conventional verbal and logical approaches. Only well-prepared teachers can teach in a variety of ways that appeal to students' diverse intelligences and are effective in their instruction. Therefore, the investigator's goal is to examine prospective teachers' multiple intelligences.

Statement of the Problem:

The title of the present study is "Multiple Intelligences of Prospective Teachers in Relation to Gender, Locality, and Level of Teacher Education".

Definitions of Key Terms:

- A. Multiple-Intelligence: The idea of many intelligences was first introduced by Gardner (1999); his hypothesis of multiple intelligences is based on the learner's skills and talents. Gardner's idea of multiple intelligences is supported by research on talented people with brain injury, adults and children who are normally developing, specialists, and people from different cultural backgrounds. As a result, Gardner classified intelligence into nine different categories, including musical, visual, linguistic, logical, kinaesthetic, intrapersonal, naturalist, and existentialist intelligence.
- B. **Prospective secondary school teachers:** In this study, students undergoing training in education colleges are referred to as "prospective teachers."

Objectives of the study

The following objectives have been formulated for the present study.

- 1. To study the levels of multiple intelligence of prospective teachers.
- 2. To study the impact of the multiple intelligence of prospective teachers with reference to
 - (a) gender (b)locality (c) level of teacher education

Hypotheses of the Study:

The following hypotheses have been framed to attain the stated objectives.

- 1. Prospective Teachers don't differ in their levels of multiple intelligence.
- 2. The following variables make a significant difference in the multiple- intelligence of prospective Teachers. (a) gender (b)locality (c) level of teacher education

Limitations of the Present Study:

- 1. The current study does not consider several factors, including age, socioeconomic position, marital status, religion, parents' employment at the time of entrance, management style, and other factors.
- 2. Only the W.G. district of Andhra Pradesh was included in the geographical scope of the investigation.
- 3. This study includes six education colleges (B.Ed. & D.Ed.).
- 4. The current study is limited to 326 aspiring teachers in the AP W.G. area.

Methodology of the Study:

- a) **Research Design:** A descriptive survey approach was used to carry out the current investigation. If the study is based on the criteria given below, expand its design.
- b) Sample and Sapling technique: This research is limited to the W.G. district. The survey approach was employed for this investigation. The elementary teacher education (D.Ed.) and education (B.Ed.) colleges were chosen using simple random procedures. The researcher chose these colleges by using a lottery approach. Data was gathered from three B.Ed. and three D.Ed. colleges. In conclusion, 326 prospective teachers make up the sample for this study.
- c) Research tool: Armstrong developed the Multiple Intelligence Inventory. This instrument is a confirmed, scientifically designed assessment of multiple intelligences. Eight different dimensions of multiple intelligence are measured by the 80 items in this self-report questionnaire: linguistic/verbal intelligence, logical/mathematical intelligence, visual/spatial intelligence, bodily/kinaesthetic intelligence, musical/rhythmic intelligence, intrapersonal intelligence, interpersonal intelligence, and naturalist intelligence. There are five possible answers: "Never," "Rarely," "Sometimes," "Often," and "Always." A score of 5 for "Always," 4 for "Often," 3 for "Sometimes," 2 for "Rarely," and 1 for "Never" should be assigned to each statement. Scores might vary from 80 to 400. The Multiple

Intelligence Inventory has a Cronbach's alpha score of 0.897, indicating a high level of reliability.

d) Statistical Techniques Used: Mean, SD, and CR were used to analyze the data.

Analysis of Data and Interpretation of Results:

Total

H1: Prospective teachers do not differ in their levels of multiple intelligence.

The results indicate that the mean and standard deviation are 258 and 33, respectively. The entire sample was divided into three multiple intelligence groups: high (above M + 1 SD), moderate (between M - 1 SD and M + 1 SD), and low (below M - 1 SD) based on the mean and standard deviation that was computed. Table 1 displays the information for the aforementioned three categories along with a numerical description of each.

Sr. Score Ν Classification % No. 1 225 and below scores 053 16 Low 2 Between 224 and 290 scores 205 63 Moderate 3 291 and above scores 068 21 High

Table 1: Classification of The Total Sample on Multiple-Intelligence

Table 1 shows which respondents are classified as having poor multiple intelligence if their scores are less than 225. There are 53 of them. Respondents with multiple intelligence scores of more than 291 are regarded as having strong multiple intelligence. The remaining respondents, who total 68, belong to the moderate multiple intelligence group. The sample of prospective teachers that have poor multiple intelligences includes around 16% of them. Twenty-one percent of the sample have high multiple intelligence, whereas sixty-three percent have moderate multiple intelligence. This demonstrates the variation in multiple intelligence levels among prospective teachers.

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100

H₂: The gender of prospective teachers makes a significant difference in their multiple intelligence.

Variable	Ν	Mean	SD	D	SED	C.R.
Male	132	254.32	22.08			2.21**
Female	194	259.73	21.17	5.41	2.45	

 Table 2: Multiple Intelligence – Gender – Mean - SD - CR

**Sig. at 0.05 level

Table 2 shows that the calculated C.R. value of 2.21 is higher than 1.96. At the 0.05 level, it is significant. Consequently, the null hypothesis is rejected. That is, the multiple intelligences that prospective teachers varied significantly according to their gender. The mean difference (2.45) favours prospective female teachers. Therefore, in comparison to their male counterparts, female prospective teachers have strong multiple intelligence.

H₂: The locality of prospective teachers makes a significant difference in their multiple intelligence.

Variable	Ν	Mean	SD	D	SED	CR	
Rural	172	256.94	21.96	0.79	2.49	0.22*	
Urban	154	256.15	22.88			0.32*	

 Table 2: Multiple Intelligence – Locality – Mean - SD - CR

*NS at 0.05 level

The calculated C.R. value (0.32) from Table 2 is less than 1.96. At the 0.05 level, it is not significant. Consequently, the null hypothesis is retained. Therefore, the multiple intelligences of prospective teachers are not much affected by their locality.

H₃: The level of teacher education of prospective teachers makes a significant difference in their multiple intelligence.

 Table 3: Multiple Intelligence - Level of Teacher Education - Mean - SD - CR

Variable	Ν	Mean	SD	D	SED	C.R.
D.Ed.	161	251.23	21.44			2 16**
B.Ed.	165	256.44	22.32	5.21	2.41	2.10

**Sig. at 0.05 level

Table 3 indicates that the C.R. value (2.16), which was obtained, is higher than 1.96. At the 0.05 level, it is significant. Consequently, the null hypothesis is disproved. That is, the multiple intelligences of prospective teachers are significantly influenced by their level of teacher education. The mean difference (2.41) favours teacher candidates pursuing a B.Ed. Therefore, in comparison to their peers, B.Ed. trainee teachers might be said to have high multiple intelligence.

Major Findings of the Study

- 1. Gender makes a significant difference in the prospective teachers' multiple intelligence.
- 2. Locality does not make a significant difference in the prospective teachers' multiple intelligence.
- The level of teacher education makes a significant difference in the prospective teachers' multiple intelligence.

Recommendations for further studies

- 1. Future research may concentrate on how instructors' varying IQs affect their use of ICT resources during the teaching and learning process.
- 2. Research on the relationships between prospective teachers' and in-service teachers' numerous IQ and personality traits is crucial.
- 3. Research on the relationship between teachers' various IQ levels and child-centered teaching techniques will enhance programmes for in-service training.
- 4. Research on the relationship between the various multiple intelligence sub-areas and the adoption behaviours of aspiring teachers may provide fresh perspectives that improve teacher preparation courses.
- 5. Research on students' multiple intelligences, especially at the secondary school level, will be beneficial for career and academic guidance.

Conclusion:

The study concludes that there are differences in the multiple intelligence scale levels of prospective teachers. Consequently, teacher training programmes need to take this into account and modify their activities and training modules so that prospective teachers make the most of their training opportunities and become better teachers. The planning, execution, and other aspects of teacher training programmes may consider doing away with antiquated factors like community affiliation, urban and rural biases, etc. since the location of prospective teachers does not significantly affect their multiple-intelligence scores. When it comes to some factors like gender, the level of teacher education, and access to more chances to fuel their drive to succeed in every facet of their professional lives, the observed difference is markedly different.

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