



# A Study on Intervention of Multiple Intelligence Theory in Modern Teaching Approach among the Primary and Upper Primary Teachers of ICSE and SSC Schools of Hyderabad District of Telangana State

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## ABSTRACT

**Introduction:** Education is a complex social, cultural and ethical process designed in a social or cultural context. It is related with social structures, cultural environments, values and ideals of people, society and the government. All these factors are dynamic. By all these the definition of teaching has been changing depending on time, place and society. Good teaching may be designed to affect maximum learning. The distribution of intelligence is follows Individual differences in all human beings. By understanding the various factors of intelligence a teacher can understand how to empower the intelligence of the students.

**Aim/Objectives:** The purpose of this study is to understand the intervention of multiple intelligence theory in the modern teaching approach among the primary and upper primary teachers of ICSE schools and SSC schools of Hyderabad. Main focus of this study was to identify the components of multiple intelligence theory embedded in the teaching of content. Method: The tool was designed with utmost care to elicit responses from teachers in order to validate the degree to which they are using due components of multiple intelligence in their daily class room teaching.

**Sample:** The samples on which the study was administered are a total of 80 teachers, 40 from primary and 40 from upper primary both from ICSE and SSC school in and around Hyderabad.

**Conclusion:** The study revealed that there is no significant difference in the intervention of multiple intelligence theory among the primary and upper primary teachers of ICSE and SSC Schools.

**Key Words:** Multiple Intelligence Theory, Intervention, Teaching, Modern Approach, Education, Multiple Intelligence Theory

## INTRODUCTION

Education is a complex social, cultural and ethical process designed in a social or cultural context. It is related with social structures, cultural environments, values and ideals of people, society and the government. All these factors are dynamic. By all these the definition of teaching has been changing depending on time, place and society. Good teaching may be designed to affect

maximum learning. The distribution of intelligence is follows Individual differences in all human beings. By understanding the various factors of intelligence a teacher can understand how to empower the intelligence of the students.

Teaching is meant to help in learning but every person learns by his own efforts and experiences. The teacher can motivate students to make interest in learning, can

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guide to have those experiences by which he can learn attitudes or skills but the teacher cannot learn anything on behalf of the students. To make students understand some facts by standing in front of them or to read text books before them is not teaching; teaching process is not like a machine.

## MULTIPLE-INTELLIGENCE THEORY

Howard Gardener of Harvard University has propounded a unique theory of intelligence called the “Theory of multiple-intelligence”. These different types of intelligences have been named as Linguistic, Logical-mathematical, Spatial, Musical, Bodily-kinesthetic, Intrapersonal and Interpersonal. The theory was extended by him. Gardener took a vacation and used part of that time to review evidence for the existence of new intelligence.

### Strengths of Gardner’s Multiple-Intelligence Theory

It is very important to know how to use Multiple Intelligence theory in various kinds of schools or for various population. Different types of intelligence and the core components of it, followed by the ways of improving various types of intelligence of the students by inculcating some aspects in teaching-learning process.<sup>2</sup>

### Verbal/Linguistic Intelligence

The people with this intelligence learn best through language including speaking writing, reading, and listening. They are able to verbally or in writing explain, convince, and express themselves.

People who are strong in linguistic-verbal intelligence are able to use words well, both when writing and speaking. These individuals are typically very good at writing stories, memorizing information, and reading.

### Aspects to be inculcated in Teaching

- It is also possible to increase one’s reading speed and comprehension quite drastically. Teachers should develop the ability of using Syntax, Semantics and Pragmatics in the students.
- Students are asked to participate in various school-oriented skills such as a written or oral expression and understanding the concepts.
- Students should participate in the various academics activities like quiz and essay writing competitions.
- As the proverb indicates practice make man perfect, students are advised to practice or exercise more in using the vocabulary and expression in order to develop their linguistic intelligence.

### Logical-Mathematical Intelligence

The people with this intelligence learn best through numbers, reasoning, and problem solving. They enjoy problem solving, measuring, sequencing, predicting, experimenting, classifying and data collection aspects of a research projects.

### Aspects to be inculcated in Teaching

- Calculation tools (calculators)
- Statistics

We always have to make decision on uncertain, possibly biased information and incomplete understanding of how the world works. This makes it extra important both to find out more and to apply probabilistic reasoning to our decision.

Arithmetic and reasoning capacity of the students should be strengthened. For this one should develop the Inductive and deductive reasoning ability and scientific thinking.

### Visual/Spatial Intelligence:

People who are strong in visual-spatial intelligence are good at visualizing things. These individuals are often good with directions as well as maps, charts, videos, and pictures.

### Aspects to be inculcated in Teaching

- Scrap book, photo albums, and slide shows: oral history projects
- Visual information materials: photographs, clipart, charts, graphs, tables.

### Musical Intelligence:

People who have strong musical intelligence are good at thinking in patterns, rhythms, and sounds. They have a strong appreciation for music and are often good at musical composition and performance.

### Aspects to be inculcated in Teaching

- Pitch discrimination
- Sensitivity to rhythm
- Ability to hear themes in music
- DVDs and CD-audios

### Bodily -Kinesthetic Intelligence

The people with this intelligence learn best through physical activity such as dance, hands-on tasks, constructing models, and any kind of movement.

Those who have high bodily-kinesthetic intelligence are said to be good at body movement, performing actions, and physical control. People who are strong in this area tend to have excellent hand-eye coordination and dexterity.

### Aspects to be inculcated in Teaching

- Video production - skits, dances, sports, role-playing
- Demonstration, Fieldtrip - using and creating

### Intrapersonal Intelligence:

Individuals who are strong in intrapersonal intelligence are good at being aware of their own emotional states, feelings, and motivations. They tend to enjoy self-reflection and analysis, including daydreaming, exploring relationships with others, and assessing their personal strengths.

### Aspects to be inculcated in Teaching

- Problem solving activities
- Social networking sites
- Brainstorming, diaries, journals
- Record personal ideas

### Interpersonal Intelligence:

The counterpart of intrapersonal intelligence in one's cognitive structure is interpersonal intelligence. It consists of the abilities to understand individuals other than one's self and one's relation to others. The knowledge and understanding of others is the quality that is needed for social interaction in one's day-to-day life. The people with this intelligence learn best through interaction with other people through discussions, cooperative work, or social activities.

### Aspects to be inculcated in Teaching

- Social networks
- Video recording - sharing with others through skits, debates and role plays, games

### Naturalistic Intelligence:

Naturalistic is the most recent addition to Gardner's theory and has been met with more resistance than his original seven intelligences. According to Gardner, individuals who are high in this type of intelligence are more in tune with nature and are often interested in nurturing, exploring the environment, and learning about other species. These individuals are said to be highly aware of even subtle changes to their environments.

### Aspects to be inculcated in Teaching

- To enable people to become more truthful with themselves.
- To widen their perspectives on themselves and the world around them
- To find clarity on how to proceed in the future while taking lessons from the past and creating something valuable to live for in the present

### Review of Related Literature:

P. & Ravi. R (2009) in their study on "*Will Multiple Intelligence Activity Based Teaching (MIABT) be an alternative means for students with learning disorders*" found that activity based teaching and learning may overcome the drawbacks and it will be one of the best alternative means for learning disabled in the traditional classroom itself.

A. Kusuma (2009) in her work on "*Creative abilities and academic achievement of Ashram and non-ashram school children*" revealed that teacher's motivation is necessary to develop creative abilities and academic achievement through guiding, directing, stimulating and encouraging the children. The teachers and parents should play an important role in fostering their creative abilities and academic achievement by providing good equipment and necessary encouragement.

S.K. Mangal (2009) in the book "*Advanced Educational Psychology*" focuses on the psychology of growth and development, psychology of individual differences, motivation, attention and personality with an emphasis on the individual's attitude towards learning and the factors influencing learning. The cognitive aspect i.e., intelligence and vital topics like creativity and the psychology of thinking.<sup>3, 10, 12</sup>

Bruce Jerry A; Kordinak Thomas.S. Harmanj Marsha (2008) in her study on "*Current trends in assessment*" found that individual intelligence test have sub tests that could actually assist in identifying the individuals multiple intelligences.<sup>1</sup>

Fisher, Elizabeth Moore (1997) in their study on "*Research on Howard Gardner's theory of multiple intelligence*" revealed that the use of Gardner's theory in schools thus serves to heighten the student's progress in an indirect way. This theory has positive influence when developing curriculum, utilizing co-operative education and working with different students.

### Objectives of the Study

1. To find out the difference among Primary and Upper primary teachers teaching methods.
2. To study the extent of difference among ICSE and SSC Primary school teachers.
3. To study the extent of difference among ICSE and SSC Upper primary school teachers

### Hypotheses of the Study

- There is a significant difference in primary and upper primary teachers' teaching methods while transacting content using Multiple Intelligence theory.
- There is a significant difference in the teaching styles of ICSE and SSC schools primary teachers while transacting content using Multiple Intelligence theory.
- There is a significant difference in the teaching styles of ICSE and SSC Schools upper primary teachers while transacting content using Multiple Intelligence theory.

### Sampling

The present study is conducted by random sampling method. According to this method each and every item has equal

importance. The researcher has selected teachers randomly for a study on intervention of multiple intelligence theory in modern teaching approach among the primary and upper primary teachers of ICSE and SSC schools of Hyderabad.

### Sample

The participants of the study included 80 teachers out of which 20 were primary and 20 upper primary teachers from ICSE Schools and 20 were primary and 20 were upper primary teachers from SSC schools of Hyderabad having from 3 years to 22 years of teaching experience. The teachers were further grouped as following: 20 primary + 20 upper primary teachers= 40 ICSE teachers. 20 primary + 20 upper primary teachers= 40 SSC teachers.

### Research Design

Researcher planned to take primary and upper primary teachers from ICSE and SSC schools to find the components of multiple intelligence embedded in their daily classroom teaching. A quantitative descriptive survey design was adopted the tool used for survey is questionnaire.

### Measures

To carry out any type of educational research we need data because answers to research questions are sort on the basis of empirical data. Data are gathered by using readily available tools or the tools that are modified or developed by the researcher. The three main attributes to be considered as a tool are reliability, validity and objectivity. In the present study the researcher is using questionnaire as a tool.

For the purpose of data collection the investigator has used a self-made tool to determine the intervention of multiple intelligence theory in modern teaching approach among the primary and upper primary teachers of ICSE and SSC schools of Hyderabad.

### Tools of the Study

The tool consisted of 30 yes/no questions to elicit responses from teachers' in order to validate the degree to which they use the components of Multiple Intelligence in their daily classroom teaching. The study involves first independent variable- multiple intelligence and secondly dependent variables i.e. primary and upper primary teachers of ICSE and SSC schools.

**Procedure:** The researcher visited both schools and established rapport with teachers. The researcher administered the questionnaire personally to the teachers. The respondents were assured that the information given by them will be kept confidential and the information given by them would

be presented only in the form of statistical summaries. The questionnaire was administered to the participants of 40 primary and 40 upper primary teachers from the selected ICSE and SSC schools of Hyderabad. The teachers answering the questions were trained as well as untrained graduates and post graduates. The age of the respondents varies from 25 years to 58 years with teaching experience varying from 3 years to 30 years.

## HYPOTHESIS-I

### Research hypothesis:

There is a significant difference in the approaches of teachers in ICSE and SSC school teachers while transacting content using the components of Multiple Intelligence theory.

**Null hypothesis:** There is no significant difference in the approaches of teachers in ICSE and SSC school teachers while transacting content using the components of Multiple Intelligence theory.

**TABLE-I Table showing mean, standard deviation and t-value of ICSE and SSC school teachers.**

| Variable | N  | Mean  | SD   | t-value |
|----------|----|-------|------|---------|
| SSC      | 40 | 25.65 | 3.13 | 0.013   |
| ICSE     | 40 | 23.88 | 3.05 |         |

Table-I reveals that:-

The Mean of 40 ICSE teachers is 23.88 and 40 SSC teachers is 25.65 respectively.

The standard deviation of 40 ICSE teachers is 3.05 and 40 SSC teachers is 3.13 respectively. The obtained t-value is 0.013. The degrees of freedom is  $N_1 + N_2 - 2 = 50 + 50 - 2 = 98$ .

The Table value at 0.05 level of significance is 2.000.

The obtained value at 0.05 level of significance is less than the table value. Hence null hypothesis accepted.

### Hypothesis-II Research Hypothesis:

There is a significant difference in the methods of teaching among primary and upper primary teacher's teaching methods while transacting content through multiple intelligence theory.

**Null Hypothesis:** There is no significant difference in the methods of teaching among primary and upper primary teacher's teaching methods while transacting content through multiple intelligence theory.



**TABLE-II Table shows mean, standard deviation and t-value of primary and upper primary teachers.**

| Variable               | N  | Mean  | Standard-deviation | t-value |
|------------------------|----|-------|--------------------|---------|
| Primary teachers       | 40 | 25.35 | 3.05               | 0.12    |
| Upper primary teachers | 40 | 24.18 | 3.27               |         |

Table- 2 reveals that: The Mean of 40 primary teachers are 25.35 and 40 upper primary teachers are 24.18 respectively. The standard deviation of 40 primary teachers are 3.05 and 40 upper primary teachers are 3.27 respectively.

The obtained t-value is 0.12. The degrees of freedom is  $N_1 + N_2 - 2 = 40 + 40 - 2 = 78$ .

The Table value at 0.05 level of significance is 2.000. The obtained value at 0.05 level of significance is less than the table value.

Hence null hypothesis accepted. Table -2 depicting Mean and Standard deviation of Primary and Upper primary teachers of ICSE and SSC schools.

### Hypothesis-III

**Research Hypothesis:** There is a significant difference in the teaching methods of primary teachers in ICSE and SSC schools while transacting content through multiple intelligence theory.

**Null Hypothesis:** There is no significant difference in the teaching methods of primary teachers in ICSE and SSC schools while transacting content through multiple intelligence theory.

**TABLE-III: Table showing mean, standard deviation and t-value of ICSE and SSC school primary teachers.**

| Variable              | N  | Mean  | Standard deviation | t-value |
|-----------------------|----|-------|--------------------|---------|
| ICSE Primary teachers | 40 | 25.05 | 2.74               | 0.59    |
| SSC Primary teachers  | 40 | 25.65 | 3.36               |         |

Table-3 reveals that the Mean of 40 ICSE primary teachers are 25.05 and 40 SSC primary teachers are 25.65 respectively. The standard deviation of 40 ICSE primary teachers is 2.74 and 40 SSC upper primary teachers are 3.36 respectively.

The obtained t-value is 0.59. The degrees of freedom is  $N_1 + N_2 - 2 = 40 + 40 - 2 = 78$ .

The Table value at 0.05 level of significance is 2.021. The obtained value at 0.05 level of significance is less than the table value. Hence null hypothesis accepted.

### Hypothesis-III

**Research Hypothesis:** There is a significant difference in the teaching methods of primary teachers in ICSE and SSC

schools while transacting content through multiple intelligence theory.

**Null Hypothesis:** There is no significant difference in the teaching methods of primary teachers in ICSE and SSC schools while transacting content through multiple intelligence theory.

**TABLE-III Table showing mean, standard deviation and t-value of ICSE and SSC school primary teachers.**

| Variable              | N  | Mean  | Standard deviation | t-value |
|-----------------------|----|-------|--------------------|---------|
| ICSE Primary teachers | 40 | 25.05 | 2.74               | 0.63    |
| SSC Primary teachers  | 40 | 25.65 | 3.36               |         |

Table-3 reveals that the Mean of 40 ICSE primary teachers are 25.05 and 40 SSC primary teachers are 25.65 respectively. The standard deviation of 50 ICSE primary teachers is 2.74 and 50 SSC upper primary teachers are 3.36 respectively. The obtained t-value is 0.63. The degrees of freedom is  $N_1 + N_2 - 2 = 40 + 40 - 2 = 78$ . The Table value at 0.05 level of significance is 2.021. The obtained value at 0.05 level of significance is less than the table value. Hence null hypothesis accepted.

### Hypothesis-IV

**Research Hypothesis:**

There is a significant difference in the teaching methods among upper primary teachers in ICSE and SSC schools while transacting content through Multiple Intelligence theory.

### Null Hypothesis:

There is no significant difference in the teaching methods among upper primary teachers in ICSE and SSC schools while transacting content through Multiple Intelligence theory.

**TABLE-IV Table shows mean, standard deviation and t-value of ICSE and SSC school upper primary teachers.**

| Variable                    | N  | Mean  | Standard deviation | t-value |
|-----------------------------|----|-------|--------------------|---------|
| ICSE upper primary teachers | 40 | 22.7  | 2.94               | 0.0009  |
| SSC upper primary teachers  | 40 | 25.65 | 2.96               |         |

Table-4 reveals that the Mean of 40 ICSE upper primary teachers are 22.7 and 40 SSC upper primary teachers are 25.65 respectively. The standard deviation of 40 ICSE upper primary teachers are 2.94 and 40 SSC upper primary teachers are 2.96 respectively.

The degrees of freedom is  $N_1 + N_2 - 2 = 40 + 40 - 2 = 78$ . The obtained t-value is 0.0009. The Table value at 0.05 level of significance is 2.021. The obtained value at 0.05 level of significance is less than the table value.

Hence, null hypothesis rejected. Table-4 depicting mean and standard deviation of Upper primary teachers of SSC and ICSE School.

## DISCUSSION

In the present study it was found that there is no significant difference in the application of components of Multiple Intelligence in the content teaching among primary and upper primary teachers of ICSE and SSC schools. Equal concentration is given on non-scholastic as well as scholastic domain by the intervention of this theory in teaching. It also helps in improving the academic achievements of the students. Equal opportunities are provided to the students of primary as well as upper primary classes to learn through multiple intelligence theory. Various activities are planned and conducted by the teachers to know students multiple intelligences.

It is found through the study that teachers are giving equal importance to the academic performance as well as extracurricular activities and they are using some new methods also to bring out the multiple intelligences of the child like conducting some competitions i.e. painting, drawing, essays, debates, quiz etc. or sending the students outside their schools as a representatives of their respective school which helps to grow the sense of responsibility among them.

Intervention of multiple intelligence theory in teaching approach helps the teachers to make their students excel in academics and also have exposure to all the activities in schools.<sup>6</sup>

Application of multiple intelligence theory is a vital ability influencing the teacher's various classroom activities.<sup>4,7</sup> Pair work, group activities, discussion, peer-teaching and newspapers cuttings, pictures. Finally we can conclude that apart from academics, there are many fields to improve the life of students.

**Limitations:** The research is limited to Hyderabad city only. The study takes into consideration only ICSE and SSC schools. It is limited to primary and upper primary teachers only. It is limited to 80 teachers only. Both trained and untrained teachers are covered. The study was carried out in urban areas that are in Hyderabad city only.

### Educational Implications

- The teacher should know the importance of Multiple Intelligence theory and its intervention in their professional life which will help their students in social ad-

justment, decision making, choosing the career, stimulating creativity, cooperation etc.

- Thus for developing the Multiple Intelligence among the teachers there should be a provisions of practical experience, special guidance from the teacher educator during teacher training program.
- The study also revealed that the Multiple Intelligence technique is undoubtedly better in respect of not only increasing achievement of students in educational statistics but also in developing favorable attitude towards their hidden talents. Hence it is suggested that the teacher educators who train the upcoming teachers should adopt it in order to garner many advantages resulting from it.
- Application of Multiple Intelligence theory is a vital ability influencing the teacher's various classroom activities. Pair-work, group-work, group-discussion, peer-teaching and newspapers cuttings, pictures, etc. are very effective methods and techniques to train the student teachers.

## CONCLUSION

This study provided investigator with an opportunity to learn the art of preparing more effective learning tasks using different skills. It was a very rewarding and enjoyable academic experience. While we all have these intelligences, individuals differ from both genetic and experimental reasons in their respective profiles of intellectual strengths and weakness.

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