



A Study on Multiple Intelligence of High School Students in Vellore District

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Abstract

The present investigation aims to explore the multiple intelligence of high school students in Vellore District. The demographical variables such as like gender, school management, medium of study and locality of the school in a sample of 200 high school students studying in Vellore District. The survey method had been followed and simple random sampling technique was used in administration of the research tools. The result also revealed that the level of Multiple Intelligence of High School Students is average and it is also found that Linguistic Intelligence, Logical-Mathematical Intelligence, Interpersonal Intelligence are average and Naturalistic Intelligence, Intrapersonal Intelligence is low, there is significant difference in the multiple intelligence of high school Students with regard to the demographic variables gender, school management and medium of study. There is no significant difference in the multiple intelligence of high school Students with regard to the demographic variable locality of the school.

Keywords: *Multiple Intelligence, High School Students, Linguistic Intelligence.*



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1. INTRODUCTION

According to **Gardner (2005)** “multiple intelligences theory has had a considerably important impact upon the whole world of education”. Actually Gardner never thought of any application of Multiple Intelligences theory in educational situations. He developed his theory of multiple intelligences with a goal of getting well advances in the fields of neuroscience, biology, and psychology.

His effort was the formation of an alternate way of thinking about human cognition. Numerous educators welcomed the idea of multiple intelligences. Thousands of school teachers and researchers in many different countries have applied multiple intelligences theory in the field of education. It is clear that multiple intelligences theory can be used to identify children’s relative strength and profile of intelligences.

2. NEED AND IMPORTANCE OF THE STUDY

Understanding the multiple intelligence levels of high school students contributes to their holistic development, by recognizing and valuing diverse forms of intelligence beyond traditional measures. This recognition fosters a more comprehensive understanding of students' strengths, talents, and potential, promoting their overall academic, social, and emotional well-being. In summary, studying the multiple intelligence levels of higher secondary school students is significant for promoting holistic student development, tailoring educational practices, enhancing student engagement and motivation, promoting inclusive learning environments, guiding career exploration, contributing to educational theory and practice, and empowering students and educators alike. This research has far-reaching implications for fostering a more inclusive, effective, and empowering educational system that celebrates the diversity of human intelligence and talent.

3. OPERATIONAL DEFINITIONS OF THE TERMS

Multiple Intelligences: Howard Gardner defined intelligence as "The capacity to solve problems or to make new trend products that are evaluated in one or more cultural setting". He reviewed the theory of intelligence using eight criteria. Gardner developed an optimal taxonomy of human capacities. These human capacities are called "Multiple Intelligences."

4. REVIEW OF RELATED STUDIES

Mark Gerald B. Doblon (2023) investigated senior high school students' multiple intelligences and their academic achievement in science. This study employs a descriptive correlational research design. The respondents of this study were 300 in the 11th Grade of senior high school students. The results of this study showed that senior high school students possess all intelligence to a great extent. Existential intelligence obtained the highest mean score of 3.96, as possessed by the respondents. On the other hand, musical intelligence got the lowest mean score of 3.60. It also showed that all multiple intelligences correlate with academic performance achievement. The correlation analysis showed that all multiple intelligences were statistically significant and could positively predict academic achievement in science.

Vemedo Kezo (2021)

conducted a study on multiple intelligences among the secondary students in and around Kohima town which is the capital of Nagaland. The total sample was 125 with 62 male and 63 female students from secondary students. It is found out from the hypothesis testing that there is no significance difference of multiple intelligence between boys and girls and between private and government schools. However, there is a positive correlation between the academic achievement and the multiple intelligence score. The dominant score of multiple intelligences for boys is interpersonal relation and for girls it is intra-personal relation. Therefore, the study highlights, the dominant multiple intelligences of boys and girls. It is interesting to note that mathematical intelligence score is least for both boys and girls.

Padala Laxman (2018)

conducted a study on multiple intelligence levels of secondary school students. The survey method is chosen for the present research and the simple random sample technique was used in the present study to select the sample of 100 students from different High Schools drawn randomly from Rangareddy district of Telangana. Findings revealed that there is no significant difference between multiple intelligence level of eight class students in Government school boys and Government school girls; there is no significant difference between multiple intelligence level of eight class students in Private school girls and Private school boys; the students multiple intelligences differ in terms of gender.

5. OBJECTIVES OF THE STUDY

- To find out the level of Multiple Intelligence and its following different dimensions of High School Students.
 - a. Linguistic Intelligence
 - b. Logical-Mathematical Intelligence
 - c. Naturalistic Intelligence
 - d. Interpersonal Intelligence
 - e. Intrapersonal Intelligence
- To find out, if there is any significant difference in the Multiple Intelligence of High School Students with regard to the gender.
- To find out, if there is any significant difference in the Multiple Intelligence of High School Students with regard to the school management.

- To find out, if there is any significant difference in the Multiple Intelligence of High School Students with regard to the medium of study.
- To find out, if there is any significant difference in the Multiple Intelligence of High School Students with regard to the locality of the school.

6. HYPOTHESES OF THE STUDY

- The level of Multiple Intelligence and its following different dimensions of High School Students is low.
 - a. Linguistic Intelligence
 - b. Logical-Mathematical Intelligence
 - c. Naturalistic Intelligence
 - d. Interpersonal Intelligence
 - e. Intrapersonal Intelligence
- There is no significant difference in the Multiple Intelligence of High School Students with regard to the gender.
- There is no significant difference in the Multiple Intelligence of High School Students with regard to the school management.
- There is no significant difference in the Multiple Intelligence of High School Students with regard to the medium of study.
- There is no significant difference in the Multiple Intelligence of High School Students with regard to the locality of the school.

7. METHODOLOGY

7.1. Method

In the present study the investigator followed normative survey method.

7.2. Sample and Sampling Technique

The present study consists of high school students studying in Vellore District of Tamil Nadu. These 200 high school students were selected on the basis of Simple Random Sampling Techniques.

7.3. Statistical Techniques Used

The data collected were descriptively analyzed by employing the following statistical techniques:

- Descriptive Analysis
 - 1) Measures of Central Tendency (Mean)
 - 2) Measures of Variability (Standard Deviation)
- Differential Analysis ('t' test and 'F' test)

8. ANALYSIS AND INTERPRETATION OF DATA

8.1. Descriptive Analysis

Hypothesis 1

The level of Multiple Intelligence and its following different dimensions is low of High School Students.

- 1) Linguistic Intelligence
- 2) Logical-Mathematical Intelligence
- 3) Naturalistic Intelligence
- 4) Interpersonal Intelligence
- 5) Intrapersonal Intelligence

Table-1: Mean and Standard Deviation in respect of Multiple Intelligence and its different dimensions of High School Students

Dimensions of Multiple Intelligence	N	Mean	SD
Linguistic Intelligence	200	3.82	1.06
Logical-Mathematical Intelligence	200	3.47	1.18
Naturalistic Intelligence	200	2.58	0.48
Interpersonal Intelligence	200	3.57	1.22
Intrapersonal Intelligence	200	2.03	0.42
Multiple Intelligence	200	15.47	4.36

It is evident from the Table-1, the calculated mean score of entire sample is found to be 15.47 and the standard deviation value is 4.36 respectively, which indicates that the mean score lies between than the average value (12 - 18), so the framed hypothesis (1) is rejected. Hence, it is inferred that the level of

Multiple Intelligence of High School Students is average and it is also found that Linguistic Intelligence, Logical-Mathematical Intelligence, Interpersonal Intelligence are average and Naturalistic Intelligence, Intrapersonal Intelligence is low.

8.2. Differential Analysis

Hypothesis 2

There is no significant difference in the Multiple Intelligence of High School Students with regard to the Gender.

Table-2: Significant Difference among Multiple Intelligence Scores of High School Students with regard to Gender

Variable	Sub Samples	N	Mean	SD	't' Value	Level of Significance at 0.05 level
Gender	Male	95	12.13	3.92	2.40	Significant
	Female	105	15.42	4.80		

In order to find out whether there is any significant difference between male and female High School Students in respect of their Multiple Intelligence, 't' value is calculated. The 't' ratio found to be 2.40 at 0.05 level and it is represented in table-2. The 't' value is higher than the table value. Hence the stated hypothesis is rejected. It is inferred that there is significant difference in the Multiple Intelligence of High School Students with regard to the gender.

Hypothesis 3

There is no significant difference in the Multiple Intelligence of High School Students with regard to the School Management.

Table-3: Significant Difference among Multiple Intelligence Scores of High School Students with regard to School Management

Variable	Sub Samples	N	Mean	SD	't' Value	Level of Significance at 0.05 level
School Management	Government	100	12.10	2.99	2.31	Significant
	Private	100	14.27	3.46		

In order to find out whether there is any significant difference between Government and Private High School Students in respect of their Multiple Intelligence, 't' value is calculated. The 't' ratio found to be 2.31 at 0.05 level and it is represented in table-3. The 't' value is higher than the table value. Hence the stated hypothesis is rejected. It is inferred that there is significant difference in the Multiple Intelligence of High School Students with regard to the School Management.

Hypothesis 4

There is no significant difference in the Multiple Intelligence of High School Students with regard to the Medium of Study.

Table-4: Significant Difference among Multiple Intelligence Scores of High School Students with regard to Medium of Study

Variable	Sub samples	N	Mean	SD	't' Value	Level of Significance at 0.05 level
Medium of Study	Tamil	82	13.20	3.06	2.10	Significant
	English	118	15.24	4.12		

In order to find out whether there is any significant difference between Tamil and English medium High School Students in respect of their Multiple Intelligence, 't' value is calculated. The 't' ratio found to be 2.10 at 0.05 level and it is represented in table-4. The 't' value is higher than the table value. Hence the stated hypothesis is rejected. It is inferred that there is significant difference in the Multiple Intelligence of High School Students with regard to the Medium of Study.

Hypothesis 5:

There is no significant difference in the Multiple Intelligence of High School Students with regard to the Locality of the School.

Table-5: Significant Difference among Multiple Intelligence Scores of High School Students with regard to Locality of the School

Variable	Sub samples	N	Mean	SD	't' Value	Level of Significance at 0.05 level
Locality of the School	Rural	86	12.04	3.16	1.14	Not Significant
	Urban	114	13.46	3.38		

In order to find out whether there is any significant difference between Rural and Urban High School Students in respect of their Multiple Intelligence, 't' value is calculated. The 't' ratio found to be 1.14 at 0.05 level and it is represented in table-5. The 't' value is less than the table value. Hence the stated hypothesis is accepted. It is inferred that there is no significant difference in the Multiple Intelligence of High School Students with regard to the Locality of the School.

9. FINDINGS OF THE STUDY

- The level of Multiple Intelligence of High School Students is average and it is also found that Linguistic Intelligence, Logical-Mathematical Intelligence, Interpersonal Intelligence are average and Naturalistic Intelligence, Intrapersonal Intelligence is low.
- There is significant difference in the Multiple Intelligence of High School Students with regard to the gender.
- There is significant difference in the Multiple Intelligence of High School Students with regard to the School Management.
- There is significant difference in the Multiple Intelligence of High School Students with regard to the Medium of Study.
- There is no significant difference in the Multiple Intelligence of High School Students with regard to the Locality of the School.

10. CONCLUSION

There are different types of students, and a corresponding instructional approach is necessary to motivate students to learn effectively. This multiple intelligence can enhance through creative strategies, appropriate instructional materials, and a stimulating and nurturing environment. The findings drew several implications that there is a need to conduct more studies on this issue. This present study may give insights to teachers about integrating multiple intelligences in the classroom.

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