



# A Study of Multiple Intelligence of Students of Grade IX in Context of their Scholastic Achievement

DR. NIMISHA K. PATEL

## 1. Introduction

We know that every person has unique intelligence quotient number. Students' scholastic achievement is almost depends on their intelligence quotient. However, it can't be measured only by knowledge or understandings or skill. Intelligence depends on different types of cleverness. Some students are clever in drawing, while other students are clever in music. Some students like to play games while other students like to read books. According to this, Howard Gardner proposed theory of Multiple Intelligence in 1983.

Howard Gardner described nine different types of intelligences based on these criteria.

1. Logical or Mathematical intelligence (number smart)
2. Verbal or Linguistic intelligence (word smart)
3. Visual or Spatial intelligence
4. Musical intelligence
5. Bodily or Kinesthetic intelligence
6. Intrapersonal intelligence
7. Interpersonal intelligence
8. Naturalistic intelligence
9. Existential intelligence

In present study, the researcher had constructed a multiple intelligence comprising all above types and study the multiple intelligence of students of standard 9.

## 2. Objectives of the study

1. To study the multiple intelligence of students of standard 9 in context of their scholastic achievement.
2. To study the multiple intelligence of boys of standard 9 in context of their scholastic achievement.
3. To study the multiple intelligence of girls of standard 9 in context of their scholastic achievement.

## 3. Hypotheses of the study

- Ho<sub>1</sub>** There is no significant difference between mean scores of Multiple Intelligence of students having high and low scholastic achievement.
- Ho<sub>2</sub>** There is no significant difference between mean scores of Multiple Intelligence of boys having high and low scholastic achievement.
- Ho<sub>3</sub>** There is no significant difference between mean scores of Multiple Intelligence of girls having high and low scholastic achievement.

## 4. Research method

In present research, the researcher had to study the multiple intelligence of the students of grade 9. Population of this study was the students of the grade 9 of schools of Ahmedabad city. Thus, the researcher had to collect information from the students. Therefore, the researcher had chosen survey method in this study.

### 5. Population of the study

Students studying in grade 9 of schools of Ahmedabad city were the population of present study.

### 6. Sample of the study

The researcher had chosen 200 students studying in different schools of Ahmedabad city was the sample of this study. The researcher had chosen 4 different schools from Ahmedabad city. The stratified sample of the study is as follows.

**Table 1: Sample of the study**

Gender →	Boys	Girls	Total
Achievement ↓			
High	38	43	81
Low	62	57	119
<b>Total</b>	<b>100</b>	<b>100</b>	<b>200</b>

### 7. Device of data collection

The researcher had constructed a Multiple Intelligence Test as a research tool. The multiple intelligence test had been comprised of following four types of intelligence:

1. Logical or Mathematical intelligence (number smart)
2. Verbal or Linguistic intelligence (word smart)
3. Visual or Spatial intelligence
4. Interpersonal intelligence

Each type of intelligence contains 10 items having 4 responses. Out of four responses only one response was true. The test was sent to the experts and the suggestions obtained by them were applied to the test and it was amended according to it.

### 8. Techniques used for data analysis

The researcher had constructed three hypotheses to study multiple intelligence in context of scholastic achievement of students of standard 9. The researcher had performed t-test to check these hypotheses.

### 9. Results of data analysis

**Ho<sub>1</sub> There is no significant difference between mean scores of Multiple Intelligence of students having high and low scholastic achievement.**

**Table 2: Mean, SD, SED and t value of students**

Achievement	N	M	SD	SED	MD	t
High	81	25.57	5.23	0.82	5.95	7.26
Low	119	19.62	6.41			

For df=198, table t-values are 1.97 and 2.6 at 0.05 and 0.01 levels respectively. From above table, it is said that the calculated t value is higher than table t value at both the levels. Therefore, the hypothesis is rejected and there is no significant difference between mean scores of multiple intelligence test of students having high and low educational achievement test. Moreover, mean score of students having higher achievement is more in multiple intelligence test. Therefore, it is also said that the students having higher educational achievement have high multiple intelligence than that of students having lower educational achievement.

**Ho<sub>2</sub> There is no significant difference between mean scores of Multiple Intelligence of boys having high and low scholastic achievement**

**Table 3: Mean, SD, SED and t value of boys**

Achievement	N	M	SD	SED	MD	t
High	38	27.41	5.89	0.84	3.63	4.32
Low	62	23.78	6.14			

For df=198, table t-values are 1.97 and 2.6 at 0.05 and 0.01 levels respectively. From above table, it is said that the calculated t value is higher than table t value at both the levels. Therefore, the hypothesis is rejected and there is no significant difference between mean scores of multiple intelligence test of boys having high and low educational achievement test. Moreover, mean score of boys having higher achievement is more in multiple intelligence test. Therefore, it is also said that the boys having higher educational achievement have high multiple intelligence than that of students having lower educational achievement.

**Ho<sub>3</sub> There is no significant difference between mean scores of Multiple Intelligence of girls having high and low scholastic achievement.**

**Table 4: Mean, SD, SED and t value of students**

Achievement	N	M	SD	SED	MD	t
High	43	23.18	5.27	0.75	5.55	7.4
Low	57	17.63	5.46			

For df=198, table t-values are 1.97 and 2.6 at 0.05 and 0.01 levels respectively. From above table, it is said that the calculated t value is higher than table t value at both the levels. Therefore, the hypothesis is rejected and there is no significant difference between mean scores of multiple intelligence test of girls having high and low educational achievement test. Moreover, mean score of girls having higher achievement is more in multiple intelligence test. Therefore, it is also said that the girls having higher educational achievement have high multiple intelligence than that of students having lower educational achievement.

## 10. Findings

1. The students having higher educational achievement have higher educational achievement than that of students having lower educational achievement.
2. The boys having higher educational achievement have higher educational achievement than that of students having lower educational achievement.
3. The girls having higher educational achievement have higher educational achievement than that of students having lower educational achievement.

## 11. Conclusion

In present research, the researcher had studied the multiple intelligence of students of standard 9 in context of their educational achievement. The researcher had chosen 200 students studying in standard 9 of Ahmedabad city. The researcher had given self constructed multiple intelligence test to the students of standard 9 to determine their multiple intelligence. The research revealed that the students having higher educational achievement have higher educational achievement than that of students having lower educational achievement.

## References

1. Agrawal, J.C. (1996). Educational Research in Introduction, New Delhi : Arya Book.
2. Best, John W. (1959). Research in Education, New Jersey: Prentice Hall in Eaglewood Cliffee.
3. Borg and Gall (1983). Educational Research An Introduction, New York : Longman Publication.

4. Gardner, H. (1983). *Frames of Minds: The Theory of Multiple Intelligences*. New York: Harper and Row. 2nd ed. (1993) London: Fontana Press.
5. Gardner, H., Kornhaber, M. L. and Wake, W.K. (1996). *Intelligence - Multiple Perspectives*. Fort Worth: Harcourt Brace.
6. Goleman D. (1995). *Emotional intelligence why it can matter more than IQ for character, Health and Lifelong Achievement*, New York : Bantham Book.
7. Kerlinger, F.N. (1996). *Foundation of Behavioural Research (2nd Edition)*, New York : Sarjeet Publication.
8. Simon, B. (1953). *Intelligence Testing and the Comprehensive School*. London: Lawrence & Wishart.
9. Whitney, F.L. (1958). *The Elements of Educational Research (Third Ed.)* New York : Prentice Hall.