
A Study of Multiple Intelligences of Students in Context to Gender

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ABSTRACT

Education has expanded rapidly in the present times. New institutions are developed because of the Globalization of education every day. The education field hasn't improved as much qualitatively as it has expanded quantitatively. The number of educated unemployed is rising day by day. The person is not getting any skill for life preservation after studying in an educational institution for long time. The current system of education is not complementing the individual differences. No two creatures on this earth are alike. This should be kept in mind while making policy in education. Is there any significant difference of Gender on Multiple Intelligence? To find answer of this question present study was conducted by keeping in mind different intelligence predispositions given in the theory of Multiple Intelligences.

Keywords: *Multiple Intelligence, Howard gardener, Higher Secondary School*

Preface

Vast number of research is conducted to the individual difference in the intelligence of the students. This gave birth to too many theories related to intelligence. The uni-factor theory, two-factor theory, multifactor theory is the major ones. Most of the theories are based on the logical and verbal intelligence of the students. This had delimited the field of measurement of the intelligence. There are many people in society who have developed not because of logical power or verbal intelligence but because of other abilities. Thus, the “theory of Multiple Intelligences” of Howard Gardener is worth considering.

Statement of the problem

The present study was conducted on the higher secondary school 11th standard students know the Multiple Intelligences in reference to gender. The research problem was worded as follows:

A STUDY OF MULTIPLE INTELLIGENCES OF STUDENTS IN CONTEXT TO GENDER

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A Study of Multiple Intelligences of Students in Context to Gender

Objectives of the study

Objectives for presented study were as followed:

1. To study the Multiple Intelligences predispositions of the 11th standard students.
2. To study the effect of gender on the Multiple Intelligences predispositions of the 11th standard students.

Hypothesis of the study

Following null hypotheses was formulated for objectives of the study:

HO₁ There will not be significant difference in the mean scores on the Multiple Intelligences of the male and female students.

- 1.1 There will not be significant difference in the mean scores on the Logical intelligence of the male and female students.
- 1.2 There will not be significant difference in the mean scores on the Linguistic intelligence of the male and female students.
- 1.3 There will not be significant difference in the mean scores on the Musical intelligence of the male and female students.
- 1.4 There will not be significant difference in the mean scores on the spatial intelligence of the male and female students.
- 1.5 There will not be significant difference in the mean scores on the Bodily-Kinaesthetic intelligence of the male and female students.
- 1.6 There will not be significant difference in the mean scores on the Interpersonal intelligence of the male and female students.
- 1.7 There will not be significant difference in the mean scores on the Intrapersonal intelligence of the male and female students.
- 1.8 There will not be significant difference in the mean scores on the Naturalist intelligence of the male and female students.

Variables included in the study

Dependent and independent variables of present study are as follows.

Table 1: Classification of Variables According to Types and Level

Type of variable	Variable	Level
Independent variable	Gender	Male
		Female
Dependent variable	Multiple Intelligence	Logical Intelligence
		Linguistic Intelligence
		Musical Intelligence
		Spatial Intelligence
		Bodily-Kinaesthetic Intelligence
		Interpersonal Intelligence
		Intrapersonal Intelligence
Naturalist Intelligence		

A Study of Multiple Intelligences of Students in Context to Gender

Importance of the study

The knowledge created through this research will be useful to following different concerning parties.

- The findings of the study will help in understanding the individual differences in the students.
- The knowledge about the Multiple Intelligences of the higher secondary students will facilitate the curriculum developers in including and emphasizing different Intelligence.
- The knowledge of Multiple Intelligences will help in guidance and counselling.
- The tool constructed in the present study will be useful to know the Multiple Intelligences of the higher secondary students.
- The present study will give directions to future research as this research field has not been much done with.

Limitations and Delimitations of the study

Despite maximum efforts in the research, following are the limitations and delimitations of the study because certain constraints.

- The study was delimited to the Gujarati medium higher secondary 11th standard students of Gandhinagar district only.
- A self-constructed tool was used for data collection; therefore the limitations of the tool are limitations of the research.
- The present study included gender as variables.

Population and Sampling

The population of the study consisted of the Gujarati Medium Higher secondary school male and female students of Gandhinagar district studying in 11th standard. Total 387 students were selected by using stratified random cluster sampling technique out of which 205 male and 182 female students.

Research method

Different research method evolved to solve different research problems are called research method. These methods are divided into three type's i.e. historical research method, descriptive research method and experimental research method. The descriptive research method was used as there was description of data collection and analysis. The sub research method was the survey research method.

Tool construction

The researcher constructed a Multiple Intelligences Inventory to get the data of Multiple Intelligences of the 11th standard students. The Inventory was constructed according the following steps.

1 primary form

The researcher constructed a primary form of Multiple Intelligences Inventory using the collected sentences. 90 sentences were selected and arranged randomly in the Multiple Intelligence Inventory. There were five points against each item to be responded i.e. completely agree, Agree, Neutral, Disagree and completely disagree. The marking for the five points was respectively 5, 4, 3, 2, and 1 for completely agree, Agree, Neutral, Disagree and completely disagree.

2 Second form

The second form of the Multiple Intelligences Inventory is prepared based on the suggestions of the experts. There were total 88 items out of which 11 items were related to each predisposition of Multiple Intelligences each.

3 Piloting

Piloting was done for the standardization of the second form of the Multiple Intelligences Inventory. 90 representative students were selected for the pilot-study.

4 Item analysis

The items having t-value showing no significant difference were removed. Then the items with high correlation were retained in the final form of the Multiple Intelligence Inventory.

5 Final form of the Multiple Intelligence Inventory

Total 6 Items for each component were selected for the final form of the Multiple Intelligence Inventory based on the time taken for response and the expert opinions and the statistical significance and correlations were also kept in mind. Thus there were total 48 items in the final Multiple Intelligence Inventory. The students responded according to their degree of relevance and they got 1 to 5 score.

Data collection

The researcher took the permission of the principals of the respective schools for the data collection from the selected higher secondary school 11th standard students of Gandhinagar district. The researcher went to the schools according to the given date and time and acquainted the principals with the objectives of the research and the tool and thus cooperation was asked. Thus, necessary data collection was done by giving proper instruction to the students and thus taking it in the time convenient to all.

Data analysis

The score on each component of the Multiple Intelligence Inventory was calculated for each student for further statistical analysis. Then they were classified according to difference variables. The mean score of the whole group was calculated for each component. The significance in the difference of mean scores was tested using Critical Ratio. Thus, mean,

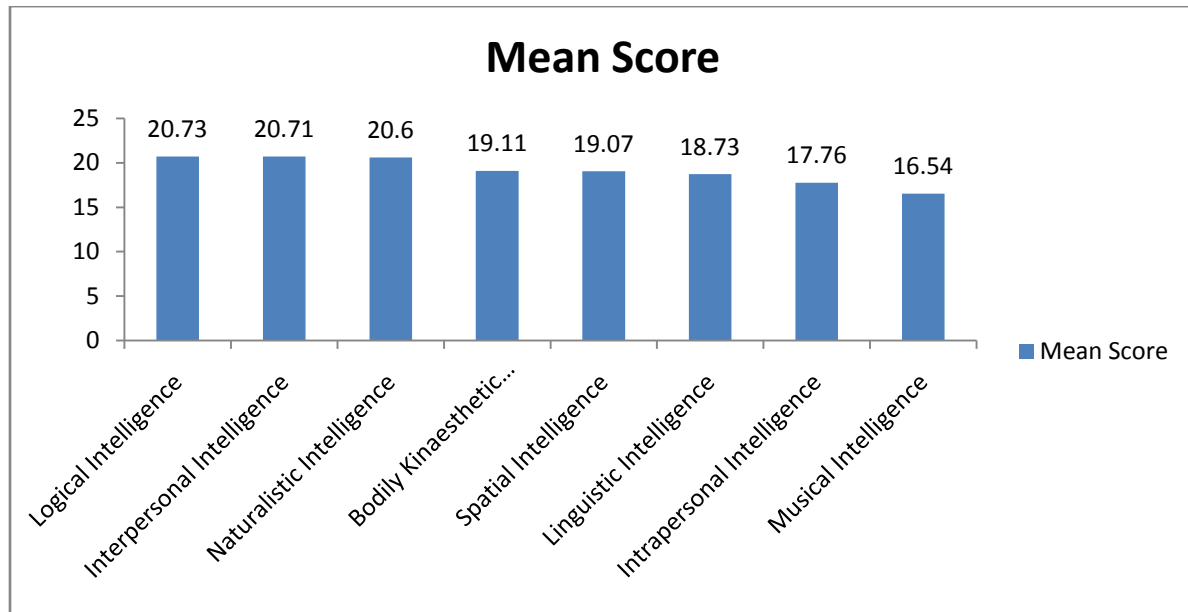
A Study of Multiple Intelligences of Students in Context to Gender

standard deviation, Critical Ratio were used for the data analysis. The M.S. EXCEL computer programme was used for the data analysis.

Objective wise Interpretation of data

Objective-1: To study the Multiple Intelligences predispositions of the 11th standard students.

The highest mean score among the eight Multiple Intelligences was in the Logical Intelligence with 20.73. Then other Intelligence had mean scores in descending order respectively 20.71 for Interpersonal intelligence, 20.60 for naturalistic Intelligence, 19.11 for Bodily intelligence, 19.07 for Spatial intelligence, 18.73 for Linguistic intelligence, 17.76 for the Intrapersonal intelligence and the lowest 16.54 for the Musical Intelligence.



Graph No.- 1

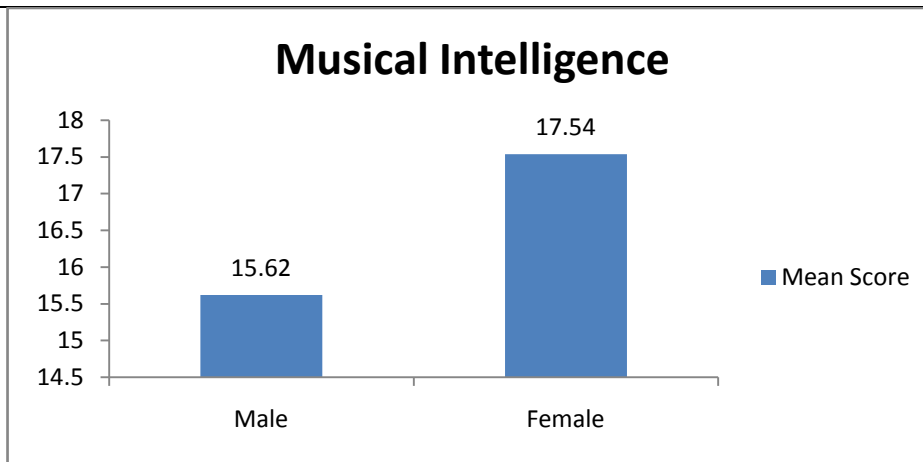
Thus the Logical intelligence mean score and the Interpersonal intelligence mean score were higher. The proportion of Musical intelligence and the Intrapersonal intelligence were lesser.

Objective-2: To study the effect of gender on the Multiple Intelligences predispositions of the 11th standard students.

Following null hypothesis was formulated for this objective.

Hypothesis	Intelligence	Gender	N	M	SD	Sed	C.R.	Remarks
Ho_{1.1}	Logical Intelligence	Male	205	21.02	4.18	0.41	1.56	NS
		Female	182	20.38	3.77			
Ho_{1.2}	Linguistic Intelligence	Male	205	18.67	3.69	0.43	0.33	NS
		Female	182	18.83	4.70			
Ho_{1.3}	Musical Intelligence	Male	205	15.62	4.22	0.44	4.36	0.01*
		Female	182	17.54	4.40			

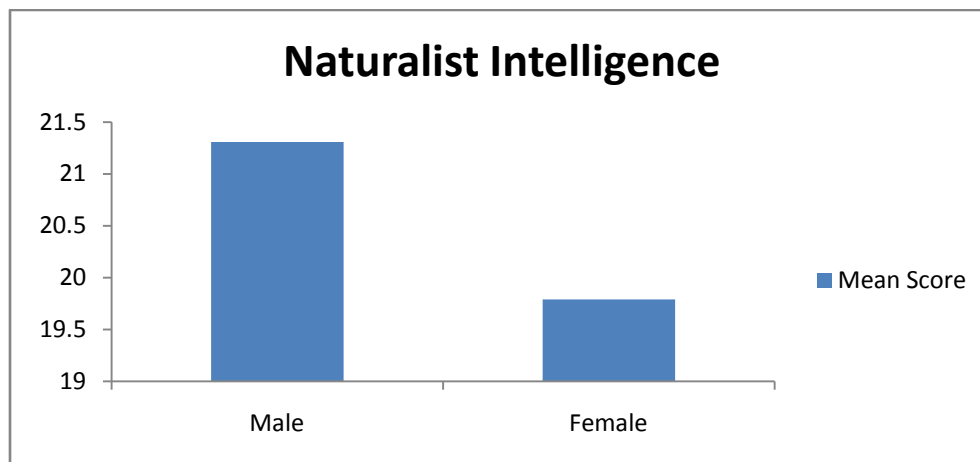
A Study of Multiple Intelligences of Students in Context to Gender



Graph No.- 2

Hypothesis	Intelligence	Gender	N	M	SD	Sed	C.R.	Remarks
Ho_{1.4}	Spatial Intelligence	Male	205	19.12	3.54	0.41	0.27	NS
		Female	182	19.01	4.37			
Ho_{1.5}	Bodily-Kinaesthetic Intelligence	Male	205	19.06	3.88	0.45	0.19	NS
		Female	182	19.15	4.92			
Ho_{1.6}	Interpersonal Intelligence	Male	205	20.77	3.64	0.42	0.21	NS
		Female	182	20.08	4.58			
Ho_{1.7}	Intrapersonal Intelligence	Male	205	17.43	4.08	0.44	1.55	NS
		Female	182	18.12	4.55			
Ho_{1.8}	Naturalist Intelligence	Male	205	21.31	3.51	0.38	3.95	0.01*
		Female	182	19.79	3.98			

*- Significant difference at 0.01 level



Graph No.- 3

FINDINGS

1. There was significant effect of gender on the Musical intelligence. Female students were superior to male students in Musical intelligence.

A Study of Multiple Intelligences of Students in Context to Gender

2. There was significant effect of gender on the Naturalistic intelligence. Male students were superior to female students in Naturalistic intelligence.
3. There was no significant effect of gender on Logical Intelligence, Linguistic Intelligence, Spatial Intelligence, Bodily-Kinaesthetic Intelligence, Interpersonal Intelligence and Intrapersonal Intelligence.

IMPLICATIONS

Following were the implications based on the findings:

1. The female students should be motivated to take part in the musical programmes in the co-curricular activities of higher secondary schools.
2. There should be arrangement of training programmes related to music for the female students.
3. The male students can be suggested nature related courses during educational guidance.

CONCLUSION

The present study was conducted to know the Multiple Intelligences of the 11th standard higher secondary school students. The findings were obtained from the data collection using survey research method. The researcher tried to create such knowledge that is useful in the world of education. This attempt will be considered fruitful if any of the findings of the study are useful in making the educational system more effective.

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