



A Study of Reasoning Ability of Grade 8 Students

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Guide
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1. Introduction

Education has been spreading, educated and literates are increasing today, by and by unemployment is going to increase. On the other hand, we have lack of training and man force. This is happened due to not proper planning of country man force. Moreover, there has lack of guidance which is responsible. If it shall go in such ways unemployment shall be increased. And human being force of India shall be lacking in giving their precious share. Not only that but shall but proved as burdensome and unproductive.

Due to lack of guidance and lack of awareness ability in him the students join in some special fields and branches looking to general studies selections. Therefore, some of them who have lower ability are down back in getting achievement and by this way they lost monitory as well west of time. In present research, the researcher studied the reasoning ability of students of standard 8 of Ahmedabad city.

2. Definitions of Reasoning Ability

2.1 Construction

According to Merriam-Webster's online dictionary, "The arrangement and connection of words or group of words in a sentence: syntactical arrangement."

According to Terry & Thomas (1977), "Programmed instruction term for the construction of an answer either in writing or by performance actively, not by passive choice."

2.2 Standardization

According to Menzel (1952), "A standardisation of a test involves the steps of construction, administration, evaluation and implementation."

According to Carter.V. Good (1973), "Test standardized: A test for which content has been selected and checked empirically, for which norms have been established, for which uniform methods of administrating and scoring have been development and which may be scored with a relatively high degree of objectivity."

2.3 Reasoning

According to Merriam Webster dictionary, "Reasoning is the use of reason; especially: the drawing of inferences or conclusions through the use of reason"

According to Dictionary.com, "Reasoning is the process of forming conclusions, judgments, or inferences from facts or premises."

2.4 Ability

Good (1973) defined ability as "The degree of capability necessary to find the correct solution to problem situations." "An estimate of such ability derived by administrating standardized tests."

According to Merriam-Webster dictionary, “Abilities are physical, mental or legal power to do something.”

3. Variables of the Study

The researcher selected following variables.

3.1 Independent Variables

1. Area
 - East
 - West
2. Type of School
 - Government
 - Self-finance
3. Gender
 - Boys
 - Girls

3.2 Dependent Variables

The scores of Reasoning Ability Test is defined as dependent variables in present study.

4. Objectives

The objectives in present study are as below.

- 1.To study the reasoning ability of students of Grade VIII.
- 2.To study the reasoning ability of students of Grade VIII in the context of area.
- 3.To study the reasoning ability of students of Grade VIII in the context of type of school.
- 4.To study the reasoning ability of students of Grade VIII in the context of gender.

5. Hypotheses of the Study

The researcher constructed few hypotheses in present study which were tested using t-test and checked the significance among scores of independent variables. These are as follow.

- Ho₁** :There is no significant difference between mean scores obtained in Reasoning Ability Test by students of east and west area.
- Ho₂** :There is no significant difference between mean scores obtained in Reasoning Ability Test by students of government and self-finance schools.
- Ho₃** :There is no significant difference between mean scores obtained in Reasoning Ability Test by boys and girls.

6. Research Tool

In present study, the researcher used a standardized Reasoning Ability Test which was constructed by the researcher himself. This test has 52 items divided in three different sections. Each item has four responses out of which only one response is true, other three responses were false. Each item is assigned with score one, thus, test has total 52 score.

7. Sample of the Study

The researcher randomly selected grade VIII students from east and west area of Ahmedabad city. The researcher selected 40 schools from Ahmedabad city out of these, 10 Government and 10 Government schools and 10 private schools were selected from east area while 10 government schools and 10 private schools were selected from west area. From these schools 1172 boys and 1149 girls were selected. Overall, 2321 students of grade VIII were selected as a sample.

8. Procedure of Data Collection

Data collection took almost more than 3 months because the researcher selected 2321 students from different upper primary schools from east and west area of Ahmedabad city. The researcher personally

visited every school and provided Reasoning Ability Test to the students of grade VIII. The researcher visited the principals of every school and to get permission about data collection. The researcher then visited that schools at date and time provided by the principals. The students were given almost one hour to fill up given scale. All information regarding how to provide responses to the test was given to the students before they were given the test. The researcher has supported the students whenever they faced any problem during filling up the scale. Finally, the researcher collected all the tests and packed it safely for further process of checking the scale and for data analysis.

9. Techniques of Data Analysis

As mentioned above, the researcher constructed few hypotheses to check the effect of independent variables on scores obtained in Reasoning Ability Test by students. The researcher performed t-test to check the significance of hypotheses.

10. Results of Testing Hypotheses

The researcher conducted t-test to check the hypotheses. The results obtained by t-tests are as below.

Ho₁ :There is no significant difference between mean scores obtained in Reasoning Ability Test by students of east and west area

Table 1: Result of t-test between students of east and west area

Area	N	M	SD	SED	t	Significance
East	1172	18.44	5.07	0.23	3.54	* *
West	1149	19.26	6.12			

df	0.05	0.01
2319	1.96	2.58

According to above table, for df=2319, table t-values are 1.96 and 2.58 at 0.05 and 0.01 level respectively. Calculated t-value is 3.54. Here, calculated t-value is higher than table t-values at both levels. Thus, hypothesis is rejected and there is a significant difference between mean scores of students of east and west area.

Moreover, mean score of students of west area is more than mean score of students of east area. Therefore, it is revealed that the students of west area possess higher reasoning ability than students of east area.

Ho₂: There is no significant difference between mean scores obtained in Reasoning Ability Test by students of government and self-finance schools

Table 2: Result of t-test between students of standard 8 of government and self-finance schools

Type	N	M	SD	SED	t	Significance
Government	1127	18.33	5.21	0.23	4.29	* *
Self-finance	1194	19.33	5.96			

df	0.05	0.01
2319	1.96	2.58

According to above table, for df=2319, table t-values are 1.96 and 2.58 at 0.05 and 0.01 level respectively. Calculated t-value is 4.29. Here, calculated t-value is higher than table t-values at both levels. Thus, hypothesis is rejected and there is a significant difference between mean scores of students of government and self-finance schools.

Moreover, mean score of students of self-finance schools is more than mean score of students of government schools. Therefore, it is revealed that the students of self-finance schools possess higher reasoning ability than students of government schools.

H₀₃: There is no significant difference between mean scores obtained in Reasoning Ability Test by boys and girls

Table 3: Result of t-test between boys and girls

Gender	N	M	SD	SED	t	Significance
Boys	1188	18.62	5.50	0.23	1.98	*
Girls	1133	19.08	5.76			

df	0.05	0.01
2319	1.96	2.58

According to above table, for df=2319, table t-values are 1.96 and 2.58 at 0.05 and 0.01 level respectively. Calculated t-value is 1.98. Here, calculated t-value is higher than table t-values at 0.05 level and lower than table t-value at 0.01 level. Thus, hypothesis is rejected and there is a significant difference between mean scores of boys and girls.

Moreover, mean score of girls is more than mean score of boys. Therefore, it is revealed that the girls possess higher reasoning ability than boys.

11. Major Findings

The major findings obtained in present study are as follow.

- 1.The students of west area possess higher reasoning ability than students of east area.
- 2.The students of self-finance schools possess higher reasoning ability than students of government schools.
- 3.The girls possess higher reasoning ability than boys.

12. Conclusion

In present study, the researcher studied Reasoning Ability of Grade VIII students of Ahmedabad city. The researcher randomly selected 2321 students from government and self-finance schools of east and west area of Ahmedabad city. The research revealed that the students of west area have higher reasoning ability than students of east area. The students of self-finance schools have also higher reasoning ability than students of government schools. The research also revealed that the girls possess higher reasoning ability then boys.

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