ISSN - 2231-1130
वर्ष–सप्तम् ; सितम्बर–2016

REASONING ABILITY OF SECONDARY SCHOOL STUDENTS AS A FUNCTION OF GENDER AND TYPES OF SCHOOLS

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Abstract: *The present study attempted to investigate the reasoning ability of secondary school students in relation to 'gender' and 'types of schools'. The secondary school students studying in XI class of aided and un-aided schools of Rae bareli district constituted the population of the study. The investigation was carried out on 96 students (48 male and 48 female). The results reveal that male and female secondary school students of aided schools do not differ significantly in respect of reasoning ability; where as in case of un-aided schools this difference is found significant in favor of female students .*

Introduction

The students vary widely in their ability to learn, which is expressed in their educational attainment and otherwise. In spite of the fact that students are exposed to the same educational environment including the same learning task, classroom and the same teachers, they are found to differ in learning outcomes. One category of factors, causing differences in their learning abilities, to a great extent is related to their personal characteristics Such as intelligence, thinking and reasoning ability, motivation, interest etc.The other category pertains to the environment in which an individual grows and interact with.

Learning is measured in terms of academic achievement. Among the cognitive factors of academic achievement intelligence has attracted the maximum attention. It has been extensively used as a major factor in a number of studies on

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learning and acquisition of concepts; intellectually superior subjects have been found to have more reasoning ability and superior academic achievement.

In the theory of Primary mental abilities, Thurston has also included the reasoning ability as the form of intelligence. In the range of cognitive variables another variable which in recent years is being increasingly recognized is the individual's ability to solve a problem.It is a well-established fact that problem solving involves the process of thinking and reasoning.

Reasoning is a process of controlled thinking as association which starts with some problems of interest to the reasoner and is directed towards its solution. It differs from ordinary imagination in that the result of reasoning are supposed to be checkedagainst some external criteria.

Bernard:-"Reasoning is a process of delaying response until dataare arranged into a new combination so that a clearly perceive goal can be reached. "

Reviewof Literature:

P.C. SHAH (1981) attempted a study on "construction and standardization of a verbal reasoning test for students of standard VI and VII in Saurashtra".

The main objective of the study was to plan, construct and standardize a verbal reasoning test.

The findings of the study were:-

Sex, grade and area (rural vs. urban) differences were significant.

Standard VII students excelled standard VI students, boys excelled girls and urban children in verbal reasoning.

AMY TRAUTH-NARE, GAYLE A.BUCK & NICOLE BEEMAN CADWALLANDER (2012) found in an

investigation 'levels of reasoning among girls engaged in technology enhanced science inquiry in an urban elementary classroom.'

SEKAR P. (2013) in an attempt to find out whether there is any significant difference in the reasoning ability of biology and computer group of higher secondary students w.r.t. gender,reported that the reasoning ability of the groups under consideration differed significantly.

Research Questions:

A number of researches have been reported regarding comparing different cognitive abilities of male and female students at different levels viz. Primary, Secondary etc., in different settings i.e. Govt./ Pvt.; Aided/un-aided etc. The findings of such studies are still inconclusive and inconsistent. The investigator is of the opinion that some more researches are still required to be conducted on these variables. In pursuit of adding further insight into the matter the investigator attempted this study with the following research questions in mind.

1. Does the reasoning ability of secondary school students differ on gender basis?
2. Whether there is a difference in the reasoning ability of students studying in aided and un-aided secondary school?

Hypotheses:

1. No significant difference exists between reasoning ability of male and female students at secondary level.
2. There is no significant difference between reasoning ability of male and female students of aided and un-aided secondary school.

Sample*:The sample was drawnon randomized basis from aided and un-aided secondary schools of Raebareli district (*affiliated to U.P. Board)

Need and Importance of the study:

With the life becoming more and more complex and challenging, there is a great need for the next generation to learn how to cope up with the fast occurring changes in the surroundings. Reasoning ability is supposed to be one of the abilities which appear to facilitatein taking on the challenges of life's adversities and stressful moment with a sense of serenity. Any individual who wishes to lead a meaningful stress-free life ought to possesssufficient reasoning ability.

Now days, education is becoming completely mechanical and people are studying not for knowledge but for sake of examination. They are giving more stress on memory rather than reflective thinking. So, their mental exploration is getting hindered. Even the top rankers are unable to pass the competitive examination and lagging behind.

In order to expose the child to the ground realities the subjects that he is taught also need to be related to real life situations. To enablethe child to cope up with the competitive world, it is believed that reasoning ability has a definite role to play. Keeping in mind the role and characteristics of reasoning ability, it is intended to identify the level of reasoning ability of secondary school students and suggestprobable ways and means to enhance it, as the destiny of any nation is built in its classrooms. In this context it would be further interesting to find out if gender too has a role to playand does the climate of the institution also is a potent contributor?

The present research paper aimed at finding out whether male and female secondary school students of aided and un-aided schools in fact differ in respect of their reasoning ability.

Methodology:

The method adapted for this study was descriptive and

statistical in nature. The investigator used survey method for data collection. The secondary school student of 12 to 17 years of aided and un-aided secondary school students of Raebareli district constitute the population of the study. A Random sampling design was applied to target the population. The investigation was conducted on 96 students (male and female) from different schools of Raebareli district.

S.No.	Name of schools	Gender		School type	
		Male	Female	Aided	Un-aided
1	Raja Chandrachurna Singh Inter College, Maharajganj, Raebareli	12	12	24	0
2	Dr. HargogindJanta Inter College, Hardaspur,Raebareli	12	12	24	0
3	Dr. B.R.Ambedkar Inter College, BawanBujurgBalla, Raebareli	12	12	0	24
4	Modern Public Inter College,Bacchrawan, Raebareli	12	12	0	24
	Total =96	48	48	48	48

Tool Used:

In the present study the researcher selected tool from National Psychological Corporation Reasoning Ability Test (RAT) by L.N. Dubey, college of Educational Psychology and Guidance, Jabalpur (M.P.)

Results and Analysis:

The Mean, S.D., Standard Error of the Mean (SEm), 't' test were the required statistics to determine and to test the hypothesis. The results are shown in the form of table-

Table -1 Comparison of Reasoning Ability of Male and Female students

Gender	N	Mean	SD	SEm	T value df =94	Significance
Male	48	41.33	23.63	4.17	1.67	Not significant at 0.05level
Female	48	48.29	16.77			

Table 1 shows that mean score of reasoning ability of male students is 41.33 and of female students is 48.29. The S.D. of the reasoning ability of male students is 23.63 and that of female students is 16.77. The t-value, 1.67 is not found significant at 0.05 level of significance. This reflects that the male and female students of secondary schools are not significantly different in respect of their reasoning ability.

Table-2 Comparison of Reasoning Ability of Male and Female students of Un-aided Secondary School

Gender	N	Mean	SD	SEm	t value df = 46	Significance
Male	24	29.67	16.44	4.48	5.74	Significant at 0.01 level
Female	24	55.38	13.82			

Table 2 shows that mean score of reasoning ability of un-aided male students is 29.67 and of female students is 55.38. The SD of the reasoning ability of un-aided male students is 16.44 and that of un-aided female students is 13.82. The t-value is 5.74 which

is significant at 0.01 level of significance. This shows that the un-aided male and female students of secondary level differ from each other in their reasoning ability.

Table-3 Comparison of Reasoning Ability of Male and Female students of aided secondary school

Gender	N	Mean	S.D.	SEm	t-value df= 46	Significance
Male	24	52.33	24.14	6.11	1.26	Not significant at 0.05 level
Female	24	43.17	16.65			

Table 3 shows that mean scores of reasoning ability of aided male students is 52.33 and of aided female students is 43.17. The SD of reasoning ability of aided male students is 24.14 and that of female students is 16.65. The t-value is 1.26 which is not significant at 0.05 level of significance. This shows that the male and female students of aided school do not differ from each other in their reasoning ability.

Conclusions

The present investigation concludes that the male secondary school students of aided schools do not differ significantly from their female counterparts in respect of their reasoning ability, however, a significant difference has been observed in reasoning ability of male and female students studying in un-aided schools in favor of female students.

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