

A STUDY ON REASONING ABILITY AMONG SECONDARY SCHOOL STUDENTS

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ABSTRACT

Reasoning is the process of higher order thinking where general principles are employed to draw relevant inferences. It is a kind of thinking, yet all kinds of thinking cannot be termed reasoning. It is a word used to describe the mental recognition of cause - and - effect relationship. The study was conducted to investigate reasoning ability of secondary school students. The study included the categorical variables gender, locality of the school, type of school management, type of school and medium of instruction. The investigator has used reasoning ability test constructed and validated by Shailaja Bhagwat (2010) for the present investigation. The reasoning ability test comprised 30 items. Normative survey method was adopted and total 212 secondary school students were standard selected randomly from the secondary schools in Chengalpattu district. The collected data was statically analysed by using percentage analysis, 't'- test and 'F'- test. The findings of this study indicates that the male secondary school students are having high reasoning ability than the female students whereas the urban secondary school students are having high reasoning ability than the rural counterparts and also the level of reasoning ability of secondary school students is moderate.

Key Words: Reasoning Ability, secondary school students

INTRODUCTION

Reasoning is the process of higher order thinking where general principles are employed to draw relevant inferences. It is a kind of thinking, yet all kinds of thinking cannot be termed reasoning. It is a word used to describe the mental recognition of cause – and – effect relationship. It may be the prediction of an event from an observed cause or the inference of a cause from an observed event.

Reasoning is said to be a typical productive thinking process and systematic advanced stage in the complex process of one's organized thinking. The reasoning ability is the ability to think logically and solve problems in a new situation that is independent of required knowledge.

REVIEW OF RELATED LITERATURE

Rani, K. V.(2017) analysed reasoning ability and academic achievement among secondary school students in Trivandrum. The sample of the study consisted of 225 secondary school students of Trivandrum district. The tool adopted here was the Reasoning Ability of Secondary School Students Scale developed by the investigator herself and academic achievement by the term test conducted in the school by the state government. Statistical techniques involved here were t-test and Pearson's Product Moment coefficient of correlation. The result of the study showed that, there was significant high positive correlation between reasoning ability and academic achievement among secondary school students. Also male students showed more reasoning ability and academic achievement than that of female students. With reference to age, and type of school also there existed significant differences in reasoning ability and academic achievement.

Sunisha (2016) has made a study on development of mathematical reasoning based on constructivist approach among the students. The study reveals that level of mathematical reasoning ability had increased by the use of constructivist approach.

Ehtesham Anwar.,(2015) studied the reasoning ability of secondary school students in relation to their intelligence. The findings of the revealed that there was no significant difference in the reasoning ability of male and female secondary school students.

NEED AND SIGNIFICANCE OF THE STUDY

The investigator believes that this study will find whether reasoning ability develops thinking, social and emotional skills, thus empowering young adolescents to respond to real life situations in positive and responsible ways. It is also hoped that this study will enable educators to identify and develop skills needed for empowering learners to make informed decisions, understanding the importance of life skills development in a continuous and comprehensive education. The investigator wishes to recommend that schools foster thinking, emotional and social skills by providing students with opportunities to improve their reasoning ability.

TITLE OF THE PROBLEM

The problem entitled as “**A STUDY ON REASONING ABILITY AMONG SECONDARY SCHOOL STUDENTS**”

OPERATIONAL DEFINITIONS OF THE STUDY

REASONING ABILITY

Reasoning Ability is the capacity to think logically and solve problems in new situations that is independent of acquired prior knowledge.

SECONDARY SCHOOL STUDENTS

Secondary school students refers, those students are studying in 6th to 8th standard.

OBJECTIVES OF THE STUDY

- To find the level of reasoning ability of secondary school students is moderate
- To study the significant difference between the reasoning ability of secondary school students based on the select sub samples gender, locality of the school and type of school management,.

HYPOTHESES OF THE STUDY

- The level of reasoning ability of secondary school students is moderate
- There is no significant difference in the reasoning ability of secondary school students based on the select sub samples gender, locality of the school and type of school management,.

RESEARCH METHOD OF THE STUDY

Normative survey method was adopted in the study. The present study is focused to find out reasoning ability among secondary school students. After selecting the title of the study, the sample, tools, variables and statistical technique were finalized for this study.

POPULATION AND SAMPLE OF THE STUDY

The population of the present study includes secondary school students studying in government, government aided and private schools. Stratified random sampling technique was used for the selection of 212 secondary school students studying in government, government aided and private schools from Chengalpattu district. Reasoning ability test constructed and validated by Shailaja Bhagwat (2010) for the present investigation. The reasoning ability test comprised 30 items. The collected data was statically analysed by using percentage analysis, ‘t’- test and ‘F’- test.

TESTING THE HYPOTHESIS

HYPOTHESIS – 1

The level of reasoning ability of secondary school students is moderate

TABLE – 1
TABLE SHOWING THE LEVEL OF REASONING ABILITY OF
SECONDARY SCHOOL STUDENTS

DIMENSIONS	RANGE OF SCORES	N	%
Low	1 – 10	45	21.22
Average	11 – 20	97	45.75
High	21 – 30	70	33.01

From the above table it is noticed that among 212 secondary school students, 45 (21.22%) of secondary school students have low level reasoning ability, 97 (45.75%) of secondary school students have moderate level reasoning ability meanwhile 70 (33.01%) of secondary school students have high level reasoning ability.

Hence the formulated hypothesis “The level of reasoning ability of secondary school students is moderate” is accepted.

HYPOTHESES – 2(a)

There is no significant difference in the reasoning ability of secondary school students of gender and locality of the school

TABLE – 2
TABLE SHOWING THE MEAN DIFFERENCES IN REASONING ABILITY OF SECONDARY SCHOOL STUDENTS OF GENDER AND LOCALITY OF THE SCHOOL

SUBSAMPLES		N	M	SD	t VALUE	S/ NS
Gender	Male	98	8.89	3.045	3.98**	S
	Female	114	7.31	2.672		
Locality of the school	Rural	102	7.67	2.913	5.08**	S
	Urban	100	9.82	3.092		

S – Significant Significant at 5 % level**

From the above table it is inferred that t values are greater than table value at 0.05, level of significance in two cases with regard to reasoning ability.

CONCLUSION

- There is a significance difference between male and female secondary school students with regard to reasoning ability.
- There is a significance difference between rural and urban secondary school students with regard to reasoning ability.

HYPOTHESES – 2(b)

There is no significant difference in the reasoning ability of secondary school students of type of school management

TABLE –3
TABLE SHOWING THE MEAN DIFFERENCES IN REASONING ABILITY OF SECONDARY SCHOOL STUDENTS OF TYPE OF SCHOOL MANAGEMENT

VARIABLES	SOURCES	SS	Df	MSS	F VALUE	S/ NS
Type of school management	Between	12.426	2	6.213	0.157	NS
	Within	8221.67	209	39.338134		
	Total	8234.089	211			

NS – Not Significant

From the above table, it is found that obtained “F” value is less than the table value required at 2, 209 degrees of freedom at 0.05 level, the null hypothesis is accepted with regard to reasoning ability.

CONCLUSION

There is no significant difference in the reasoning ability of secondary school students of type of school management

DISCUSSION OF THE STUDY

Ehtesham Anwar .,(2015) studied the reasoning ability of secondary school students in relation to their intelligence. The findings of the revealed that there was no significant difference in the reasoning ability of male and female secondary school students. These findings is not confirm to present study and they that there is a significance difference between male and female secondary school students with regard to reasoning ability.

CONCLUSION

The findings of this study indicates that the male secondary school students are having high reasoning ability than the female students whereas the urban secondary school students are having

high reasoning ability than the rural counterparts and the level of reasoning ability of secondary school students is moderate.

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