

PROBLEM SOLVING ABILITY OF NINTH STANDARD STUDENTS

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ABSTRACT

This study aims to find the problem solving ability of Ninth standard students. The main objective of this study is to identify the problem solving ability of Ninth Standard Students with respect to gender and location. Normative survey method was used for the study. Samples of two hundred ninth standard students from Vellore district were selected for the research by using simple random sampling techniques. Problem Solving Ability Tool of L.N. Dubey (2011) was used to measure the problem solving ability of Ninth standard students. Findings show that there exists a significant difference between Ninth Standard boys and girls in their Problem Solving Ability. Also, there exists significant difference between rural and urban Ninth Standard Students in their Problem Solving Ability.

Key words: *Problem solving ability, Mathematics, Ninth standard students, etc.*

INTRODUCTION

Problem-solving skill is defined as a person's ability to engage in cognitive processes when understanding and solving problems for which the method of solving is not readily available (Shute, 2016). Problem solving ability has played a critical role in human history (Ohlsson, 2012). Problem solving is to discover knowledge and skills that reach the target country by interfering with a set of processes and goals where the solution is unknown, unfamiliar, or reaching a new state of goal (Jonassen, 2004; Inkinen, 2015). Intuitive problem solving styles tend to process information from different paradigms simultaneously. It is therefore more likely to create new problem solutions as possible (Isaksen, 1987; Kirton, 1976). In order to determine how to solve problem situations that are different from the current situation and have unknown results, problems are solved through the process of adjusting previous experience, knowledge, and intuition (Charles & Lester, 1982)

SIGNIFICANCE OF THE STUDY

Problem solving is a skill which is related to mathematical knowledge, general intelligence, general creativity, and verbal abilities (Bahar & Maker, 2015). Problem solving is related with conceptual understanding and procedural knowledge (Saygılı, 2017). Problem solving improves critical thinking ability and therefore, problem solving skills need to be developed so that students' thinking processes can be formed properly (Wahyuddin & Syahri, 2018). It is necessary to improve the problem solving ability of students to increase cognitive ability, and improve the quality of teaching (Patnani, 2015). Thus, improvement of problem solving skills must be possessed by students in order to contribute to society in solving problems in real life communities (Eggen & Kauchak, 2006). Therefore this study is intended to find the problem solving ability of Ninth standard students.

REVIEW OF RELATED LITERATURE

Laine, Anu et al.(2014) studied the Mathematical Problem Solving Ability of Elementary school students. The main objective of the study was to find the Problem Solving Ability of Third to Fifth standard students. The samples were three hundred and forty eight Third standard students, and three hundred and fifty six Fifth standard students. The pre-test and post-test was conducted for both groups. Only four questions were given to answer. The finding of the study shows that seventeen percentages of the Third standard students, and twenty one percentage of the Fifth standard students answered solutions for a particular problem.

Shakila,J.(2011) studied the mathematical concepts of secondary school students with respect to spatial ability and problem solving skills. The main objective of the study was to find the relationship between problem solving skill and spatial ability. The study was conducted with the six hundred and twenty Ninth standard students. Stratified random sampling technique was adopted to select the sample. Findings show there exist a significant relationship between problem solving skills and spatial ability.

HYPOTHESES OF THE STUDY

1. There is no significant difference between Ninth Standard boys and girls in their Problem Solving Ability.
2. There is no significant difference between rural and urban Ninth Standard Students in their Problem Solving Ability.

METHOD OF THE STUDY

The researcher has used normative survey method. Samples of two hundred ninth standard students from Vellore district were selected for the research by using simple random sampling techniques.

TOOL USED FOR THE STUDY

The investigator has used the Problem Solving Ability Tool of L.N. Dubey (2011) to measure the problem solving ability of Ninth standard students.

HYPOTHESIS:1

There is no significant difference between boys and girls in the Problem Solving Ability of Ninth Standard Students.

Analysis and Interpretation

Variable	Sub Sample	N	Mean	S.D	't' Value	Level of Significance
Gender	Boys	105	58.68	13.48	13.34	Significant
	Girls	95	30.76	16.00		

Results show that the calculated 't' value of male and female ninth standard students in their Problem Solving ability is 13.34 which is more than the table value 1.96 at 0.05 level. Hence the null hypothesis is rejected and it is concluded that there is significant difference between Boys and Girls students of ninth standard students in their problem solving ability.

HYPOTHESIS:2

There is no significant difference between Rural and Urban Ninth Standard Students in their Problem Solving Ability

Analysis and Interpretation

Variable	Sub Sample	N	Mean	S.D	't' Value	Level of Significance
Gender	Rural	122	56.12	11.37	8.51	Significant
	Urban	78	33.19	14.00		

Results show that the calculated 't' value of Rural and Urban ninth standard students in their Problem Solving ability is 8.51 which is greater than the table value 1.96 at 0.05 level. Hence the null hypothesis is rejected. It is concluded that there exists a significant difference between Rural and Urban ninth standard in their problem solving ability.

MAJOR FINDINGS OF THE STUDY

1. There is significant difference between Ninth Standard boys and girls in their Problem Solving Ability.
2. There is significant difference between rural and urban Ninth Standard Students in their Problem Solving Ability.

CONCLUSION

Problem solving ability is very much essential for students in their day to day life as well as for their achievement. The present study shows that there exist significant differences in the problem solving ability of Ninth standard students with respect to the gender and location. Mathematics is not only important for success in life but it is present all around us. The laws of mathematics are evident throughout the world, including in nature, and the problem-solving skills obtained by completing mathematical calculation helps to tackle problems in other areas of life.

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