A STUDY ON PROBLEM-SOLVING ABILITY AMONG HIGHER SECONDARY STUDENTS

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ABSTRACT

Problem Solving is the process to understand what is happening in the environment, identifying things that ought to be changed, and then figuring out the things that need to be done to create the desired outcome. The main purpose of the study is to find the difference in problem-solving ability among higher secondary students owing to the difference in a few selected variables. A stratified random sampling method was used and the Sample size is 498. The findings are there is no significant difference in the problem-solving ability of students owing to the differences in the medium of instruction. Government school students have low problem-solving ability compared to government-aided and private school students.

Keywords: *Problem-solving ability, higher secondary students.*

Introduction

Problem solving is the process or act of achieving our desires and goals despite all odds of failure. Everyone should have some skills like good analytical skills to execute, critical thinking, and emotional well-being. Analytical skill is the ability to identify, collect the data and get insights on the knowledge the data provides to find the root cause of the problem and critical thinking is the ability to question, analyze, interpret and make a judgment. Emotional well-being is a state where we have control of all our thoughts irrespective of the odds things that happen around us and the skill to execute is the act of putting in place an action as planned. The first and foremost step is to identify the problem. The next step is to identify the root cause. There should be some actions or series of events that made the problem occur. The root cause identification leads us to the next step of the solution. The goal in this stage is to find all the possible solutions and list them. The pros and cons of all the identified solutions are studied. And the next step is to choose a primary and secondary solution. Once evaluated all the options, choose the best one and can create an action plan to implement the solution that is identified as needed to create an action plan and shall implement the solution, monitor regularly, and finally document the solution. Both the successful, failed solutions and the related observations should be documented for future reference.

Background of the Study

Problem-solving is a vital human quality. It is the process to understand what is happening in the environment, identifying things that ought to be changed, and then figuring out the things that need to be done to create the desired outcome. Problem-solving is not only an important skill but also a mandatory requirement of each individual to face the problems of society and by effectively finding solutions for each problem each individual can attain absolute freedom to achieve the Goal in life.

Significance of the Study

It is evident that now-a-day no one has the patience to wait for the right time nor accept or adapt to the flow of society. Now, students are concentrating only on winning but no one is taught how to handle complications. Hence one could see lots of suicide among students when it comes to either results or when students face problems in society, at home, or in classrooms. Teenage Suicides, social media addiction, and teenage crimes are the finest example that defines how the present generation of students handle the problem.

Students expect a struggle-free existence and weren't taught how to effectively handle hitches or failures in life.

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The education system in such a way defines success as purely academic and not in any other way. But practically academic success is only a small part of their life and is not a whole life. Hence the present study is the need of the hour.

Objectives of the study

The objective of the study is to find the difference in problem-solving ability among students studying in different Mediums and among students studying in government, government-aided, and private schools.

Hypotheses of the study

1. There is no significant difference in the problem-solving ability of students owing to differences in medium of instruction.
2. There is no significant difference in the problem-solving ability of students owing to differences in the type of school.

Methodology

In order to get information from the higher secondary school students for this study, the researcher used the survey method (descriptive research). A survey is a highly organized questionnaire that is used to gather data from a large number of respondents that are representative of certain demography. The tool used to study the problem-solving ability of students is Problem Solving Inventory (PSI) which was constructed and standardized by P. Paul Heppner (1988).

Analysis of data

Data was collected from 498 students drawn from standard XI of different school types. The variable studied in the present investigation is Problem Solving Ability with reference to some selected variables like Medium of Instruction and Type of School. After the data was collected it was classified according to various categories and sub-categories of the above-mentioned variables and a test and ANOVA were carried out to find the significant difference between the different sub-variables.

Interpretation of data

Hypothesis 1 : There is no significant difference in the problem-solving ability of XI standard students owing to the differences in the medium of instruction.

Table 1

Difference in problem-solving ability owing to medium of instruction

Variable	Medium of Instruction	N	Mean	SD	Calculated 't' Value	p-value	Remarks
Problem-Solving Ability	Tamil	249	114.1	15.416	3.767	0.000	S
	English	249	119.20	14.844			

From the table 1, since the p-value is less than 0.05 at 95% of confidence level, the null hypothesis is rejected. Hence it is concluded that there is significant difference in the problem-solving ability of XI standard students owing to the difference in the medium of instruction.

Hypothesis 2 : There is no significant difference in the problem-solving ability of XI standard Students owing to the differences in the Type of School.

Table 2

Mean and SD of problem-solving ability owing to type of school

Variable	Type of School	N	Mean	SD
Problem Solving Ability	Government	166	109.46	13.28
	Government Aided	166	119.97	15.55
	Private	166	120.51	14.56

Table 2 shows the One-Way ANOVA Showing the difference in the problem-solving ability of XI standard students with respect to the difference in types of school

Table 3

One-Way ANOVA Showing the difference in problem-solving ability with respect to the difference in types of school

Variable	Source of Variation	Sum of Squares	df	Mean Square	Calculated 'F' value	p-value
Problem-Solving Ability	Between	12870.173	2	6435.09	30.64	0.000
	Within	103957.63	495	210.015		

Since the p-value is less than 0.01 at 99% confidence level, the null hypothesis is not accepted. Hence it is concluded that there is a significant difference in the problem-solving ability of XI standard students owing to differences in the type of school. Since F is significant for types of school Post Hoc test was used to analyze between the subgroups and the results are presented in table 4.

Table 4

Post Hoc Test showing the difference in the problem-solving ability of XI standard students with respect to the difference in Types of School

Group	Sub Groups	Mean Difference	Standard Error	p-value
Types of School	Government Vs. Government Aided	10.506	1.587	0.000
	Government Vs. Private	11.042	1.529	0.000
	Government Aided Vs. Private	0.536	1.653	0.944

From the above table 4, it was found that there is a significant difference in the problem-solving ability between Government school students vs. Government Aided school students and Government school students vs. private school students. The computed mean difference indicated that the problem-solving ability of Private school students is high and among them, the problem-solving ability of Government school students is very less.

Findings of Study

1. There is significant difference in the problem-solving ability of XI standard students owing to the differences in the medium of instruction.
2. Government school students have the low problem-solving ability when compared with private school and Government Aided School Students.

Educational Implication

Problem-solving skill has more implications in many of the actions one performs. And particularly education plays a significant role. Students are facing challenges in weighing their abilities, and self-doubt and simply assume they cannot do it. The problem-solving skill being properly employed will help the students overcome their fear and pursue higher education and beyond. It is a proven fact that problem-solving ability is lower in Government school students compared to private school students as well as Government aided school students. The poor infrastructure and facilities in the Government school lead to poor problem-solving ability. Hence in government school infrastructure facilities, teaching methods, learning techniques, puzzles solving, and brain activities should be upgraded to increase the problem-solving ability among Government school students.

The government of India has set a target of a 50 percent Gross Enrollment Ratio (GER) in higher education by 2035. GER stood at 27.1 percent during the year 2019-2020. Surprisingly Tamil Nadu has a gross enrollment ratio (GER) of 51.4% in Higher education. Hence by imparting education to students their ability to solve the problem will automatically raise and the awareness about the possibilities of the problem will also increase among students.

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