



**A COMPARISON OF PROBLEMSOLVING ABILITY OF MALE AND FEMALE
SENIOR SEDCONDARY SCHEDULED CASTE SCHOOL STUDENTS
BELONGING TO KULLU AND MANDI DISTRICTS OF HIMACHAL PRADESH**

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Abstract

This study was conducted on 600 Scheduled Castes Senior Secondary School Students of Kullu and Mandi Districts of Himachal Pradesh to find out the differences in the problem solving ability of these students in relation to their gender and district they belong to. The results of the study revealed that neither the gender nor the district of the senior secondary scheduled caste school students have any effect on problem solving ability of these students.

Keywords: Problem Solving Ability, Senior Secondary Scheduled Caste School Students.



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INTRODUCTION

Every human being whether young or old, ought to come across problems in the journey of life. When he is confronted with a problematic situation he has to find out its solution at his own. The life of an individual is becoming more and more complex with the advancement in socio-economic status of the families in the society due to the advancement in the technological field which makes life easier and faster than the earlier. The problematic situation occurs when there is an obstacle to reach the goal. The obstacle may be physical, social or economic which may hinder the progress of an individual towards the goal. In solving the day to day problem intelligently and sufficiently, one must have ability to solve the problems without being under stress and confusion and if he/she is incapable of solving his/her problems easily and courageously, he/she may have to face frustration of failure which ultimately leads towards the deviant behaviour. That is why education has many responsibilities to be performed at the early stage of life. The senior secondary school stage is the stage where the adolescents are struggling for choosing their careers and settled down their lives. They are facing the multi-sided problems. It is only the right type of education

which may develop their insights to understand the world around them and solve the problems intelligently.

One of the major responsibility of education is to develop the ability of problem solving ability. The success, efficiency and happiness to a large extent depend upon their abilities. Every child has not possess enough abilities but one has to develop his/her ability in society at large through struggling efforts made in right directions. That is why the efforts in education concentrated in problem solving ability. The efforts in education are mainly concentrated in developing the problem solving ability of children through their thinking and creative powers which depends on their innovative practices and a strong sense of imaginations.

It has been found that person having higher intelligence and reasoning ability can solve the complex problem quickly. Therefore, it is necessary that on one hand we try to develop intelligence and reasoning ability and on the other hand we should also develop the problem solving ability through proper education and training of our young boys and girls belonging to different social settings. The concept of problems solving ability is described below in detail.

THE CONCEPT OF PROBLEM SOLVING ABILITY

Problem solving ability is a capacity of an individual to form a pattern of framework, creative thinking and reasoning. It is the ability to think and reason on given levels of complexity. People who have learned effective problem solving techniques are able to solve problems at higher levels of complexity than more intelligent people who have not such training. Problem solving ability is also selected to term such as thinking, reasoning, decision making, critical thinking and creative thinking. Problem solving ability is a cognitive process directed to achieving a goal when no solution method is obvious to the problem solver. Problem solving is a goal directed and motivated by the need to reduce the discrepancies between one state of an affairs and another.

Problem solving is a process of overcoming difficulties that appear to interfere with the attainment of a goal. Simple problems can very well be solved by the instructive and habitual behaviours. More difficult problems requires a series of solution attempts, until the successful solution is reached. Problem solving ability is a variety of thinking skills that allow to organize ideas, select appropriate strategies and determine the reasonableness of solution. Problem solving ability is a process that require to follow a series of steps to find solution.

Problem solving ability involves both analytical and creative skills, fostering skills required for students to take control of their journey by taking them problem skills powers students' effective problem solving ability is about making informed choices in a variety of situation.

Problem solving ability is the basic ability of identifying the problem and taking steps to resolve problem. The skill of problem solving is acquiring the knowledge that will lead one to a solution and one's ability to combine that knowledge in a ready to use format and utilize it to find the solution. Problem solving ability are not only useful in scholar context but they can help students to understand and develop solution when coping with many of life's problem or challenges with in a varied and problematic world. The students must aware of the fundamental steps in order to solve authentic complex problems in the diverse situations. Problem solving ability is a key to success and regarded as the most significant aspect of human behaviour. It plays an important role in academic achievement of students. The main characteristics of the problem solving ability are: Problem solving ability is a goal directed. The main focus is to remove obstacle, Process of problem solving ability involves selective relevant experiences which are recalled for finding a successful solution, it is considered as selective concerned and relevant experiences are recognized towards a complete solution, creativity is required in the sense that solution of problem results into an essentially new construct and accumulation as well as organization of new ideas or movements or both and it involves critical thinking as it essentially evaluate the adequacy of desired results or tentative solution.

IMPORTANCE OF PROBLEM SOLVING ABILITY

Problem solving ability play a vital role in developing of student's ability to learn, think, feel confident and competent at understanding world. It is an ability to think logically and creatively while using and applying facts to solve problems. Problem solving ability helps students to understanding of problem deeply. Students are quite involved with the problem to solve. It helps them to gain a positive attitude towards the subject. Problem solving ability gives an opportunity to students to explore their ideas and so as to give them the chance to extend their creativity, even apparently weak students may have ideas that turn out to be fruitful. Problem solving ability helps students to develop enjoyment, learning and social skills cooperation and communication.

Process of problem solving ability helps in development of intellectual or mental powers. It affects our ability to analyze a situation, come to the decision and check thinking

and its results precise relationship, to concentrate and to be systematic in our work habits. In schools it can help teacher to know weak areas of students in learning the subjects especially mathematics. It also gives students to know their ability and overcoming mathematics and science. It helps teacher to improve teaching strategies to attain desirable goals in their subjects. Knowledge about the abilities will help an individual to choose their career it also helps to provide vocational guidance. It helps students for searching and finding solution of problem. Problem solving ability helps to design curriculum and programme in schools, Kamaruddin and Hazni (2010) recommended that the problem solving ability is very important especially for students. Students can improve their learning ability if the teachers teach them with the implementation of problem solving techniques. It can also help an individual to learn habits of using problem solving ability in the solution of the problem.

The studies conducted by Graf & Riddle (1972) concluded that no significance difference between male and female concerning solution of a problem was found but the females require a longer time to solve a problem.

Brown (1986) studied the growth of internal personal problem solving abilities in grades Nine through Twelve and found that senior females scored significantly higher than senior males.

Kaur and Gupta (1998) conducted study on problem solving behaviour of eight class students in relation to their creativity it was found that high achiever boys in problem solving were found to be more creative in comparison to low achiever boys. High achiever girls and low achiever girl in problem solving ability do not differ significantly on creativity. No significant difference exists between high achiever boys and low achiever girls in problem solving ability in relation to creativity.

Ganandevan (2006) found out that the problem solving ability of higher secondary students was low. The male and female students and the students residing at rural and urban area differ in problem solving ability.

Mohanty, Parida and Jena (2007) studied scientific creativity and problem solving abilities of creative and non-creative students. It was revealed that sex had no impact on development of problem solving ability. Problem solving ability is not affected by the scientific creativity. The interaction of results of sex and creativity: sex and locality and that of locality and creativity on the problem solving ability was found insignificant. There exist significant interaction among sex, locality and creativity on the development of problems solving ability of students.

Gupta (2013) conducted a study on problem solving ability and academic achievement among the students belonging to Scheduled Tribe and Scheduled Caste categories. Significant differences were reported in the problem solving ability of boys and girls of both the categories.

Kaur (2014) concluded that in problem solving ability Boys and girls did not differ significantly in social warmth, enthusiasm, boldness, self-sufficiency, competition dimensions of personality. But she found that the students studying in private schools had better problem solving ability and similarly the boys had better problem solving ability than that of the girls.

Singh (2015) conducted a study on attitude towards mathematics of secondary school students in relation to problem solving ability it was found that there was significant relationship between attitude towards mathematics and problem solving ability of the 10th class students.

NEED AND JUSTIFICATION OF THE STUDY

As we know that the problem solving is the key to success for developing different abilities and skills in an individual which is the major aim of education, it was discovered in the past studies by the various scholars that no two individuals are alike in their abilities, skills, intelligence and pattern of thoughts etc. Which affects their way of living in the society and to solve the day to day problems. Some individuals can easily handle a situation, but others cannot. A student having good problem solving ability can perform better in academic as well as in social life. Psychological and physical makeup of the child also affects its problem solving ability. Further, differences were observed between boys and girls in their problem solving ability. Paechter (1998) argues that male and female students do experience the world in different ways. Firstly, they are differently positioned in society. The second is their different learning styles and how they perceive and process reality. Parental attitude towards their children like rejection and favoritism and towards the differences on the gender basis, affects their problem solving ability. Due to social constraint Scheduled Caste students may feel neglected and ignored in the school and society. It results in a psychological pressure on their thinking. The Scheduled Caste students generally being from poor home background have to face many problems to struggle academically in the institutions and due to low economic status in the society struggle to add the earnings of the family for the survival. There is gender biasness in the families of the scheduled Castes families as compare to that of the

other categories in the society and there occurs different situations in different districts also which varies in facilities provided to them in the institutions. Keeping in view all above facts in mind the investigators thought it better to study the problem solving ability of senior secondary scheduled caste school students in relation to their gender and district.

OBJETIVES OF THE STUDY

1. To find out the differences in problem solving ability of Senior Secondary Scheduled Caste School Students in relation to their gender.
2. To find out the difference in problem solving ability of the Senior Secondary Scheduled Caste School Students in relation to their district.

HYPOTHESIS OF THE STUDY

1. There will be significant differences in the problem solving ability of Senior Secondary Scheduled Caste School Students in relation to their gender.
2. There will be significant differences in the problem solving ability of Senior Secondary Scheduled Caste School Students in relation to their district.

RESEARCH METHOD EMPLOYED

The study was conducted through the 'Descriptive Survey Method of Research' on the 11th class Government Senior Secondary Scheduled Caste Schoolstudents belonging to DistrictKullu andMandi of Himachal Pradesh on a randomly selected sample of 600 11th class Senior Secondary Scheduled Caste school students from four tehsils; Manali, Kullu, Banjar and Nirmand of District Kullu and four tehsils; Sadar, Balh, Sundernagar and Karsog of District Mandi and finally from these sampled eight tehsils 48 (six from each tehsil) Government Senior Secondary schools.

The Hindi version of Problem Solving Ability Inventory by L. N. Dubey was used to collect the requisite data for the study.

ANALYSIS AND INTERPRETATION

The data were analysed by applying the t-test for comparing the problem solving ability of the groups of senior secondary scheduled caste school students based on gender and districts. The means, standard Deviations and t-values for groups based on gender and districts were given below in table number 1 and 2 respectively.

Table 1: Means, Standard Deviation and t-value calculated on the problem solving ability scores in respect of Boys and Girls Senior Secondary Scheduled Caste School Students.

Gender	N	Mean	SD	t- value
Boys	273	6.91	2.959	1.226NS
Girls	327	6.61	3.126	

It is evident from table number 1 above that the t-value for comparing the Problem Solving Ability of Senior Secondary Scheduled Caste School boys and girls came out to be 1.226 for df 598 which was not found significant at 0.05 level of confidence due to calculated 't' value did not reach up to table value significant at 0.05 level. The 't' value is > at 0.05 level. It means that the two groups of boys and girls did not differ significantly on their problem solving ability. It can be interpreted that the gender did not affect the problem solving ability of senior secondary scheduled caste school students.

Hence, the hypothesis stated at serial number 1 above that "There will be significant differences in the problem solving ability of Senior Secondary Scheduled Caste School Students in relation to their gender" is rejected.

Table 2: Means, Standard Deviation and t-value calculated on the problem solving ability scores in respect of Kullu and Mandi districts Senior Secondary Scheduled Caste School Students.

District	N	Mean	SD	t- value
Kullu	300	6.69	3.144	0.414NS
Mandi	300	6.80	2.963	

It can be inferred from table number 2 above that t-value for comparing problem solving ability of senior secondary scheduled caste school students of the two districts Kullu and Mandi came out to be 0.414 for df 598 which was not found significant at 0.05 level of confidence. The calculated t-value did not reach up to the level of significance at 0.05 since the table value of 't' is > at 0.05 level of the confidence. It can be intercepted that the senior secondary scheduled caste school students of Kullu and Mandi districts did not differ significantly on their problem solving ability. It means that the district they belong to did not affect the problem solving ability of senior secondary scheduled caste school students.

Hence, the hypothesis stated at serial number 2 above that "There will be significant differences in the problem solving ability of Senior Secondary Scheduled Caste School Students in relation to their district" is rejected.

DISCUSSION

Locality and gender do not influence the problem solving ability of these students. Kullu and Mandi districts of Himachal Pradesh have almost equal type of climatic condition and other natural settings etc. The condition of scheduled castes in these districts of Himachal Pradesh is pathetic one as they are badly lagging behind in almost in every spheres of life in general and especially in educational field in particular. With the active involvement of National and State Government by formulating policies and programmes on education, people have to start send their children to the schools in near by areas but it will take a lot of time to be at par with other students excel in the educational field due to lacking in confidence, poverty, over burden with working at home for survive and inferiority complex etc. What to talk about the problem solving ability even these students are found at the bottom in other academic and co-curricular activities also. There is still rigidity on the basis of the gender and living status of the people inhabited in these districts which has adverse effect on the study of the students. Hence, the Government should take more constructive efforts to formulate the policies and programmes on education which must be skill based and equity based. Teachers must impart their roles as philosophers, guides, friends and reflectors to bring the desirable change in the behaviour of the learners.

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