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Adolescent's Learning Style as Determinant of Problem Solving Ability

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ABSTRACT

The present study was an endeavor to explore the relationship between learning style and problem solving ability of the adolescents. The study was conducted over a sample of one hundred students of tenth standard. The mean score of the learning style of the adolescent boys was found to be 159.12 whereas the mean score of the problem solving ability was found to be 9.68, the product moment coefficient of correlation was determined between the scores of learning styles and problem solving ability scores and the value was found to be 0.14 for $df = 49$, which is not significant even at 0.05 level of significance. Similarly, the mean score of the learning style of the adolescent girls was found 163.21 whereas the mean score of the problem solving ability was found to be 5.48, the product moment coefficient of correlation was determined between the scores of learning styles and problem solving ability scores and the value was found to be 0.04 for $df = 49$, which is not significant even at 0.05 level of significance. Thus the study indicates that there exists no significant correlation between learning style and problem solving ability of the adolescents.

Keywords: Learning Style, Problem Solving Ability, Adolescent, Significant, Correlation, Scores.

INTRODUCTION

The concept of problem solving ability is as old as human civilization. The problem solving ability refers to the individual's capability to observe and analyze the causes of the problem at hand and to seek its solution. Problem solving is such a unique framework or pattern within which creative thinking and reasoning take place. The state of tension created by unsatisfied wants that drives the individual to exercise his efforts and to use his best language techniques such as observation, prediction, and inference to control the difficulties that hinder progress towards his goal of want satisfaction is problem solving. Problem solving is a situation for which the individual has no readymade solution and the state of tension is created in mind. He exercises his great effort and uses all the abilities, intelligence, thinking etc. to seek answer to the problem situations. Some individuals are able to solve problem sooner as compared to others, which indicates that there are different levels of problem solving ability-ranging from average ability to highest ability depending upon the difficulty level of the problem. Dubey (1971) found that the persons having higher intelligence and reasoning ability can solve the complex problems quickly.

The term learning style refers to the learning behavior of the student and it points to the fact that every student learns differently. Etymologically, the learning style of

individual is referred to the preferential ways of absorbing processing, comprehending and retaining of the information received. For example, when learning how to generate sound, some students understand the process of sound generation by following the verbal instructions, while others have to physically conduct activity themselves to understand the concept. The four types of learning styles most commonly referred are visual, auditory, reading/writing preference, and kinesthetic. Academic confidence increases depending upon as many as different types of learning styles used by students.

Advancement in socio-economic arena and development in the technological area, the life of the individual is becoming more and more complex with a number of problems which the individual and the society have to face in coming future. The responsibility of school becomes increasingly important to develop scientific attitudes in students so that they may solve their problems independently for better adjustment in the future complex society.

Udeani and Adeyemo (2011) concluded that good problem solving ability of the teacher can modify his teaching style so as to suit the learning styles of the students to increase the academic achievement in the subject of biology. Bhat (2014) found that learning styles affect the problem solving ability of the students studying at high school level. Bhat further reported that the most preferred style of learning followed by the students at this stage is assimilator, which indicates that students learn more through abstract conceptualization. Anboucarassy (2015) found positive relationship between problem-solving ability and learning styles of the adolescents. Thus the studies have confirmed that the learning styles of adolescents significantly influence their problem solving ability or success. Hence this study was an effort to explore the whether the relationship is consistent and sustainable or it is because of the chance factor.

RATIONALE OF THE STUDY

Problem solving is considered one of the cognitive activities used in daily life contexts. Problem solving ability is a challenging task now a day. The good problem solving skill is an advantage to the person as every person encounter problems in daily life. Some of these problems are obviously more severe or complex than others. Problem solving depends on how we take things. Every individual is unique in their ways of thinking, and learns in their own way as well. Learning is key process in forming the human behavior. It plays a central role in the language one speak, one's attitude and beliefs. Learning causes changes in behavior through experience direct or indirect. The results of the learning style researches and problem solving studies added to the interest and curiosity of the investigator to find out the relation between the problem solving and learning style of secondary school students.

Since, the adolescents at secondary stage intend to make career planning and career choices which in turn is linked to their problem solving ability as well as other personality factors. The choices of career are also linked to their academic success as an admission in a particular course is determined by academic achievement. The achievement and academic success depends to a great extent on the ways of learning

adopted by the student. Thus, the learning style is a contributing factor for academic achievement in addition to other conditions. Therefore, this study was planned to explore the relationship between learning style and problem solving ability of the adolescents for predicting the success and progress of the student in future life.

OBJECTIVES OF THE STUDY

1. To find out the relationship between learning style and problem solving ability of the boy students.
2. To find out the relationship between learning style and problem solving ability of the girl students.

HYPOTHESES OF THE STUDY

The following null hypotheses were tested in the study:

1. There exists no significant correlation between learning style and problem solving ability of the boy students.
2. There exists no significant correlation between learning style and problem solving ability of the girl students.

PROCEDURE OF THE STUDY

The present study was basically conducted to find the correlation between learning style and problem solving ability of the adolescents. The study was carried out by employing descriptive survey method of research. The study was delimited to only two variables viz. learning style and problem solving ability. The study was carried over a sample of 100 students of secondary classes of government schools in the city of Chandigarh only. The tools used for the present study were the learning style by Learning style inventory by K. S. Misra (2012) and the problem solving ability by L. N. Dubey (2008). The tools were administered as per the instructions given in the respective manuals after following proper procedure.

ANALYSIS AND INTERPRETATION OF THE RESULTS

The data so collected by employing the stipulated tools were analysed by using descriptive and inferential statistics. The results so obtained were interpreted according to the norms of the tools provided in respective manuals. The data concerning the learning style and problem solving ability of the secondary boys was analysed and the coefficient of correlation computed and is depicted in table 1 below.

Table 1: The Coefficient of Correlation between learning style and problem solving ability of the boys

Variable	Mean	N	df	Correlation value	Remarks
Problem solving ability	9.68	50	49	0.14	Not significant even at 0.05 level
Learning style	159.12				

(Critical values of r= 0.276 at 0.05 and 0.358 at 0.01 level, df= 49)

Table 1 shows that the calculated value of coefficient of correlation between problem solving ability and learning style learning style and problem solving ability of secondary school boys comes out to be 0.14 which is even less than the table value of .276 at 0.05 level of significance. Thus, there is no significant correlation between the learning style and problem solving ability of secondary school boys. So, the hypothesis, “There is no significant correlation between learning style and problem solving ability of secondary school boys” is retained.

The data concerning the learning style and problem solving ability of the girls was analysed and the coefficient of correlation was computed and is depicted in table 2 below.

Table 2: The Coefficient of Correlation between learning style and problem solving ability of the girls

Variable	Mean	N	df	Correlation value	Remarks
Problem solving ability	5.48	50	49	0.04	Not significant even at 0.05 level
Learning style	163.21				

(Critical values of $r = 0.276$ at 0.05 and 0.358 at 0.01 level, $df = 49$)

Table 2 reveal that the calculated coefficient of correlation between the learning style and problem solving ability of secondary school girls comes out to be 0.04 which is less than the table value of 0.276 at 0.05 level of significance. Thus, there is no significant correlation between the learning style and problem solving ability of secondary school girls. Hence the hypothesis of the study, “There is no significant correlation between the learning style and problem solving ability of secondary school girls” is retained. Hence, both the variables the learning style and problem solving ability are independent. So there is no relationship between learning style and problem solving ability of secondary school girls.

CONCLUSIONS

The analysis and interpretation of results of the study reveals that: i) there is no significant correlation between the learning style and problem solving ability of the boys, ii) there exists no significant correlation between the learning style and problem solving ability of the girls students. The results of the study contradict the findings of Bhat (2014) and Anboucarassy (2015). The study suggests that learning style have no significant bearing on the problem solving ability of the adolescents. This study also shows that the learning style and problem solving ability are two independent factors. Therefore the learning style and problem solving are individual traits and in no way they are linked to the group behavior.

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