



## Problem Solving Ability of Pre Service Teacher Trainees in Relation to Their Academic Achievement

### KEYWORDS

Problem solving ability, Academic achievement, Pre-service teacher trainees

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### ABSTRACT

The present investigation was carried out to find problem solving ability of pre service teacher trainees in relation to their academic achievement. 150 samples were used, survey method was adopted and data were analyzed by using 't' test and correlation. There is no significant difference in the mean scores of the problem solving ability of B.Ed students with respect to location. There is significant difference in the mean scores of Academic achievement of B.Ed students with respect to location. There is significant relationship between problem solving ability and academic achievement of B.Ed students.

### INTRODUCTION

There is a huge concern among the heads of the institutions teachers and parents that the academic achievement is deteriorating nowadays. Therefore discussing the ways and means through which academic achievement could be increased is the need of the hour. Few studies have been conducted to show the relationship between the academic achievement and other psychological variables. Yet knowing the correlative effect of problem solving ability and academic achievement becomes an important one.

### PROBLEM SOLVING ABILITY

The productive work involved in the Evaluation of the situation and the strategy worked out to reach one's set goals is collectively termed problem solving. The Concise Oxford Dictionary (1995) defines a problem as: "A doubtful or difficult matter requiring a solution" and "Something hard to understand or accomplish or deal with. In psychology, problem solving refers to a state of desire for reaching a definite 'goal' from a present condition that either is not directly moving toward the goal, is far from it, or needs more complex logic for finding a missing description of conditions or steps toward the goal. In psychology, problem solving is the concluding part of a larger process that also includes problem finding and problem shaping.

### NEED AND SIGNIFICANCE OF THE STUDY

Considered the most complex of all intellectual functions, problem solving has been defined as a higher-order cognitive process that requires the modulation and control of more routine or fundamental skills. Problem solving has two major domains: mathematical problem solving and personal problem solving where, in the second, some difficulty or barrier is encountered. Further problem solving occurs when moving from a given state to a desired goal state is needed for either living organisms or an artificial intelligence system. Therefore every teacher should teach his lesson in consonance with the problem solving ability of all kinds of students in the classroom. Hence the present study was undertaken to get a clear picture of problem solving ability and of pre teacher trainees on their academic achievement.

### OBJECTIVES OF THE STUDY

- To find out whether there is any significant difference in problem solving ability of B.Ed students based on locality

- To find out whether there is any significant difference in academic achievement of B.Ed students based on locality
- To find out the relationship between problem solving ability and academic achievement of B.Ed students.

### HYPOTHESES OF THE STUDY

- There is no significant difference in the mean scores of problem solving ability of B.Ed students with respect to urban and rural location.
- There is no significant difference in the mean scores of academic achievement of B.Ed students with respect to urban and rural location.
- There is no significant relationship between problem solving ability and academic achievement of B.Ed students.

### LIMITATIONS OF THE STUDY

The present study is delimited to:

- The B.Ed colleges of karur district.
- This study has been limited to 150 subjects.

### METHOD OF THE STUDY

Descriptive survey method was used in the present study.

### POPULATION

2000 B.Ed students are in karur Educational district

### SAMPLE

The sample consisted of 150 teacher trainees. Out of 150 teacher trainees ,75 from urban and 75 from rural were taken.

### TOOLS

The tools used for data collection were

- Problem solving ability by L.N.Dubey
- University examination scores of B.Ed students were taken as an index of Academic achievement.

### ANALYSIS OF DATA

The data was computerized and analyzed for two statistical techniques viz.'t' test, product movement correlation. The data is presented in the following table

**HYPOTHESES 1**

There is no significant difference in the mean scores of problem solving ability of B.Ed students with respect to urban and rural location.

**Table 1**  
Difference between the mean scores of problem solving ability of B.Ed students with respect to location.

Category	N	Mean	S.D	S.ED	Df	't' Value	Significance at 0.05
Urban	75	45.00	14.237	1.644	74	-1.020	NS
Rural	75	46.67	12.229	1.412			

From the above table the obtained t-value (-1.020) is lower than the table value (1.96) at 0.05 level of significance. Hence the null hypotheses "There is no significant difference between problem solving ability of B.Ed students with respect to urban and rural location" is accepted.

**HYPOTHESES 2**

There is no significant difference in the mean scores of academic achievement of B.Ed students with respect to urban and rural location.

**Table 2**  
Difference between the mean scores of academic achievement of B.Ed students with respect to location.

Category	N	Mean	S.D	S.ED	Df	't'Value	significance at 0.05
Urban	75	69.90	5.076	586	74	3.017	S
Rural	75	67.41	5.032	.589			

From the above table the obtained t-value (3.017) is higher than the table value (1.96) at 0.05 level of significance. Hence the null hypotheses "There is no significant difference between Academic achievement of B.Ed students with respect to urban and rural location" is rejected.

**HYPOTHESES 3**

There is no significant relationship between problem solving ability and academic achievement of B.Ed students.

**Table 3**  
Correlation between problem solving ability and academic achievement of B.Ed students

Category	N	Mean	SD	'r' value	significance at 0.01 level
Problem solving	150	45.83	13.253	.971	S
Academic achievement	150	68.74	45.178		

From the above table the obtained r-value (.971) is higher than the table value (0.1140) at 0.01 level of significance. Hence the null hypotheses "There is no significant relationship between problem solving ability and academic achievement of B.Ed students" is rejected.

**FINDINGS**

There is no significant difference in the mean scores of the problem solving ability of B.Ed students with respect to location.

There is significant difference in the mean scores of Academic achievement of B.Ed students with respect to location.

There is significant relationship between problem solving ability and academic achievement of B.Ed students.

**DISCUSSION**

Based on urban and rural students there is no significant difference in their problem solving ability. Since the problem solving ability is the higher order cognitive process it doesn't affect by the locality. Instead academic achievement able to find out the significant difference between urban and rural since it indicates the opportunity, e-resources and technology devices given to the students in order to improve their achievement through their parents and society. There is significant relationship between the mean scores of problem solving ability and academic achievement of B.Ed students. Since problem solving ability is the higher order cognitive process it promote academic achievement. Hence the study reveals that problem solving ability is one of the major psychological factors to promote higher academic achievement among B.Ed students.

**RECOMMENDATION**

If there were no barriers in the way of achieving a goal, then there would be no problem. Problem solving involves overcoming the barrier that prevents the immediate achievement of goals. Hence in order to achieve in high our institutions should provide mandatory training to the students in order to promote problem solving ability

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