



A Study on Creativity and Problem Solving Ability Among Higher Secondary School Students

M.SURESH

Assistant Professor in History AKT Memorial college of Education
Neelemangalam, Kallakurichi, Villupuram-606202, Tamilnadu, India.

ABSTRACT

Creativity is universal. Every one of us possesses creativity to some degree. Although creativity abilities are natural endowments. Though creativity expression something new or moral is produced. Problem solving ability is a mental process which is the conducting part of the larger problem process that includes problem finding, shaping and reaching towards a final goal. A problem is any situation where you have an opportunity to make a difference to make things better Sharma-2006. There is a need to development of the same among school students who will become the future citizens of the country. This paper presents our attempt to study on creativity and problem solving ability among higher secondary school students in Attur taluk.

The results of the study indicate that the level of creativity and problem solving ability among higher secondary students is average. There is significant positive relationship between creativity and problem solving ability, there is no significant difference in the level of creativity between male and female higher secondary school students, and there is no significant difference in the level of problem solving ability between male and female higher secondary school students.

KEYWORDS

Higher secondary school students, creativity, problem solving ability, etc.

Introduction

Creativity is essentially a form of problem solving ability. But it is a special type of problem solving one that involves problems for which there are no easy answers, that is problems for which popular or conventional responses do not work. This should be developed among the children. Reasoning and creativity are purely mental process where as problem solving ability involves manual work also. Problem solving is the process of analyzing situations of uncertainty to produce actual improvements or changes in the situation.

Review of Literature

Jeevan Vasagar (2014) studied creativity in relation to some selected variables. The samples were randomly selected from higher secondary schools. He found that the type of schools, grade levels, and age have a relationship with creativity. Educational qualification, level of occupation and income group of parents had a positive relationship. Figural creativity was related with verbal and emotional intelligence.

Beckwith(2013) described a program developed at city university of New York difficult concepts and principles in the first year biology and chemistry courses. Topics addressed include small group interaction, co-operative learning, mastery learning, interactive technology, and information access.

Significance of the Study

Significance has been considered to be very rare phenomenon blessed which divine inspiration that can be observed only in a few outstanding people. To face and overcome these we need creative minds. There are individual differences among mankind. Creativity is a function of knowledge, imagination and evaluation which comes in to play in different ways in different situation. It is thus a part of the expanding function of human nature. It sensitizes our problem deficiencies, gaps in knowledge, besides identifying difficulties, and finding solutions. Creative problem solving requires a searching, combining, synthetic mind. Experiments have shown that individuals trained to think creatively can do a much better performance, in producing new ideas, etc., From this point of view there is a need to lay more emphasis on identifying, preserving and nurturing creativity among the higher secondary school students so as to make them aware of the significance of development

of creativity among their children for the development of the our nation.

Objectives of the Study

- The following are the objectives of the present study.
- To identify the existing school level of creativity (both verbal and nonverbal) of higher secondary school students.
- To identify the existing levels of problem-solving ability of higher secondary school students.
- To find out, if any, the significant relationship between creativity and problem solving ability of higher secondary school students.
- To compare the level of creativity between male and female higher secondary school students.
- To compare the level of problem solving ability between male and female higher secondary school students.

Hypotheses of the Study

- Based on the objectives, the following hypotheses have been framed.
- The level of creativity among higher secondary school students is not high.
- The level of problem solving ability among higher secondary school students is not high.
- There is no significant relationship between creativity and problem solving ability of higher secondary school students.
- There is no significant difference in the level of creativity between male and female higher secondary school students.
- There is no significant difference in the level of problem solving ability between male and female higher secondary school students.

Research Methodology

The present study uses survey of research. The methodological details like sample, tool, and procedure of data collection, scoring procedure and statistical techniques are given below.

Sample

The sample of present study consists of 160 higher secondary school students studying in the government and private school students of attur taluk(Salem District Tamilnadu) in the

academic year 2014-2015. To draw the sample simple random sampling technique.

Tool Used

In order to collect information on the variables considered in the study, the following two tools were used. 1. Verbal and non verbal test of creative thinking developed by Baquer Mehdp(1073) 2. Problem solving ability test developed by L.N. Dubey.

Data Collection

In order to assess the level of creativity and problem Solving ability of the higher secondary school students the tools were distributed to them and administered faithfully in strict accordance with the direction provided in the problem solving ability for testing procedure.

Statistical Techniques Used

In order to analyse and interpret data percentage simple arithmetic Mean product- moment correlation and 't'test were used.

Analysis and Interpretation of Data

For analysis and interpretation of data, the relevant input and analytical finding and inference derived have been presented in different tables and their discussion provided after the each.

Table – 1
Percentage of level of creativity among total sample

Creativity level	Number of Students	Percentage
Low	24	10
Moderate	96	66.25
High	40	23.75
Total	160	100

According to the data obtained and presented in table 1 it is labeled that among the total of 160 higher secondary school students 16(10% of the sample) belong to the low creativity group: 106(66.25%) have average level of creativity and the remaining 38 (23.75%) belong to high creativity group. Since the majority of the students belong to average level of the creativity, we accept the hypothesis-1, that level of creativity among higher secondary school students in not high but average.

Table – 2
Percentage of level of problem solving ability among total sampling

Problem solving Ability	Number HSC School Students	percentage
Low	24	15
Moderate	96	60
High	40	25
Total	160	100

From the table- 2 it is observed that 24 (15% of total sample) belong to low problem solving group: 96(60%) have average level of problem solving skill and 40 (25%) belong to high problem solving ability group. Since the majority of the students belong to average level of problem solving ability we accept the hypothesis -2 that the level of problem- solving ability among higher secondary school students in not high but average.

Table – 3
Relationship between creativity and problem solving ability of higher secondary school students

Variable	Df	'r'	Significant Level(0.05)
Creativity	158	0.741	Significant
Problem Solving Ability			

From table-3 it is observed that there is a significant relationship between creativity and problem solving ability at 0.05 level of significance. Hence the hypothesis -3 that there is no significant relationship between creativity and problem solving ability of higher secondary school students is rejected.

Table – 4
Mean SD and 't' Value for creativity

Groups	Number	Mean	SD	't' value	Significant Level
Male	80	319	42.44	1.205	N.S
Female	80	320.25	58.33		

Table : 4 shows that the mean scores of male and female are 319 and 320.25 with standard deviation of 42.44 and 58.33 respectively. The obtained t- value is 1.205 is less that the theoretical't' value 1.96 at 0.05 level of significance. Hence the hypothesis-4 that there is no significant difference in the level of creativity between male and female higher secondary school students is accepted.

Table – 5
Mean,SD and 't' Value for problem solving ability

Groups	Number	Mean	SD	't' value	Significant Level(0.05)
Male	80	49.33	10.48	1.905	N.S
Female	80	53.91	13.39		

Table-5 shows that the mean scores of male and female are 49.33 and 53.91 with standard deviation of 10.48 and 13.39 respectively. The obtained t -value is 1.905 is less that the theoretical t- value 1.96 at 0.05 level of significance. Hence the hypothesis -5 that there is no significant difference in the level of problem solving ability between male and female higher secondary school students is accepted.

Findings of the study

- The level of creativity among the higher secondary school students is average.
- The level of problem –solving ability among the higher secondary school students is average.
- There is significant positive relationship between creativity and problem solving ability.
- There is no significant difference in the level of creativity between male and female higher secondary school students.
- There is no significant difference in the level of problem- their solving ability between male and female higher secondary school students.

Education implication of the study

The present study denotes the importance of creativity and problem solving ability among the students. These both play an important role in their field of education and in their future too. Therefore it is to be improved among the students. The

following are some of the major recommendations to improve the creativity and problem solving ability among higher secondary school students.

First of all awareness is to be brought about creativity and problem solving ability among the higher secondary school students by the Administrators.

The teachers too have a great responsible in creative and problem solving ability.

Parents should motivate and encourage their children in developing such creativity and problem solving ability

Programmers should be conducted in such a manner in order to give more importance to creative skills and problem solving ability too.

Curriculum should be constructed in such a way which gives importance only for the syllabus, but also for improvement of creativity and problem solving ability.

These are the major points to be considered in the harmonious development of creative and problem solving ability.

REFERENCES

1. Anderson, Harold, H. Editor (1990) "Creativity and its cultivation, New York, Harper and Brothers. | 2. Alien, Denise, (1995), Creativity problem solving, Teaching Prek-8; v25 n4 p1 8-25. | 3. Sharma R.C (2006), "Modern science Teaching", Dhanpat Rai Publishing co., 140-146. | 4. Bruner J.S, (1957) "Going Beyond the information given", New York: Norton. | 5. Danilson, Mary Ann, Mitchell, Nancy (1995), Creative problem solving Gifted child Today (GCT); V1 5 n6p52-53. |