MATHEMATICAL CREATIVITY IN RELATION TO SOCIO-ECONOMIC STATUS OF SECONDARY SCHOOL STUDENTS

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ABSTRACT

The present paper focuses on, to know the mathematical creativity in relation to Socio–Economic-Status of X Standard students. The results show that there is no significant relationship between Socio-Economic-Status and Mathematical creativity among X standard students and there is no significant difference in the Mathematical creativity between X standard students belonging to low and moderate groups of socio-economic-status. There is no significant difference in the mathematical creativity between X standard students belonging to low and high groups of mathematical creativity.

KEYWORDS: Mathematical creativity, Socio-Economic- status, Adolescents.

INTRODUCTION

Mathematics has become a fundamental element of present life and an indispensable instrument in most of the disciplines especially in the field of science and technology. The subject is taught as a collection of disjoint branches and as isolated bits of information without giving any thought to the basic structure of mathematics. It is not providing basic foundation for conceptual understanding of the subject. The twenty-first century, this is going to be an era of science and technology. Therefore it is necessary to prepare the child for this era of technology with a strong base of mathematics education for entry into 21st century.

Mathematics should be visualized as the vehicle to train a child to think, reason, analyze and to articulate logically. Apart from being a specific subject involving analysis and reasoning with the recent introduction of computers in schools, the teaching of mathematics will be suitably redesigned to bring it in line with technological devices – NPE (1986). Mathematics has a played a predominant role not only in the advancement of civilization in general but also in the development of physical science, and has now wider applications in other branches as well. Mathematics has been an inseparable part of school curriculum ever since the beginning of formal education and it continues to be so. The mathematics curriculum has undergone various changes from time to time in accordance with changing needs of the society.

Teaching of mathematics has been a changing to the teachers since the origin of human race. Mathematics is a self contained mental discipline, with its own language and structure. Besides being an independent subject of study, it has its applications in other branches of knowledge. It is a mental tool for the training and exercise of intellectual functions. Due to its unique role in solving everyday problems it has occupied a significant position in the school curriculum. Necessity of teaching more mathematics and better mathematics has emerged from the advancement of this subject itself and its applications in other disciplines. Mathematics is a sequenced discipline, in the sense that it is slightly different from other subjects. It has its own language and symbolism. Unlike some of the other subjects learning of any new topics in mathematics depends on some previous related knowledge. To learn and perform in mathematics a perfect understanding of the underlying principals is essential. Since quantitative treatment including measurement, analysis and reasoning are beginning increasingly involved in many other subjects and relevance of mathematics should be seen not only as a specific subject area but also as a concomitant to other concerned subject areas. The application of mathematical abilities in day today life situations cannot be ignored.

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OBJECTIVE OF THE STUDY

To study the mathematical creativity of X standard students in relation to their different levels of socio-economic-status.

HYPOTHESES OF THE STUDY

1. There is no significant difference in the Mathematical Creativity between X standard students belonging to Low and Moderate groups of Socio-Economic-Status.
2. There is no significant difference in the Mathematical creativity between X standard students belonging to low and high groups of Socio-Economic-Status.
3. There is no significant difference in the Mathematical creativity between X standard students belonging to moderate and high groups of Socio Economics Status.

METHODOLOGY

Sampling procedure:

Among X standard students in English medium schools, 500 students were selected from different schools of Mandya District. The Researcher Used the stratified random sampling technique to draw the sample. The basis for the stratification was

1. Type of Institutions (Private and Government)
2. Gender (Boys and Girls)

TOOLS OF RESEARCH

1. Mathematical creativity test
2. Socio- Economics –Status scale

STATISTICAL TECHNIQUES USED

Pearson product moment co-efficient of correlation® and t-test

ANALYSIS AND INTERPRETATION OF DATA

There is no significant difference in the Mathematical Creativity between X standard students belonging to Low and Moderate groups of Socio-Economic-Status.

Table –1
Number, Mean, SD and t-value of Mathematical creativity Scores of X standard students belonging to Low and Moderate groups of Socio-Economic-Status

Socio-Economic - Status	Number	Mean	SD	t-value	Level of Significance
Low	133	24.44	13.51	1.36	Not significant
Moderate	250	26.64	15.79		

The obtained t-value of 1.36 is found to be not significant at 0.05 level of significance. Therefore, the null hypothesis is accepted. This means that there is no significant difference in the Mathematical creativity between X standard students belonging to Low and Moderate groups of Socio-Economic - Status.

There is no significant difference in the Mathematical creativity between X standard students belonging to low and high groups of Socio-Economic-Status.

Table – 2
Number, Mean, SD and t-value of Mathematical creativity Scores of X standard students belonging to Low and High groups of Socio-Economic Status

Socio-Economic Status	Number	Mean	SD	t-value	Level of Significance
Low	133	24.44	13.51	2.74**	0.01
High	132	29.25	14.98		

The obtained t-value of 2.74 is found to be significant at 0.01 level of significance. Therefore, the null hypothesis is rejected. This means that there is a significant difference in the Mathematical creativity between X standard students belonging to Low and High groups of Socio-Economic-Status.

The mean difference of 4.81 is found to be in favour of X standard students belonging to high Socio-Economic-Status group, thereby indicating that the X standard students belonging to high Socio-Economic-Status group show better Mathematical creativity than the students belonging to low group of Socio-Economic Status.

There is no significant difference in the Mathematical creativity between X standard students belonging to moderate and high groups of Socio Economics Status.

Table – 3
Number, Mean, SD and t-value of Mathematical creativity Scores of X standard students belonging to Moderate and High groups of Socio-Economic Status

Socio-Economic Status	Number	Mean	SD	t-value	Level of Significance
Moderate	250	26.64	15.79	1.56	Not Significant
High	132	29.25	14.98		

The obtained t-value of 1.56 is found to be not significant at 0.05 level of significance. Therefore, the null hypothesis is accepted. This means that there is no significant difference in the Mathematical creativity between X standard students belonging to Moderate and High groups of Socio-Economic-Status.

FINDINGS OF THE STUDY

There is no significant difference in the Mathematical Creativity between X standard students belonging to Low and Moderate groups of Socio-Economic-Status.

There is no significant difference in the Mathematical creativity between X standard students belonging to low and high groups of Socio-Economic-Status.

There is no significant difference in the Mathematical creativity between X standard students belonging to moderate and high groups of Socio- Economics -Status.

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