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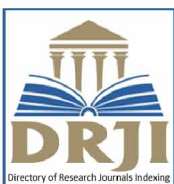
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MATHEMATICAL CREATIVITY IN RELATION TO MATHEMATICAL APTITUDE OF SECONDARY SCHOOL STUDENTS

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Abstract

The present paper focuses on, to know the mathematical creativity in relation to mathematical aptitude of IXth standard students. The result shows that there is no significant relationship between Mathematical aptitude and Mathematical Creativity among IX standard students and there is no significant difference in the Mathematical creativity between IX standard students belonging to low and moderate groups of Mathematical aptitude. There is no significant difference in the Mathematical creativity between IX standard students belonging to low and high groups of Mathematical aptitude.

INTRODUCTION

It is unfortunate that many people are not aware of the important of mathematics and mathematical sciences. Even a large number of students and teachers also overlook its significance, in the development of society. The number of people, who suffer from 'mathphobia' and believe that mathematics is not their cup of tea, is large. There is, therefore, a sufficient need for the 'popularization' of mathematics and spreading 'mathematical culture' and 'mathematical temper' in every society. Its need is indeed much greater in the developing countries which are struggling hard to improve the quality of life. The recently held Binational Conference on Mathematics Education (1989) and research has in its report "Mathematics in India; meeting the challenge" (published by UGC, New Delhi), recommended a course on history, culture, excitement and relevance of mathematics for undergraduate mathematics students, in view of the fact that many students do not cultivate the necessary appreciation of mathematics, and such a course may go a long way towards correcting this major defect. It has urged the mathematical community to think seriously in this direction.

Through the present world is more mathematically inclined, the student in school feel it as more abstract. The teaching of mathematics is a challenge to teachers with the diversification of the subject itself and its wide utility in all developmental programs of mankind. These show not only the importance of learning mathematics and also the need for revolutionizing the teaching of mathematics in schools. Though the teachers can teach this subject with the help of modern educational technology and more advanced effective methods of teaching, there is poor performance of students in the subject. Hence there must an internal psychological factors like creativity, aptitude, attitude, interest and also social factors like gender, types of schools etc., affecting the learner in learning the subject mathematics.

The main objective of mathematics education research is to be of help in improvement of classroom learning. It is, therefore, natural that a large number of research studies should be concerned with different aspects of this problem. This improvement can be brought about through studying the characteristics of effective teachers of mathematics, through the use of computers, computer assisted instruction and programmed learning through analysis of errors committed by the students and development of efficient remedial packages to reduce the same; through improving the attitudes of students towards mathematics, through developing a more positive attitude towards homework in mathematics of both students and teachers; through understanding the styles of learning of high achievers; through study of cognitive factors underlying the learning of mathematics on the personality and temperamental characteristics of the student; through the use of audio-visual aids, enrichment materials and number games; through the study of socio-economic status and environmental factors like father's and mother's education and profession, types of schools etc., on learning of mathematics through development of special teaching materials for mathematics for special groups; through development of packages of divergent type problems and skills in problem solving, and through comparison of different social and psychological factors on the learning of mathematics.

OBJECTIVE OF THE STUDY

To study the Mathematical creativity of students of IX standard in relation to their different levels of mathematical aptitude.

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HYPOTHESES OF THE STUDY

1. There is no significant relationship between Mathematical aptitude and Mathematical Creativity among IX standard students.
2. There is no significant difference in the Mathematical creativity between IX standard students belonging to low and moderate groups of Mathematical aptitude.
3. There is no significant difference in the Mathematical creativity between IX standard students belonging to low and high groups of Mathematical aptitude.

METHODOLOGY

Sampling Procedure:

Among IX standard students studying in English and Kannada medium schools, 200 students were selected from different schools of Bangalore City. 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)

Variables of the Study: Dependent variable-Mathematical Creativity and Independent variables selected-Mathematical Aptitude

Tools of Research:

1. Mathematical Creativity Test.
2. Mathematical Aptitude scale

Statistical Techniques Used:

Pearson's product moment co-efficient of correlation(r) and t-test.

ANALYSIS AND INTERPRETATION OF THE DATA

There is no significant relationship between Mathematical aptitude and Mathematical Creativity among IX standard students.

Table 1. Number, Mean, SD, df and Co-efficient of Correlation Value between Mathematical Aptitude and Mathematical Creativity

Variables	N	df	r-value	Level of Significance
Mathematical Aptitude	200	198	0.309**	0.01
Mathematical Creativity				

It is observed from the above table that a positive relationship is found between Mathematical aptitude and Mathematical creativity. It is positively low correlation. The value is tested for its significance using r . The r -value 0.309 is found to be significant at 0.01 level of confidence. Therefore the null hypothesis is rejected. Hence, it is inferred that there is a significant relationship between Mathematical aptitude and Mathematical creativity among IX standard students.

There is no significant difference in the Mathematical creativity between IXth standard students belonging to low and moderate groups of Mathematical aptitude.

Table 2. Number, Mean, SD and t-value of Mathematical Creativity Scores of IXth Standard Students belonging to Low and Moderate Groups of Mathematical Aptitude

Mathematical Aptitude	Number	Mean	SD	t-value	Sign.
Low	62	13.43	4.70	0.74	NS
Moderate	98	13.98	4.45		



The obtained t-value 0.74 is found to be not significant at NS level of significance. Therefore, the null hypothesis is accepted. This means that there is no significant difference in the Mathematical creativity between IX standard students belonging to Low and Moderate groups of Mathematical aptitude.

There is no significant difference in the Mathematical creativity between IX standard students belonging to low and high groups of Mathematical aptitude.

Table 3. Number, Mean, SD and t-value of Mathematical Creativity Scores of IXth Standard Students belonging to Low and High Groups of Mathematical Aptitude

Mathematical Aptitude	Number	Mean	SD	t-value	Sign.
Low	62	13.43	4.70	3.43**	0.01
High	40	16.93	5.31		

The obtained t-value of 3.43 is found to be significant at 0.01 level of significance. Therefore, the null hypothesis is rejected. This means that there is significant difference in the Mathematical creativity between IX standard students belonging to Low and High groups of Mathematical aptitude. The mean difference of 3.5 is found to be in favour of IX standard students belonging to high Mathematical aptitude group, thereby indicating that the IX standard students belonging to high Mathematical aptitude group show better Mathematical creativity than the students belonging to low group of Mathematical aptitude.

FINDINGS OF THE STUDY

There is a significant relationship between Mathematical aptitude and Mathematical Creativity among IX standard students.

There is no significant difference in the Mathematical creativity between IX standard students belonging to low and moderate groups of Mathematical aptitude.

There is a significant difference in the Mathematical creativity between IX standard students belonging to low and high groups of Mathematical aptitude.

REFERENCES

- M.B., Buch. (Ed) (1997). Fifth survey of research in education NCERT, New Delhi.
- Bhoodev, Singh. (1988). Teaching learning strategies and Mathematical creativity. Hittal Publications, New Delhi.
- Deshmuckh, M.N. (1984). Creativity in Classrooms; S.Chand and Co, New Delhi.
- Gakhar, S.C. (1991). Educational environmental Variables at determinant of attitude of School students towards Modern Mathematics, Journal of India Education. Vol. 16(5).
- Gakhar, S.C. (1995). Intelligences, creativity and achievement in mathematics a regenesis of analysis. Journal of the institute of educational research.
- Grallo, R. M. (1989). A study on profiles of aptitude and achievement in low-achieving 7th grade mathematics students, Dissertation Abstracts International, Volume 49 (8).
- Hengkietisak, Sane. (1990). A study gender difference in mathematics ability. A metaanalysis of aptitude and achievement test scores, Dissertation Abstracts International, Volume 51 (2).
- Khatoon, F. (1997). the relation of mathematical aptitude among boys and girls with interest and vocational performances, Fifth survey of educational research, volume 1.
- Mulkraj, Tuli. (1985). Mathematical creativity as related to aptitude for achievement an and attitude towards mathematics. Indian Educational research, volume 17(3) Jan – Dce.
- Pandey, M.M. (1980). Mathematical aptitude in relation to intelligence and academic achievement among the rural and urban secondary school students of Bihar.
- Tuli, M.R. (1980). Mathematical creativity related to aptitude for achievement in and attitude mathematics III rd survey of research in education Baroda.

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