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A STUDY OF FEAR AND USE OF APPLICATIONS OF MATHEMATICAL KNOWLEDGE FOR SECONDARY STUDENTS

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Short Profile

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ABSTRACT:
The present study aims to find out fear and use of applications of mathematical knowledge in daily life. The sample consists 200 secondary students selected randomly from rural secondary schools of Agra District of U.P. A questionnaire was developed for the collect the data. For the analysis and interpretation of the data, both descriptive and inferential modes of treatments were adopted. t-test was applied for testing the significance of Hypotheses. The results revealed that, there is no significance difference in fear and use Applications of mathematical knowledge of students. Both male and female secondary students have mathematical fear. They did not used more applications of mathematical knowledge in daily life.

KEYWORDS
Mathematical Knowledge , Applications , Education commission .

INTRODUCTION :

The Indian Education Commission (1964 – 66) recommended Mathematics as a compulsory subject for students at school level. The commission seemed to have been influenced by international opinion at that particular time and favoured 'new mathematics' which later pervaded secondary education. That was the era of sets, and the algebra of sets.

The science of 'mathematics education' is still in its infancy. In any curriculum, content and presentation of content are the most important and inseparable components. The application of learning theories in content presentation is of very recent origin. Research evidence is inadequate to say anything definite about which method is going to be the most effective for presentation of a particular type of content. The commission points out that, 'in the teaching of mathematics emphasis should be more on the mechanical teaching of mathematical computations'. Commenting on the then prevailing situation in schools. It observed that 'In the average school today instruction still conforms to a mechanical routine, continues to be dominated by the old besetting evil of verbalism and therefore remains as dull uninspiring as before'.

- The National Policy on Education (1986) has also considered the importance of Mathematics in general education and suggests that 'mathematics should be visualized as the vehicle to train a child to think, reason, analyze and to articulate logically. A part from being a specific subject, it should be treated concomitant to any subject involving analysis and reasoning'. In the recent past there have been tremendous developments in theories of learning and the science of teaching. Though athematics occupies a place of importance, the researches have been scanty.

Sound knowledge of Mathematics develops decision making power; rational and analytical thinking, reasoning, and competence to solve problems, positive attitudes and aesthetic sense. While according to Ravindra,Director of NCERT (2000) there is a huge gap between prescription and practice of a mathematical curriculum. Most of the time classrooms of mathematics are preoccupied with routine teaching and not much time is devoted to learning of mathematics. Hardly a student asks questions in a mathematics classroom, implying that the learning rarely takes place in the classroom. So at the result, It can be seen among students that they are failed to answer very easy questions .For example, what would be number after 1\2? What would be multiplication of two digits decimal numbers? It indicates that basic mathematical concepts may not be clear or they may be under mathematical phobia. Besides its, conditions of secondary schools of rural area is very poor. In these situations, the study is much needed. The results of the study will introduced about the real situation about mathematics subject. Have adolescent mathematical fear or not? Are they used application of mathematical knowledge in daily life?

OBJECTIVES:

- To study fear of mathematics for secondary students.
- To study use of applications of Mathematical knowledge for secondary students in daily life

HYPOTHESES:

- There is no significance difference between fear of mathematics for secondary students in relation to

their gender.

•There is no significance difference between uses of applications of mathematical knowledge for secondary students in daily life in relation to their gender.

Methodology:

Descriptive survey research method was used to investigate the problem.

Sample:

200 adolescent students across the 10 rural secondary schools from Agra Dist of Uttar Pradesh were selected by simple Random sampling technique.

Tool:

A questionnaire to measure fear and use applications of mathematical knowledge was developed for the collect the data.

Analysis of Data:

The quantitative data collected through the questionnaire was analyzed by using statistical techniques like Mean, Standard Deviation and t-test was applied for testing the significance of Hypotheses.

RESULT & DISCUSSION:

Hypotheses (Ho.1) significance difference between fear of mathematics for secondary students

Gender	N	Mean	SD	't' value
Male	100	4.94	25.90	0.056
Female	100	3.42	7.79	

It is clear that, the mean and SD value of Male and Female for secondary students is (4.94, 3.42) and (25.90, .7.79) respectively. The 't' value (.056) is insignificance at both level of significance. It shows that,both Male and Female for secondary students do not differ significantly in relation to fear of mathematical knowledge. Therefore, Null hypothesis no.1 is accepted. It can be concluded that,both male and female students have fear from mathematics.

Hypotheses (Ho.2). Significance difference between uses of applications of mathematical knowledge in daily life for secondary students.

Gender	N	Mean	SD	't' value
Male	100	3.98	19.45	0.041
Female	100	5.32	25.78	

It is clear that, the mean and SD value of Male and Female for secondary students is (3.98, 5.32) and (19.45, 25.78) respectively. The 't' value (.041) is insignificance at both level of significance. It shows that, both Male and Female for secondary students do not differ significantly in relation to use of application of mathematical knowledge in daily life. Therefore, Null hypothesis no.2 is also accepted. It can be concluded that, both male and female students did not use more applications of mathematical knowledge in daily.

It is clear from the results of the study that student's exhibit fear and no more use of application of mathematical knowledge. So before given mathematics to students as a subject, teachers should checked interest and attitude in mathematics by group discussion or criterion referenced test. Attitude' as an important correlates of mathematical achievement. Research studies (Haritharan, 1992; Srinivasan,1999; Sumangala,1995; Wangu, and Thomas1995) 'reported students have a more positive attitude towards homework in mathematics than others and that students with this positive attitude towards homework have better academic achievements in mathematics and advocated that, every mathematics teacher should assign such homework in mathematics as can develops a positive attitude towards it'. So positive attitude can remove fear from students. The teachers should use to teach applications of mathematical knowledge in daily life by teaching method of learning by doing and problem based learning. During the teaching, The teacher should noticed about gaps in knowledge of concepts, difficulties in understanding of mathematical language, lack of openness and flexibility in teaching, difficulty in mathematics of verbal problems and interpretation of mathematical results, the abstract nature of mathematical and clear presentation of the subject based on the needs of the children besides it, Appointment of competent with commitment and effective teacher in mathematics is first requirement of all in schools. Only efficient teaching of mathematics by the teacher can develop ability in students and encourage them to apply mathematical Knowledge in daily life .Hence, finding of the study is very useful in improving mathematics of students. Teachers of these schools can utilize results of the study in making their mathematics teaching with joy to students.

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