MATHEMATICAL INTEREST OF SECONDARY SCHOOL STUDENTS IN RELATION TO THEIR DEMOGRAPHIC VARIABLES

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ABSTRACT

Mathematics is the most beautiful and most powerful creation of the human spirit. To speak freely, I am convinced that mathematics is a more powerful instrument of knowledge than any other. The present study was conducted to remove the stereotype from the society that males and the students living in urban areas are excellent in mathematics. The sample of the study comprised of 200 secondary school students i.e. 100 males and 100 females. Mathematical Interest Inventory (MII) developed by LN Dubey was used to assess the interest of students. The result showed that there was no influence of gender on the mathematical interest of students. Also, there was no significant difference of locality in the interest of students.

Keywords : Mathematics, Mathematical Interest, Demographical Variables

INTRODUCTION

Mathematics is a hypothetical approach to define reality on which the development of all the civilizations depends. There is no science, no art, and no profession where mathematics does not play a key role. That is why, mathematics is one of the compulsory subjects at secondary level. Mathematics is used by an individual in everyday life. In science, mathematics is an essential tool for nearly all scientific studies. Scientists use it in designing, experiments, analyzing data, expressing precisely their findings by mathematical formulae and making physical science as astronomy, chemistry, and physics relay heavily on mathematics. Social science, economics, psychology and sociology also depends greatly on statistics and several other branches of mathematics. Economists use computers to create mathematical models of the economic systems. Mathematicians use mathematical theory, computational techniques, algorithms and the latest computer technology to solve economic, scientific, engineering, physics and business problems.

The locality has an effect on mathematical interest of the students. The students living in urban and rural areas have different areas of interest. Student from urban locality have a higher mathematical interest than students from rural background. This is a stereotype in Indian society that mathematics is a subject of male dominance. It is always assumed that males are very bright in mathematics and girls are not that much good in mathematics. It is supposed that rational mind of boys is much more developed than girls. Although, there is no significant difference between the mathematical ability of girls and boys. This means that segregating the students on the basis of gender is wrong. Mathematics is a subject that is necessary in all fields. Without mathematics, all the research in any subject is meaningless. For testing of any hypotheses mathematics is important which leads to the formation of the theory.

OBJECTIVES

1. To study the mathematical interest of secondary school students in relation to their gender (i.e. male and female)
2. To study the mathematical interest of secondary female school students in relation to their locality (i.e. urban and rural)
3. To study the mathematical interest of secondary male school students in relation to their locality (i.e. urban or rural)

HYPOTHESES

1. There is no significant difference between mathematical interest and gender of the students.

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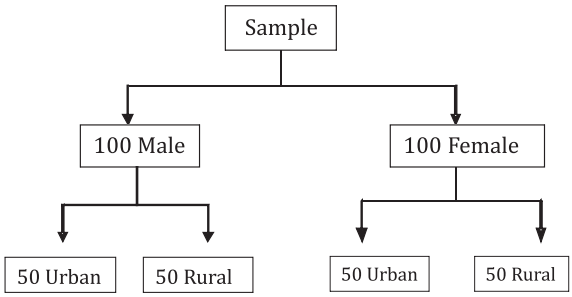
2. There is no significant difference between mathematical interest and locality of the female students.
3. There is no significant difference between mathematical interest and locality of the male students.

METHOD

Descriptive survey method of research was used.

SAMPLE



TOOLS USED

Mathematical Interest Inventory (MII) By L.N. Dubey

DATA COLLECTION

The present study is based on primary data. The data was collected from the sample using the above mentioned tool. Before collecting the data, support was established with teachers. The teachers were told the purpose of administration of the tool. The important instruction related to tests were given clearly to the respondents. The respondents were told that their response will be kept in secret so they can answer without any hesitation. The test and questionnaire were distributed individually to the sample. After collecting the filled questionnaire, the scoring was done as per instruction for scoring of each test.

STATISTICAL TECHNIQUES USED

1. Mean 2. Standard Deviation
3. 't' test

RESULT AND DISCUSSION

Table 1: The table given below shows the difference between Mean, S.D., 't' Test aspect of mathematical interest of students (100 boys and 100 Girls)

Boys		Girls		σ_D	't' value	Level of
Mean	S.D.	Mean	S.D.			Significance
20.7	4.08	20	3.46	0.75	0.93	N.S

The researcher discussed the result of mathematical interest and gender of secondary school students and found that there is no significant difference between Mean and S.D. of boys and girls. All the students have equal mathematical interest. So, we can say that there is no significant difference between mathematical interest on the basis of gender of secondary school students.

Table 2: The given table showing the difference between the mean, S.D., 't' test aspect of mathematical interest of secondary school Boys in relation to their locality (50 urban Boys and 50 rural Boys).

Urban Boys		Rural Boys		σ_D	't' value	Level of
Mean	S.D.	Mean	S.D.			Significance
21.5	3.90	19.9	4.10	0.8	2	N.S

The researcher discussed all the inventory of mathematical interest and locality of secondary school boys and found that there is no significant difference between Mean and S.D. of urban boys and rural boys. All the students have equal mathematical interest. So, we can say that there is no significant difference between mathematical interest on the basis of locality of secondary school boys.

Table 3: The given table showing the difference between the mean, S.D., 't' test aspect of mathematical interest of secondary school Girls in relation to their locality (50 urban Girls and 50 rural Girls).

Urban Girls		Rural Girls		σ_D	't' value	Level of
Mean	S.D.	Mean	S.D.			Significance
20.7	3.49	19.3	3.17	0.6	2.3	N.S.

The researcher discussed all the inventory of mathematical interest and locality of secondary school Boys and found that there is no significant difference between Mean and S.D. of urban Girls and rural Girls. All the students have equal mathematical interest. So, we can say that there is no significant difference between mathematical interest and locality of secondary school Girls.

MAIN FINDINGS

1. There was no significant difference between the mathematical interest and gender of the students. The 't' value is 0.93 which is not significant at level of 0.01 and 0.05. So, we can say that both boys and Girls are equally bright in mathematics. Both, boys and girls have equal interest in mathematics.
2. There was no significant difference between the mathematical ability of Urban and Rural Area. The 't' value 2 is not significant at level of 0.01 & 0.05. So, we can say that both urban boys and Rural boys are equally bright in mathematics.
3. There was no significant difference between the mathematical ability of Urban and Rural Area. The 't' value 2.3 is not significant at level of 0.01 & 0.05. So, we can say that both urban girls and Rural girls are equally bright in mathematics.

CONCLUSION

At the end of the study, it can be concluded Girls are no less than boys in any work. There is a stereotype in our society that boys are far better in mathematics than boys. But, from the present study, it is clear that Girls are equal in mathematical ability. And, sometimes Girls are even much better than boys. Also, the pupils living in rural areas are doing very well in mathematics. They can equally explore in every field and can attain success.

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