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A Study of Achievement in Mathematics of Ix Class Students With Annual Income and Size of The Family

Education

KEYWORDS : Achievement, mathematics, annual income, size of the family and IX class students.

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ABSTRACT

When a student acquires knowledge in some area, then his appraisal is necessary, acquired knowledge is pupil's achievement which verifies this achievement is called achievement test. This test informs us the limit up to knowledge. It also explores whether the pupils has gained masters in the subject or not. The main objective of the present study is to study the influence of annual income and size of the family on the achievement in mathematics of IX class students. Achievement in mathematics test developed by Naveen, P (2010) was adopted for the present study. A sample of 320 IX class students representing all categories of secondary schools in Chittoor District by following the standardized procedures. 'F' (ANOVA) test was employed for analysis of the data. There is significant influence of annual income at 0.05 level and size of the family at 0.01 level of significance on the achievement in mathematics of IX class students.

INTRODUCTION

Achievement may be defined as a change in the behavior of students in a desired direction. It is an important and essential constituent in the process of evolution. 'Achievement' means one's learning attainments proficiencies, accomplishments etc.

The vision of mathematics teaching and learning is not the reality in the majority of classrooms, schools, and districts. Today, many students are not having the opportunity to learn significant mathematics. In others, students lack commitment or are not engaged by existing curricula.

Mathematics is the most versatile of all the sciences. It is uniquely well placed to respond to the demands of a rapidly changing economic landscape…Mathematics now has the opportunity more than ever before to under-pin quantitative understanding of industrial strategy and processes across all sectors of business. Companies that take best advantage of this opportunity will gain a significant competitive advantage: mathematics truly gives industry the edge.

As the courses are lengthy to be covered, the study of value of the history of Mathematics in high schools has been postponed to post graduate level. Also pupils of high schools may not appreciate it. Hence no place has been provided for the introduction of the Study of the value of the History of Mathematics in the present Secondary School Curriculum

REVIEW OF LITERATURE

Manjuvani and **Mohan (2002), Srinivasan** and **Arivudayappam (2004), Krishna Reddy, D (2008), Naveen, P (2010), Padmini (2010), Siddi Raju (2010), Sujatha (2011), Ravi, S (2014)** and **Shaik Khadar Valli (2015)** reported that annual income of individuals do have significant difference on achievement. However, **Anice James** and **Marice (2004), Laxmidhar Behera** and **Sushant Kumar Roul (2004), Shahpur Nagappa** and **Panchalingappa (2004)** and **Sekhar, K (2012),** reported that annual income of individuals do not have significant difference on achievement.

Anice James and **Marice (2004), Dwivedi R.D (2005), Krishna Reddy, D (2008), Padmini (2010), Prabhu Swamy (2010), Siddi Raju (2010)** and **Sekhar, K (2012)** reported that size of the family of individuals do have significant difference on achievement. However, **Gakhar** and **Aseema (2004), Mehera (2004), Panchalingappa (2004), Naveen, P (2010)** and **Manpreet Kaur, Ram Niwas** and **Rai, V.K (2015)** reported that size of the family of individuals do not have significant difference on achievement.

Scope of the Study: The main intention of the present study is to find the relation of achievement in mathematics of IX class students with annual income and size of the family.

Objective of the Study: To study the impact of annual income and size of the family on the achievement in mathematics of IX class students.

Hypotheses of the study

There would be no significant impact of 'annual income' on the achievement in mathematics of IX class students.

There would be no significant impact of 'size of the family' on the achievement in mathematics of IX class students.

Tools for the Study

The achievement in mathematics test was adopted from **Naveen, P (2010).** The tool was highly reliable for the investigation. The total items are 100. For the purpose of scoring one mark is awarded for each correct answer and the total marks obtained by each student are marked on the right top corner of the sheet.

Personal data regarding the student – 1. Name, 2. Annual income, 3. Size of the family.

Data Collection

The sample for the investigation consisted of 320 IX class students in Chittoor district. The stratified random sampling was applied in three stages. The first stage is management i.e. Government and Private, second stage is locality i.e. rural and urban and third stage gender i.e. boys and girls. It is a 2X2X2 factorial design with 320 sample subjects. The investigator personally visited schools with the permission of the head masters of the schools. The IX class students who attended to the school on the day of collection of data are considered for the purpose of the investigation. It was provided to the concerned IX class students of the schools. The IX class students were given necessary instructions about the instruments and motivated to respond genuinely to all the items. The achievement in mathematics

test and personal data sheet were administered. The data on each variable in the investigation is properly coded to suit for computer analysis. The analysis was carried out on the basis of objectives of the investigation and hypotheses formulated by employing appropriate statistical techniques. The inferential statistical technique 'F' (ANOVA) test was employed to test hypotheses.

RESULTS AND DISCUSSION

1. Annual income

The relationship of achievement in mathematics of IX class students with their annual income is studied in the present investigation. On the basis of annual income, the students are divided into three groups. The annual income is up to rupees fifty thousand form the Group – I, Group – II forms with annual income is above rupees fifty thousand one to one lakh and Group – III forms with annual income is above rupees one lakh. The corresponding achievement in mathematics of IX class students of the three groups were analyzed accordingly. The mean values of achievement in mathematics of IX class students for the three groups were tested for significance by employing 'F' - test. The following hypothesis is framed.

Hypothesis – 1

There would be no significant impact of 'annual income' on the achievement in mathematics of IX class students.

The above hypothesis is tested by employing 'F' - test. The results are presented in **Table – 1.**

Table – 1: Influence of annual income on the achievement in mathematics of IX class students

S. No.	Annual income	N	Mean	S.D.	'F' - Test
1.	Group – I	125	43.18	10.92	
2.	Group – II	107	43.81	11.55	3.828*
3.	Group – III	88	47.31	10.97	

* **Indicates significant at 0.05 level**

It is found from the **Table – 1** that the computed value of 'F' (3.828) is greater than the critical value of 'F' (3.030) for 2 and 317 df at 0.05 level of significance. Hence the **Hypothesis – 1 is rejected** at 0.05 level. Therefore it is concluded that the annual income has significant influence on the achievement in mathematics of IX class students.

2. Size of the family

The relationship of achievement in mathematics of IX class students with their size of the family is studied in the present investigation. Size of the family means total members of the family. On the basis of size of the family, the students are divided into three groups. Group – I is formed with size of the family is three, Group – II formed with size of the family is four and Group – III is formed with size of the family is five and above. The corresponding achievement in mathematics of IX class students of the three groups were analyzed accordingly. The mean values of achievement in mathematics of IX class students for the three groups were tested for significance by employing 'F' - test. The following hypothesis is framed.

Hypothesis – 2

There would be no significant impact of 'size of the family' on the achievement in mathematics of IX class students.

The above hypothesis is tested by employing 'F' - test. The results are presented in **Table – 2.**

Table – 2: Influence of size of the family on the achievement in mathematics of IX class students

S. No.	Size of the family	N	Mean	S.D.	'F' – Test
1.	Group – I	100	44.32	12.21	
2.	Group – II	89	47.85	10.45	6.344**
3.	Group – III	131	42.43	10.53	

** **Indicates significant at 0.01 level**

It is found from the **Table – 2** that the computed value of 'F' (6.344) is greater than the critical value of 'F' (4.680) for 2 and 317 df at 0.01 level of significance. Hence the **Hypothesis – 2 is rejected** at 0.01 level. Therefore it is concluded that the size of the family has significant influence on the achievement in mathematics of IX class students.

Findings: There is significant influence of annual income at 0.05 level and size of the family at 0.01 level of significance on the achievement in mathematics of IX class students.

Conclusions: In the light of the findings, the following conclusions are drawn. Annual income and size of the family have significant influence on the achievement in mathematics of IX class students.

EDUCATIONAL IMPLICATIONS

The findings of the present research have raised some important questions related to the educational needs of the students with special reference to their achievement in mathematics of IX class students.

Annual income is the highly influenced in achievement in mathematics of IX class students. High annual income group students have better performance than the low income group students. The administrators to provide scholarship facilities for the low income group students.

Size of the family is highly influenced in achievement in mathematics of IX class students. Small family group students have better performance than the big family group students. The administrators to provide extra coaching facilities for the big family group students.

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