



AN ANALYTICAL STUDY OF ERRORS COMMITTED BY THE IX CLASS STUDENTS IN GEOMETRICAL CONCEPTS WITH MOTHER EDUCATION AND FATHER EDUCATION

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ABSTRACT Geometry thus began as the study of special properties of material bodies, properties having to do with the form, shape and size of things. Later the science of geometry was sought to be established on the basis of notation of points, line etc. The main objective of the present study is to study the influence of mother education and father education on the errors committed by the IX class students in geometrical concepts. Errors committed in geometrical concepts scale developed by Bala Guravaiah, G (2008) 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. 't' test was employed for analysis of the data. There is significant influence of mother education and father education at 0.01 level of significance on the errors committed by the IX class students in geometrical concepts. Illiterate mothers group students have less error committed by the IX class students in geometrical concepts than the literate mothers group students. The administrators have to provide educational facilities for mothers. Illiterate fathers group students have less error committed by the IX class students in geometrical concepts than the literate fathers group students. The administrators have to provide educational facilities for fathers.

KEYWORDS : Geometrical concepts, Mother education, Father education and IX class students.

INTRODUCTION:

The word geometry originally meant for measurement of earth. It is a Greek word goes meaning earth and matron meaning measure. Geometry was extremely important to ancient societies and was used for surveying, astronomy, navigation, and building geometry in actually known as Euclidean geometry which was written well over 2000 years ago in ancient Greece by Euclid, Pythagoras, Thales, Plato and Aristotle just to mention a few.

The most fascinating and accurate geometry text was written by Euclid and was called elements.

There are two types in geometry:

- (1) informal geometry and,
- (2) formal or demonstrative geometry.

In Egypt, the need for the study of geometry grew up due to annual Divesting Floods of the Nile. After the river Nile receded farms owned by farmers had to be earned again. Thus, interest in the study of shapes and size of geometrical figures grew.

Geometry thus began as the study of special properties of material bodies, properties having to do with the form, shape and size of things. Later the science of geometry was sought to be established on the basis of notation of points, line etc.

Geometry became an important part in mathematical curriculum. Geometry has a double value, first as knowledge and second as a method of logical thinking. Geometry is recognized on a study important for cultural development. It is the key to mathematical thinking. Geometry provides ideal field observing and exercising the process of deductive logic. Technical advances have placed an increasing importance on the geometry of form, size and position. No branch of mathematics perhaps appeals to the layman more than does geometry.

REVIEW OF LITERATURE:

Suresh Therani (2011):

investigated that locality management annual income and academic achievement have significant influence on the errors committed by the VIII class pupils in geometrical concepts.

Anjaneyulu Bolineni (2012):

found that gender management annual income father education caste and type of family have significant influence on the errors committed by the X class pupils in geometrical concepts.

Aruna Kumari Chatla (2013):

investigated that gender, mother education, management, annual income and academic achievement have significant influence on the errors committed by the IX class pupils in geometrical concepts.

Rajeswari, L (2014):

found that management, annual income and type of family have significant influence on the errors committed by the VIII class students in geometrical concepts.

Subba Raju, D (2015):

found that gender, mother education, management, annual income and residence have significant influence on the errors committed by the VIII class students in geometrical concepts.

Raja Kumar, B (2016):

investigated that mother education, age, father education, caste, academic achievement and type of family have significant influence on the errors committed by the IX class students in geometrical concepts.

Scope of the Study:

The main intention of the present study is to find the relation of errors committed by the IX class students in geometrical concepts with mother education and father education.

Objective of the Study:

To study the impact of mother education and father education on the errors committed by the IX class students in geometrical concepts.

Hypotheses of the study:

1. There would be no significant impact of 'mother education' on the errors committed by the IX class students in geometrical concepts.
2. There would be no significant impact of 'father education' on the errors committed by the IX class students in geometrical concepts.

Tools for the Study:

1. The Errors committed in geometrical concepts test developed by **Bala Guravaiah, G (2008)** was adopted for the present study. The tool was highly reliable for the investigation. The total items are 40. Each question carries one mark.
2. Personal data regarding the student – 1. Name, 2. Mother education, 3. Father education.

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 and second stage is locality i.e. rural and urban and third stage gender i.e. male and female. It is a 2X2X2 factorial design with 320 sample subjects. The investigator personally visited secondary 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 colleges. The IX class students were given necessary instructions about the instruments and motivated to respond genuinely to all the items. The Errors committed in

geometrical concepts 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 't' – test was employed to test hypotheses.

RESULTS AND DISCUSSION:

1. Mother education:

The relationship of errors committed by the IX class students in geometrical concepts with their mother education is studied in the present investigation. On the basis of mother education, the IX class students divided into two groups. The mother education is illiterate form with Group – I and Group – II forms with mother education is literate. The errors committed by the IX class students in geometrical concepts of the two groups were analyzed accordingly. The errors committed by the IX class students in geometrical concepts for the two groups were tested for significance by employing 't' - test. The following hypothesis is framed.

Hypothesis – 1

There would be no significant impact of 'mother education' on the errors committed by the IX class students in geometrical concepts.

The above hypothesis is tested by employing 't' - test. The results are presented in **Table – 1**.

Table – 1: Influence of mother education on the errors committed by the IX class students in geometrical concepts.

S. No.	Mother education	N	Mean	S.D.	't' - Test
1.	Illiterate	144	29.26	4.68	3.139**
2.	Literate	186	26.13	3.75	

**Indicates significant at 0.01 level

It is found from the **Table – 1** that the computed value of 't' (3.139) is greater than the critical value of 't' (2.58) for 1 and 318 df at 0.01 level of significance. Hence the **Hypothesis – 1** is rejected at 0.01 level. Therefore it is concluded that the mother education has significant influence on the errors committed by the IX class students in geometrical concepts.

2. Father education:

The relationship of errors committed by the IX class students in geometrical concepts with their father education is studied in the present investigation. On the basis of father education, the students are divided into two groups. The illiterate fathers group students form the Group – I and Group – II forms with literate fathers group students. The corresponding errors committed by the IX class students in geometrical concepts of the two groups were analyzed accordingly. The mean values of errors committed by the IX class students in geometrical concepts for the two groups were tested for significance by employing 't' - test. The following hypothesis is framed.

Hypothesis – 2

There would be no significant impact of 'father education' on the errors committed by the IX class students in geometrical concepts.

The above hypothesis is tested by employing 't' - test. The results are presented in **Table – 2**.

Table – 2: Influence of father education on the errors committed by the IX class students in geometrical concepts.

S. No.	Father education	N	Mean	S.D.	't' - Test
1.	Illiterate	153	29.14	4.83	2.942**
2.	Literate	167	26.97	3.26	

** Indicates significant at 0.01 level

It is found from the **Table – 2** that the computed value of 'F' (2.942) is greater than the critical value of 'F' (2.58) for 1 and 318 df at 0.01 level of significance. Hence the **Hypothesis – 2** is rejected at 0.01 level. Therefore it is concluded that the father education has significant influence on the errors committed by the IX class students in geometrical concepts.

Findings:

There is significant influence of mother education and father education at 0.01 level of significance on the errors committed by the IX class

students in geometrical concepts.

Conclusions:

In the light of the findings, the following conclusions are drawn. Mother education and father education have significant influence on the errors committed by the IX class students in geometrical concepts.

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 errors committed by the IX class students in geometrical concepts.

1. Mother education is highly influence on the errors committed by the IX class students in geometrical concepts. Illiterate mothers group students have less error committed by the IX class students in geometrical concepts than the literate mothers group students. The administrators have to provide educational facilities for mothers.
2. Father education is highly influence on the errors committed by the IX class students in geometrical concepts. Illiterate fathers group students have less error committed by the IX class students in geometrical concepts than the literate fathers group students. The administrators have to provide educational facilities for fathers.

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