A STUDY OF NUMERICAL ABILITY OF EIGHTH STANDRD STUDENTS

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ABSTRACT

Considering today's scenario, various school having different board and accordingly having different level of numeracy; the questions arises of which school will give better result? So, to answer such questions, researcher has decided to conduct the research which draws attention towards the numerical ability of boys and girls having different zone and for particular standard of eight students of Ahmedabad. 320 students of GSEB schools has selected through multi stage sampling method. Data has been collected by administered standardized tool the numerical ability test. Researcher found that numerical ability of boys and girls as well as urban and rural area students were similar. High achiever students' numerical ability found higher compare to low achiever students.

Key words: numerical ability

INTRODUCTION

Our nature is unique mysterious and mystifying. In contrast to animals, man is considered to be endowed with certain cognitive ability, which makes him a rational being. He can reason, discriminate and understand adjust and face a new situation more intelligently. Is definite that man is superior to animals in all aspects of behavior but all humans are not alike. Since man is

product of heredity and environment, the answer lies with either of these questions from the very beginning of the knowledge. These are wide difference among individual.

The research and theories of Thorndike, Kelly spearman, Thurston and other have made up increasingly aware that so called intelligence is not a unitary trait but it is composed of many abilities which are present in different individual in varying amount. This means that suppose two students have taken a single score test which is composed equally of verbal and numerical items one students answer few items correctly of verbal type and almost every numerical items correct and students pick up a very few point of numerical part but scores good in verbal items. As a result both students will be said to have same IQ but they are not same into abilities, this reveals the need of measurement of abilities.

The numerical ability test refers to skill is an individual have acquired in the basic arithmetic, computations of numbers, numerical critical reasoning, understanding the relationship of numbers, measurements, number sequence. Moreover the standard 8th students contribute a lot for basic applications to helpful for higher grades. Considering today's scenario various school having different board and accordingly having different level of numeracy the questions arises of which school will give better results? So, to answer such questions researcher has decided to conduct the research which draws attention towards the numerical ability of boys and girls having different zone i.e. urban and rural areas and for particular standard 8th students of Ahmedabad district.

OBJECTIVES

 The objectives of the research are as under.

(1) To study the effect of boys and girls on the numerical ability of standard 8th students of Ahmedabad.

(2) To study the effect of Urban and Rural areas on the numerical ability of standard 8th students of Ahmedabad.

(3) To study the effect of Low achievement and High achievement on the numerical ability of standard 8th students of Ahmedabad.

HYPOTHESIS

Hypothesis is a tentative statement about the salutation of the research.

Ho$_1$: There will be no significant difference between the mean scores of numerical ability of boys and girls of standard 8th students of Ahmedabad.

Ho$_2$: There will be no significant difference between the mean scores of numerical ability of standard 8th students belonging to Urban and Rural areas of Ahmedabad.

Ho$_3$: There will be no significant difference between the mean scores of numerical ability of High achiever and Low achiever students of standard 8th of Ahmedabad.

VARIABLES OF THE STUDY

The researcher has classified the variables of his research work as follows:

Gender : Classification of human beings into male and female means sex of gender.

The "males" are physically stronger , well built up shout. The "females" are dedicate, soft spoken, caring natured.

"Gender is a social dimension of being male or female gender identity is the sense of being male or female it has different from sexuality, sexual concern, physical and biological difference"

Area : The researcher has classified area of Ahmedabad district into two categories.

   (1) Urban   (2) Rural

Achievement : According to Good C.V. Achievement is,

"Academic achievement as the knowledge , attitude and skills developed in the school subjects, usually designed by the list scores or marks assigned"

High Achievers : In the present study , the higher achiever are those who obtain more then 70% in the previous class.

Low Achiever : In the present study, the lower achiever are those who obtain less than 60% in the previous class.

POPULATION AND SAMPLE

In this research, researcher has taken number of students 320 as a sample and students itself as population of standard 8th of GUJARAT SECONDORY EDUCATION BOARD schools of Ahmedabad.

DELIMITATION OF STUDY

The major limitations of the research were:

(1) The research is restricted to study of numerical ability of grade 8th students of Ahmedabad only.

(2) The research is restricted to the study of numerical ability of grade 8th students of English medium only.

(3) The research is restricted to the study of numerical ability of grade 8th students of English medium only.

(4) The research is limited to Gujarat board schools only.

TOOL OF STUDY

The test of level of numerical ability of students of standard 8th studying in GSEB schools of Ahmedabad district, the researcher has used the numerical ability test prepared by Dr. Kaushal Yadav.

As a researcher included GSEB schools so the researcher has decided to include or to use numerical ability test prepared by Dr. Kaushal Yadav because it is the tool available in English version of numerical ability standard test, moreover it has been standardized on the students of standard of 8th of Gujarat state.

Therefore the researcher has chosen this test which is valid and reliable for the resent study. The criterion related reliability of the rest was found with rest, retest method, logical reasoning method and split method respectively.

RESEARCH METHOD

In the present study, the researcher has researcher has adopted the survey method, collect the information regarding the information regarding the Numerical ability among standard 8th students in relation to Gender, Area and achievement.

DATA COLLECTION OF STUDY

In the present study the researcher used the numerical ability test prepared by Dr. Kaushal Yadav for the students of grade 8th of Gujarat State Education Board.

In the first step of administration, research collected the details of the schools from Ahmedabad district of Gujarat. After fixing the sample the researcher contracted the principal of the school and obtained their permission fro collecting the data by administering the numerical ability test before answering the question, clear and precise information were given to the subjects and their doubts were clarified. The research gave appealed for their willing co-operation and participation.

The students having percentage less than 60 % were considered as low achievers and students having percentage more than 70 % were considered as high achievers. By this way all the students of the samples of the samples were first categorized into the form of high achiever and low achievers. Then after, their respective numerical ability was done as per the requirement of this study.

ANALYSIS OF DATA

In order to analyze and interpret the data obtained by administering the students numerical ability. The following statically techniques are used with the help of computer aid.

(a) Mean

(b) Standard deviation and t-test

  The test of the significance of the difference between two mean is known as t-test. In the present study, researcher used t-value because there is comparison between two variables.

ANALYSIS AND INTERPRETATION

Ho_1: There will be no significant difference between the mean scores of numerical ability of numerical ability of the boys and girls of standard 8th students of Ahmedabad.

Table-1
Analysis of numerical ability of boys and girls

Variable	N	Mean	SD	t-value	Significant
Boys	160	30.30	4.917	1.69	NS
Girls	160	31.03	4.608		

From the above table-1, is is evident that t-value is 1.69, which is less than 1.96. so the hypothesis is not significant.

Hence, the hypothesis that there will be no significance different between the mean score of numerical ability of the boys and girls of standard 8th of Ahmedabad is not rejected at 0.05 level. It means there is ni significant difference numerical ability of boys and girls of standard 8th of Ahmedabad.

Ho_2: There will be no significant difference between the mean scores of numerical ability of numerical ability of the urban and rural area of standard 8th students of Ahmedabad.

Table-2
Analysis of numerical ability of urban and rural area students of Ahmedabad

Variable	N	Mean	SD	t-value	Significant
Urban	160	30.65	5.367	0.75	NS
Rural	160	30.28	4.269		

From the above table-2, is evident that t-value is 0.75, which is less than 1.96. so the hypothesis is not significant. Hence, the hypothesis that there will be no significance different between the mean score of numerical ability of the urban and rural area of standard 8th of Ahmedabad is not rejected at 0.05 level. It means there is not significant difference numerical ability of urban and rural area of standard 8th of Ahmedabad.

Ho$_3$: There will be no significant difference between the mean scores of numerical ability of numerical ability of the high achiever and low achiever of standard 8th students of Ahmedabad.

Table-3
Analysis of numerical ability of high achiever and low achiever students

Variable	N	Mean	SD	t-value	Significant
High achiever students	257	31.310	3.520	13.2	**S**
Low achiever students	63	23.603	4.917		

From the above table-3, is evident that t-value is 13.2 is more than 1.96. so the hypothesis is significant.

Hence, the hypothesis that there will be significance different between the mean score of numerical ability of the high achiever and low achiever students of standard 8th of Ahmedabad is rejected at 0.05 level. It means there is significant difference numerical ability of high achiever and low achiever students of standard 8th of Ahmedabad.

FINDINGS OF THE STUDY

Following were the findings of the research study:

- There is no significant difference between the numerical ability of boys and girls of standard 8th students of Ahmedabad. It means that the numerical ability of boys and girls are similar.

- There is no significant difference between the numerical ability of urban and rural area students of standard 8th of Ahmedabad. It means that the numerical ability of urban and rural area students are similar.

- There is significant difference between mean scores of numerical ability of higher achiever and lower achiever students of 8th standards of Ahmedabad. It means that scores

obtained over numerical ability are more of high achiever compare to that of low achiever students.

SUGGESTIONS OF THE STUDY

The following suggestions have been made by researcher the basis of interpretation and findings.

- Special program for low achiever students of grade 8th students studying in urban and rural schools should be conducted for the enhancement of numerical ability for the development and enhancement of level of numerical ability of low achiever students of grade 8th and proper guidance and other programmers keeping in mind the concept of textbook, education pattern, evaluation technique and teaching methodology should be conducted by teacher and principals.

- General program for the development of level of numerical ability of grade 8th students of urban and rural areas should be conducted. The level and (simple & effective) language of textbooks, the educational pattern of mathematics subjects, old teaching methodology , way of evaluation of papers as well as evaluation of students ability by teachers need to Buch, M.B. (1978-83). Forth survey of Research in Education Vol.-II. New Delhi: NCERT.

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  o Extra activity based programs like mathematics club, mathematics exhibition, fun activities etc. should be conducted in schools to give motivation to the high achiever students of grade 8th to enhance the level of numerical ability. By this they can score

more marks in academic session and this will help them to participate in various competitive exam.

o The level of numerical ability of students of grade 8th in urban and rural areas in same.

So, the similar program for low achievers students of grade 8th studying in urban and rural areas of Ahmedabad.

CONCLUSION

In this research, researcher focused on current status of numerical ability in standard eight students. This ability is very essential in mathematics and science subject. It is also useful for competitive exams related to higher education and jobs. Students must have good knowledge of numerical study. Teachers also try to develop this ability in students through different techniques and methods.

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