# Student's Perception on Various Content Difficult Areas In Mathematics With Respect To Variable 'Gender'

**Vikas Kumar Vishwakarma[1], Syed Shahnawaz Ali[2]**
[1, 2] Dept of Mathematics
[1, 2] SriSatyaSai University Of Technology &Medical Sciences,Sehore,M.P.India

**Abstract-** *Mathematical logic uses the standard mathematical methods, such as the axiomatic method, informal number theory, and symbolic notation while Philosophical logic on the other hand attempts to attack its object of interest, which we could broadly characterize as reasoning. Thus, apart from using the deductive method, we might consider linguistic aspects of logic, or logic. Analysis of the data related to the students perception on difficulty in learning Mathematics, attitude of the High school students towards learning Mathematics, In the present work The data was analysed using measures of central tendency and the measures of variability. The Hypotheses is tested using 't'test,.It was found that there is no significant difference between the overall perception of Boys and Girls towards various content difficult areas in mathematics. This indicates that as far as the student perception is concerned with regard to variable Gender there is no significant difference between the two groups.*

*Keywords*- Mathematical logic, Philosophical logic, 't' test, variable Gender

## I. INTRODUCTION

Logic is an ancient area of philosophy which, while extensively being studied in universities for centuries, not much happened from ancient times until the end of the 19th century. The development of logic in the first part of the 20th century since Frege, Russell and others[1] is a turning point both in logic as an area of philosophy and in mathematical logic. Later, in addition to its interest for mathematicians and philosophers' logic became a central applied field in computer science. The desire to secure a foundation for mathematics was brought on in large part by the British philosopher Bertrand Russell's discovery in 1901 that naive set theory contained a contradiction[2]

**Mathematical Logic**. This is a branch of mathematics that investigates the various fundamental mathematical structures emanating out of Foundations of Mathematics - for their own sake. There is no aim to address issues in Foundations of Mathematics. A subarea of Mathematical Logic is clarifying: there has been some reasonably successful attempts to apply these investigations to problems and contexts in mathematics, creating a useful mathematical tool[3]. The most common name for this is Applied Model Theory.

**Philosophical Logic**. This attempts to analyse and treat logical notions in their most rudimentary form, independently of how they are used in mathematics. Mathematics, like everything else, is something to be questioned, justified, criticized, etc. Foundations of Mathematics is between mathematics and philosophy, and has a different perspective than either of the two. Unlike the philosophy of science and the philosophy of mathematics, the philosophy of logic has yet to recognize the importance of building its understanding of the field upon the actual practice of its researchers. The aim of the present study is to provide some initial motivation for embracing a practice-based approach within the philosophy of logic, showing that those considerations that justified a practice-based turn within the philosophies of science and mathematics apply equally to the philosophy of logic.

## II. METHODOLOGY

Analysis of the data related to the students and teachers' perception on difficulty in learning Mathematics, attitude of High School students towards learning Mathematics, Content area difficulty levels by students.The data was analysed using measures of central tendency and the measures of variability. The Hypotheses is tested using 't' test,

**Details of the Sample**

The data was collected from 200 High School students from Niwari district Of Madhya Pradesh.

## Table 1.1 variable wise sample

| S. No. | Variable Name | Particular | Numbers | Total |
|---|---|---|---|---|
| 1 | Classes | IX class | 50 | 200 |
|  |  | X Class | 50 |  |
|  |  | XI Class | 50 |  |
|  |  | XII Class | 50 |  |
| 2 | Gender | Girls | 100 | 200 |
|  |  | Boys | 100 |  |
| 3 | School Management | Private | 100 | 200 |
|  |  | Government | 100 |  |
| 4 | Locality | Rural | 100 | 200 |
|  |  | Urban | 100 |  |

## Table 1.2 variable wise sample (Sex, School Management & Locality)

| S. No. | Variable Name | Particular | Numbers | Total |
|---|---|---|---|---|
| 1 | Sex | Girls | 100 | 200 |
|  |  | Boys | 100 |  |
| 2 | School Management | Private | 100 | 200 |
|  |  | Government | 100 |  |
| 3 | Locality | Rural | 100 | 200 |
|  |  | Urban | 100 |  |

## Table 1.3 't' test of student's perception on various Content difficult areas in Mathematics with respect to variable 'Gender'

| Perception of various content area | Gender | N | Mean | S.D. | t-Test | Sig |
|---|---|---|---|---|---|---|
| Number System | Urban | 200 | 83.74 | 12.8 | 1.45 | NS |
|  | Rural | 200 | 87.17 | 10.25 |  |  |
| Arithmetic | Urban | 200 | 81.73 | 14.75 | 1.98 | NS |
|  | Rural | 200 | 86.12 | 10.11 |  |  |
| Algebra | Urban | 200 | 81.17 | 10.01 | 1.91 | NS |
|  | Rural | 200 | 81.15 | 11.77 |  |  |
| Geometry | Urban | 200 | 85.18 | 10.34 | 1.02 | NS |
|  | Rural | 200 | 89.54 | 11.58 |  |  |
| Mensuration | Urban | 200 | 88.33 | 11.86 | 0.98 | NS |
|  | Rural | 200 | 87.26 | 11.33 |  |  |
| Statistics | Urban | 200 | 80.25 | 10.96 | 0.99 | NS |
|  | Rural | 200 | 72.99 | 12.24 |  |  |
| Overall Perception | Urban | 200 | 80.02 | 10.24 | 1.31 | NS |
|  | Rural | 200 | 81.35 | 11.11 |  |  |

## III. RESULT

NS: Not Significant ** Significant at 0.01 level 112 From table 1.3 it could be observed that the overall perception of Urban and Rural students towards difficulty in various content areas of mathematics is not significant. Even though the content areas Number System and Algebra are significantly differed, but it could not bring the table value significant in overall. This indicates that there is no significant difference in the perception of students towards variable "Locality" is Accepted.

## REFERENCES

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