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Research Article

Awareness Of Basic Concepts Of Mathematics Among B. Ed Student Teachers

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ABSTRACT

Ordinary knowledge is awareness of external facts; ordinary belief, conviction on inadequate grounds (Alfred R. Orage, 1998). This present study aims to find out the Awareness of basic concepts of mathematics in student Teachers of B.Ed colleges. Normative survey method is used in the present study. Sample consists of 132 college of education from the pedagogy of Mathematics student teachers, selected using convenient sampling technique in Villupuram district. Mathematics Awareness Questionnaire (MAQ) was developed by P.Sivagnana Sakthivel. The sample reliability is established by test re-test method by the researcher. The correlation co-efficient is found to be 0.87. Descriptive and differential Analysis were used for analyzing the data. The result shows the level of mathematics awareness of B.Ed student teachers is high.

Keywords: Awareness, Mathematics and Student-Teachers

Introduction

Mathematics is one of the most important subjects. Mathematics is a subject of numbers, shapes, data, measurements and also logical activities. It has a huge scope in every field of our life, such as medicine, engineering, finance, natural science, economics, etc. Math isn't only an important subject in schools but it's essential for many of your daily tasks. You are likely to use it in every day life to perform real-life skills, like grocery shopping, cooking and tracking of your finances. It gives us a way to understand patterns, to quantify relationships, and to predict the future. Mathematics helps us understand the world and reciprocally we use the world to understand math. The world is interconnected. Everyday math shows these connections and possibilities.
So, Awareness can be defined as, what is manifest in all forms of perception, in all forms of knowing. Awareness is qualified by different objects. Awareness is a state of elementary or undifferentiated consciousness.

Review of Related Literature

Oben Kanbolat (2023) conducted a study on the experiences of pre-service mathematics teachers' on skill-based problem solving-oriented lesson study. In the study, 31 pre-service mathematics teachers first received a comprehensive training on teaching problem solving in mathematics for six weeks. During the lesson study process, they experienced within the scope of the research, pre-service teachers shared their knowledge and experiences about the problem solving process and teaching with one other, as well as activities such as collaborative work in groups, designing and implementing teaching materials such as lesson plans and worksheets. According to the results obtained in the study, it was seen that the activities in the problem solving-oriented learning environments of the pre-service teachers varied. In addition, it was seen that the pre-service teachers had the opportunity to experience the steps of the problem solving process and the instructions they could use in these steps on the students, through the research lesson and then make the necessary rearrangements through evaluation meetings.

Maura (2018) highlighted the degree of awareness that teachers show about: (1) the distinction between what the institutions proposes as a mathematical object. (2) the different aspects of a semiotic representation that the students are able to handle the representation. (3) the semiotic conflicts generated by the contents of

semiotic representations that are similar to each other in some respect and the results clearly show the need for a review of professional teacher training programs, as regards to the role the semiotic handling plays in the cognitive construction of the mathematical objects and the learning assessment.

Objectives of the Study

- To identify the level of awareness of basic concepts of mathematics of B.Ed student teachers
- To find out the level of awareness of basic concepts of mathematics of B.Ed student teachers with respect to gender and locality of students

Hypotheses of the Study

- The level of awareness of basic concepts of mathematics of B.Ed student teachers is high
- There is no significant difference between the mean scores of male and female student teachers in their mathematics awareness
- There is no significant difference between the mean scores of rural and urban student teachers in their mathematics awareness

Methodology

The researcher used the normative survey method for the present study.

Sample for the Study

The sample for the study consists of 132 student teachers from various colleges of Education in Villupuram district in Tamil Nadu. The sample is selected through convenient sampling technique.

Tool for the Study

Mathematics awareness questionnaire (45 items) developed by P.Sivagnana Sakthivel (2024) with help of the guide is used to identify the mathematics awareness of student teachers. The sample reliability was established by test re-test method, which shows a correlation co-efficient of 0.87.

Statistical Techniques

- Descriptive Analysis
- Differential Analysis

DATA ANALYSIS AND INTERPRETATION

DESCRIPTIVE ANALYSIS

Hypothesis – 1

The level of awareness of basic concepts of mathematics of B.Ed student teachers is high

TABLE – 1

Showing Mean and Standard Deviation of the student teachers in their mathematics awareness.

Variable	N	Mean	SD	Max. Score
Mathematics Awareness	132	33.40	5.53	45

From the table 1 it is found that mean of total mathematics student teachers is 33.40 and the standard deviation is 5.53. It is observed that an individual can score a maximum of 45. In comparison with the maximum score, it is found that the obtained mean score is 74.22% of the maximum score, which means the mathematics student teachers have high level of mathematics awareness.

DIFFERENTIAL ANALYSIS

Hypothesis – 2

There is no significant difference between the mean scores of male and female student teachers in their mathematics awareness.

TABLE - 2

Showing Mean and Standard Deviation of male and female mathematics student teachers in their mathematics awareness

Max. Score: 45

Group	N	Mean	SD	't' Value	p Value
Male	52	31.37	5.12	3.736	0.000
Female	80	34.54	5.45		

From the above table 2 the calculated 't' value is found to be 3.736 which is greater than table value 1.96 at 0.05 level of significance. Hence the null hypothesis is rejected. Therefore it is concluded that there is significant difference between the mean scores of male and female mathematics student teachers in their mathematics awareness.

Hypothesis – 3

There is no significant difference between the mean scores of rural and urban student teachers in their mathematics awareness.

TABLE - 3

Showing Mean and Standard Deviation of rural and urban mathematics student teachers in their mathematics awareness

Max. Score: 45

Group	N	Mean	SD	't' Value	p Value
Rural	99	31.61	5.37	7.211	0.000
Urban	33	37.40	3.42		

From the table 3 the computed 't' value is 7.211 which is greater than table value 1.96 at 0.05 level of significance. Hence the null hypothesis is rejected. Therefore it is concluded that there is significant difference between the mean scores of rural and urban mathematics student teachers in their mathematics awareness.

Findings of the Study

- The mean score of the mathematics student teachers have high level of mathematics awareness.
- It is inferred that there is significant difference between the mean scores of male and female mathematics student teachers in their mathematics awareness. Since, female student teachers are better than male student teachers.
- It is observed that there is significant difference between the mean scores of rural and mathematics student teachers in their mathematics awareness. Since, mathematics student teachers are more influence than rural mathematics student teachers.

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