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MINIMUM LEVELS OF LEARNING IN MATHEMATICS AT PRIMARY LEVEL

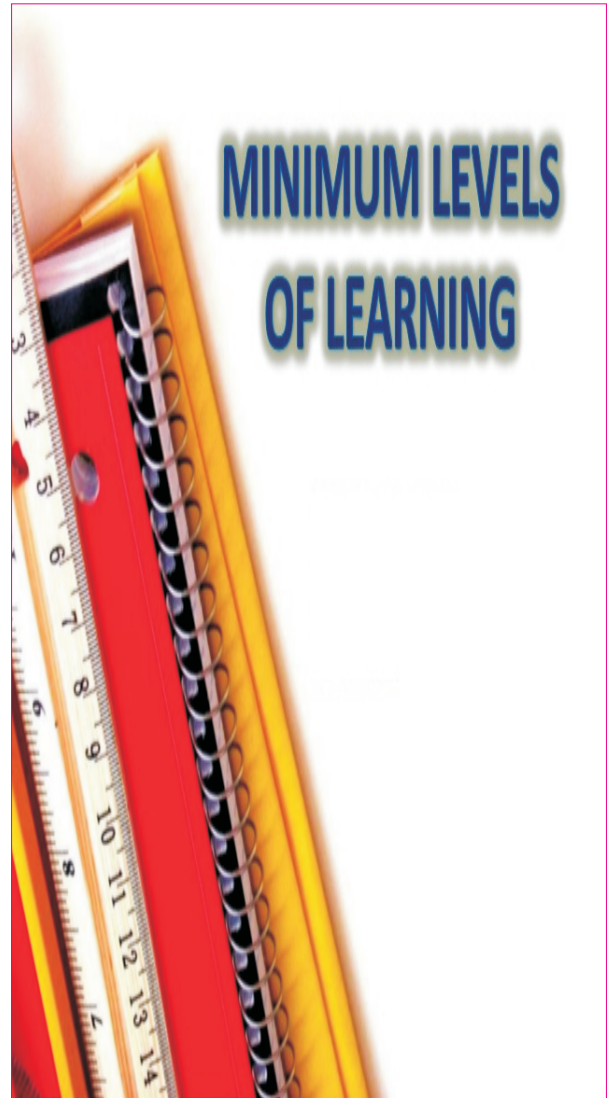
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ABSTRACT:

The Minimum Levels of Learning (MLL) laid down by MHRD for improving the quality of elementary education. It is an attempt to combine quality with equity. The purpose of this study was to assess the primary school students on the basis of MLL in Mathematics. Objective of this study-To know the gender wise achievement in Mathematics on the basis of MLL and to determine the content area wise competency among boys and girls. Descriptive method was used by the researcher to know the Minimum Levels of learning in Mathematics. A purposive sampling technique was used for the present study. A self-made achievement prepared by the researcher to know the Minimum Levels of Learning in Mathematics. T-test and Percentage analysis were used for the analysis of data. On the basis of results, it was concluded that the students have shown difference in achievement of MLL in Mathematics at Primary level.



Preeti Vijaya

KEYWORDS: Learning in Mathematics , Minimum Levels of Learning (MLL) , purposive sampling technique .

INTRODUCTION:

Education plays an integral part in the overall development of the personality .For the fulfillment of this basic need; the Govt. has come up with unique steps to make primary education compulsory for all. Primary Education is the basic and foremost right of every child. It brings awareness among the masses, open avenues for opportunities as well as self-advancement. It usually ends at 10 years as fifth grade. The major objectives of the primary school stage of education are to lay a strong foundation for literacy including basic literacy and numeracy. In fact it is the fundamental basic skills needed for learning at all stages and ages. So, primary education is essential for all. But there are some issues,

which are organic to the elementary education system are access, quality and equality. To provide access, quality and equality MHRD has laid down Minimum levels of learning. These are the learning outcomes, which should be achieved by the students who pass the primary stage of education.

For the betterment of primary level, MHRD has laid down MLL in three subjects namely Language, Mathematics and Environment studies. Primary mathematics help the children in develop understanding of key mathematical concepts at each level through appropriate experiences with things from the physical world and the immediate environment. It helps children in developing an understanding from concrete to the abstract, from the specific to the general. Main objectives of teaching mathematic at primary level is to make the children efficient in performing computations with speed and accuracy, estimate measurement, apply mathematical concepts and skills to solve simple problem of day-to-day life and think logically.

Different types of studies have been conducted on MLL in Mathematics such as:

- + Shah, P.A. (1992), "A critical evaluation of the mathematics syllabi introduced in the schools of Gujarat State for Grades I to IV."
- + Mullis, Ina VS (1997). "Mathematical achievement in the primary school years."
- + Abdulhalim, MD. (2007). "Mathematics at the Primary level in Bangladesh and India: the critical analysis and comparative view of curriculum contents."
- + S.Yiiksel (2008). "Mathematics anxiety among 4 and 5 Grade Turkish Elementary School Students."
- + Prakash, K and Sharma, Premlatha (2010), "Influence of Gender and Area on MLL attainment in Mathematics among V standard students."
- + Kelangang J. G.P (2012), "Mathematics difficulties among primary school students."

OBJECTIVES

The objectives of the study are to know the Minimum Levels of Learning in Mathematics with reference to:

- + Gender
- + Content areas

HYPOTHESIS

1. There is no significant difference in Minimum Levels of learning among boys and girls in Mathematics.
2. There is no significant difference in content area wise Minimum Levels of Learning in Mathematics among boys and girls.

TERMS DEFINED

(a) MLL (Minimum Levels of Learning)

Ministry of Human Resource Development has laid down the Minimum Levels of Learning .It can be stated in terms of learning competency expected to be mastered by every child by the end of a particular class or stage of education.

(b) Primary Level

In the present study primary level means students of V standard.

© Subject

In the present study the subject is Mathematics.

(d) Content areas

Mathematics includes following areas:

- + Understanding whole numbers and numerals
- + Ability to add, subtract, multiply and divide whole number
- + Ability to use and solve simple problems of daily life relating to units of money, length, mass (weight), capacity area and time
- + Ability to use fractions, decimals and percentage
- + Understanding of geometrical shapes and spatial relationship

METHOD OF THE STUDY

The method used by the researcher in this study is descriptive method.

POPULATION

The population under consideration in the present study is students of Delhi studying in Class V.

SAMPLE

The researcher selected 12 schools i.e. four school each of Govt., Private and Kendriya Vidyalaya.Thirty students from each school were selected through purposive sampling technique.

VARIABLES

In the present study, variables are:

Independent variable- Gender and content areas

Dependent variable-Minimum Levels of learning

NATURE OF DATA

Data is quantitative in nature,

SOURCES OF DATA

The source of data is primary in the study.

TOOL

Researcher employed self-made achievement test in Mathematics.

STATISTICS USED

The researcher used quantitative analysis namely: t-test and Percentage analysis.

ANALYSIS AND INTERPRETATION

1)There is no significant difference in the Minimum Levels of Learning among boys and girls in Mathematics

Table 1.1 Gender wise Minimum Levels of Learning in Mathematics

Gender	N	Mean	SD	SD Error Mean	T	Df	Level Of Significance
Boys	180	55.67	12.474	0.930	1.96	358	0.05
Girls	180	52.92	14.33	1.068			

Degree of freedom (df) = 358, Value of tat 0.05 level of significance = 1.96

Table 1.1 indicates gender wise Minimum Levels of Learning in Mathematics among boys and girls. The mean score and SD of boys in Mathematics are 52.92 and 14.33 respectively whereas the mean score and SD of the girls in Mathematics are 55.67 and 12.47 respectively. The tabulated “t” value for degree of freedom i.e. 358 at 0.05 level of significance is 1.96.The calculated “t” value among boys and girls is 1.96 which is not less than the tabulated value at 0.05 level of significance for degree of freedom 358 which clearly shows that there is significant difference among boys and girls in Mathematics. Thus, the hypothesis 1) i.e. “There are no significant difference in the Minimum Levels of Learning among boys and girls in Mathematics” is not accepted. Thus, we can say that achievements of Minimum Levels of Learning in Mathematics in Boys are greater than girls.

2) There is no significant difference in content area wise Minimum Levels of Learning in Mathematics among boys and girls

Table 1.2 Content area wise Minimum Levels of Learning in Mathematics among boys and girls

S. No.	Content Areas	Boys (in %)	Girls (in %)
1	Understanding whole numbers and numerals	81.08	83.11
2	Basic operations like add, subtract on whole numbers	77.74	83.38
3	Solve simple daily life problems like money	51.58	53.63
4	Solve simple daily life problems like length, area	70.63	71.74
5	Ability to use fractions, decimals & percentage	56.08	58.08
6	Geometrical shapes	61.83	72.39
Overall		66.13	69.63

Above table indicates that both boys and girls have scored highest score in retaining MLL in area 'understanding whole numbers and numerals' i.e. content area no. 1. Boys have shown above average performance in basic operations like add, subtract etc. whereas, girls have achieved highest score in this area. Students performed relatively well on items that required knowledge of one or two basic operations such as addition, subtraction, multiplication and division etc. However, the area that required the application of these operations, the items related to daily life problems received fewer score. Fractions, decimals and percentage were also difficult for both boys and girls. Test items pertaining to time, mass received the average percentage performance. A total of 66.13 % boys and 69.63% girls were able to score in mathematics. Subsequently, we can say that there is significant difference in retaining MLL in Mathematics among boys and girls. Thus, the hypothesis i.e. "There is no significant difference in content area wise Minimum Levels of Learning in Mathematics among boys and girls" is not accepted. Overall, it can be said that girls have performed slightly well than boys in achievement of area wise Minimum Levels of Learning in Mathematics.

SUMMARY OF RESEARCH FINDINGS

- + There is significant difference in the Minimum levels of Learning among boys and girls in mathematics.
- + Girls have performed better in retaining Minimum levels of learning in mathematics as compared to boys.
- + There is significant difference in content area wise Minimum Levels of Learning in Mathematics among boys and girls.
- + Both boys and girls have performed better in achieving MLL in areas related to 'understanding whole numbers and numerals and basic operations on them.'
- + Boys have shown above average performance in attaining MLL in area related to basic operations like add, subtract etc. but girls have performed best in this content area.
- + Both boys and girls have shown poor performance in retaining MLL in area related to 'solve simple daily life problems like money and ability to use fractions, decimals and percentage.'

EDUCATIONAL IMPLICATIONS

Educational Implications of the above study can be classified according to the five major branches of Primary Education System.

- + For teachers
 - + This study will help teachers in the selection of the proper method of teaching according to the MLL.
 - + This study will help them in evaluating students in their exams according to the Minimum Levels of Learning.
- + For school administration
 - + This study will help schools in deciding admission criteria for those students who are seeking admissions in secondary level on the basis of Minimum levels of learning.
 - + This study will give innovative ideas based on MLL to school such as organizing workshops, seminars on learning by doing or activity based teaching.

- ✦ For students
- ✦ This study will help in designing a perfect place where students acquire maximum knowledge and skill.

- ✦ For curriculum frame workers and text bureau
- ✦ The present study will help curriculum planners in framing such curriculum, which will be according to the age and level of children.
- ✦ This study will also help in setting such a structure so that each and every student get competencies in Minimum Levels of Learning.

- ✦ For parents
- ✦ This study will help parents in understanding the levels of their children and help them in creating awareness among parents regarding the importance of primary education

DELIMITATIONS

1. Research work limited to Delhi only.
2. Research work limited to Kendriya Vidyalaya, Private school and Government school.
3. Research work conducted on students of class V only. T
4. Research work limited to content areas of mathematics.

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