EFFECT OF TEACHING VEDIC MATHEMATICS ON STUDENTS' ACHIEVEMENT.

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Introduction

The main goal of mathematics education in schools is to develop the child's thinking. Clarity of thought and pursuing assumptions to logical conclusions is central to the mathematical enterprise. Mathematics is the mother of all sciences. Mathematics is an important part of life, without which everything in life falls apart. From beggar to businessman, cobbler to construction engineer, student to scientist, Astrologers to astronauts literally everyone would be using mathematics in some way or the other. Mathematics is full of magic and mysteries. The ancient Indians were able to understand these mysteries and develop simple keys to solve these mysteries. Thousands of years ago the Indians used these techniques in different fields like construction of temples, astrology, medicine, science etc., due to which India emerged as the richest country in the world.

Vedic Mathematics

The Indians called the system of calculations as "THE VEDIC MATHEMATICS". Vedic Mathematics is much simpler and easy to understand than conventional Mathematics. Using Vedic Mathematics we could calculate the problems in single step, and some of the problems faster than a calculator and of course, much faster than conventional methods of calculations. This makes mathematics an easy task. This also creates an interest in the students. Vedic Mathematics is a magical method of fast calculation. It is a new and unique system based on simple rules and principles which enable mathematical problem of all kinds to be solved easily and efficiently. Experts suggest that it could be a handy tool for those who need to solve mathematical problems faster. Though Indians know little about it, Vedic mathematics is being taught today in several institutions in Britain, the US, Australia and Holland.

Origin of Vedic Mathematics

The astonishing system of calculation, which was originally born in the Vedic Age and was deciphered during the start of the 20th century, is what we know as Vedic Mathematics. According to popular beliefs, Vedic Mathematics is the ancient system of Mathematics which was rediscovered from the Vedas between 1911 and 1918 by Sri Bharati Krsna Tirthaji (1884-1960), a scholar of Sanskrit, Mathematics, History and Philosophy. He studied these ancient texts for years, and after careful investigation was able to reconstruct a series of mathematical formulae called sutras. According to him, all Mathematics is based on sixteen Sutras or word-formulas.

Advantages of Vedic Mathematics

- Vedic mathematics reduces the burden of remembering large amount of stuff because it requires you to learn tables up to 9 only.
- It enables faster calculation when compared to the conventional method. Thus, the time that gets saved in the process can be used to answer more questions.
- Vedic mathematics plays an important role in increasing concentration as well as improving confidence.
- Vedic math's system also gives us a set of checking procedures for independent cross checking of whatever we do.
- More and more use of Vedic mathematics can without any doubts generate interest in a subject that is generally dreaded by children.
- We are living in the age of competitions. Vedic mathematics methods come to us as a boon for all competitions.
- It helps a person to solve mathematical problems 10-15 times faster.
- It is a magical tool to reduce scratch work and finger counting and improve mental calculation.

Objectives of the Study:

- To study the effectiveness of Teaching through Vedic Mathematics and Conventional methods in relation to achievement of students.
- To compare the means scores of achievement of the two groups of students to be taught through Vedic Mathematics and conventional method of teaching before the experimental treatment

- To compare the means scores on the achievement of the two groups of students to be taught through Vedic Mathematics and conventional method of teaching after the experimental treatment.

Hypothesis:

- There is no significant difference in the mean scores of experimental group & control group on pre-test.
- There is no significant difference in the mean scores of the experimental group & the control group on post-test.

Sample:

Random sampling technique was used for the selection of the sample. 130 students of two different school students were divided into two groups (Experimental group and Control group). The number of students in each group was 65.

Tool used:

Achievement test was used as a tool for the study. Same question paper was considered for the controlled group & experimental group.

Statistical techniques used: Mean Standard deviation and t-test.

Analysis & Interpretation of Data:

Hypothesis 1:

There is no significant difference in the mean scores of experimental group & control group on pre-test.

Table-1

Group	N	Mean	S.D	t-value
Experimental Group	65	12.86	5.51	**0.97**
Control Group	65	12.89	5.43	

The hypothesis is accepted by the researcher on the basis of the above table and t-value is 0.97 at 0.05 level of significance. The t-value is less than the critical value. It indicates that, there is no significant difference in the mean scores of experimental group & control group on pre-test.

Hypothesis 2:

There is no significant difference in the mean scores of the experimental group & the control group on post-test.

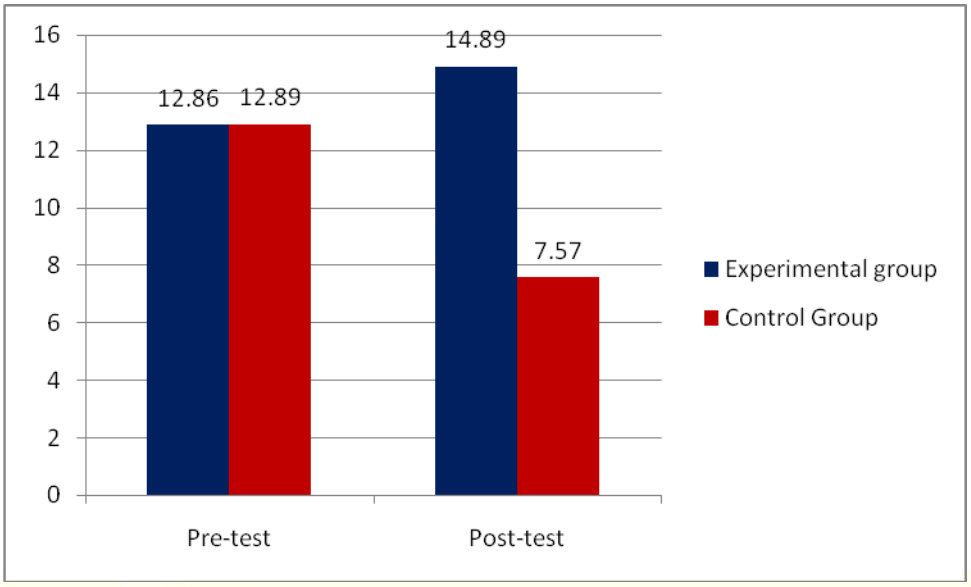
Table-2

Group	N	Mean	S.D	t-test
Experimental Group	65	14.89	5.19	**9.04**
Control Group	65	7.57	3.98	

The hypothesis is rejected by the researcher on the basis of the above table and t-value is 9.04 at 0.05 level of significance. The t-value is greater than the critical value. It indicates that, there is a significant difference in the mean scores of experimental group & control group on post-test.

Graph-1

Comparison of Pre-test & Post-test Scores of Experimental & Control group



Conclusions:

Above mentioned results indicated that students of experimental group who were taught by Vedic Mathematics method showed comparatively better results than that of students of control group who were taught with traditional method. So achievement level of students in the experimental group was better than that of students of control group in the subject of mathematics. On the whole, it was found that Vedic Mathematics learning groups performed significantly better than the group taught by traditional method of teaching. So we can conclude that teaching through Vedic Mathematics is beneficial for the students in improving their achievement in Mathematics. It enables faster calculation when compared to the conventional method. Thus, the time that gets saved in the process can be used to answer more questions. Vedic Mathematics saves time during examination.

Educational Implications

- Better student-teacher understandings and relationships, better adaptation of teaching-learning, greater satisfaction of student with his learning etc. can be maintained.
- Vedic Mathematics emphasis on meaningful learning than mechanical learning.
- Finding answers through Vedic mathematics may help to reduce the students' anxiety level.

- Teachers should encourage students to use their leisure time profitably by engaging in activities such as reading books related to Vedic Mathematics, collecting puzzles, solving problems and other such activities.
- Teachers must appreciate the successful activities of their children.
- Students can be motivated to learn mathematics interestingly, if the Vedic system of mathematics will be included into our curriculum.

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