

ENHANCING MODERN EDUCATIONAL PRACTICES THROUGH VEDIC MATHEMATICS INTEGRATION

Dr. Shubhangi Harihar Patil

(Associate Professor)

Priyadarshini College of Education,

Post Graduate department of Education

Nagpur

Email Id -shubhangipatil1975@gmail.com

Mob. No. – 9067811349

Abstract :

It is promotes integration, computing skills and problem solving abilities. It discusses the possible integration of Vedic mathematics into the educational curriculum. Vedic mathematics is widely used by researchers and scientists to become computer literate and proficient in it. For this it is necessary to organize various programs at different places to enhance Vedic mathematical skills. It is necessary to develop such a Vedic Mathematical program at the specialty school level so that the majority of students can benefit from it right from the primary level. It develops creativity and intelligence in students. Students' abstract thinking is stimulated. It shows the results of number-based formulas in Vedic mathematics. They have potential applications in algorithmic optimization. It is Introduce Vedic mathematics as an ancient problem solving method. This research paper attempts to solve the mathematical problems that are included in the mathematics curriculum today, based on Vedic mathematics in the contemporary research and development process.

Key Words : Vedic Mathematics, Research and Development, Scientific Innovation, Algorithmic Optimization, Computational Efficiency.

Conclusion :

- 1) Vedic Mathematics Contemporary research and development drives computational efficiency and creates scientific innovation.
- 2) Even today its importance has increased a lot. To learn mathematical techniques in today's modern age, following the Vedic mathematical method is tenfold beneficial.

Introduction:

Vedic math is a simple and quick way to solve the problem. Its inventor is Jagadguru Shri. Bharti Krishna Tirthaji. It consists of 16 sutras and 13 sub-sutras. After mastering it, the person solves the math based on Vedic mathematical formulas ten times faster. Creativity, intelligence, abstract thinking power, memory and imagination are enhanced in a person who has studied Vedic mathematical techniques.

Modern mathematics solves problems by integrating Vedic mathematics into contemporary research and development processes. It is Emphasizes the ability to increase computational efficiency and algorithmic optimization. Chinese mathematical techniques are

used in Vedic mathematics. The objective of this study is that Vedic Mathematics makes the human brain brilliant in various scientific and technological fields. It Promotes integration, computing skills and problem solving abilities. It discusses the possible integration of Vedic mathematics into the educational curriculum. Vedic mathematics is widely used by researchers and scientists to become computer literate and proficient in it.

This Vedic Mathematical Technique helps our children to face new challenges by adopting Vedic Mathematical Techniques in modern research. The presented research is very useful for expanding the creativity of primary school children.

The Main Objective :

Improve the speed of the basic mathematical operations in fourth class students with the help of Vedic Mathematical Techniques.

In this research following 4 Vedic Mathematics techniques are used :

1) Multiplication Technique :

In Vedic mathematics, the use of "vertically and crosswise" technique automatically increases the multiplication technique. This allows for faster calculations in engineering, finance and computer fields.

Vedic mathematics Technique: Vertically and cross wise

Traditional Method: $43 * 67$

Vedic Mathematics: $(40+3) *(70-3)$

= 2,881

2) Square Root Vedic Mathematics Approximation :

The Vedic mathematical method is related to computer algorithms for extracting approximate square roots, used for optimization and efficiency enhancement. Vedic mathematical technique is followed to calculate the approximate square roots efficiency. This is essential for optimization and performance enhancement.

Vedic Mathematics Technique : By Subtraction and Addition

Traditional Method : $\sqrt{9802}$

Vedic Method : $99-1=98$

3) Method to Check Digital Root :

Following the digital root method of Vedic mathematics gives a single digit result. The sum of these digits is then returned. It is used in data transmission and cryptography.

Digital Root Method :**Traditional Method :** 786, 239**Vedic Mathematics :** $7+8+6+2+3+9= 35 -)$

$$3+5=8$$

4) Quick Calculation for Percentage :

Vedic mathematical techniques for calculating percentages are used in business and finance. Decisions can be made quickly and with complete confidence.

Percentage Calculations :**Vedic mathematics Technique- Percentage****Traditional Method :** 18% of 250**Vedic Mathematics :** $25*18= 450$ **Proceedings :**

In this present research study, a total number of 4 primary schools of class 4 students in Nagpur city were selected by "random sampling method". Considering the total population of Nagpur city, 80 students from four schools were selected as sample. By creating a "single group design" of these 80 students, a "control group" and an "experimental group" of the same students were created.

Initially, a control group of 80 students were taught the following traditional mathematics Method. Following mathematics is taught in traditional way.

1. Multiplication
2. Method to Check Digital Root
3. Square root Approximation
4. Quick Calculation for Percentage

Then they were given a test. His score was taken. Then the same group was made 'experimental group' and taught Vedic Mathematics using Techniques method. An expert 'Vedic teacher' was appointed for that.

He also taught the above mathematics in Vedic Techniques method. He was also scored. The scores of both the control and experimental groups differed. Speed also made a difference. But the Vedic method made a tenfold difference among fourth graders in primary school. So at the end of this study it was realized that even though the Vedic system is an ancient system, its importance has increased even today.

Even today its importance has increased a lot. To learn mathematical techniques in today's modern age, following the Vedic mathematical method is tenfold beneficial.

These increases :

- 1) Logical Thinking power in students.
- 2) Creativity of students increases.
- 3) Their understanding power increases.
- 4) Memory power of students increases.

This research study emphasizes computational efficiency and algorithmic optimization. It has used Vedic mathematical techniques which are very ancient in Vedic mathematics and are used in practice. By taking advantage of these mathematical techniques, an attempt has been made to achieve the objective of this study. This research will mainly be used in various scientific and technological fields.

Challenges and future directions :

This Vedic Mathematical Technique helps our children to face new challenges by adopting Vedic Mathematical Techniques in modern research. The presented research is very useful for expanding the creativity of primary school children. States-of-the-art R&D works with respect to Vedic Math applications and identifies potential areas for further research.

Vedic mathematics is used to work very quickly. So it will be mainly useful for competitive exams in future. This will be useful for quick calculations and winning races.

Indian education system has adopted Vedic mathematics. Rajasthan Board has also adopted Vedic Mathematics in Class III of its syllabus. Also the State Board there has also adopted Vedic Mathematics.

Considering the benefits of Vedic Mathematics, even though Vedic Mathematics is not included in the curriculum in other states, they try to adopt Vedic Mathematics by having an extra class.

The Haryana government has also started efforts to introduce Vedic Mathematics into the curriculum. Other states have also taken steps for the same. Considering the advantages of Vedic Mathematics, its academic advances are very high. This removes the fear of mathematics in the mind of the students. Students strive to confidently move forward into the future without fear

Conclusion:

- 1) Vedic Mathematics Contemporary research and development drives computational efficiency and creates scientific innovation.
- 2) Even today its importance has increased a lot. To learn mathematical techniques in today's modern age, following the Vedic mathematical method is tenfold beneficial.

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