

CHAPTER -II

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CHAPTER - II

REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

Review of literature will make the researcher's effort more profitable, effective and time saving. Keeping the above rationale in mind the researcher reviewed the studies relating to the present topic under study. The survey of related literature helps the Researcher to find out the locations, objectives, Hypothesis, methods used & findings of the relevant researches. The Researcher needs to collect information about what and how has been done in the particular area and build upon accumulated and recorded knowledge of the past. A good Review of Related Literature gives a pleasure to produce new research and a joy to read. It gives you some guidelines to precede your research and build your confidence. The main purpose of this review is to obtain detailed information about the methods, research designs, statistical tools used and the conclusions drawn in similar studies.

The study of Past researches increases the significance of the conducted study. It is necessary to have knowledge of the area of the study. If investigator does not review the related Past researches then the on hand study may become only repetition of the previous studies.

The investigator made an attempt to present a summary review of the related literature, which may be helpful in understanding the basic trends available and to bring-out the meaningful outcomes of the present study. The scholar tried her level best to gather the best available literature. For this purpose, she visited number of e-libraries. In addition to the above sources, the investigator searched various related websites on internet and available personal and supervisor's literature etc.

2.2 PURPOSE OF THE REVIEW

- The main importance of reviewing the related literature is, the scholar will come to know about the recommendations given by the earlier researchers given in their research for further study.
- Every educational researcher who would advance scientific knowledge must identify and understand the research that has already been done in the field of interest, knowledge cannot be acquired purposely in isolation it needs to be necessarily linked with the previous existing knowledge.
- The review of the related literature helps the scholar to help an understanding of the previous work that has been done.
- It helps the investigator to avoid unfruitful and useless problem areas.
- It gives the way to the researcher to set the limits and describe his/her problem.

- Review prevents repetition of research.
- The review of related literature is an essential step in scientific approach and its importance and benefits can't be undermined as it gives the path to the researcher to define, demarcate and find out the variables of the problem in more easy way.

2.3 SOURCES OF INFORMATION

1. Primary Sources:

These sources provide direct description of the study by person who has actually observed the occurrence and carried it out.

2. Secondary Sources:

These sources include publications written by an author who is not a direct observer or participant in the event described. The common secondary sources include Educational Encyclopedias', Research Reviews, Different journals and other periodicals contain reviews and abstract of researches, Articles and Reports of Surveys etc.

2.4 REVIEWS IN ABROAD

Williams, Davenna(2005), he conducted a research on "to determine the impact of the instructional strategy, cooperative learning on third grade elementary students' abilities to understand multiplication in comparison to traditional instruction" Two different third grade students were selected for his study. Two units based on multiplication were designed for his study. Cooperative learning strategy was used for the experimental group students while traditional method of teaching was used for the control group students. Quasi-experimental pretest/posttest design was used by the researcher for his research. A pretest was administered to determine the prior knowledge of the students possessed in multiplication to each third grade class, while a posttest was administered after completion of the units. The result of the study revealed that the students who learned by cooperative method of teaching scored higher than the students who learned by traditional method of teaching.

John M. Muehlman (1998), He conducted Research on "Maharishi's Vedic Mathematics in Elementary Education: Developing All Knowingness to Improve Affect, Achievement, and Mental Computation". He used an empirical study. He compared Vedic Sutra based multiplication and checking to traditional methods of solving problems at the third grade level students. The results indicated that i) Those students who used vedic mathematics sutras scored higher achievement than the students who used traditional method of teaching. ii) Those students who used vedic mathematics sutras retained more multiplication and checking skill than the students who used traditional method of teaching, iii) Those students who used vedic mathematics sutras enjoyed computation more than the students who used traditional method of teaching, iv) Those students who used vedic mathematics sutras computed more efficiently and performed more mental computation than the students who used traditional method of teaching. After

all students involved in the study, structured interviews were conducted. He had learned

- i) Students who used vedic mathematics found computation were easier than the students who used traditional method.
- ii) Students who used vedic mathematics found computation were more enjoyable than the students who used traditional method,
- iii) Students who used vedic mathematics found computation were more motivating than the students who used traditional method.

Kenneth R. Williams(2003), "The System Of Vedic Mathematics- A Comparison" The main findings are, Vedic Mathematics is certainly more integrated, more efficient and more fun than conventional mathematics. It leads to greater enjoyment of mathematics, greater flexibility of mind, increased mental agility and brings out the creative faculty that is in all students.

2.5 REVIEWS IN INDIA

Sobha,B.C (2012), conducted a research on "Effect of Folk Mathematics on Achievement". The main intentions of her Study were as follows:

1) To scrutinize the effectiveness of teaching Mathematics using mathematical folklore over conventional method. 2) To compare the effectiveness of teaching Mathematics using mathematical folklore with conventional method with particular reference to the objectives – knowledge, understanding, application and skill. The sample consisted of 60 students and Mean, S.D, t-test and ANOVA were used for analysis and interpretation of data. Main findings were, 1) For the total pretest scores of the students who learned by teaching through folk mathematics and the students who learned by traditional method of teaching group did not differ significantly.

2) The pretest scores and Mean gain scores of students who learned by teaching through folk mathematics and the students who learned by traditional method and the students who studied through folk mathematics method were greater than that of the students who studied in another method. So teaching mathematics using folklore was effective than the conventional method. 3) The pretest scores of students who learned by teaching through folk mathematics and the students who learned by traditional method did not differ significantly. Whereas the total posttest scores of students who learned by teaching through folk mathematics were found to be greater than the students who learned by traditional method of teaching.

Prabha S Kasliwal, BP Patil, DK Gautam (2011), They conducted a Research on "Performance Evaluation of Squaring Operation by Vedic Mathematics". In their study, they planned a technique for implementing squaring operation using Vedic methods in VHDL and evaluate the performance. The results were: this squaring unit was efficient over conventional multipliers; it could save the area occupied on chip and also gave faster computational speed.

ManoranjanPradhan,RutuparnaPanda,Sushanta Kumar Sahu(2011), “The 16x16 Vedic multiplier using „Nikhilam Sutra found to be better than 16x16 Vedic multiplier using “UrdhvaTiryakbhyam” They concluded that, the Sutra in terms of speed when magnitude of both operands is more than half of their maximum values . This approach may be well suited for multiplication of numbers with more than 16 bit size.

Mrs. PushpalataVerma , Dr. K. K. Mehta (2012), “Implementation of an Efficient Multiplier based on Vedic Mathematics Using EDA Tool” They observed that the Vedic multiplier is much more efficient than Array and Booth multiplier in terms of execution time (speed). Vedic Mathematics is a methodology of arithmetic rules that allow more efficient speed implementation. It also provides some effective algorithms which can be applied to various branches of engineering such as computing.

RanaMukherji, Amit Kumar Chatterjee, Manishita Das(2011),”Implementation of an efficient multiplier architecture based on ancient Indian vedic mathematics using SystemC” They concluded that, by using these ancient Indian Vedic mathematics techniques, the world can reach new heights of performance and excellence for the cutting edge technology devices.

Shamim Akhter(2007), “VHDL Implementation of Fast NXN Multiplier Based On Vedic Mathematics”. The coding is done in VHDL (very high speed integrated circuit hardware description language) and synthesis is done using Xilinx ISE series. The combinational delay obtained after the synthesis is compared with normal multiplier. Further, this Vedic multiplier is used in matrix multiplication. The finding is, This Vedic multiplier can bring great improvement in the DSP performance.

SumitR.Vaidya,DeepakR.Dandekar,(2011), “hierarchical design of high performance 8x8 bit multiplier based on Vedic mathematics” This paper presented a high speed 8x8 bit Vedic multiplier architecture which is quite different from the Conventional method of multiplication like add and shift. The findings were The high speed processor requires high speed multipliers and the Vedic Multiplication technique is very much suitable for this purpose.

Pattabiraman (2003), The researcher conducted a research on Vedic mathematics. He wished to see whether Vedic mathematics is to be a fastest way to do arithmetic. He took two primary and two secondary resources to complete his research. He conducted an interview with Kenneth Williams, a Vedic mathematics scholar and mathematician. He conducted an experiment in six 6th grade students who were advanced in mathematics. He used three websites online and a news paper article for secondary resource. He made a conclusion that the students who studied through Vedic mathematics were 15% more efficient than the students who were in the other group, even though they had the same average score. At the end, he also conducted a survey on the kids who were

taught Vedic mathematics. He concluded that, those students who use Vedic Mathematics were quicker and more accurate while doing computations.

2.6. CONCLUSION

The review of literature thus becomes a link between the research planned and the studies previously done. It tells the person who reads about aspects that have been already established or accomplished by other authors, and also gives an opportunity to the reader to realize the proofs that has already been collected by previous research, and thus projects the current research work in the proper point of view. A large part of review of literature essentially needs to be done even before the research project is dignified. This is necessary to make certain that you are not copying the work that other person has already done earlier. Sometimes, if the research anticipated by you has already been taken out earlier, then it gives you an alternative of changing your work by adding a new point of view or changing some of the methods of research to obtain a perspective that will be different from earlier works and thus more important. In the chapter researcher reviewed the related variable in Indian context and abroad.