CHAPTER - II

REVIEW OF RELATED LITERATURE

Introduction

Review of related literature is a concise outline of earlier research and writings of experts. The review of literature helps the researcher to know the researches done in any particular area/topic. It gives the researcher the evidence of what is already known and familiar with the field of his/her study. The clear picture on the research already conducted and the gaps that are existing or the uncovered aspect of the area will pave better insight in the problem to be investigated by the researcher. In other words, 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.

“Review of related literature may seem to avoid unnecessary worn out problems and may help to make progress towards solution of new ones.” Scot and Mertheimer

“Review of related literature is time consuming and fruitful phase of investigation” Best.

A novice Researcher gains invaluable insight into the methods, measures, subjects and approaches used by other researchers. An investigation into the success and failures of various techniques help the researcher to perfect the research design to be employed. Recent studies keep the researcher up-to-date with changes, innovations in the particular field of study.
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 problem identified and discussed can only be studied in detail on the foundation of the existing knowledge in the literature. A research becomes strong when it is based upon the previous researches, and established works in that particular area. Number of discussions, experiments and papers are present in the literature regarding the problem selected for the study. A perusal of the literature was done by the researcher for in depth knowledge of the problem.

A scrutiny of the literature would help the researcher to appraise herself to the importance of the problem and how it was studied
earlier. It also helps the researcher to examine and decide the scope of the problem and formulate focus questions, objectives and hypotheses. The examination of the literature would bolster the knowledge of the researcher in the fields of methodology used earlier and that would become a guiding beacon for selecting appropriate design and statistical measures.

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 libraries. In addition to the above sources, the investigator searched various related websites on internet and available personal and supervisor’s literature etc.

Surveying of researches conducted in the field helps the investigator in understanding the problem from different perspectives. Such a review of the studies conducted by the other
investigators in the field related to the problem in hand also helps the researcher in framing the objectives and the correspondence hypothesis of the study. However, the most significant contribution of such surveys helped the investigator in the interpretation of the results of the study.

**PURPOSE OF THE REVIEW**

- The review of the related literature helps the scholar to help an understanding of the previous work that has been done.

- It gives the way to the researcher to set the limits and describe his/her problem.

- It helps the investigator to avoid unfruitful and useless problem areas.

- It helps the investigator an understanding of the methodology of research which gives to the method/technique of the study which is to be conducted.
• It helps the researcher to know about the tools and techniques which proved to be very useful to the study.

• 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.

• Review prevents repetition of research.

• 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 literature thus provides a strong foundation on which the researcher can build his edifice. In the absence of such a base, the study is likely to be shallow and native without the deep insight which is prerequisite for effective research.
• The review of related studies implies location carefully examining reports of related studies, relevant articles printed in journals, books, manuscript and encyclopaedias.

• 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.

• The researcher become alert and aware of the existing gap in research in the area of study and can develop into such research possibilities, which have been overlooked.

• A novice researcher gains invaluable insight into the methods, measures, subjects and approaches used by other researchers. An investigation into the success and failures of various techniques help the researcher to perfect the research design to be employed. Knowledge and information expand
in leaps and bounds. Recent studies keep the researcher up to
date with changes innovations in the particular field of study.

- It is essential to survey the research work, done by others in
  various fields. It helps in growing a research project in our
  areas of research priorities.

**SOURCES OF INFORMATION**

The related researches were grouped as primary and secondary
sources.

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
Encyclopaedias, Research Reviews, Different journals and other
periodicals contain reviews and abstract of researches, Articles and Reports of Surveys etc.

REVIEWS IN INDIA

Mondal, A.K. (2002), “Achievement in Mathematics at the Elementary Level in Rural Bengal”. His objectives of the study are as follows: i) to scrutinize the achievement of mathematics of class IV students. ii) to compare the achievement in Mathematics of the students of government – aided primary schools with that of the students of private schools and iii) to compare the achievement in mathematics of the students of towns/ semi urban areas with that of the rural areas students. In this study, Survey method was used. The Investigator selected the sample of 101 students of class IV. The results indicated that, i) the achievement level of Students of class IV in mathematics at the elementary stage in rural Bengal was not all the satisfactory. ii) Most of the students’ qualities were of inferior as regards their achievement in mathematics, though it did
not mean that those students were of low merit or that they were not interested in mathematics. iii) The Achievement level of private schools was better than that in the government aided schools, both in town and village areas. iv) The achievement of the students in town areas was far better than that in village areas.

**Shrivastava. P (2002)**, conducted a research on “A study of Achievement in Mathematics and Teaching – learning Process of Class V Students”. The main goals of this study was as follows: i) to discover the achievement of students and ii) to study and compare the achievement level, Teaching – learning process, school environment and co-curricular activities among the students of Bhopal and Schore districts. The Researcher used experimental method for his research. He selected the sample of 100 students of class V government schools from Bhopal and Sehore districts. He collected data through different tools such as Mathematics Achievement test, Students Interview schedule, Teachers Interview
Schedule and primary school observation schedule. The results of the study were 1) Achievement level among the students of both the districts is mostly same. 2) In both the districts, teachers often use blackboard and hardly any teacher uses innovative methods of teaching. 3) No specific difference was found among the teachers with reference to educational qualification and evaluation is based on monthly tests and annual examination. 4) The infrastructure of schools in Bhopal is better than those in Sehore.

**Anand 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 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.

Jayaraman. P, (2003), “Facilitate Childrens’ Achievement in Mathematics at Primary Level through Learning Activity Centered Style.” The objectives of the study is as follows;  i) to find out the effectiveness of the technology accessed low-cost learning kit (s) for mathematics at the primary level. ii) To state the importance of the learning activity centered style. iii) To assess the students’ achievement in mathematics and iv) to examine the efficiency of the drill and practice method of teaching – learning in mathematics.
Experimental method was used for this study. To conduct the research, the researcher employed Pre-test post-test non-equivalent groups experimental design. Two groups of fifty students each were matched with respect to their mean age of 10-11 year old. T-test was used for analyzing the data. The findings were, importance of the learning activity centered style is found to be more effective at the primary level teaching. Learning kit(s) for mathematics is found to be useful for upper primary children to learn mathematics individually in class as well as at home. Influence of the drill and practices method is more effective for mathematics in order to learn easily with long retention.


The combinational path delay of 4x4 bit Vedic multiplier obtained after synthesis is compared with normal multipliers. After
conducting their research, they found that the proposed Vedic multiplier circuit seems to have better performance in terms of speed. They also suggested that, multiplier design based on vedic multiplier can be applied to all branches of mathematics.

Ganihar, Noorjehan N. Wajiha A.H (2009), a study of Factors Affecting Academic Achievement of IX Standard Students in Mathematics. Their main purpose of the study was “To examine the relationship between achievement in mathematics and mathematical creativity, test-anxiety, attitude towards mathematics and achievement motivation of IX std students”, They classified the students according to their sex and according to the medium of instruction. Researchers used stratified random sample technique and selected the sample of 800 boys and girls from 20 secondary schools. For analyzing the data, they used Correlation, t-test, and Multiple regressions. The major findings were as follows: i) Girls had performed better in achievement in mathematics than boys,
and ii) English medium students had performed better in achievement in mathematics than Kannada medium students.


They concluded that, the traditional method takes more time than vedic multiplier. Vedic multiplier helps to speed up the signal processing task.

Pallavi Kaul(2010), “The effect of Learning together techniques of Cooperative Learning method on students Achievement in Mathematics”. Experimental method was used in this research. Pretest-posttest was also applied for experimental group & control group of students. The researcher selected a sample of 70 students studying in 7th class in N.S Public School, Gamma II Greater
Noida, Uttar Pradesh. In this study, Cooperative Learning method (Learning together technique) had been applied to the treatment group and traditional teaching method had been applied to the other group. The findings of the study were as follows: i) The students who learned by The Learning together techniques of Cooperative learning method scored higher than the students who learned by traditional method of teaching. ii) of Cooperative learning (Learning together technique) method was more effective than Conventional teaching methods.

Syed Ismai Syed Azman bin and Pumadevi a/p Sivasubramniama (2010), The Researchers conducted a Research on “Multiplication With The Vedic Method”. The sample of the study involved five Year four Malaysian Primary school pupils. These students were selected by conducting a test consisting of questions on multiplication for 30 students. The study found out the use of the "Vedic Method" to do multiplication problems
involving tables more than five by making use of tables from zero to five. From the above report it can be inferred that 8 bit Vedic multiplier achieves higher speed by reducing gate delay by factor of 24% compared to array multiplier and around 18.2% compared to booth multiplier. Similarly, 16 bit Vedic multiplier achieves higher speed by reducing gate delay by factor of 39.9% compared to array multiplier and around 48.36% compared to booth multiplier. The result also suggested that Vedic multiplier is faster than other multipliers and thus this is extremely advantageous.

Harish.G.C(2011), “Impact of Integrated Critical thinking Skills on Achievement in Mathematics of Secondary school students”. He had selected certain objectives. They are as follows: 1) To scrutinize the impact of integrated critical thinking skills on achievement of students in mathematics. 2) To find out the relationship between the integrated critical thinking skills & achievement of students in mathematics with respect to gender. 3)
To determine the differences in the critical thinking skills & achievement scores of students based on gender. The researcher selected sample of this study of 140 students. The researcher used the inferential statistical techniques like ANOVA, ANCOVA & Factorial design for testing the hypothesis. The findings of the study were: i) the boys & girls students do not differ in their achievement in mathematics subject. ii) The boys and girls students differ in the critical thinking skills. iii) The boys students have shown better performance than girls students in the integrated critical thinking skills.

Kerur S, Jayashree C N, Harish M Kittur, Prakash Narchi and Girish V A (2011), conducted a research on “Implementation of Vedic Multiplier for Digital Signal Processing”. In this paper, an attempt was made to explore the design space for optimal implementation of Vedic multiplier using VHDL. The results also
suggested that Vedic multiplier is faster than other multipliers and thus this is extremely advantageous.

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.

Surinder Kaur, Aruna Sharma (2011), They conducted a research on “the effect of abacus technique on achievement in mathematics at elementary stage” the main intention of their study was “to find out the effect of abacus technique on achievement in
mathematics at elementary stage”. A sample consisting of 120 students of 5th grade from three schools was selected. T-test, 2x2 ANOVA were used to analyze the data. The findings of the study were: i) there was no significant effect of interaction of intelligence and gender on achievement of students of experimental group. ii) The sum of mean squares of gender does not differ significantly but some of mean squares of intelligence have significant difference at different levels of intelligence of males and females.

Narendra Girdhar Pachpande (2012), In this study the researcher had studied, “the effect of advanced organizer model on attainment of students in mathematics teaching at Secondary School level”. For this study 74 students of VIIIth STD Marathi medium from A.T. Zambre high school Jalgaon were selected by random method. For this purpose Intelligence test of Dr. Prayag Mehta and achievement test in mathematics subject was given to collect data. From this study it was found that the learning of those students
who learned by advanced organizer model was more effective than
the students who learned by conventional method of teaching on
achievement of students in mathematics teaching.

**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 leaned 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 leaned 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 leaned 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 leaned by traditional method of teaching.

REVIEWS IN ABROAD

Krystyna M. Rzoska & Colleen Ward (1991), This study found out the effects of cooperative and competitive learning methods on the mathematics achievements, attitudes towards school, self
concept and friendship choices of Maori, Samoan and Pakeha children. Three hundred and nineteen children, aged seven to eleven, from fourteen classes in four racially – mixed urban primary schools participated in the intervention. Data were analyzed by a 3 x 2 x 2 (MANOVA); means and standard deviations. The finding showed that significant gains in mathematics achievement were found for the sample as a whole. However, no overall effect for learning condition was present on any of the measures, although Samoan children had the most favorable and Pakeha children the least favorable attitudes towards cooperation.

Pulos & Sneider (1994), found that the well-selected educational game helps the children to learn the meanings and new skills of mathematics. The researchers recommended that the games must be taken into account for educating program of mathematics lesson as a useful activity. They found by experience that using of the
educational games in mathematics lessons, cause to better perception and more long remembrance of acquired knowledge.

**Stein, Grover, and Henninssen (1996),** The Researchers examined the use of enhanced instructions as a means of building students’ capacity for Mathematics thinking and reasoning. They suggested, before engaging students in critical thinking, reasoning and brain storming students should be given encouragement opportunities as well as good assistance. Give opportunity to students to solve more problems and help them to understand the concepts properly so that they understand easily and which we get good learning outcomes.

**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 r 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.

**Samuel F. Leary Jr. (1999),** The researcher conducted a research on “the effects of the Thinking Maps program, a series of graphic organizers, on the achievement of fourth-grade students”. He used quasi-experimental study. The researcher used a non-equivalent pre-test-post test control group design. He selected two elementary schools within a school division for his research. The researcher selected seventy eight students for his sample of the study. He selected forty one students in two classes for his treatment group and thirty seven students for his control group. For analysis of data he used four-way ANOVA. The results of the study showed that those students who used graphic organizers for learning
achievement was as same as the students who learned by traditional method.

**Beeland (2001),** conducted a study to find out the impact of SMART Board technology on students’ engagement. He suggested that i) all students and teachers should engage in Smart board technology, ii) Learning through smart board technology creates interest among students. iii) It also develops critical thinking iv) students will be actively participate in all the activities iv) It creates good teacher -student relationship. The findings of the study showed that i) the use of smart board technology increased students engagement ii) It helps positively impacted visual, auditory and tactile learning.

**Asuman Duatepe (2004),** conducted a study “to investigate the effects of drama based instruction on seventh grade students’ achievement on geometry (angles and polygons; circle and cylinder)”. The researcher selected three seventh grade classes
from a public school to conduct this study. Achievement test
(angles and polygons; and circle and cylinder), interviews,
mathematics and geometry attitude scale were used to collect data
for his research. For analysis of data, the quantitative analyses
was used for analyzing data. Two multivariate covariance analyses
were used for analyzing the data. The finding revealed that the
students learned through drama based instruction had achieved
more than the students who learned through traditional method of
teaching.

**S.V.R. Barnard (2004),** the aim of this study was an exploration
of the relationship between the use of an Integrated Learning
System (ILS), entitled Master Mathematics, as a supplement to
traditional mathematics instructions and mathematics achievement
as measured by the Paper 2 marks of the National Mathematics
Examinations for standard grade learners in grade 12. This study
used quantitative and qualitative methods. For each of the
experimental and control group twenty – six learners were selected.

For twelve sessions of three hours each, the experimental group worked on the Master Mathematics programme. The quantitative analysis was used for conducting this research. The findings of the study showed that i) the intervention did not make a significant difference to the experimental group. ii) The Master mathematics programme led to only a 0.56% increase in the marks of the experimental group.

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.

Mathomo M. Moila (2006), The main aim of the study was to examine the use of educational technology in mathematics teaching and learning. In order to conduct his research, he selected a Phusela Secondary school. He selected the Sample of 25 students. Descriptive and Interpretive analysis were used to analyze the data. It can be concluded that, Junior Secondary learners do show some problems with their operations in the subsection data handling.
Syh-Jong Jang (2006), The main aim of this research was “to study the effects of team teaching upon two 8th-grade teachers in the field of mathematics”. The researcher used quasi-experimental method for his study. Sixty three students were selected for experimental group i.e by using team teaching method and sixty one students were selected for control group i.e learning through Lecture method. The research findings were that i) those students who received team teaching method scored the average final exam marks were higher than those students who received conventional teaching method. ii) those students who received team teaching method achieved higher than those students who received conventional teaching method.

Cuneo, Amy (2008), did a research to find out “the effects of collaborative learning on performance in undergraduate mathematics”. The researchers used experimental method and survey method for this study. Local community college beginning
algebra course students were divided into three sections as a control group and an experimental group. Pretest and posttest were conducted to all the participants in the study. The experimental group completed the activities with their own classmates i.e. peer and the control group completed the activities by their own i.e. with individually. For analyzing the data an ANCOVA was performed. The result showed that i) The students who used collaborative learning a slight performance increase than the students who learnt individually. The survey indicated that ii) The students who used collaborative learning felt more confidence than the students who learnt individually. iii) The students who used collaborative learning enjoyed the activity more than the students who learnt individually. iv) The students who used collaborative learning had a more positive experience in completing the activity v) The students who used collaborative learning felt slightly more pressured for time than the students who learnt individually.
Jill C. Roper (2008), done a research to find out “the effects of mathematics calculation homework on the mathematics performance of elementary school students demonstrating varying levels of achievement in mathematics”. The study also explored the effects of practice homework and a different type of homework, working-practice homework, which incorporated drill ratio procedures on math achievement. Ninety participants, who were all enrolled in the fifth grade at a Mid-Atlantic, suburban school district, completed the study. The results of the study indicated that there were no statistically differences between the two homework types overall or within each level of achievement group.

Peter Vankus (2008), conducted a research on to find out the effect of Games Based Learning in teaching of mathematics at lower secondary school students. The researcher used experimental method for his study. He selected a sample size of 103 students of 5th grade students. He used t-test to analyze the data. Results of the
study showed that i) those students who used Game based learning received the same amount of knowledge as the students who did not use Game based learning. ii) The knowledge was achieved by both the classes during the same time amount so integration of didactical games did not hinder the pace of teaching process.

**Biswajit Behera (2009),** The study was designed to investigate cognitive skills in solving mathematical problems of learners at the terminal stage of elementary education. Contrast group of achievers with equal number of boys and girls constituting HA & LA were selected on the basis of MAT result. The written works of both core and non core problems were scored and the differences in performance of the two types of problems were analysed using ANOVA & t-test. It revealed that HA groups were superior to LA groups irrespective of sex. The higher performance of high achievers over the low achievers in both core and non –core
problems revealed that those who can verbalize the process of solution are better at solving problems.

**Brown-Lopez, Priscilla, Alva, Marie (2010),** conducted a research on “Analysis of the effects of a Constructivist-Based Mathematics Problem Solving Instructional Program on the achievement of Grade Five Students in Belize, Central America”. For conducting research, the researcher selected three hundred and forty two students and eight teachers from two rural and urban schools as samples. For analysis of data, ANOVA was used. The results of the study revealed that, i) those students who received constructivist based mathematics problem solving instruction programme scored more than the students who received traditional method of teaching. And also ii) Semi-structured interviews data revealed that there are few students who lacked basic mathematical skills. Some students were not exposed or guided to solve complex problems.
**Jafar Pouyamanesh (2012)**, The main aim of the present research was the investigation of game influence on mathematics learning rate in elementary stage. The researcher used quasi experiential method. Statistical sample included 55 students that they were selected by cluster sampling from the students of the Kousar Elementary Girl’s School in Qom city. *T-Test* was used for results analyzing. This research indicated that the teaching method based on the game is more effective in mathematical problems learning. Also this effect was observed both in odd and even subject and learning of numbers axis subject. When the students use the game, show more motivation and desire for education.

**Kerridge, Susan (2012)**, conducted a research to Study the Improvement of the Mathematical Academic Attainment of Low Achievers in VII Standard when Accelerated Learning was used as a Teaching Pedagogy in the Classroom. A toolbox matrix was
developed showing how various tools can be used within the seven stages of accelerated learning. Specific recommendations of the three most important tools are suggested of small white boards, scaffolding and group work. The limitations of the study were then discussed. The data provided from these examinations were statistically analysed by calculating the mean, standard deviation, scatter graphs, ANOVA and linear regression. The results from the ethnographic study and statistical analysis showed an improvement in the academic attainment of the low ability pupils.

Oloyede, Adebowale, and A. A. Ojo (2012), The study sought to find out the relative effectiveness of three classroom interaction strategies which are known to affect students' learning outcomes in Mathematics. 484 senior secondary school three (SSSIII) students randomly selected through judgmental and stratified random sampling from government-owned secondary schools in Ikere and Ado-Ekiti. The instrument was a self-constructed one, validated
and used for collecting data and titled “Mathematics Achievement Test (MAT).” The experimental treatment lasted for four weeks, and the data collected were analyzed using one-way ANOVA, ANCOVA, two-way ANCOVA, and Tukey HSD post hoc pairwise comparisons analysis. The findings showed that the students’ learning outcomes in Mathematics were better promoted by the cooperative and competitive strategies but rather minimally by both individualistic and conventional strategies.

Yancy, Yuri (2012), conducted a research on “The Effects of Project-Based Learning Activities on Intrinsic motivation and Skill Acquisition of Rural Middle School Math Students”. This study was conducted in a middle school mathematics class and investigated the effects of project-based activities on the middle school math students’ skill acquisition and intrinsic motivation. The researcher used (ANOVA) to analyze the scores from the mathematics pretest and posttest. t-test was used to evaluate the
MLSQ results and to identify if significant changes in the participants’ motivation and skill acquisition existed. The control and experimental groups were randomly selected. Results were analyzed, the female participants’ scores increased slightly on two of the sections of the MLSQ, while the scores of the males stayed about the same on two of the sections. On the intrinsic goal orientation and self-efficacy for learning sections of the MLSQ, the pretest and posttest scores of the male participants remained the same, while their scores on the task value pretest decreased slightly on the posttest.

**CONCLUSION**

Each and every portion of continuing investigation needs to be connected with the work which has to be done already, to achieve an overall significance and intense. 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. She reviewed the researches from 1990 to 2012 about 82 studies.