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CHAPTER II

REVIEW OF RELATED LITERATURE

2.0 INTRODUCTION

In the last chapter the investigator has discussed about the introduction, the co-operative learning, need and importance of the study, objectives and overview of the study. This chapter gives an in-depth study of review of related literature after referring various journals, magazines, periodicals, survey books and Internet.

The review of related literature is an important component of the research process. The review of related literature involves the systematic identification, location and analysis of documents containing information related to research problems.

A research work is not meaningful without a thorough analysis of related works. Such related literature should be completed before proceeding with the actual conduct of the study. A fabularity with the literature in a problem area helps the research to discover what is already known, what others attempted to find out, what method attacks have been promising and what problems remain to be solved.

Practically all-human knowledge can be found in books and library. So there is an extensive use of the library and thorough
investigation of related literature which is essential in planning and carrying out the kind of searching involved.

Survey of related literature serves the following purposes as,

1. To show whether the evidence already available solves the problems adequately without further investigation, and thus to avoid the risk of duplication.
2. To provide ideas, theories, explanation or hypotheses valuable in formulating the problem.
3. To suggest methods of research appropriate to the problem.
4. To locate comparative data useful in the interpretation of the results.
5. To contribute the general scholarship of the investigator

Hence, review of related literature is a valuable guide to define the problem, recognizing its significance, suggesting promising data, gathering tools and devices appropriate to the study design and also sources of data. Only those studies that are relevant to the present study are included in the review.

2.1 REVIEW OF RELATED LITERATURE:

Lawrence Lyman and Harvey Foyle (1991) studied “Teaching Geography Using Cooperative Learning”

The study discusses cooperative learning as a means of teaching geography. It also urges production of a positive classroom climate by using group builders and cooperative projects. The study suggests projects involving maps, community study, and bulletin boards. The study argues that students in cooperative learning
become more involved in the subject and more motivated to learn content. The principles of cooperative learning can be and should be applied to the teaching of geography. When cooperative learning is used, students become more involved in the subject and more motivated to learn content. Geographic knowledge can increase among U.S. students when they are more motivated to learn. A variety of cooperative learning lessons can bring about that motivation and increase in knowledge.

**Fred John Brandt (1995)** studied “The effects of cooperative learning on achievement and self-esteem of high school students with learning disabilities”

This study was undertaken to examine the effectiveness of cooperative learning vs. traditional non-cooperative learning on the self-esteem and academic achievement of 74 urban high school students in grades 9-12 with learning disabilities in self-contained mathematics, English, English as a Second Language (ESL), Spanish, and science classes. In Traditional teaching methods students work individually or competitively often do not work with children with learning disabilities, resulting in low self-esteem and limited academic achievement. Too many students with learning disabilities are not prepared to meet the demands and challenges of the 21st century. Six experimental classes were taught the regular high school curriculum in each subject area using cooperative learning and six control classes were taught the same material using traditional non-cooperative methods for 15 weeks. The same subject teacher taught the same material to one experimental group and one control group. The Piers-Harris Children's Self-
Concept Scale was used to measure self-esteem at the beginning and end of the term. The New York State Regents Competency Tests and the New York State Second Language Proficiency Examination in Spanish were used to test standardized academic achievement. Teacher-made tests of specific topics measured criterion-referenced academic achievement. In addition, daily discussions with teachers and whole class open-ended discussions with students immediately after post-testing added qualitative insights. Information gained in these discussions allowed the researcher to assess student attitudes regarding the traditional and cooperative learning experiences. Analyses of covariance indicated no significant differences between the groups' posttest scores for both overall and academic self-esteem. The results of t tests yielded significant differences in favor of the cooperative learning classes on standardized and criterion-referenced academic achievement. The study concluded that cooperative learning is an effective method for teaching high school students with learning disabilities.

**Hertzog and Lieble (1996)** investigated “A Study of Two Techniques for Teaching Introductory Geography: Traditional Approach versus Cooperative Learning in the University Classroom”.

This study was a collaborative effort between the geography area of the College of Arts and Sciences and the Department of Educational Leadership at Valdosta State University. The project was conducted to determine whether students in an introductory course would benefit from the use of cooperative learning groups based on their learning styles, hemisphericity, and gender.
compared to students taught with a traditional lecture/inquiry approach. Students who enrolled in World Regional Geography were separated into a control class, which utilized the traditional lecture/inquiry approach, and an experimental class, which implemented the cooperative learning approach. Both classes began with 40 students and were taught during the mid-morning hours by the same two professors. Although no significant gain was realized at the conclusion of the study, 36 students remained in the experimental class while only 26 students remained in the control class.

Judith (1996) studied “Effects of Cooperative Learning Among Hispanic Students in Elementary Social Studies”

Although research has indicated that cooperative learning enhances student achievement, promotes self-esteem, and improves interpersonal relations, few studies have focused on cooperative learning in elementary social studies. There is a close affinity between the goals of citizenship education and social skills promoted by cooperative learning. This investigation determined differences between achievement and self-esteem of Hispanic fourth graders who received instruction using cooperative learning or traditional instruction. Results indicated higher achievement with cooperative learning. Although self-esteem was apparently higher for boys than for girls, regardless of treatment, this result was inconclusive. Making connections between social studies goals and cooperative learning offers a valuable tool for improving social studies education.
Christine Kim-Eng Lee (1998) studied “Effects of cooperative learning structures on self-esteem and classroom climate in social studies”.

This study reports on a study which involves the implementation of cooperative learning in a social studies classroom. The effects of cooperative learning on the self-esteem of pupils and classroom climate were investigated. Interviews with pupils and the experimental teacher were also conducted. Results showed that there was no significant effect of cooperative learning on the self-esteem of the pupils in the experimental group. However, there was a significant effect on the Difficulty subscale of the classroom climate of the experimental group. Pupils' and teacher's interviews showed favourable attitudes among pupils towards the use of cooperative learning in social studies lessons.

Korkmaz (1996) studied “The Impact Of Blended Learning Model On Student Attitudes Towards Geography Course And Their Critical Thinking Dispositions And Levels”.

The study aimed to determine the impact of blended learning model on student attitudes towards Geography course and their critical thinking dispositions and skills. An experimental pattern with pretest-posttest control group was used in the study. The study group consists of a total of 57 students – 28 in the experiment group and 29 in the control group – at Kırşehir High
School. The experiment group was subject to hybrid learning through the Geography web page, while the traditional learning model was used for the control group. The data were collected through literature review, the Geography Attitude Scale, and the California Critical Thinking Disposition Inventory with Cronbach Alpha values of 0.92 and 0.88, respectively. The data were then subjected to percentage, arithmetic mean, t-test, ANOVA, Scheffé and Pearson correlation tests and the results were interpreted (p<0.05). As a results: Blended learning model contributed more to student attitudes toward geography course when compared to the traditional learning model; blended learning model contributed more to student critical dispositions and levels when compared to the traditional learning model; and there was a positive correlation between student attitudes toward geography course and their critical thinking dispositions and levels.

**Abu (1997)** studied “The Effects Of Cooperative Learning Methods On Achievement, Retention, And Attitudes Of Home Economics Students In North Carolina”

The purpose of this study was to determine the effects of the cooperative learning approach of Student Teams-Achievement Divisions (STAD) on the achievement of content knowledge, retention, and attitudes toward the teaching method. Cooperative learning was compared to non-cooperative (competitive) learning classroom structure using a quasi-experimental design. An achievement test, consisting of items from the state competency
test-item bank for the course, and an attitude questionnaire were administered immediately following instruction on the unit of special nutritional needs. A retention test was administered three weeks following the achievement test. California Achievement Test scores and first semester grades in home economics classes were used as covariates to adjust for possible preexisting differences between the groups. Multivariate analysis of covariance showed no significant difference among the dependent variables (achievement and retention) between the teaching methods used. There was also no significant difference in student attitudes toward the teaching methods.

Melinda Karnes et. al. (1997) studied “Using Cooperative Learning Strategies To Improve Literacy Skills in Social Studies”

This study argues that the use of cooperative learning strategies in social studies instruction represents a natural match of method and substance. That is, cooperative learning provides the perfect vehicle for helping children understand and experience many of the essential concepts and values embedded in the social studies curriculum. This study focuses primarily on how classroom teachers can instruct their students in essential reading and writing skills while using social studies as the medium for discussion. A brief, illustrative review of the empirical literature on the use of cooperative learning approaches in social studies is followed by a general overview of representative cooperative learning methods and a more in-depth description of a few specific
reading and writing applications. Other potential applications of cooperative learning procedures are described as well.

Don (1997) studied “Social skilling through cooperative learning”

The lack of social skills on the part of some school students has been identified as one contributory factor in student misbehaviour. Experience and theoretical studies indicate that corrective models of behaviour management are not, in themselves, sufficient. Research suggests that cooperative learning contributes to the fostering of social skills in students of all ages. The first investigator implemented a 10-week programme of cooperative learning in a class of 10-12-year-olds, to develop their social skills alongside their academic skills. Classroom activities provided specific training in, and required pupils to use and monitor the use of, identified social skills. Task-oriented skills included sharing, persuading and managing time; and person-oriented skills covered being positive, valuing others and conflict resolution. Pupils worked in pairs, and later in larger groups, with each pupil responsible for a specific academic or social task. Although the period of the study (10 weeks) was too short to make any generalized claims, there was evidence of social growth. Social interactions became noticeably more varied and students agreed to work in assigned groups, even when they did not like some members of the group. This willingness to engage with those outside the immediate friendship groups was observed to carry over into playground activities. The interpersonal relationships of previously isolated students improved, both with their peers and with the teacher. There were
also benefits in terms of student behaviour. The responsibility associated with a group role made students focus on their task more consistently and, in some cases, the group had a positive influence on the behaviour of 'difficult' students.

**Banerjee and Vidyapati (1997)** studied “Effect of lecture and cooperative learning strategies on achievement in chemistry in undergraduate classes”

A comparative study of the effect of lecture and cooperative learning strategies on achievements in general chemistry at the undergraduate level was undertaken with 68 first-semester students in a teacher preparation course. The overall achievement scores were similar in the two classes following different learning strategies. The achievement scores were not influenced significantly by subject background (mathematics or biology) and gender.

**Christine Kim-Eng Lee; Tock-Keng Lim; Maureen Ng (1997)** studied “Affective Outcomes of Cooperative Learning in Social Studies”

This study reports an experimental study involving the use of cooperative learning in a social studies classroom. The outcome variables discussed in the study are pupil self-esteem and classroom climate. Over the period of the study, cooperative learning did not significantly improve the self-esteem of the pupils. However, pupils in the experimental group who were taught
through the cooperative learning approach perceived class work to be less difficult than the control pupils who worked individually. The control pupils also reported a decline in satisfaction with class work and perceived more friction in their class. Interviews with the teacher and pupils showed favourable attitudes toward cooperative learning.

Rehana Schrueder (1998) studied “Cooperative Learning as an Approach to Learning Science”

The focus of the study is on findings of a research inquiry into the implementation of cooperative learning using action research. Cooperative learning research has gone through a series of phases representing different orientations of research, including research into the value of cooperative learning and the generation and evaluation of models of cooperative learning; using statistical input-intervention-output design and, more recently, looking at interactions that occurred in small learning groups. In this inquiry action research offered a way of examining more closely the process of introducing, maintaining and understanding cooperative learning in a multicultural science class. Qualitative analysis used evidence which was in the form of texts from sources which included classroom observation, student reflective notes, a research diary and interviews, among others. The analysis involved the writing of descriptive-interpretive reports which were used to formulate analytic theme reports. Propositions were developed from these reports and recommendations made on the basis of these propositions.
Strom (1998) studied “Student Participation In The Evaluation Of Cooperative Learning”

Cooperative learning is intended to maximize the understanding of class material and the acquisition of teamwork skills. To attain these goals, students must be individually accountable and credited for efforts to help their team. The Peer and Self-Evaluation System informs teachers about group interaction from the student point of view. More specifically, this system enables students to identify and record the attitudes and skills demonstrated by teammates and themselves in group work. Based upon these observations, which are kept anonymous, each student gets confidential feedback regarding personal strengths and limitations. This approach has been utilized in most subject matter areas and appears suitable for meeting the developmental needs of students from middle school through college level education.

Kluge, David. (1999) studied “A Brief Introduction to Cooperative Learning”

Cooperative learning is defined as a group learning activity organized so that learning is dependent on the socially structured exchange of information between learners in groups, in which each learner is held accountable for his or her own learning, and is motivated to increase the learning of others. Each of the several key elements of cooperative education is discussed, including: positive
interdependence (which includes positive goal, resource, reward, identity, role, and outside enemy interdependence); team formation; accountability; social skills; structures and structuring; distributed leadership; group autonomy; group processing; and face-to-face interaction. The research section provides a brief overview of the research comparing and contrasting cooperative learning methods with competitive and individualistic learning, concluding that cooperative learning yielded superior outcomes. The five most common models of cooperative learning (the structural approach; group investigation; student team investigation; curriculum packages; learning together) are then briefly described. Teachers can choose one of the models described but may be better off adopting and adapting parts of several models to create their own model of cooperative learning that best fits their teaching style and situation.

Johnson, Johnson and Stanne (2000) stated that this combination of theory, research, and practice makes cooperative learning a powerful learning procedure. But this does not mean that all practices of cooperative learning will be effective in maximizing achievement. Different types of cooperative learning methods are being used. Hence educators have very little guidance as to which specific cooperative learning methods will be more effective in different situation. They had examined four issues on their research. The first issue is how much research has been conducted to validate specific cooperative learning procedures. The second issue investigated is how many different cooperative learning methods have been evaluated. The third issue investigated is how effective are the different cooperative methods in maximizing
The fourth issue investigated is the characteristics of the more effective cooperative learning methods. The study shows that cooperative learning is essential for maximizing learning and ensuring healthy cognitive and social development as well as many other important instructional outcomes. Hundreds of research studies demonstrate that cooperative learning result in higher individual achievement than competitive or individualistic learning. Cooperative learning is used throughout the world by educators. The combination of theory, research and practice had made cooperative learning one of the most outstanding of all instructional practices.


Cooperative learning is one of the most widespread and fruitful areas of theory, research, and practice in education. Reviews of the research, however, have focused either on the entire literature which includes research conducted in non-educational settings or have included only a partial set of studies that may or may not validly represent the whole literature. There has never been a comprehensive review of the research on the effectiveness in increasing achievement of the methods of cooperative learning used in schools. An extensive search found 164 studies investigating eight cooperative learning methods. The studies yielded 194 independent effect sizes representing academic achievement. All eight cooperative learning methods had a significant positive impact on student achievement. When the impact of cooperative
learning was compared with competitive learning, Learning Together (LT) promoted the greatest effect, followed by Academic Controversy (AC), Student- Team- Achievement-Divisions (STAD), Teams-Games-Tournaments (TGT), Group Investigation (GI), Jigsaw, Teams-Assisted-Individualization (TAI), and finally Cooperative Integrated Reading and Composition (CIRC). When the impact of cooperative lessons was compared with individualistic learning, LT promotes the greatest effect, followed by AC, GI, TGT, TAI, STAD, Jigsaw, and CIRC. The consistency of the results and the diversity of the cooperative learning methods provide strong validation for its effectiveness.

**Klein and Schnackenberg (2000)** studied “Effects of Informal Cooperative Learning and the Affiliation Motive on Achievement, Attitude, and Student Interactions”.

The purpose of this study was to investigate the effect of informal cooperative learning and the affiliation motive on achievement, attitude, and student interactions. Participants classified as high or low need for affiliation used either an informal cooperative learning strategy or an individual strategy while receiving information, examples, practice and feedback from an instructional television lesson. Results indicated that participants who used the individual strategy acquired significantly more knowledge from the lesson and indicated significantly more continuing motivation for working alone than those who used the informal cooperative strategy. Instructional strategy did not influence performance on the application portion of the test.
Results also revealed that high affiliation participants expressed significantly more continuing motivation than low affiliation participants for working with another person. Low affiliation participants expressed significantly more continuing motivation than high affiliation participants for working alone. Finally, results indicated that high affiliation dyads exhibited significantly more on-task group behaviors (taking turns, sharing materials, group discussion of content) and significantly more off-task behaviors than low affiliation dyads.

Simon Veenman; Brenda Kenter; Kiki Post (2000) studied “Cooperative Learning in Dutch Primary Classrooms”.

This study examines teachers' use and evaluation of cooperative learning along with pupils' reactions to cooperative grouping and the quality of the group cooperation in a sample of Dutch primary school teachers who implemented cooperative learning methods. Teachers reported that cooperative learning occurred in their classrooms about four times a week. Teachers reported social skills, on-task behaviour and pupil self-esteem to improve as a result of having pupils work in groups. The pupils reported a positive attitude towards cooperative group learning and rated their work in groups as effective. About half of the teachers reported problems with the monitoring of the cooperative groups. Observations showed the time-on-task levels of the pupils working in groups to be high, but effective learning and cooperation not to be promoted. The teachers devoted little time to the teaching of group work skills. In general, the implementation of cooperative
grouping was found to lack the features recommended in the literature for effective cooperative learning.

Mohammad H. Ahmadi (2000) studied “The Impact Of Cooperative Learning In Teaching Mathematics”

This study presents an analysis of the results of an experimental study conducted by the investigator at the University of Wisconsin-Whitewater in two mathematics courses: one section of Finite Mathematics, and two sections of Business Calculus. Both courses are designed for students majoring in business and social sciences. The experiment involved a nontraditional style of teaching, a combination of lecture and group discovery methods. The approach involved considerable student interaction, both in and out of the classroom; it used a team format and had less formal instruction. The dependent variables in the study were student performance, interest, motivation, conceptual understanding, and attitudes toward mathematics. To determine the effectiveness of the method of instruction on the dependent variables, comparisons were made with data from other sections of the same courses taught using more traditional methods. The results of the study demonstrated that students in the study performed better than those in traditional sections; their attitude towards mathematics improved; they actually participated in outside classroom work and became more interested in and motivated to do mathematics; and the majority of the students were positive about the instructional approach and thought this method was a better way for them to learn mathematics.
Heinz Neber; Monika Finsterwald; Nicola Urban (2001) studied “Cooperative Learning with Gifted and High-achieving Students: A review and meta-analyses of 12 studies”

Current empirical research is reviewed in this study and meta-analyses of available results in 12 published studies are performed. Results show that few methodologically sound studies can be found at present. In addition, researchers only considered a restricted spectrum of participants, focused on learning of relatively simple materials, measured only a restricted range of possible outcomes, and neglected processes and activities of the learners, which might determine outcomes of cooperative learning. Results therefore remain controversial even for fundamental issues like learning in homogeneous versus heterogeneous, mixed-ability groups. In spite of these limitations, analyses nevertheless show that cooperative learning offers strong potentials for further improving the quality of instruction with gifted and high-achieving students. Further empirical research is required to obtain more differentiated information on the various aspects of cooperative learning.


This study reviews research published from 1990 to 2000 examining effects of cooperative learning strategies on the academic
achievement of students with learning disabilities. The literature search is described. Fifteen studies are included in the review and are grouped according to the types of cooperative learning strategies that were examined. Sample characteristics, measures, findings, and effect sizes are reported in a table. Achievement outcomes are mixed. Cooperative learning strategies that incorporate individual accountability and group rewards are more likely to improve achievement of students with disabilities. However, design problems across the studies limit conclusions to be drawn about the efficacy of cooperative learning. More research is needed before it may be viewed as an effective strategy for students with disabilities.

Sharon Sherman; Gregory Camilli (2002) studied “Effects of Leader and Teacher Behaviour on Implementation of Cooperative Learning in the Elementary School”

Structural equation modelling was used in this study to examine interrelationships among change management functions, teacher orientations and implementation of cooperative learning which were assessed in terms of four latent variables based on teacher self-reports of knowledge, perceived benefits, amount of professional development and frequency of use. After preliminary modifications, the final structural model suggested four major influences on implementation. First, lower levels of pupil control ideology of the teacher lead to more self-reported knowledge of cooperative learning methods. Pupil control ideology is a measure of how school personnel view their students with regard to control. The higher the pupil control ideology, the more controlled the
Second, higher levels of shared vision and lower levels of pupil control ideology lead to stronger teacher perceptions of the benefits of using cooperative learning. Third, higher levels of principal and resource support but lower levels of teacher participation in decision making lead to more professional development experiences.

Winston Vaughan (2002) studied “Effects of Cooperative Learning on Achievement and Attitude”.

The investigator examined the effects of cooperative learning on the achievement in and attitudes toward mathematics of a group of 5th-grade students of color in a culture different from the United States (i.e., Bermuda). Students participated in 12 weeks of R. Slavin's (1978) Student Teams Achievement Division method of cooperative learning in mathematics during the fall semester. Students completed 2 measures: the computation and application sections of the California Achievement Test (1985) Form E (Level 14) and Penelope Peterson’s Attitude Toward Mathematics Scale for Grades 4-6 Students at 4 different intervals. The measures were completed as pretests at the beginning of the semester (before students were exposed to cooperative learning) and as posttests at the end of Weeks 5, 9, and 13. Data were analyzed with a 1-factor (4 levels) repeated measures analysis of variance design to ascertain whether there were significant differences among the pre- and posttest scores. Results suggest that there were positive gains in attitudes and achievement.
*Adeyemi (2003)* studied “Effect of Cooperative Learning and Problem Solving on Junior Secondary School Students Achievement in Social Studies”

This study showed Effect of the three strategies (Cooperative Learning, Problem Solving and Conventional method) Junior Secondary School Students Achievement in Social Studies. The design used for the study was pre-test, post-test control group non randomized quasi experimental from three design. The study made use of 150 students that were selected using stratified cluster sampling from three public secondary schools in Nigeria. The result showed that students exposed to cooperative learning strategy performed better than their counterparts in the other groups. The results of the study also indicated that the effect of teaching strategies was gender sensitive. The findings of the study are highly significant and relevant. The results have implications for curriculum planning, teacher training and retraining programme and classroom practice.

*Baer (2003)* studied “Grouping and Achievement in Cooperative Learning”

Colleges typically group students homogeneously in classes by means of both admission requirements and course prerequisites, but when professor’s form cooperative learning groups within classes they generally use heterogeneous grouping. Investigators compared heterogeneously and homogeneously grouped cooperative learning groups in six paired classes, taught
by the same professor using matching syllabi and assignments. Overall, homogeneously grouped students (who were grouped based on achievement on the first test given in the course) significantly outperformed heterogeneously grouped students on the final examination. High- or average-achieving students particularly benefited from homogenous grouping. Low achievers did equally well in either type of group

Teske (2003) studied “Cooperative Learning: A Sixth Grade Mathematics Curriculum For Teaching Addition Of Fractions”

Mathematics proficiency is an important aspect of education of for today’s youth. In order to be successful in today’s society students need to have more developed math skills. Currently, students in the United States are not keeping up with students from other countries. Additionally, students in California are falling behind other states. One key area of math instruction that needs more support is fractions. Fractions are the gatekeeper to Algebra, which is required for all eighth grade students in California. With the lagging achievement scores, educators need to find a way to make math instruction more engaging and accessible for students. Current math instruction typically follows a direct instruction model with memorization of algorithms and practice on worksheets. This project will help students become engaged with the math lessons, which will, in turn, increase mathematics achievement. Students will have opportunities to discuss their learning and work together in order to develop a deeper understanding of fraction concepts. The Review of Literature examines three key areas. The first is current problems with math, including student achievement scores, curriculum, and student motivation. Next is an analysis of
current teaching strategies. Within these strategies is direct instruction and self-discovery. The review of literature also includes research-based aspects to consider when implementing cooperative learning. Sources of data used were professional journals, books, and websites. Conclusions Reached Sixth grades students have been working with fractions since third grade and still have not developed proficiency. Students need learning activities that are engaging and encourage them to take an active role in their learning. This study provided teachers with a guide to implement hands-on and group based activities in their classrooms that increase student achievement with fractions.

Tshibalo (2003) studied “Cooperative Learning as a strategy to improve the Teaching of Mapwork to grade 11 and 12 Geography learners in region 3 (Limpopo Province): A Case Study Conducted at ramaano Mbulaheni Inservice Training Centre”.

Experimental and control groups were formed from both Grade 11 and 12 learners. The experimental group used cooperative learning method while the control group used the traditional lecture method. During the process observations were made. Questionnaires were given to an experimental group and their responses were analysed. At the end of the process, an evaluation was done by means of a test, given to both the experimental and control group. The aim of this study was to examine the possible effects of co-operative learning in mapwork on grade 11 and 12 learners. The content used in this study is from
grade 11 and 12 Geography syllabus, which requires geography learners to be able to do the following (specific aims):

(a) identify and explain the title of topographical map;

(b) locate geographical features using grid references;

(c) work out direction and bearing;

(d) calculate distances on a map in metres and kilometres;

(e) calculate magnetic declination;

(f) know and use three types of scales;

(g) work out the slope gradient, and

(h) interpret vertical aerial photographs and topographical maps.

Co-operative learning in mapwork improves learning quality and increases educational standards. This is because low achievers in this study improved their scores significantly when compared to their peers taught by ordinary traditional method (lecture). The average quality of the work produced by co-operative learning effort is usually higher than the average work of individuals. In this study, five learners in one team were able to use two topographical maps at the same time. This is economical use of resources especially in rural areas where educational resources are a problem. Reading and interpretation of topographical maps by co-operative teams were less stressful, allowing for critical thinking as learners learn from each other as well as challenges and question each other. Short learning periods (periods less than 60 minutes) are not conducive to co-operative learning in the teaching of
The analysis of the questionnaire showed that there is a significant correlation between attitude towards co-operative learning and intergroup relations, social support, and psychological health.


An experimental study with (2x2) factorial design was conducted. Objective of this study included: (1) To determine whether the cooperative learning is more effective than traditional methods of teaching with respect to academic achievements of students in mathematics; (2) To examine the effects of cooperative learning on the academic achievement of high-achievers; (3) To examine the effects of cooperative learning on the academic achievement of low-achievers; (4) To examine the effects of cooperative learning on the retention of the students in mathematics; (5) To recommend for the improvement and promotion of suitable method of teaching mathematics to secondary school students. This study was conducted in Government High School DA V College Road, Rawalpindi. The students of 10th class section B and C served as the sample of study. Students were divided into two sections on the basis of pretest. Section B served as the control group and section C served as the experimental group. Two mathematics teachers having equal qualification, equal teaching experience and considerably equal teaching potential, were selected to teach the control and the experimental groups. Same lesson plans and worksheets were used.
along with the direct teaching strategy for the both the control and the experimental groups. The control group was kept under control condition by providing traditional competitive situation in the class while the experimental group was provided with cooperative learning method STAD as treatment. This experimental lasted for a period of 10 weeks (4th September 2003 to 20th November 2003). After the provision of instruction and practice on 18 lesson plans covering five chapters, the academic achievement of the control group and the experimental group was examined through a posttest. The students and teachers continued working on next chapters. Six weeks after the first evaluation, the same posttest was administered surprisingly, to test the retention of the students of the both experimental and the control group. Pretest and posttest were used as measuring tools in the experiment. The pretest was for the equal distribution of students in the control and the experimental groups. The purpose of posttest was to measure the achievement as well as retention of the students after treatment. Actually posttest was a test parallel to pretest. The equality and similarity of the two tests was ensured on the basis of judgmental evaluation by the experts. Reliability of this test was determined by using Spearman-Brown's prophecy formula. Reliability of the posttest was found to be 0.75. Significance of difference between the mean scores of the experimental and the control groups on the variables of pretest; posttest and retention test was tested by applying t-test. To test the treatment effects for high and low achievers of both the experimental and control groups on posttest and retention tests, the factorial design (2x2) analysis of
variance, was applied. The interaction effect was explained on the basis of graphs.

**Gupta (2004)** studied “Enhancing student performance through cooperative learning in physical sciences”.

Students in a physical sciences course were introduced to cooperative learning at the University of Queensland, Gatton Campus. Groups of four to five students worked together in tutorial and practical sessions. Mid-term and practical examinations were abolished and 40% of total marks were allocated to the cooperative learning activities. A peer- and self-assessment system was successfully adapted to account for individual performance in cooperative learning group assignments. The results suggest that cooperative learning was very well received by students, and they expressed willingness to join cooperative learning groups in other courses. In addition, cooperative learning offered many benefits to students in terms of graduate attributes such as teamwork, communication, lifelong learning and problem-solving.

**Julie Bullard and Bullock (2004)** studied “Building relationships through cooperative learning”.

Based upon several years of team-teaching intensive early childhood education courses, the investigators discuss their experiences of building teacher-learner relationships through cooperative and collaborative learning. After witnessing significant conflict occurring within groups over the years, the investigators
began to investigate, discuss and integrate notions of cooperative learning, collaboration, conflict and change within their early childhood courses. Considerations for limiting unproductive conflict and encouraging productive conflict among adult learners are highlighted. Guided by current research, the investigators developed and applied several practices and strategies to support relationship building, promote respectful interactions, and to assist groups to negotiate conflict and work collaboratively on goals and projects.


This study investigates the connection between teachers' experience, beliefs concerning the acquisition of knowledge, behavioural intentions to implement instructional innovations and their use of the Student Teams Achievement Divisions (STAD) cooperative learning (CL) method in teaching English as a foreign language (EFL). Fifty-five EFL teachers from diverse school backgrounds in Lebanon participated in the study. The participants completed a demographic questionnaire and another Likert-type questionnaire that measured the variables under consideration. The results indicated that teachers' interpretive beliefs, attitudes towards STAD, subjective norms, and perceived degree of behavioural control play a significant role in the use of STAD in EFL teaching. Conversely, the results revealed that teachers' transmissive beliefs and experience did not influence their use of STAD in their teaching.
Linda Wilson-Jones, Marlene Cain Caston (2004) studied “Cooperative learning on academic achievement in elementary African American males”

The aim of this study was to investigate how cooperative learning promoted the academic success of elementary African American males in grades 3 through 6 in a rural school in Mississippi. This study presents viewpoints based on these students' perception of what influenced academic achievement. The qualitative study using a qualitative analyzed interview data gathered in approach to collecting data, participants engaged face-to-face interviews with 16 African-American males over a 3-month period during the 2002-2003 academic school year. Participants represented 16 elementary African American males. All students were regular education students who ranged between the ages of 8 and 13 years old. The participants were interviewed focused on topics related to home and school experiences and on how these two environments affected their academic success. It was evident of the significance cooperative learning had on their desire to learn. Results of this study indicated that was primary among the factor promoting that promoted these students' their academic success. The results further indicated that among the factors thought to inhibit their academic success. Findings showed that those African American males who had limited literacy activities did not perform as well academically as the students who did.

Siegel (2005) studied “Implementing a Research-Based Model of Cooperative Learning”.


The investigator used qualitative research methods to explore an 8th-grade mathematics teacher's personal definition of cooperative learning and the enactment of cooperative learning in his classroom according to that definition. Data collection involved interviews and classroom observations. The investigator used coding schemes and descriptive statistics for data reduction and analysis. Constructivist psychology provided the theoretical groundwork for conclusions based on consistency across interview and observational data. Results revealed that while the teacher implemented a research-based model of cooperative-learning instruction, he adapted the model for use in his classroom. Results also identified the teacher's prior experience and teaching context as factors that influenced his implementation of cooperative-learning instruction.

Took (2006) studied “Cooperative Learning And Achievement In English Language Acquisition In A Literature Class In A Secondary School”

Cooperative learning is a teaching arrangement that refers to small, heterogeneous groups of students working together to reach a common goal. Its effectiveness had been documented through numerous research studies. However, very few published materials have been done on the relationship between the use of cooperative learning as a teaching method to increase students' achievement in learning English literature in secondary school. Therefore, the purpose of this study was to discover the relationship between cooperative learning and achievement in English language
acquisition in a literature class in a secondary school. It is hoped that this study could help overcome the problems of students who have low English language proficiency in secondary schools. This study was conducted in a rural secondary school. A total of 59 respondents from Form 4 classes have participated. The experimental group received teaching method using cooperative learning strategies, while the control group received traditional lecture method. Qualitative and quantitative data were gathered in this study using four types of instruments: pre-test and post-test questions, questionnaires, classroom observations and interviews. Data analysis was done using SPSS version 9.0 program. It was found that all respondents showed a low and moderate performance in English Literature before the treatment. However, after the treatment, respondents from the experimental group showed a significant improvement. Those from the control group did not show similar improvement. Thus, the use of cooperative learning played an important role in acquiring English language in an English literature class. Furthermore, the qualitative data showed that cooperative learning could enhance students’ social development as well as interest in the learning of English literature. In conclusion, this study had proven that cooperative learning enhances students’ achievement in learning English literature.

Martin Herold; Birgit Landherr; Huber (2006) studied “A fractal approach to implement cooperative learning in German classrooms”
The development of skills necessary to master the challenges of culturally heterogeneous classrooms is impeded seriously by linear teaching/learning procedures within the majority of educational institutions. One of the most serious obstacles is the systematic organisation of teaching according to strictly separated subject matter areas. This study describes an approach to implement cooperative learning by radically changing the organisational structure of teaching as well as the roles of teachers and students. Because this approach tries to create similar structures and processes within all organisational units from staff level to the level of cooperative teams of students, it is called a fractal model of implementation. All students of the same grade are assigned to one of several 'learning islands' that comprehend those subject matter areas, which can easily be linked to each other. In our study 12th grade students will access the topic of 'energy' on three 'islands' under the perspectives of natural sciences/mathematics, linguistics, and social sciences. According to a modified version of Jigsaw learning, the students take turns as inhabitants of each of the learning islands. A team of teachers introduces the overlapping topics. Each student has to complete the assignments of one of the disciplines represented on the learning island in order to become an 'expert', while other students on the same learning island will become experts for the other subject matter areas. Later, back in their 'basic teams' they will share their different expert knowledge, teaching each other and learning from each other with increasing self-responsibility. The teachers are available during this phase of learning as moderators of group dynamics, learning procedures, and as subject matter
experts. This organizational principle is realized on all levels of the teaching/learning system, from structuring a complete grade level according to learning islands, breaking them down into expert groups, teams, and finally individual learners.

**Milena Bandiera; Costanza Bruno (2006)** studied “Active/cooperative learning in schools”.

The study describes a teaching action undertaken in the belief that the use of methodologies based on active and cooperative learning could obviate some of the most worrying deficiencies in current scientific teaching, while at the same time supporting the validity of the constructivistic theory that prompted them. A teaching action on genetically modified organisms (GMOs) was planned which involved the setting up of tools (diagnostic tools, strategies imbued with problem-based learning and concept cartoons), a teaching sequence and laboratory materials (replica-plating aimed at the recognition of transformed bacteria, Nicotiana cultures, electrophoresis comparing protein patterns of GM and non-GM plants). It was then carried out in 10 classes of six upper secondary schools (three specialising in classical and three in scientific studies) in Rome, with a total of 144 students ranging in age from 16 to 19. The written texts of students' views and arguments were analysed statistically and conceptually, which led to an overall positive evaluation of the teaching activity, at least as regards the acquisition of scientific terminology and argumentation. The action can also be considered effective with respect to scientific education as well as overall intellectual and social maturity. Though the structure and the organisation of the schools involved
were very different, autonomous inquiry, group work, and plenary discussion were not impeded in any way.

**Zakaria and Iksan (2007)** studied “Promoting Cooperative Learning in Science and Mathematics Education: A Malaysian Perspective”

The purpose of this study is to discuss the current shortcomings in science and mathematics education in Malaysia. The use of cooperative learning as an alternative to traditional method is emphasized. Cooperative learning is grounded in the belief that learning is most effective when students are actively involved in sharing ideas and work cooperatively to complete academic tasks. This study would also focus on selected studies done locally and their expected educational outcomes. A challenge involved in implementing cooperative learning is also discussed.

**Yamarik (2007)** studied “Does Cooperative Learning Improve Student Learning Outcomes?”

The investigator applied cooperative learning to one section of intermediate macroeconomics and taught another section using a traditional lecture format. Investigator identified and then tracked measures of student learning outcomes. Using multivariate regression analysis, he found that students taught by cooperative learning achieved greater academic performance in the form of higher exam scores.

**Meixia Ding et. al. (2007)** studied “Teacher Interventions in Cooperative-Learning Mathematics Classes”
The investigators examined the extent to which teacher interventions focused on students' mathematical thinking in naturalistic cooperative-learning mathematics classroom settings. The investigators also observed 6 videotapes about the same teaching content using similar curriculum from 2 states. They created 2 instruments for coding the quality of teacher intervention length, choice and frequency, and intervention. The results show the differences of teacher interventions to improve students' cognitive performance. The investigators explained how to balance peer resource and students' independent thinking and how to use peer resource to improve students' thinking. Finally, the investigators suggest detailed techniques to address students' thinking, such as identify, diversify, and deepen their thinking.

Chamberlin (2008) studied “Cooperative Learning as Method and Model in Second Language Teacher Education”.

This study describes the integration of a series of cooperative learning activities into a graduate level teacher education course, Collaborative Teaching in ESL, for in-service teachers in one of the largest urban school districts in the United States. Because some of the challenges identified by the ESL teachers center on status and relationship issues with other teachers in their schools, this course in collaborative teaching focused on relational dynamics such as trust, reciprocity, and approachability as central to successful implementation of collaborative practice. Cooperative learning (CL) activities were integrated into the program in order to bring the ESL teachers together in groups to explore their own values and expectations for learning as well as their own communication styles.
that encourage or hinder collegiality. The research question asks how CL contributes to teachers’ understanding of themselves as communicators, collaborators, and agents of change. From a qualitative analysis of observer notes, journal entries, classroom discussions, group activities, and autobiographies, evidence of teacher learning is presented and discussed. The study highlights how dimensions of cooperative learning can be used not only as methodology in second language teacher education but also as a model for developing collaborative relationships between ESL and content area teachers.

Mentz and Van Der Walt (2008) studied “The effect of incorporating cooperative learning principles in pair programming for student teachers”

Based on their quantitative and qualitative investigations, the investigators conclude that pair programming as a strategy for teaching student teachers could be made more effective through the incorporation of principles associated with cooperative learning. They substantiate this claim by referring to a literature study about the advantages and disadvantages of pair programming as a teaching-learning strategy, by then discussing five principles of cooperative learning, and by presenting the findings of their empirical study. Second year student teachers taking a Delphi programming module participated in an experiment conducted over a two year period. In 2005, the participants did computer programming in pairs without the application of principles associated with cooperative learning. In 2006, a similar group of participants also programmed in pairs, but in their case, certain
principles associated with cooperative learning were incorporated in the strategy followed by the facilitator. According to a comparison of the module examination marks, the 2006 group outperformed the 2005 group. This finding was confirmed by qualitative investigations.

**Perihan Dinc, Artut (2009)** studied “Experimental evaluation of the effects of cooperative learning on kindergarten children’s mathematics ability”

The aims of this study were to investigate the effects of cooperative learning on the mathematics ability and cooperative social behaviours of kindergarten children and to evaluate teachers’ perspectives on the application of the program. One control (n = 17) and one experimental group (n = 17) were studied. In the experimental group, a curriculum based on cooperative learning method activities was used. Significant improvements in mathematics abilities were found for children in the experimental group that utilized cooperative learning.

**Hornby (2009)** studied “The effectiveness of cooperative learning with trainee teachers”.

A plethora of research studies has found cooperative learning to be effective in promoting academic achievement with students of all ages. It has been suggested that key elements of cooperative learning are individual accountability and positive interdependence. Forty-four final-year teacher trainees participated in a study which compared the effectiveness of a two-hour
workshop on cooperative learning with and without these two key elements. A multi-choice test focusing on what students had learned and a post-workshop questionnaire focusing on the students' experiences of and attitudes towards cooperative learning were used to evaluate the impact of the workshop. Results indicate that academic learning was greater in the experimental group, in which individual accountability and positive interdependence were structured into the activity. They also indicate that the inclusion of these two elements did not significantly affect students' experiences of the workshop or their attitudes towards cooperative learning. These findings support the suggestion that to achieve optimum effectiveness, individual accountability and positive interdependence should be built into cooperative learning activities.

**Marina Vasileiadou (2009)** studied “Cooperative learning and its effects on pre-primary, marginalized children”

This study is based on the effect that cooperative learning activities may have on the acceptance of marginalized children in pre-primary school. The small-scale project was undertaken at a public, pre-primary school in Cyprus using sociometric measures and observations, pre and post the implementation of some cooperative learning lessons. Thirteen kindergarten children participated in the project (mean age = five years, eight months). The findings indicate some possible beneficial effects from cooperative learning on children who are marginalized, which need further investigation in future research.
**Stoltzfus, and Reffel (2009)** studied “Cultivating an Appreciation for Diverse Religious Worldviews through Cooperative Learning in Undergraduate Classrooms”

Perspectives courses at Valdosta State University are charged with expanding undergraduate students' intellectual and attitudinal horizons by exposing them to both interdisciplinary and multicultural perspectives. The Religion and Culture Perspectives course focuses on how a diversity of religions respond to real-life dilemmas using the medium of cross-cultural case studies and religious autobiographical narratives. This course can effectively foster imaginative engagement with and appreciation for diverse religious perspectives and practices through specific cooperative learning strategies. Research explored the effects of cooperative learning on appreciation of religious difference. Students showed changes in their attitudes as a result of course participation.

**Shimazoe and Aldrich (2010)** studied “Group work can be gratifying: Understanding and overcoming resistance to cooperative learning”

The study provides several benefits on the use of cooperative learning approach for students. First, cooperative learning promotes deep learning of materials. Second, students achieve better grades in cooperative learning compared to competitive or individual learning. Third, students learn social skills and civic values. Fourth, students learn higher-order, critical thinking skills. Fifth, cooperative learning promotes personal growth. Finally, students develop positive attitudes toward autonomous learning.
Zakaria (2010) studied “The Effects of Cooperative Learning on Students’ Mathematics Achievement and Attitude towards Mathematics”

The purpose of this study was to determine the effect of cooperative learning on mathematics achievement and attitude towards mathematics. This quasi experimental study was carried out on two form one classes in Miri, Sarawak. One class (n = 44) was assigned as an experimental group and the other (n = 38) was assigned as a control group. The two groups were pre-tested prior the implementation. At the end of the study, post test was given, while daily quiz was used as a tool for formative testing. Teaching and learning process was carried out for two weeks. Data were analyzed using the t-test to determine performance by comparing the mean of the post test for treatment and control group. The results of this study showed that cooperative learning methods improve students’ achievement in mathematics and attitude towards mathematics. The researchers concluded that cooperative learning is an effective approach, which mathematics teachers need to incorporate in their teaching.

Thurston et. al. (2010) studied “Cooperative Learning in Science: Follow-up from primary to high school”

This study reports a two-year longitudinal study of the effects of cooperative learning on science attainment, attitudes towards science, and social connectedness during transition from primary to high school. A previous project on cooperative learning in primary schools observed gains in science understanding and in
social aspects of school life. This project followed 204 children involved in the previous project and 440 comparison children who were not as they undertook transition from 24 primary schools to 16 high schools. Cognitive, affective, and social gains observed in the original project survived transition. The implications improving the effectiveness of school transition by using cooperative learning initiatives are explored. Possibilities for future research and the implications for practice and policy are discussed.

**Carla Chamberlin-Quinlisk (2010)** studied “Cooperative learning as method and model in second-language teacher education”

This study describes the integration of cooperative learning (CL) activities into a graduate teacher education course, Collaborative Teaching in English as a Second Language (ESL). Because teachers and researchers have both identified discipline status and relationship issues as challenges to collaboration, this course focused on relational dynamics such as respect, trust, reciprocity, and approachability as central to the successful implementation of collaborative practice. CL activities were integrated into the program to encourage ESL teachers to explore their own values and expectations for learning as well as their own communication styles which might facilitate or hinder collegiality. The research question asks how CL contributes to teachers' understanding of themselves as communicators, collaborators, and agents of change. From a qualitative analysis of observer notes, journal entries, classroom discussions, group activities, and
autobiographies, this study highlights how dimensions of CL can be used not only as methodology in second-language teacher education but also as a model for developing collaborative relationships between ESL and content-area teachers

**Sahlberg (2010)** studied “Hope of cooperative learning: intentional talk in Albanian secondary school classrooms”

The notion of a knowledge society has led policy-makers and reformers to look for classroom practices that would lead to more productive learning in schools. Modern educational technologies are often thought to transform the traditional presentation-recitation mode of instruction into more participatory learning. This study assumes that teaching for modern intercultural knowledge societies should rely on multilateral communication, students' ideas and social interaction. Based on observation data from 303 upper secondary school classrooms in randomly selected schools, which were analysed using Flanders Interaction Analysis Categories, this study found that these basic conditions for productive teaching, such as cooperative learning were missing in most classrooms. These data suggest that typical secondary school lessons are dominated by teacher talk and that time for student-initiated talk is about 1% of total lesson time. This study also confirmed that classrooms provide a poor psychological and social environment to stimulate student initiation, participation or risk-taking. Therefore, unless the pattern of verbal interactions in classrooms is changed, cooperative learning will have difficulty taking root as part of secondary school culture.
Sharan (2010) studied “Cooperative learning: a diversified pedagogy for diverse classrooms”.

As a generic and diversified pedagogy, cooperative learning (CL) reaches out to the field of intercultural education with an offer to establish a reciprocal relationship. After a short description of the diversity of CL and a brief exploration of the influence that culture has on learning, this study depicts how the partnership between CL and intercultural education can help to create a culturally sensitive CL classroom, where learning is made relevant for all. Culturally responsive teaching implies using CL methods and strategies to discover the students' worlds and incorporate them into the world of the classroom.

Scheuerell (2010) studied “Virtual Warrensburg: Using Cooperative Learning and the Internet in the Social Studies Classroom”.

The investigator discusses how high school social studies teachers can have their students investigate local history topics and share their findings by producing Web pages, using a cooperative learning structure. The investigator discusses his firsthand experiences using this approach with high school students at Warrensburg High School. He emphasizes the need to rethink how technology is being used in the social studies classroom in particular, by having students share their local history findings with others beyond the walls of the classroom rather than being passive learners with the Internet. In addition, he emphasizes the benefits of having students work together to collaboratively construct knowledge using technology specifically,
by using the PIES cooperative learning structure to ensure there is positive interdependence, individual accountability, equal participation, and simultaneous interaction among group members. Examples of Web pages, produced by his students using the PIES cooperative learning structure, are discussed in the study.

**Ulrike-Marie Krause (2010)** studied “Reflection in example and problem-based learning: effects of reflection prompts, feedback and cooperative learning”.

To examine the effects of reflection prompts, elaborated feedback and cooperation on learning and reflection, two experimental studies were conducted. For both studies, an example- and problem-based e-learning environment on correlation was used. In Study 1, 57 university students were randomly assigned to two conditions: with reflection prompts that asked students to give reasons for their decisions and without reflection prompts. The intervention promoted learning, and the students' reasons indicated substantial reflective processes. In Study 2, 137 university students were randomly assigned to four conditions: individual learning with or without feedback intervention and dyadic learning with or without feedback intervention. The feedback intervention clearly enhanced learning outcomes, whereas cooperative learning had no significant effect on learning. Perceived reflection was high in all groups, differences were non-significant.
Yurdabakan (2010) studied “The Investigation of Peer Assessment in Primary School Cooperative Learning Groups with Respect to Gender”

The present study focuses on whether peer assessment used in cooperative learning groups varies with respect to gender and investigates the compatibility level of peer assessments with teacher grades. This study was conducted in a primary school fourth grade social sciences course with 46 participants, 28 female and 18 male, their ages ranging from 9 to 10. The study rendered different results of peer assessment, where male and female students scored their fellow and opposite sexes with respect to their contribution to group work and their learning levels. The compatibility between female and teacher scores was higher than male and teacher scores.

Hsiung (2010) studied “An experimental investigation into the efficiency of cooperative learning with consideration of multiple grouping criteria”

The present study conducts an experimental investigation to compare the efficiency of the cooperative learning method with that of the traditional learning method. A total of 42 engineering students are randomly assigned to the two learning conditions and are formed into mixed-ability groups comprising three team members. In addition to the regular daytime classes, homework sessions are arranged such that the out-of-hours learning method and learning time can be effectively controlled. The students' academic achievement is evaluated by means of unit tests in the
daytime classes and homework tests in the out-of-hours sessions. As an alternative method for resolving the multiple grouping criteria problem, the analysis of covariance method is used to compensate for the initial difference in the prior knowledge of the students in the two learning conditions regarding the course contents. The results show that given an equivalent learning time, the students in the cooperative learning condition outperform those who study alone in both the unit tests and the homework tests. Therefore, it is concluded that cooperative learning has a higher efficiency than the individualistic learning method.

**Huiping Ning (2010)** studied “The effectiveness of cooperative learning in teaching English to Chinese tertiary learners”

Few studies have been conducted of the impact of cooperative learning (CL) on the teaching of English as a foreign language (EFL) at the tertiary level. This study investigated the effects of CL on Chinese EFL learners' English language competencies in listening, speaking, reading, writing and vocabulary. Participants were a 100 first-year College English learners from a university in the north of China. A pre-test-post-test control group quasi-experimental design was employed to study the effects of the CL approach on students' language competencies in comparison to traditional instruction. Findings revealed clear differences in favour of the CL approach in the areas of listening, speaking and reading but no differences were found between the two approaches in the areas of writing and vocabulary.
**D’souza (2010)** studied “Two Heads are Better Then on Cooperative Learning is so Much Fun”

An attempt was made in this investigation to study the effectiveness cooperative learning in the teaching of the topics Natural Resources and Types of Pollution of the students of standard VIII in a school based in Mumbai. The investigator concluded that having students work together cooperatively is a powerful way for them to learn and has positive effects on the classroom climate. The importance of emphasizing cooperative learning groups in classrooms goes beyond achievement, acceptance of difference and positive attitudes. The ability of all students to learn to work cooperative with other is the keystone in to building and maintaining stable families, careers and friendships.

**Huang (2010)** investigated “Study Of Teaching Model Based On Cooperative Learning”

Cooperative learning is a popular teaching method now in the world. This study first discusses the teaching model based on cooperating learning, then analyzes the advantages of cooperating learning and at last proposes the steps of carrying out cooperating learning. It is necessary to introduce the teaching model based on cooperating learning into the teaching for training software talents of China.
**Pushpanjali (2010)** studied “Effect of Cooperative Learning on Achievement Motivation and Anxiety”

Cooperative Learning is a board phase for an effective approach to education. Cooperative Learning in a classroom learning environment in which student learn in mixed ability heterogeneous groups on academic tasks. In the present study an attempt has made to find out the effectiveness of cooperative learning strategy on achievement motivation and anxiety of Class IX students of Chikoddi city. The findings of the study were Cooperative learning strategy was more superior to conventional method in significantly promoting achievement motivation and cooperative learning strategy was effective insignificantly reducing the anxiety.

**Aziz (2010)** studied “A comparison of cooperative learning and conventional teaching on students’ achievement in secondary mathematics”

Cooperative learning (CL) has been a preferable alternative to conventional teaching (CT) for recent decades. This study aimed at comparing the effects of CL and CT on mathematics achievement in Sreepur Adarsha Girls’ High School. Sixty two students of grade-IX participated in this study where quasi-experimental design was employed. Both the experimental group (EG) and control group (CG) were guided by the same teacher in one academic session for fifteen weeks. The results showed a statistically significant difference in favour of the EG after CL treatment. The findings revealed that the cooperative students significantly outperformed
the conventional students. As such, CL can effectively be implemented to improve students’ achievement in secondary mathematics.


The purpose of this research is to investigate the relations the achievement motive of secondary school students and the relations between the achievement motive and “gender”, “class level”, “parent education level” and “family income level” with variables. Total 151 students studying in high schools in the city center of Karabük in the academic year of 2010-2011 participated in the research. Survey model was used in the study. "The Achievement Motive Scale" was used as data collecting tool developed by Ellez (2004). The descriptive statistics, t-test and one way variance analysis (ANOVA) were used in the analysis of data. At the end of the study, the arithmetic mean of the views of students about the scale of achievement motivation has been determined to be 3.74. The views of students about the scale of geography lesson achievement motivation has shown significant difference according to “class level”, but did not show any significant difference according to “gender”, “mother’s education level”, “father’s education level” and “family income status”. Based on the findings of the study, suggestions for increasing the achievement motivations of the students towards geography curriculum have been developed.
Qaisara Parveen et al (2011) studied “Effect Of Cooperative Learning On Academic Achievement Of 8th Grade Students In The Subject Of Social Studies”

The study was designed to explore the effect of cooperative learning on academic achievement of 8th grade students in the subject of social studies. It was hypothesized that there is significant difference between mean posttest achievement score of the experimental group and mean achievement score of the control group.

The pretest posttest control group design was chosen for the experiment. The study sample consisted of 35 students who were distributed among experimental group (N=18) and control group (N=17), by matching them on the basis of their annual examination at social studies scores. The dependent variable of social studies achievement was measured through self constructed, 25-item achievement test used both as a pretest as well as a posttest. The experimental group was exposed to the treatment of cooperative learning while the control group was provided with routine teaching. The material used for teaching the experimental group consisted of lesson plans, worksheets and Quizzes designed to implement cooperative learning strategy. The data were analyzed through t test. The result of the study did not confirm the research hypothesis. Cooperative learning as not found to be a better instructional strategy than routine method of instruction.
Lavasania (2011) studied “The effect of cooperative learning on mathematics anxiety and help seeking behavior”

Present study is surveying effectiveness of cooperative learning over mathematics anxiety and help seeking behaviour of first grade of high school girl students. Experimental research method was pretest - posttest type which lasted for 8 meetings. For measurement of variables has been used from mathematics anxiety questionnaire and help seeking questionnaire (acceptance and avoidance from help seeking). In respect of executing project plan in pretest level and after execution of two questionnaires, based on highest mark of mathematics anxiety, 40 students from two schools have been selected randomly matching and were put at two groups of control and experimental. Teaching some subjects from math book at control group in traditional way and in exam group has been in cooperative learning method. After termination of educational meetings, again two questionnaires of mathematics anxiety and help seeking behaviour performed over some persons. For data analysis has been used from analysis of covariance (ANCOVA). Consequently results showed that cooperative learning method in comparative with traditional way, decrease mathematics anxiety in students significantly and increase help seeking behaviour and decrease its avoidance component (p<0.05) at them.
Ana María Luque Gil (2011) studied “Cooperative Learning And Teaching Of Geography Under The Ehea”

This study aims to clarify what is cooperative learning, explain the advantages and disadvantages of its implementation, learn the main techniques and present the results of a project of educational innovation which has experimented with these techniques in two different areas of geography; the methodology values the opinion of students and teachers on cooperative learning. The results were evaluated interchangeably by students and faculty and served to shape a series of conclusions regarding cooperative learning in college geography. This learning method has strengths and weaknesses but it seems clear from the experience made and collected the literature, which is one of the best ways to work the skills related to cross-cutting skills and abilities as well as the development of attitudes and values in the discipline of geography and others. In the current scenario of change in the university, cooperative learning is well suited to the new requirements of the European Higher Education Area, and hence the extension and implementation of these techniques among university professors.

Ozdemir (2012) studied “High School Students’ Attitudes Towards Geography Courses”.

The purpose of the study is to put forth high school students' attitudes towards geography lessons. The research group of the study is comprised of 200 students attending to high school
students in Karabük in 2011-2012 educational years. As means of data collection "Geography attitude scale" developed by Ayd (2009) was used in this research in the frame of survey model. As the result of the study the gathered data were analyzed by SPSS 15 statistical programme in terms of frequency, percentage, arithmetic mean, t test and one way variance analysis (ANOVA). When general expressions measuring general attitudes towards geography lesson, it is clear that 83.5 % of the students love geography. According to the results of the analysis, high school students’ attitudes towards geography courses having no meaningful correspondence with their “gender” and “class level” variants.

**Howell. (2013)** studied “Introducing Cooperative Learning into a Dynamics Lecture Class”

Numerous references have suggested that cooperative learning can significantly increase student understanding. Yet, structuring a lecture class to be given over totally to cooperative learning groups is overwhelming to most instructors and many remain unconvinced of its value. In this department, a limited experiment has served to introduce cooperative learning to the students as well as the instructor. Through a series of cooperative problem solving exercises, “lecture” classes become more active learning environments.

**Hsiung (2013)** studied “The Effectiveness of Cooperative Learning”.
This study compares the learning effectiveness of cooperative and individualistic learning. The proposed approach carefully monitors the learning method and the time on task both in regular day-time teaching classes and out-of-class studies. A series of experiments was performed in which 42 mechanical engineering students were randomly assigned to individualistic or cooperative learning conditions, respectively, and were then formed into heterogeneous groups comprising three team members. The experiments were conducted over an 18-week semester. In conducting the experiments, the students attended both regular classes and out-of-hours homework sessions. The experimental results showed that given a sufficient period of time for the cooperative learning teams to mature, the students in the cooperative learning condition performed substantially better in both the homework and unit tests than those in the individualistic learning condition. Since the time on task was carefully monitored, the higher academic performance of the students in the cooperative learning condition suggests that cooperative learning is more effective than individualistic learning.

2.2 CONCLUSION

The above literatures support the use of well-structured cooperative learning in order to increase student achievement in Geography. Geography understanding plays a crucial role in society and future successes for students. The foundation is formed at a very young age and students either begin to love social studies or hate it. Once they have negative feelings, they begin to feel they do not have the ability to ever be successful or understand math.
Teachers have the responsibility to develop lifelong learners. In order to do that, teachers need to create and foster an environment that is conducive to positive geographical perceptions, social interactions, and directed at the needs of each individual student. As research also shows, students are more motivated when they feel successful and the concepts taught are related to their lives. The use of cooperative learning is a powerful way teachers can create and engaged community of learners. It allows students to develop positive feelings about themselves as learners and experience success in geography while understanding higher-level concepts. Additionally, when fostered in a classroom and implemented strategically, cooperative learning promotes students taking an active role in their education through participation and involvement. This can enhance each students learning and lead to higher levels of achievement. It is also found that there is no much done on cooperative learning in India on Geography topic. Therefore it is not possible to categorize hence they are integrated. It is difficult to find the differences, similarities and between the previous studies.

The next chapter methodology is about the detailed information of the variables used the study, hypotheses, population and sample, tools used for the collection of the data and statistical technique applied for the investigation.