Introduction
Chapter I

INTRODUCTION

Despite great advances in knowledge about student learning and tremendous amount of investment in terms of time, effort and money, our schools still have not progressed towards the goal of efficient learning for all students. Thus the schools continue to provide successful and rewarding learning experiences for only about one third of our learners. At this moment, thousands of students at every educational level and in all types of educational facilities are working on school projects, that will in due course, be labelled unsatisfactory, 'poor' or failures'. Students fail too often and so universally, that some people are convinced that failure is an essential and inevitable aspect of the educational process (Torshen, 1977).

However, failure often produces harmful consequences that work against the goals of education. Many dedicated teachers have doubted their own professional abilities when they could find no alternative other than giving a failing grade to a student (Tarshan-1977). And many students who received repeated and consistent evidences that their work was unsatisfactory, have been convinced that school was a place where they could not succeed. When sincere attempts to teach and to learn meet with repeated negative responses, the instructional process can actually eliminate those activities that are essential to productive education.

During his stay in school, a student needs to attain mastery of essential learning tasks (Erikson, 1959), to see himself as a competent student and to receive evaluations that indicate to him that his performance has been successful (White, 1960; Skinner, 1968; Kelly, 1971). If he fails to attain mastery or to achieve the status of one who is competent and successful, his chances for healthy development can be substantially reduced.

The teacher, faced with the job of creating an environment in which each student can develop his potential and attain competence, is confronted with a monumental task. This task may be impossible unless the teacher can employ varied instructional methods and materials sufficinetly appropriate for each student to enable him to master the basics of the curriculum. Each student needs access to instruction at the level appropirate for him. Flexible scheduling is needed to allocate the amount of time each student needs to attain mastery (Torshen, 1977). Students with diverse interests and goals need instructional objectives appropriate for them. And evaluation methods must provide positive evaluation to each student when his performance is
competent, even these conditions appear reasonable, they are lacking in many classroom situations at the present time.

Mastery learning (Bloom, 1968) offers a powerful new approach to school learning which can provide almost all students with successful and rewarding learning experiences, now available to only a few. It operates on the proposition that almost every student can learn the school curriculum when the instruction is of good quality and appropriate for him, and when he spends adequate time in learning (Bloom, 1971; Calloll, 1971).

1.1 MASTERY LEARNING

Mastery Learning is one of the models of teaching under the behavioural systems family of models (Joyce and Weil, 1986). Behaviour theory based on Skinner’s operant conditioning and Wolpe’s counter conditioning as well as training psychology, form some of the important bases of educational technology. In mastery learning the primary emphasis is on reinforcement, stimulus control and immediate feedback.

Mastery learning procedures closely follow the principles of instructional design described below:

- Specification of goals and tasks,
- Specification of sub-task,
- Training activities to ensure mastery of each sub-task,
- Sequencing sub-tasks to ensure transfer and
- Achievement of pre-requisite learning before more advanced learning.

Mastery learning as one of the important approaches to enhance student learning, was presented by Bloom (1966) and his associates based on Carroll’s (1963) model of school learning. It has been widely researched on and major projects have been carried out (Kim, 1969).

Carroll’s (1963) postulated a model of school learning in which "time" played an important role. The model which is applicable to an individual student states that the time actually spent

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\text{Degree of learning} = \frac{\text{time actually spent}}{\text{time needed}}
\]

Carroll redefined aptitude as learning rate rather than learning level, by allowing time to vary but holding learning constant. Traditionally aptitude is considered as a relatively fixed and generic ability to perform various kinds of learning tasks (Clark, 1987). If students are normally distributed with respect to aptitude for some subject and
all students are given exactly the same instruction in terms of quality of instruction and learning time their achievement will be normally distributed.

But, if the students are normally distributed with respect to aptitude but the kind and quality of instruction and learning time are allowed to vary to suit the characteristics and needs of each learner, the majority of students will achieve mastery.


Where:
Opportunity to learn: Amount of time allocated to the learner for learning of a given task which is under the control of teacher.
Perseverance: Time the learner is willing to spend on the task controlled by the student. It can be increased by providing high quality of instruction and frequent feedback.
Aptitude is the amount of time needed to master the task under ideal conditions.
Quality of instruction is the degree to which the presentation, explanation and ordering of elements of the learning task optimises for given learner.
Ability to understand instruction based on general intelligence and verbal ability, is the ability of the learner to understand the nature of the task he is to learn and the procedures he is to follow in his learning (Block, 1971).

Bloom (1966) transformed Carroll's model into a working model for mastery learning where, in the context of group based teaching, individualization of instruction is attempted. Bloom (1971) based his approach on some of the elements in the Winnetka plan of Washburne (1922) and on Morrison's ideas (1926). The ideas were further refined and elaborated by Block (1973) and Anderson (1975). Learning through Bloom's MLS is group-based and teacher-paced. Another model of ML used for college courses (Burns, 1977) such as Keller's personalized system of instruction (1968) is Individual-based and student-paced.

Some modified MLS have also been tried like Co-operative Mastery learning or Modified Bloom's MLS (with only one cycle of feedback correctives). In the recent span of twenty five years more than one thousand articles were written on mastery learning (Guskey and Pigott, 1988). Despite occasional controversies and criticism, results of numerous studies have supported the basic philosophy of mastery learning.

1.1.1 Syntax of MLS

Both the MLS operate through the following syntax:

(A) Defining Mastery

- Formulating a set of instructional objectives in behavioural terms.
- Preparing a final or summative test over these objectives and determine the course mastery performance standard which the students will be expected to achieve on this test.
- Sequencing the learning units and determining the course objectives to be covered in each unit.

(B) Planning for Mastery

- The teacher develops study guides by using his customary group-based teaching method (in Bloom's strategy).
- The teacher develops study guides consisting of an introduction, a statement of objectives, suggested study procedures (Keller's approach).
- Prepare formative tests.
- Develops feedback/corrective procedures.
- Develops a set of alternative instructional materials.
Introduction

Teaching for Mastery

- The teacher provides orientation to the students regarding mastery learning procedures.
- Teaches the first learning unit, administers the unit criterion /formative test, identifies the non-achievers and asks them to use the appropriate corrective measures to complete their unit learning.

Grading for Mastery

- Administering summative/criterion test.
- Identify masters and non-masters.

Providing Feedback/Corrective Measures

- Provides feedback to masters and non-masters according to individual requirements.
- Implements alternative instructional materials to non-masters (monitorial, tutorials, need-based homework assignments, enrichment in Bloom's MLS and programmed package in Keller's MLS).
- Repeat formative test.
- Providing additional material to masters.

Tasks of Teacher in MLS

a) Defining Mastery

- Identify most essential, critical course outcomes or objectives:
  - Excellent learning for a limited number of highly desirable objectives (mastery is emphasis).
  - Mediocre learning for all conceivable objectives (coverage is emphasis)
- Final summative test is prepared:
  - To assess degree of learning over entire course
  - To evaluate (grade) the overall quality of student learning
- Set the level of acceptable performance:
- Divide the entire course into a series of smaller learning units:
  - Set of objectives for each unit are prepared to allow sufficient time for students to learn interrelated set of facts, concepts, principles, skills etc.
  - Closely monitor each student's learning
Sequence the units:
• Such that facts, concepts, principles, skills acquired in one unit are used over and over again in subsequent units

Decide what constitutes mastery for each unit:
• Tests vis-a-vis unit objectives are designed (formative tests)
  • to identify errors of learners,
  • to improve student learning rather than to evaluate,
  • to classify students.

Planning for mastery
• Design a general plan for students to master the unit objectives (referred to as original instructional plan).
• Preparing of methods for interpreting and using information of formative test.
• Set of alternative instructional material and learning activities keyed to each objective on the unit's formative test are developed.
  • These correctives are used to reteach each unit's objective - in a way different from original instruction viz.
    • Co-operative small groups
    • Small group study sessions
    • Peer tutoring
    • Different text books
    • work books and
    • A.V. materials

Using Correctives: Teacher has 4 options
Option I: Use initial 'masters' as tutors for non masters (Willingness of students, having specific tutorial material are essential)
Option II: initial masters be permitted to complete work in other subject areas
Option III: engage initial masters in structured independent study
Option IV: allow the masters to engage in "Vertical enrichment"

Planning of time:
• Approximate amount of time must be allocated in the original instruction, corrective instruction and testing.

c) Teaching for mastery
• Orientation of students:
  • Ss are informed of what they are expected to learn,
Introduction

- How will they learn it,
- How will they demonstrate learning,
- How the adequacy of their learning will be judged.

Teaching each learning unit in sequence using the original instructional plan.

Administering unit's formative test:
- Those who achieve performance standard are certified (either engage in enrichment or serve as tutors for slow learners)
- Those who have not achieved are identified (corrective instruction)

Announcement of the day on which initial instruction relative to the next unit will begin:

Phase I: Provide instruction for those objectives not mastered by a massive number (also indicates an instructional problem)
Phase II: Provide alternative activities and materials which are keyed to each objectives.

This cycle of original instruction, formative testing and certification or correction is repeated unit by unit until all units are complete.

Pacing of this cycle is done by the teacher (how much material and how many objectives be exposed).
- Pacing is done either by 'borrowing' time of subsequent units (if corrective and enrichment occur in a regular class)
- Or pacing be done as usual (if corrective and enrichment are provided outsides regular class)

d) Grading for mastery
- Administer a summative test:
  - Grade A for those who score at or above mastery performance standard.
  - Who score below performance standard
    (i) assign grade of incompletes' (either sufficient time was not spent or they did not receive sufficient help)
    (ii) assign remainder of traditional grades i.e. B, C, D and F.
- Select (i) or (ii) and identify number of objectives each one of them has acquired.
- Preferably formative tests (criterion referenced should be used to grade students rather than summative test (cumulative information).
1.1.2 SUPPORT FROM RESEARCH

An overwhelming majority of research studies on mastery strategy reveal that MLS is more effective than conventional teaching strategies. Bloom (1984) has predicted that forms of MLS will be able to consistently produce achievement effects of 2 sigma i.e. effect sizes of 2.00. This effect is due to the fact that there is a close relationship between objectives, learning and evaluation as far as the ML group is concerned (Slavin, 1987).

1.1.2. (i) Research on MLS-cognitive outcomes

- **Achievement of students in the experiment group (ML) on locally constructed tests is much higher than that of control groups.**
- **The ML strategies have been tried for different cognitive outcomes at different educational levels. viz:**

**At School level**

- First to sixth grade english grammar (West, 1979; Bacon, 1985, Hefner, 1985).
- Physics (Srivastva 1983; Kishore, 1986).
- High school civics (Nicholson 1982).
- Ninth grade Algebra (Tenenbaum, 1986); Language syntax (Anutora, 1987)
- Language Arts (Johnson, 1990).
- Tenth Grade Chemistry (Salim, 1988).
- Eighth grade chemistry (Despandey & Bhatt, 1994).
- High School Education course (Whiting & others, 1995).
- First & Second Grade Economics Concepts (Laney & others, 1996).

**At College Level**

Mastery procedures have been used in numerous college courses. High performance of mastery learning group as compared to non-mastery group was reported in the various subject areas viz.:-

8
Introduction

- Vocabulary skill (Melemore, 1981).
- French (Holden, 1983).
- Basic Arithmetic (Shrum, 1985).
- Male student's maths (Pitts, 1985).
- Chemistry (Rosing, 1985).
- Nursing Course (Jones, 1986).
- Hotel Management Courses (De France, 1993).

At University level

**Effectiveness of MLS at University level have been proved in the subjects. viz:**

- Test theory (Airasian, 1967).
- Psychology (Sherman, 1967).
- Philosophy (Moore-1968).
- Statistics (Mather, 1988).
- Grammar Teaching and Communication (Takashiwa, 1995).

Retention of experimental group is significantly more than that of students in the control group viz:

- First to sixth grade Mathematics (Anderson, Scott & Hutlock, 1976).
- Science (Brooks, 1982).
- High School chemistry (Cottey, 1983).
- Physics (Srivastava, 1983).
- Algebra (Sawhney, 1993).
- Biology (Ahuja & Sharma, 1998).

1.1.2 (ii) **Research on MLS and Affective Outcomes**

(a) **Attitudes & Interest**

Among researches investigating student affective consequences associated with mastery model implementation, the most frequent measurement was the student report of this interest or attitude towards the subject matter and towards the instruction.

At School Level

*MLS helped the school children to develop positive attitude towards different subject areas as in*
Introduction

• Algebra (Block, 1970);
• Mathematics (Yadav, 1984);
• Reading (Evans, 1985);
• English (Anujoro, 1987).

Regarding attitude towards the strategy positive results were reported by Hooda, 1982; Joyce, 1988.

At College level and University Level

At college level students reported no difference in attitude of MLS group towards subjects like hotel management Block & Tiemey, (1974) DeFrance (1993). At University Level Sherman (1967) reported positive attitude of MLS group towards psychology.

Attitude towards strategy at university level

Hudson (1995) reported significant increase in affective scores, interest, enjoyment of overall feeling about the strategy.

(b) Other Affective Outcomes : (self-concept and other students perceptions)

At school level

• Change in self concept results in changes in performance (Brookoves 1964, Albei, 1971; Torshen 1974)
• Increase in verbal and non-verbal creativity (Hooda, 1982)
• MLS are more effective with low ability students (Hallade, 1982)
• Increase in academic motivation (Joyce, 1988)
• Increase in self-esteem of the students (Bonoparte, 1989)
• Self-concept : (Chaudhari and Vaidya, 1988; Deshpandey and Bhatt, 1994)
• Increase in Initiative (Ahuja & Sharma, 1998)
• MLS have been found to be more effective with high SES students, (Kapoor, 1989; Kersh, 1990; and Mevereech, 1986; Deshpandey and Bhatt, 1994)

At College Level

• MLS have been found to enhance self-esteem (Modu, 1969)

1.1.2 (iii) Modified MLS and Cognitive Learning Outcomes

Recently some modified version of MLS have been tried and the results of these studies suggest:
Co-operative mastery learning strategies lead to higher achievement gains as compared to MLS and conventional instruction [Kreider, 1992; (Physical Science), Mevarech, 1993 (Questioning Behaviour)].

Modified MLS lead to higher achievement when only one co-operative feedback cycle is provided (Luckmeyer and chaipetta, 1981; Dillashaw and Okey, 1983; Deshpandey and Handli, 1994).

Modified MLS with different advance organisers in initial instruction resulted into higher performance as compared to MLS or conventional instruction (Ahuja and Ogogo, 1996).

When, initial instruction in MLS is imparted through Gagne’s events of instruction (Ahuja and Sharma, 1998).

1.2 CO-OPERATIVE LEARNING

Co-operative learning (CL) is a process by which students work together in groups to "master material initially presented by the teacher" (Slavin, 1990). According to Slavin (1990) the goal of CL is for students to help each other succeed academically. To be successful, all members in a group must achieve mastery of the material or contribute to the completion of a group assignment. Theoretically CL fosters a co-operative atmosphere in classroom, rather than a competitive one, because students are interested in each others learning, not just their own (Slavin, 1990). Furthermore CL is believed to enhance cognitive skills to the extent that students share ideas and explain their thinking as they work together (Meloth, 1990).

Several goals of co-operative group learning have been identified in the literature. Two primary goals for all students are:

- to assume leadership responsibilities in the group and;
- to participate equally and actively in the group process (Dishon and O'leary, 1984);

Additional goals of CL include fostering academic cooperation among students (Hilke, 1990, Slavin, 1983a);
- encouraging positive group interaction (Hilke, 1990) (Johnson and Johnson, 1985);
- increasing academic achievement (Hilke, 1990; Johnson and Johnson, 1985, Slavin, 1983, 1991) and
1.2.1 Characteristics of Co-operative Learning

Specific characteristics of co-operative group have been shown to maximize the extent to which these goals are achieved:

- **Heterogeneity of group members**
  
  One characteristic linked to the effectiveness of CL is heterogeneity of group members (Disher and O, Leary, 1984; Hilke, 1990; Johnson and Johnson, 1985; Slavin, 1991). Research has shown that effective CL groups include relatively equal proportions of male and female students with diverse socio-economic background and academic skills and students who represent both majority and minority ethnic groups. For example, Larson and others (1984) found that students who worked on reading assignments in heterogeneous ability groups scored significantly higher on measures of main-idea recall than did students in homogeneous groups. Larson and others (1984) concluded that working in heterogeneous groups may benefit low ability students because they are able to observe strategies of high ability students. Similarly, high ability students may learn new strategies by teaching other students in the group. In a study examining helping behaviour, Webb (1991) also found that groups with equal numbers of boys and girls promoted more explaining between students than did same-sex groups.

- **Reward Structure**
  
  A second feature of CL related to effectiveness is reward structure. According to Slavin (1983) the success of CL is highly dependent on the underlying incentive or reward structure. There are three general types of reward structures students may receive:
  
  a) individual rewards for individual achievement,
  b) group rewards for group achievement, or
  c) group rewards for individual achievement.

  The third type, which is called an independent record structure has proved to be most effective (Slavin, 1983). When students success as individuals is dependent on the success of other group members, students are more likely to work to ensure that peers learn the material.

  The use of an interdependent reward structure circumvent many problems inherent in alternate reward structures. For example, when students receive group rewards for the completion of a group product, there is no way of ensuring that all group members have learned the material. The academically strongest students may tend to take over the project to obtain a good grade. Similarly when students are
rewarded individually they have no incentive to help other group members learn the material because their grade is not affected by anyone else's performance. According to Johnson and Johnson (1985) "under purely co-operative conditions, an individual can attain his or her goal if and only if the other participants can attain their goals".

- **Task Structure**

  A final characteristic of CL is task-structures. Two types of task structure can be incorporated into CL. Students may either participate in group study or be assigned specialized individual tasks (task specialization). With a group-study task-structure, all group members work co-operatively to learn material, solve problems, or find answers to questions. In contrast, when students are given specialized tasks, they are responsible for learning a particular section of material independently and then teaching it to the rest of their group. Both task structures have been more effective than competitive or individualistic methods, although there is little evidence to suggest that one type of task structure is more beneficial than the other (Johnson and Johnson, 1985). Research concerning the differential effectiveness of task structures remains inclusive because most researchers have invested only group study, not both group study and task specialization. Further more, task structure is typically embedded in an interdependent reward structure. Thus, reward structure may account for positive outcomes more than task structure does.

  In addition to identifying effective features of CL, researchers studying elementary children, have documented several academic and social benefits that result from implementing CL techniques (Dishon and O'Leary, 1984; Hilke, 1990; Johnson and Johnson, 1985; Slavin, 1993, 91). Although these researchers have focused primarily on academic achievement, there is growing evidence that CL promotes positive affective and social outcomes as well. In their review of research, for example, Johnson and Johnson (1985) reported that for 35 out of 37 studies comparing co-operative with competitive and individualistic learning, CL promoted the most positive interpersonal relationship among students. Students specifically reported feeling of being liked and supported by other students in their group. Johnson and Johnson also found that CL promotes positive attitude towards the subject matter and towards school in general.

  According to Dishon and O'Leary (1984) another benefit of CL is improvement in students social skills, such as initiating interaction, sharing information and ideas, asking questions, following directions and staying on task. When students engage in appropriate social behaviours, they feel better about themselves and about others in their groups, enjoy time spent together, and produce high quality work. Dishon and
Leary cautioned, however, that such benefits do not happen coincidentally. Classroom teachers must assume primary responsibility at least initially, to teach, observe, and reinforce students for using appropriate social skills in groups. Finally, according to Slavin (1993, 1990), feeling liked by peers and feeling academically competent contribute to positive self-esteem among students. Thus the academic and social benefits of CL are likely to lead to higher self-esteem among students as well.

1.3 CO-OPERATIVE MASTERY LEARNING

Co-operative mastery learning is a process of learning in which children learn in small heterogeneous groups, and they are exposed to the same activities as children in the co-operative learning setting. At the end of unit, each student is provided individually with the teacher's feedback. Those who could not attain mastery level are required to re-do the work with the assistance of other children in the small group.

In the present study co-operative mastery learning was used in which initial teaching guidelines were provided by the teacher. After first formative test, the masters were identified and then the class was divided into equal ability small groups and rest of the teaching re-teaching was conducted through co-operative learning.

1.4 CONCEPT OF TRIBES

The term tribal is usually applied to the tribal population of India as an indication of their being the earliest among the present inhabitants in this country. At the time of the adoption of Indian constitution, 212 tribes in 14 states had been declared to be scheduled tribes which constituted 5.36 percent of the total population of the country.

Although the term tribe is widely used in reference to preliterate people in many parts of the world, there is no commonly accepted definition of the word.

No doubt, with the passage of time the differences on the concept and definition of a tribe have certainly narrowed down to an appreciable extent, but a theoretical discussion seems imperative to understand this problem in its proper perspective.

The Latin word 'tribes' was used to refer to each of the independent 'gentile'groups (Titites, Ramnes and Luceres) that together formed the population of early Rome. Also in the archaic Attic dialect of Greece any group of uncivilized people was referred to as trittus, and as trippus in the dialect of the Aeoliam emigrants of Asia Minor (Dole, 1971).

A common definition of a tribe categorizes it as 'pre-literate' pre-industrial and possessing an egalitarian economy, with relatively simple tools to produce and primary goods to consume. (Gluckman, 1971).
Tribal groups, like the Bedouin, since Ibn Khaldun, are defined by the term asabiyat or solidarity or kinship group (Watt, 1961) which is the spirit of the clan. It implies boundless and unconditional loyalty to fellow clansmen and corresponds in general to patriotism of the passionate, chauvinistic type. (Hilli-1977).

According to Oxford ditionary "A tribe is a group of people in a primitive or barbarous stage of development acknowledging authority of a Chief and usually regarding themselves as having a common ancestor".

Since the development of anthropology as a science and special its link with psychology psychoanalysis and allied disciplines of social sciences, constant efforts have been made by academic and professional anthropologists and psychologists to empirically test the effects of culture change on personality adjustment, and mental health structures of different primitive societies due to acculturation and culture contact with the Western Civilization.

The well designed studies conducted in different primitive societies in and outside India have expanded the scope of our knowledge about this subject. Important among the influential writing are those of Parwathamma (1974); Reimer, William L (1988); Falehi, Ahmed (1989); Shortman, P.V. (1992).

The psychological characteristics of individuals reared in a particular sociocultural milieu may be quite different from another series of individuals living in totally different conditions. When people with particular mode of life come into intimate and continuous contact with those having quite different food habits, kinship system, language, beliefs, traditions etc., Changes occur in one or both the groups due to interaction in which people start borrowing traits from others, certain areas of culture are affected by exotic influences as a result of the entire mode of life, personality patterns and mental health of one group are transformed due to the prolonged contact with the culture of another.

In almost all Monographs of Indian tribes written from the beginning of the 20th century by British civil servants and by pioneering Indian anthropologist like Roy (1975 and 1977) and in many regional surveys of castes and tribes, notably by Risky (1915), culture contact and culture change have been noted and the process of change has in many cases been identified and analysed. A number of monographs have appeared on the subject, especially since 1937. These include: Majumdar's (1937) work on the Ho, Aeijappan's (1944) Iravan, fueres Harvendorof's (1945) Redde's, Majumdar's (1950) On the Ho in an enlarged version on his earlier thesis, Datta-Majumdar's (1955) Santhals, Sinha's (1956) Bhumij and Srivastavas (1958), Tharus, Mishra (1984) on oriya tribals, Shaho (1986), Panda (1996). These monographs have carried very little
in explicit reference to culture contact, culture dynamics acculturation. Some other monographs which appeared during this period invariably devoted a chapter to contact and acculturation e.g. Hamenloro (1943) on the chanchus, Das (1945), on the puranas, Mahaputra (1960) On the Hill Bhuiyan, and panda (1996) on saora.

1.5 FAMILY BACKGROUND AND ITS IMPORTANCE

Family is the most important socializing agent that influences the child’s life (Tewari, Morbhalt and Kumar, 1981). A family is the unit of the society. In a family the relationship between individual constituting the family is very closely knit and the interdependence more pronounced. In the process of growth from child through adolescence, and to adulthood an individual is, to some degree, dependent on the family according to his needs and duties. The patterns of behaviour towards the other members of the family also undergo constant change with aging of a child and his level of maturity. During the impressionistic stages of childhood and adolescence the individual is influenced to a great extent by the relationship among the family members.

Family background is the complex of social and cultural conditions, the combination of external or extrinsic physical conditions that affect and influence the growth and development of the members of the family, the most instructive fundamental social group is one which includes parents and their children.

The role of the family as an important influence on educational and vocational development has been recognized since Roe (1957) found that parents attitudes have effect over the child's eventual occupational choice.

The family contributes in many subtle ways to career decision-making as reported by most vocational theorists (Ospow, 1983). Since vocational choice are attitudes towards work and towards occupations, it follows that children who identify with their parents and their subculture, develop preferences for the type of occupations which their parents value.

A variety of factors enter into the development of child viz. home life, persons, things, materials, objectives and personal attitudes in varying degrees. Some of the factors related with home, that have been found to influence cognitive and affective behaviour of a child are:

• Physical factors: Space, restfulness, orderliness cleanliness etc.
• Economic factors: Income, financial status, parental occupation
• Social factors: Relationship of parents, home environment, socialisation, encouragement, values, social conformity, social status etc. expectations of parents, attitude towards education, acceptance parental involvement.
All these factors have been found to influence academic development of a child. Gordon (1971) presented nine family factors related with cognitive development, (language development being a part of it):

- amount of academic guidance provided for the child
- parents cognitive style
- presence of planned cultural activities in the family
- amount of direct instructional time with the child
- educational aspirations for the child
- use of external resources
- verbal facility of parents
- frequency of verbal contact between parent and the child

Achievement in language being one of the objectives of the present investigation, family background was considered to be studied as an independent as on independent variable.

1.6 SELF-ESTEEM

The term "Self-esteem" refers to the evaluation a person makes and customarily maintains with regards to him or herself. "Self-esteem" expresses an attitude of approval or disapproval and indicates the extent to which a person believes him or herself capable, significant, successful, and worthy. In short, a person's self-esteem is a judgement of worthiness that is expressed by the attitude he or she holds towards the self. It is a subjective experience conveyed to others by verbal reports and other overt expressive behaviour.

Self-esteem is a set of attitudes and beliefs that a person brings with him on herself when facing the world. It includes beliefs as to whether he or she can expect success or failure, how much effort should be put forth, whether failure at a task will 'hurt' and whether he or she will become more capable as a result of different experiences. In psychological terms, self-esteem provides a mental set that prepares the person to respond according to expectation of success, acceptance and personal strength.


Morval, M. and Morval, J. (1972) examined the concept of self-esteem from psycho-analytic, social psychological and existential phenomenological view points. They viewed self-esteem as the value that an individual attributes to himself.
German, R.B. (1978) considered self-esteem as the esteem attached to the self as it is known to the individual.

Chrzonowski, G. (1981) defined self-esteem as a positive image of one-self based on fair appraisal of one's assets and liabilities.

Zervas, L.J. and Sherman, M.F. (1994) referred to self-esteem as the affective or violative component of self-perception, and, positive self-esteem is considered crucial from the point of psychological and emotional well being.

More recently, Stratton, R. and Hayas, N. (1996) described self-esteem as the personal evaluation which an individual makes of her-self or himself; the sense of their own worth, or capabilities.

Self-esteem is not something separate from school performance in reading, math and social and physical skills. It is an important integral part of performance. Many studies conducted in the past for several decades viz: Bledson, 1964; Brookover, Thomson and Patterson, 1964; Pierce, J.L.; Gandner, D.G.; Cumming, L.L.; and Dhunham, R.B. (1990); Bantista, D.Y.; Crawford and Wolfe, A.S. (1995); Slee, P.T.; Rigby, K.; Davis, S.F.; Hanson, H.; Edson, R.; Siegler, C. (1993); Watkins, D.; Yu Jiayaun (1994); Mitchell, G. and Fandt, P.M. (1995) Dhawan, R.B. (1996) indicated that children with high self-esteem perform better in their school work than children with lower level of self-esteem. It appears that children who feel better about their abilities to perform and who expect to do well actually perform better in school. There are indications that the kindergarden child's feelings about him or herself are better indication of reading readiness than are his or her scores on an intelligence test (Wattenberg and Clifford, 1964).

Self-esteem can be viewed as the process of human self-realization, self-satisfaction and fully successful existence. Self-esteem of a person is chiefly concerned with his total sense of growth and development; adjustment, success, happiness and effective membership of a group or community.

The centrality of self-Esteem to individual well being and mental health has well been recognized. Homey, (1937); Adler, (1939); Fromm (1947); and Rogers (1961) view self-esteem as essential for adequate personal functioning.

Self-esteem plays an important role in a person's adjustment to home, school, and society (Coppersmith, 1967; Sears, 1970; Medinnus, 1974).

Research in this area is indicative of the fact that self-esteem is closely connected with the feelings of life satisfaction (Andrew and Whitley, 1976; Compbell, 1981). Thus, a person with high self-esteem is both happier and more effective person (Rosenberg, 1965; Sridesmn, 1975; Gecas, 1982). Thus Self-esteem is important in a
person which affects all aspects of his life. It affects one's mental health, educational achievements and relationship with others.

1.7 REVIEW OF RELATED RESEARCH LITERATURE

1.7.1 Research Studies on Mastery Learning

Thompson (1980) examined the effects of Bloom's mastery learning strategy on the achievement of 40 graduate students enrolled in educational statistics classes in a private Midwestern university. The findings indicated support, for the mastery learning strategy as a highly favourable instructional component for enhancing student learning.

Kaundal (1981) in Science, Hooda (1984) in Maths, Kaul and Chand (1985) in statistical and Thakur (1987, 1990) in statistics conducted studies on the effectiveness of Bloom's MLS and found that it was more effective in enhancing students retention at immediate and delayed level. It was also concluded that Bloom's group yielded higher adjusted mean scores on the criterion as compared to control group of both levels of retention.

Clark, Gurky and Benninga (1983) designed the study to determine the effectiveness of a group based, teacher paced mastery learning instructional model for undergraduates and concluded that mastery learning group scored higher in common final examination, than students taught by conventional methods.

Singh (1983) conducted his study on high school social studies students and found that there was no significant difference in the achievement motivation of the students after taking instructions through B-MLS as compared to programmed instruction and Conventional Group but there was no significant difference in the change of self concept and test anxiety of the students taught through these three treatments.

Riley (1984) found that there was no significant correlation between self-concept change and attendance gain or academic gain under mastery learning.

Kaundal (1984) concluded that the performance of ninth and tenth grade students in physics, taught through B-MLS and K-PSI was found to be the same for immediate retention measured by summative criterion test. But performance of both these groups was found to be superior than traditional group.

Sharma (1984) stated that in Bloom's ML group of seventh grade girls students, significant change occurs in the mean attitude scores from the beginning to the close of instruction but no significant difference was found between experimental and control group regarding attitude scores.
Sethi (1985) conducted a study on fifth grade students in the subject of Maths and found that Keller's and Bloom's mastery learning groups were equally effective in respect of percentage of obtained scores and at the learning types (comprehensive and skill) in immediate test.

Saners,(1985) studied whether the mastery learning programme was more effective in improving reading achievement or not, and concluded that ML was significantly more effective a programme.

Jacobsen, Gary Han's (1986) study was to determine if student achievement could be improved and/or the number of remediations required for mastery were reduced by incorporating learning styles into initial instruction in a mastery learning classroom. The researcher concluded that by incorporating learning styles into initial instruction in ML classrooms, the number of remediations necessary for mastery could be significantly reduced.

Guru (1986) examined the effect of Bloom's and Keller's MLs on pre-school children in the three aspects of language development i.e. pronunciation, word meaning and conversation and found that both methods were equally effective in post test achievement.

Kow (1986) studied an individual learning programme in basic chinese characteristics using a ML approach. Results showed that at the end of the semester there was significantly greater proportion of students who could earn an 'A' by mastering the criterion number of characteristics than the proportion of students using the conventional instructional approach.

Naslund (1987) conducted a study to see the learning beyond mastery to automaticity and its effect on individual variation and retention. The group learned same behaviour but practiced mastery and automaticity in different manners. The results were that in the psychomotor task the group that practiced components in a cumulative sequence took significantly less total trails (mastery + automaticity) than the comparison group (that practiced the components in Unison). The variance for trials to mastery was also significantly lower for the cumulative component mastery group.

Dasgupta (1987) conducted a study of teaching school Economics for ninth graders by the PSI and found that mean achievement of pupils taught by K-PSI was same as that of conventional group.

Chand (1987) concluded that K-PSI and B-MLS had equal positive effects on performance in Geography of ninth grade, Adi Tribe students and performance of K-PSI and B-MLS groups were superior than control group.
Thakur (1987) concluded that at the immediate retention, measured in the form of performance on the criterion test, tenth grade male and female students performed the same when instructed through Bloom's or Keller's mastery learning strategy. Both these groups were found to be significantly higher than that of control group.

Joyce (1988) Stated that under Mastery learning there was significant development in academic motivation but there was no significant development in study habits.

Salim, (1988) conducted a study designed to determine the effects of a MLS on the achievement of secondary school chemistry students in Sabha, the socialist people Libyan Arab Jamahiriyas. The influence of gender and aptitude (independent variables), on achievement (dependent variable) was also studied. He concluded that there were significant differences in achievement due to instructional strategy. The ML students had significant achievement gains in chemistry across all achievement tests. There was a significant difference in achievement between students of different aptitude across all levels of treatment. Students of high aptitude had higher achievement scores than students of average or lower aptitude. Although females and males did significantly better under ML, instructional strategy appeared to reduce gender difference. Although, all aptitude students benefited from mastery learning, high and average aptitude students benefited more than low aptitude students.

Jantjes, (1988) conducted a study to devise practical group learning conditions as effective as the one-to-one tutorial method. To investigate whether student achievement is a function of the learning conditions provided to students and not an effect of inmate and stable earlier characteristics and to determine whether effect becomes more positive when greater cognitive achievement results from these learning conditions. The findings indicate that when the conditions of learning are appropriately improved to meet the cognitive and effective needs of most students, their levels of achievement and effect are significantly enhanced, and their initial cognitive difference are greatly decreased over time. The results show that educators can devise teaching learning conditions that are almost as effective as tutoring conditions.

Anderson, Ronald William (1988) studied the effect of mastery learning on algebra achievement, the design of this study incorporated what 'Salvin' proposed to be the "best evidence" for ML. Both the experimental groups performed better on the teacher made algebra test than their control group counterparts, with effect sizes of .274 and .856. On the standardized post test, the afternoon experimental group outperformed its control group yielding a relatively high effect size of .724. However, the
morning control group performed better than its corresponding experimental group, with an effect size of .181.

Olson, (1988) determined ML interacting with the principle of wait-time’s effect on students achievement and attitudes in seventh and eighth grade mathematics classroom. The results for grade seventh were that ML, wait time and gender had significant effects on student achievement as measured by the criterion reference test, with ML, wait time, and females having the greater post test achievement.

The post test Stanford Achievement Test (NRT) results showed that females were at a statistically greater level. There was a significant three-way interaction on attitude in which females had higher attitude scores on the presence of mastery learning and wait time.

The result for grade eight showed interactions with the independent variables on the Stanford Achievement Test (NRT) post test. The interactions had females having the greatest achievement when combined with the treatment of ML and wait time and males having higher achievement as a control group and with ML and wait time. ML was a positive and significant main effect for the CRT post test and males having higher achievement as a control group, and, with mastery learning and wait time, ML was positive and significant main effect for the CRT post test. Wait time was a negative and significant main effect for the CRT post test. ML had a negative main effect on attitude on ATT post test.

Earn Heart, Margaret Mausfield’s (1989) results support Bloom’s theory pertaining to ML and enhanced initial cognitive entry behaviours with regards to achievement. Although not tested directly, Bloom’s theory regarding achievement and affective characteristics was not supported by the findings of this study.

Monger (1989) studied effectiveness of Bloom’s MLS for elementary and Middle School Mathematics achievement, and found that there was no significant difference between achievement and subjects related effect for second and fifth graders. For seventh grade, control group outperformed the experimental group in Maths-concepts and total Maths. So Bloom’s theory of ML was not supported by the study.

Verma (1991) in the study for secondary school female students on the subject of Geography found that the pattern of study habits and attitudes of pass group as well as promoted group of students following instruction through K-PSI, B-MLS and control group was more or less similar, though in pass group B-MLS group showed higher but not statistically significant scores and in promoted group PSI students showed higher but not statistically significant scores.
Kincaid (1991) investigated the effectiveness of K- PSI as compared to a traditional-Lecture-discussion setting in the development Mathematics courses at a two year college in central Texas and concluded that the post test scores of those who participated in the mastery based setting were significantly higher than those in the lecture setting.

Edjlali Mohmmad (1991) studied the effect of competency based ML on aptitude, motivation, self- esteem, and Math anxiety. Results of the data indicated that significant difference existed between the two methods of teaching/learning. The research findings indicate that students in mastery learning class perform at a higher achievement level, had a more positive attitude towards learning mathematics and towards themselves, had less Math-anxiety and developed higher self-esteem.

Blackemore and Others (1992) compared psychomotor skill performance in isolation and in competitive game situations with seventh grade boys, taught basketball using Bloom's mastery learning model and non-mastery procedures. Mastery subjects surpassed control and non-mastery groups on all skills performed in isolation. No significant differences existed in skill performance in competitive game situations.

Bajaj (1994) studied the effect of the MLS (Bloom's and Keller's) on teaching of Geometrical concept for sixth grade students in relation to intelligence and found no significant difference between B-MLS and K.PSI.

Donn Ritchie (1994) used a teacher directed, videodisc-based programs for teaching fractions to fifth-grade students to examine the factor of accountability in ML programs. The video-disc-based instruction was chosen to help minimize differences in instructional materials, instructional time, and instructional delivery. Researchers used a pretest-postest, two group design to identify if knowledge of participation in a ML program was related to academic achievement. Ninety six students in four classes participated in the study. Classes were randomly assigned to two treatments. All students received instruction in fractions via the teacher directed, video disc based Mastering fractions program. Treatment 1 students (n=50) knew that they were participating in a MLP and therefore were held accountable for their progress and remediation. Treatment 2 students ( n=46) were not aware that their teacher was using ML principles to determine progression and remediation. Comparisons between treatment 1 and treatment 2 students scores, after adjustments for pretest results, using analysis of covariance, revealed standardized mean difference effect sizes of 0.67 for achievement favouring Treatment 1. These results provide some evidence that knowledge of being in a mastery based program contributes to increased achievement.
Nuray Senemoglu (1995): conducted an experiment to determine the effect of several elements of mastery learning on student achievement in an undergraduate course on curriculum development and instruction, which is a less sequential course than the type of courses used in prior studies. Learning in a less sequential course can be facilitated by previous learning, but the lack of prerequisites does not abstract learning. Students were randomly assigned to three groups: conventional teaching methods; enhancing cognitive entry behaviour plus conventional teaching methods; and feedback/corrective procedures. The combination of feedback/corrective procedures, and initial enhancement of cognitive prerequisites was significantly more effective than using only enhancement of cognitive prerequisites, which in turn was significantly more effective than using conventional methods. The results indicate that using a combination of alternative variables effectively in the teaching - learning process may solve the subject series at the university level.

Kumar (1995a) concluded that achievement of +2 students of economics was better when taught through K-PSI than the students of B-MLS. Achievement of male students was higher than female students in economics.

In a study by Jennifer A. Livingston & J. Ronald Genetile (1996) Performance on successive units of achievement in graduate classrooms using ML procedures was used to test two variations of Bloom's decreasing variability hypothesis - namely, that under the favourable condition of ML, differences in faster and slower learners will decrease over successive units, leading to (a) smaller variances on successive units and (b) smaller correlation between an initial measure of aptitude and achievement on successive units. The data from the four classrooms studied, do not support the decreasing variability hypothesis; rather, they show no change over time.

The results of the study by Sharma, R. (1999) indicate that the mastery learning strategies viz. Bloom's mastery learning strategy and Keller's personalized system of instruction were more effective than traditional method of teaching, Keller's personalized system of instruction was found more effective for longer retention as compared to Bloom's mastery learning strategy and conventional instruction and stress does not seem to differentially affect the attainments through mastery learning strategies.

1.7.2 Research Studies Related to Co-operative Learning

Watson, Scott, B. (1988) examined the effect of the group educational Models (GEM) material and co-operative learning techniques on the achievement of high school biology students. The results of this study indicate that allowing students to work together in group, whether heterogeneous or not, may be one of the reasons for
the success of both the GEM materials and co-operative learning. The implication is that there is an additional effect in using the components of CL and that heterogeneous grouping and group incentives appear necessary to maximize achievement.

Costello, Donna Marie (1988) examined how co-operative staff development learning group facilitate teacher conceptual development of issues relevant to the education of elementary teachers and addresses pedagogical and theoretical issues about the beginnings of how teachers change their notion of the learning and teaching process and concluded that:

- overall there was no major changes in conceptual scores of the teachers as a group.
- The base line and changed conceptions of teachers were primarily at levels one and two.
- Individual teachers showed evidence of small gains in thinking primarily in a positive direction.
- All the categories of conceptions revealed small gains in a positive direction.
- The determinants of behaviour was the single category which showed greater gains.
- Teachers did not perceive a two day training as an indepth staff development experience, and
- The level of implementation was not sufficient by itself to account for gains in conceptual scores.

Carney, (1988) examined the impact of CL on the acquisition of keyboarding skills. The results showed no significant impact of CL on students acquisition of keyboarding skills. The results also showed attitudes towards one another depending on together or not they worked in a CL environment. A significant difference, however, did occur between the two schools. Acquisition of keyboarding skills was significantly better in the school using portable keyboards. These results were discussed in terms of the teachers role in computer-based learning.

Davis, (1988) designed a study to have treatment and control groups using co-operative learning. The results of the study indicate that there was no statistically significant differences in student achievement or student attitude between the two conditions. The observational data revealed differences in students interaction patterns between the treatment and control groups students using the specified group process.
Krampt's (1988) study yielded significant improvement in physical achievement rating for subjects in the co-operative and individualistic goal structured groups.

Bashey (1988) in the review of literature on experimental studies which have been conducted on cooperation found that co-operative learning increases academic achievement and interpersonal relationships which in turn increases self-esteem. Co-operative learning is effective in integrating students with a handicapping condition or of different social or ethnic backgrounds into the regular classroom. All sixteen of the principals and 142 teachers want to continue inservice training in the area of CL. Teacher and principals viewed CL as having more strengths than weaknesses. Generally, teachers have not discovered that special education and gifted students also benefit from the use of CL methods. CL methods are used by teachers in all subject areas. Students prefer working co-operatively in groups to working alone.

Tingle (1988) conducted a study, the main purpose of which, was to determine empirically whether there was a difference in achievement between students solving problems individually and in co-operative groups. There was no statistically significant differences in performance between regular or honor students of varying proportional reasoning ability solving psychometric problems individually or in co-operative groups.

Edelbrock (1990) found that the experimental group reported a significant reduction in the level of computer anxiety at the conclusion of the course which included the CL intervention. The control group also reported a significant reduction in the level of computer anxiety, but without position treatment. Although the gains by the paired students were higher than the control group, the computer education course itself, stressing "hands-on", experience with a computer, proved to be efficacious in reducing computer anxiety regardless of the method used.

Jerold (1990) determined the effect of using a co-operative learning (CL) method on students learning of computer application. The study examined this co-operative learning method by evaluating the acquired competencies of the learner. The hypothesis of this study predicted that students who used a CL method to learn a computer application would show greater gains in competencies than students who used an individual learning method. This hypothesis was supported. A t-test statistical formula was used to analyse the post-test mean scores for the complete instrument, and the performance section of the instrument. The results of all three analyses indicated that the experimental group did significantly better in terms of gained competencies than the control group at the .05 level of significance. In addition the results of the data that were kept on the amount of time students used their computers.
to complete their lessons showed that the students in the experimental group completed their lesson on an average in 12% less than the control group.

Jones, Robert Clanin and other (1992) proponents of CL reported experimentally reliable gains for students in classrooms when compared to students in competitively structured classrooms.

This study proceeds from a concern that educationists cannot fully understand student learning within the context of a particular instructions strategy until they take their questions about learning directly to the learners. It is grounded in the ethnographic assumption that classroom learning results from an individuals interaction with self, peers and teachers. The purpose of the study was to examine two commonly practiced instructional strategies competitive and co-operative learning from learners point of view. Two students interacting within a competitively structured classroom were videotaped. All six students were interviewed by researchers within 45 hours of videotaping. This interview consisted of student viewing in videotape and recalling what he/she was thinking and feeling at the time of actual lesson. The researcher carded each transcript by means of analytic indication and prepared an ethnographic discourse that presented as synthesis of meaning for each learner. Based on these students reported meanings, the researchers concluded that the competitive and co-operative experiences of leaders did not result from the instructional strategy. Rather, students interacted with their teacher and with one another in ways that made sense to them for promoting their self-determined goals.

Ryan, (1992) compared two treatments co-operative learning with Adaptive Instructions to conventional instruction for two independent groups of students in adult machinist training at the focus. The results show that average student Achievement scores in the Experimental group increased 12.3% as compared to students in the control Group. Additional research in co-operative learning in other areas of education, e.g. foreign language, science, etc. was necessary before a generalized theory of learning based on aptitudes can be made.

Margulus, (1992) conducted a study to answer the following research questions:

- Which teacher Skills are necessary to implement affection teamwork in a classroom?
- What Kind of learning environment is optimal for implementing effective teamwork in a classroom?
- In classroom using teamwork does greater student achievement occur than in classroom not using teamwork.
The findings of the study were mixed though the treatment group at school 2 clearly out performed the control group at school 2. However there was a positive correlation between attendance and achievement at both schools in the treatment groups.

Kassner, (1992) investigated the effect of computer assisted instruction in music (CALM) Combined with mastery learning and co-operative learning on the playing abilities and attitudes of beginning band students. Analyses indicated that students attitudes towards the three components of TRIMM were generally positive. The teacher in this study as well as the four teachers in the pilot study, felt that the TRIMM system was easy to use, that students were on task more in TRIMM system than in other system, and that they want to use TRIMM again. Also, the TRIMM system appears to be associated with reduced attrition in beginning band.

Udupa, (1992) systematically assessed the effects of concept mapping in a co-operative learning environment on achievement and attitude of biology students. The results showed a positive effect on classroom achievement. The results also revealed that the students attitude towards concept mapping and co-operative learning was positive.

Bouas, (1992) A naturalistic research design was used to describe the effect of instruction about and participation in co-operative learning in three pre service teacher education methods classes had on preservice teachers attitude towards, Knowledge about academic and social benefits related to and pedagogical competence to organize future classrooms for co-operative learning. Findings indicated that instruction about and experiences with co-operative learning in the method classes positively influenced preservice teachers attitudes towards and knowledge about academic and social benefits related to co-operative learning. Subject's communicated a desire to implement this model in their future classroom. They expressed that more direct instruction about co-operative learning and opportunity to engage in more co-operative learning activities in preservice classes would have enhanced. Their confidence and ability to impelement this instructional model, suggest implications for teacher educators.

Kalkowski (1992) reported a qualitative case study of how co-operative learning theory may be transformed in to practice. For the implementation of CL in Cedal City, which originally followed the "Learning together" and "complex instruction" models of classroom instruction. By combining the results of observation of staff development activities; observations hours of classroom lessons, documents analyses and interviews of staff development teachers and students, the investigator determined seven transformations:
• An expanding transformation, in which co-operative learning came to be seen as more than an educational strategy.
• A grafting transformation in which strategies not intended for combined use were used that way,
• A reducing transformation in which a strategy was abandoned by staff developers and teachers,
• A uniqueness transformation, in which unjustified claims of site-specific strategy uniqueness were made,
• A limiting transformation in which limited effectiveness strategies of implementing a co-operative learning component were used, more than higher effectiveness strategies,
• A softening transformation in which important possibly harsh seeming features of co-operative learning were not implemented and,
• A skipping transformation, in which teachers followed co-operative learning authors' guidelines and "skipped" recommendations of staff developers to the contrary. It was determined that components of co-operative learning strategies could be identified as "robust" or "Vulnerable". Robust components were implemented even when teachers overlooked them. Vulnerable components were forgotten or ignored by teachers or students despite heavy emphasis by staff developers and or teachers, respectively.

Rayn (1992) undertook a project, the purpose of which was to provide a teachers manual for elementary school teachers who wish to integrate the innovations of critical thinking learning styles and co-operative learning into their classroom lessons and to include a research based rationale for supporting this integration. The three innovations in this project have been over time proven to provide positive cognitive and affective outcomes for students. Integrating them into classroom lessons will make it more likely that they will be used on a more consistent basis in our schools.

Leali (1992) conducted a study to explore the outcomes of co-operative and individualized learning with computer assisted instruction (CAL) in mathematics for at risk high school students. The findings were that students in the co-operative environment performed better on the mathematics post test than those in the individualistic classes. The analyses suggested that males had a more favorable attitude towards computers than females, and those students in the individualist classes showed a more positive attitude towards co-operative learning.
Qin, (1992), found that:

- Learners who engage in co-operative learning are more successful in problem solving than those in competitive learning. The overall mean effect size of 63 studies reviewed is .547. All of the four types of problem solving investigated in the study or co-operative learning, co-operative efforts are more successful in non-linguistic problem solving (effect size is .722) than in linguistic problem solving (effect size is .366), although no statistically significant difference was found.

- No statistically significant difference was found between two age groups: Younger learners (below 6th grade) and older learners (7th grade up to adults). However, under co-operative learning, there was a tendency for older learners to do better than Younger Learners in three types of problems: Linguistic, non-linguistic and well-defined problem, but not in ill-defined problem. The effect sizes for older learners' achievement in each of these three types of problem-solving are at least 0.2 standard deviations higher than those of younger learners.

- It was found that for older learners co-operative learning promotes greater success in well-defined problem-solving than ill-defined problem solving, however, younger learners did better in ill-defined problem-solving than in well-defined problem solving. Also some integration effects were found between age and types of problem solving. Further research is needed to examine the hypothesis.

Staudt, (1992) examined the synergism created by combining a co-operative learning approach, the students Teams-Achievement Devision, and the mnemonic keyword learning strategy. Twelve intact classes of fourth, fifth and sixth grade students (N=221) from an urban school were assigned on a stratified random basis controlling for grade level to four groups. The results of the delayed post-test indicate that fifth and sixth grade students in the individual groups retained more information over a three-week period than fifth grade students in the co-operative groups. In addition, fourth grade students in the individual groups retained more information over a three-week period than fifth grade students in the individual groups.

Varela's (1992) purpose of his study was to investigate how two experienced and successful teachers, skilled in using co-operative learning techniques used such techniques in their classrooms during the 1991, 1992 school year. The findings of these two case studies are not inconsistent and in fact lend support to the following generalizations: a) there is not a best co-operative learning approach; (b) teachers
adopting co-operative learning have to be sensitive to the environment, flexible in scheduling and planning and supporters of the students' individual self-responsibility; (c) there are clear differences between co-operative learning in elementary and secondary settings, which have implications for teachers' pre service and inservice training.

Miller, (1992) determined if a co-operative learning group can positively influence the conventional interactions of main streamed hard-of-hearing students in middle school social studies classrooms.

The results from this study suggest that co-operative learning may be one avenue for teachers to use in order to provide hard-of-hearing students as well as hearing students with opportunities to engage in conversation with one another. Although, co-operative learning is not a panacea it did appear to result in successful conversational interactions for the subject of this study.

Purdom & Kromery (1995) reported the findings from a series of 3 studies on CL at the college level, using the Jigsaw II (R.E. Slavin-1990) CL approach in which students read new material and then individual take assigned portion of the material to teach their peers in small groups. CL methods of instruction are increasingly being used in college classrooms in an attempt to promote academic achievement, increased student participation, and encourage positive attitudes towards learning. From compiling responses to questionnaires administered in each study, data are presented that reveal students attitudes and opinions about various aspects of CL. Based on the students responses, a set of guidelines are proposed to apply when using CL with college students.

Kristina, Linda & John (1977) studied the effect of co-operative learning on student achievement and attitude in a secondary mathematics classroom. In this quasi-experimental design, two precalculus courses were compared. Students in one class studied the material in co-operative learning groups; Students in the second class studied the material independently. There chapter, tests were used to measure students and a questionnaire was administered to the treatment group members after the study was completed to assess their attitudes towards the co-operative learning procedure. The result obtained from a repeated-measures multivariate analysis of variance (with pre test scores as the covariate) showed a significant group X Time interaction. Students in the co-operative learning group had increasingly higher test scores than students in the comparison group and significantly outscored the comparison group on the third chapter test. Survey result revealed primarily favorable responses towards the co-operative leaning procedures. Most students indicated that
they liked working in groups and appreciated getting help from other students especially for learning difficult concepts. Some students disliked having groups preassigned and permanent, and they suggested alternating group membership.

1.7.3 Research Studies Related to Co-operative Mastery Learning

Kreider, (1992) conducted a study, the purpose of which was to determine, if the use of co-operative mastery learning (CML) (Mevarech, 1991), a strategy formed by integrating the critical components of ML (Bloom, 1976; Guskey, 1985) and CL (Johnson & Johnson, 1987; Kagan, 1980; Slavin, 1983) significantly affected achievement in heterogenously (untracked) grouped 9th grade physical science class. Six intact physical science classes were randomly assigned to one of the three treatments, CL, CML and traditional learning. 156 ninth grade, physical science students completed two pretests & two post tests, one to measure achievement on study objectives, and the other to measure the isolation scores of students (indicating how many people chose that person for a partner).

The results indicate that co-operative mastery learning and CL are tools that, can be used to increase achievement as well as students acceptance of each other’s differences.

Zamira (1993) studied the effect of learning with co-operative mastery method on elementary students and found that co-operative mastery learning and mastery learning pupils scored higher on measures of higher order questioning skills and originality, than did the co-operative learning group.

1.7.4 Research Studies Related to Tribes

Desai, and Pandor, (1974) conducted a study on the schedule caste and Tribal High School students in Gujrat. Their findings were that a majority of students belonged to the economic status which was neither quite good not bad. In large number of cases the scheduled tribe percentage of primary Educated was partly being large compared to other caste tribes. The scheduled tribe students were more nationalistic as indicated by their choice of ideal persons than the scheduled caste students who gave the first place to national leaders. The scheduled tribe students participated largely in the co-curricular activities and without any inhibition.

In their general interaction with other students and teachers the scheduled tribe students did not feel discriminated. These students were found to cherish the values and the norms of their surrounding non-tribal society. A good percentage of scheduled tribe students believed that conditions had improved, but their status was still lower than that of their friends in other communities.

32
By and large, these students felt that governmental policies were helpful to them and should be continued but there were some who believed that government was creating a sense of dependency among them.

Dube, (1974) undertook to investigate the socio-economic background of the scheduled caste and scheduled tribe students of Assam and to find out how their education affected their aspirations and performance, their way of life, their participation in other activities, their feeling and opinion about their status etc. A large majority of Schedule Tribe students did not find difficulty in following the lectures:

- They have high educational and vocational aspirations.
- There was very low degree of teacher taught relations.
- A small percentage of Schedule Tribe students participated in political activities.
- Majority of them felt that their traditions were helpful to them.
- Majority of the teachers felt that the scheduled tribe students had poor intelligence.
- They also maintained that the facilities of reservation for them was justified.

Lau (1974) studied educational progress of scheduled caste and scheduled tribe students in Jodhpur and found that economic status and participation in extracurricular activities did not affect significantly the study habits of scheduled caste students but they immensely affected the study habits of scheduled tribe students.

Rathnayya, (1974) studied structural constraints in tribal education. The major findings of the study were that:

- Geographical barriers and inadequate school and hostel facilities in the tribal area had been largely responsible for the slow progress of education of the tribals.
- Enrollment was found to be more where fathers were salaried employees rather than cultivators or labourers.
- The role of dropouts was found to be phenomenal in the tribal schools where out of every 100 children enrolled in the first grade only three reached the fifth grade.
- The medium of instruction, curriculum, syllabi and text books were not adapted to local conditions.

Rajagopalan, (1974) studied educational progress and problems of scheduled tribe students in Karnataka. He found out that:

- Thirty percent of the students lived in hostels while their parents lived in villages.
Introduction

- Economic condition of the students was uncomfortable.
- Domestic work seemed to come in their way.
- Most of the students felt the need for private tuition.
- Home encouragement from parents was there.
- The influence of mass media seemed to vary little.
- The influence and participation in politics was almost negligible.
- The educational aspirations of the scheduled tribe students were very high, yet in many other respects they did not differ much from the S.C. students.
- The scheduled tribal students were more liberal in their outlook on marriage and friendship pattern than their scheduled cast counterparts.

Parvathamma (1974) made a study of scheduled cast and scheduled tribe college students in Karnataka. He brought out the following facts.

- Many of the scheduled tribe students were still to come forward to get education.
- Scheduled tribe students remained in college more than the normal time required.
- A bulk of them lived in village, whereas colleges were in towns so they mostly stayed at hostel or if possible, studied as day-scholars if college was within reach.
- There was no teacher from the scheduled tribe on the college staff.

Germaine, Dale (1975) conducted a study to ascertain whether significant differences of expectations and perceptions existed among tribal chairman, tribal education coordinators and principals of Indian schools toward the role of the Indian school principal.

The general design of the study utilized the descriptive method of research. A total population sample of 184 principals of Indian Schools, 41 tribal chairman, and 37 tribal education coordinators in Arizona and New Mexico was used. The subjects were asked to respond to 45 role norm statements included under five identified roles of Indian school principals. The measuring instrument used was a modified version of Foskett's role norm Inventory. It was validated by a panel of Judges and field testing.

The data gathered from this study indicated that there was a significant difference at the .025 level among perceptions of tribal chairmen, tribal education coordinators and principals of Indian schools with respect to the five role areas of the principal of an Indian school.
Singhi, (1975) made a study on educational problems of the schedule caste and schedule tribe school students in Rajasthan. 187 SC students and 173 ST students were selected for the study by Singhi who found lack of awareness among the students regarding their future prospects.

Srivastava and Panda (1979) attempted to find out the attitudes of the people of Paraja and Kondha tribes of Kondhapara (hamlet) of Vejigura village, regarding the education of their children, house accommodation and their family income.

- The data, collection from all the heads of the households of this para, show that most of the respondents are in favour of sending their children to the school.
- When the respondents were asked that up to which class they want to educate their sons and daughters, most of them told that they want that their sons must get education above primary class and their daughters at least up to primary class.

Mishra, (1984) made comparative study of Moral knowledge of Tribal and Non-tribal school children of Orrisa, and found that the:

- Tribal and non-tribal, male and females of late childhood and pre-adolescent age group have a fairly high degree of moral knowledge. No culture-wise sex differences exist between tribals and non-tribals.
- Culture and sex influence the degree of knowledge of moral values.
- In value pattern no wide range difference exists between late childhood and pre-adolescent age group, but sex differences are well marked.
- Tribal students indicate teachers as the best source of moral knowledge followed by parents, elders, friends, books, personal knowledge and siblings, and non-tribals indicate parents as the best source followed by teachers, elders, personal knowledge, books, friends and siblings.

Mishra, (1984) made a study of creativity of Tribal and non-tribal school children of Orrisa. The major findings of the study were that:

- The non-tribals are superior to the tribals in creative thinking.
- Non-tribal boys and girls are more creative than tribal boys and girls.
- In the case of both tribals and non-tribals, gender has only a marginal influence on creativity.
- The results pertaining to the relationship of creativity with residential background of the tribals and non-tribals are conflicting.
Sahoo, (1986) studied effect of acculturation on level of aspirations, mental health and scholastic achievement of tribal and non-tribal 10th grade students of Orrisa and found:

- Level of acculturation influences security/insecurity of tribal students.
- Sex does not affect security/insecurity of tribal students.
- Level of acculturation and sex do not have any interaction effect on security/insecurity.
- Level of acculturation affects neuroticism, security, level of aspiration and scholastic achievement. Sex does affect state anxiety.
- Acculturation and sex do not have any interaction effect on state anxiety. Neuroticism and adjustment do have a significant interaction effect on scholastic achievement.

Reimer, (1988) conducted a study the purpose of this quasi-experimental research was to measure the effects of tribes, an effective education program, on elementary school children.

The results of the quantitative evaluation showed that the tribes program had significant effect on the self-esteem scores of children in the two different aptitude groups below average/average and above average. The program was more effective, however, with the children with below average/average aptitude. Tribes also motivated some students towards greater academic achievement. The tribes program had a significant effect on the reading achievement scores of boys and fifth grade students.

Fatehi, (1989) sought to test Rothkopf and McKenzies's research findings that student learning can be elicited, focused and sustained by inserting test like questions into assigned reading by applying their findings to an Iranian tribal group, the Ghesghaiss. The investigator sought to determine the effects of certain interventions upon the intentional and incidental learning of fourth grade members of the tribe. There were two investigations:

- Inserting test like questions into the children reading assignments and providing feedback on test performance covering the reading.
- Two experimental groups were used. One group of 16, had the test like questions inserted in their reading texts.
- A second similar sized group had the test like questions inserted and was given feedback about the performance. A control group of 22 children simply read the text materials. The groups were monitored and tested weekly, over a four week
period with regard to their mastery of the content. They were administered four weekly quizzes and one final examination covering all of the learning content.

- When the results for the three groups were compared, there were significant differences in the performance level of both experimental groups compared to that of the control group.
- The experimental group was significantly higher in their level of intentional and incidental learning compared to the control. Contrary to expectations, the experimental group that received both interventions did not perform significantly better than the one which only received test like items regarding the giving of feedback.

Shortman, (1992) studied to elicit the perceptions held by teachers employed in tribal college with regard to effective staff development activities.

- He found that older staff members are at a higher stage of staff development readiness on the first 25 items of the staff development inventory than younger teachers.
- Significant differences were shown, in that, regular content areas teachers preferred a demonstration of lesson and activities than those who teach social and cultural classes. These regular content areas teachers also had a higher preference for experiential learning than did the social and cultural teachers. The social and cultural teachers showed a higher preference for lectures than did regular teachers.

Panda, (1996) studied acculturation, sex and interaction effects on personality adjustment of Soora and Oriya children. He found that:

- Oriya and ORG groups possess better personal adjustment than LA and LAG; MAB possesses better personal adjustment than LAB and there does not exist any significant difference between all other group combinations.
- Oriya, ORB and ORG groups possess better social adjustment than LA, LAB, LAG, MAB and MAG groups; and there does not exist any significant differences between all other group combination.
- Oriya, ORB, and ORG group possess higher total adjustment than LA, LAB, LAG and MAG groups; and MAB groups has better total adjustment than LAB group; and there does not exist any significant difference between all other group combinations.

Mutharayappa (1996) found that the Jenu Kuruba and Kadu Kuruba tribes are endogamous in character, having different social structures and marriage patterns.
While Kadu Kurubas have divisions and class among them the Jenu Kurubas do not have any class but they speak of gods and groups. Among kadu Kurubas the patri-sibs help in regulating marital relations. The Jenu Kuruba children are free to marry any one they like among them but one should not marry blood relations. Very often they separate and remarry in succession. Among these tribes, there is very little control for elders over the brides and grooms. They require a mate both arranged by parents and also by elopement. Both consanguineous and non-consanguineous marriages are prevalent among these tribes.

Sreedevi and Lakshmi (1998) studied four hundred and ninety-one tribal school children from Ashram School (residential) and single teacher school (non-residential) of Kumool district, Andhra Pradesh for their anthropometry, morbidity, food and nutrient intake. The study revealed that a majority (69 percent) of the children belonged to the chenchu tribe followed by other tribes, such as, Yerukula, Yanadi and Sugali. The health and nutritional status of the children was not satisfactory. However, compared to the diets of single teacher school children, Ashram school diets were better in quality and quantity indicating the beneficial role of Ashram schools.

1.7.5 Research Studies Related to Self-Esteem

Pierce, J.L.; Gardner, D.G.; cumming, L.L. and Dunham, R.B. (1990) administered an organization based self-esteem (OBSE) using 2444 employees from diverse organizations and occupations and reported that subjects with high OBSE perceived themselves as important, meaningful effectual and worth while within their organization. Experiences in an organisation may affect employees level of OBSE which, in turn may affect their organisation-related behaviours and attitudes.

Gadzera, (1988) conducted a study, the purpose of which was to determine the effect of North shoroe community college’s co-operative education progress on the career maturity and self-esteem of community college students.

It was concluded that co-operative education was more effective in increasing the level of career maturity and that co-operative education was more effective at influencing the level of self-esteem than traditional academic courses.

Kawash, Clewesn, and Keating, (1990) examined self-esteem in the context of general personality functioning and reported that self-esteem can be differentiated clearly from other personality factors while retaining significant correlation with some of them most notably anxiety.

Vinutha, Rajni. and Nagalakhmi, (1990) investigated self-esteem in children and found that boys have significantly higher self-esteem in general, social and academic self-esteem than girls.
Banks, H.David (1992) examined the relationship among self-esteem, racial-identity attitudes, and academic performance for African-American male college students. The study tested four research hypotheses: Regression analyses were used to answer the research hypotheses. There were no significant differences on the independent variables or demographic variables between subjects from the different campuses. Findings from the study did not provide support for any of the hypotheses tested. Suggestions for future research include the incorporation of lie scale, use of random sampling and design which investigate both individual and environmental influences on academic performance among African-American male college students.

Thornton, (1992) evaluated the effectiveness of the co-operative teaching model as a service delivery option for mainstreamed ninth grade students, specifically, it sought to determine if the model positively affects student academic achievement and self-esteem. Malcolm provus's Discrepancy Evaluation Model (DEM) was selected as the evaluation model.

The DEM analysis revealed the greatest success in the output area. The co-operative teaching model was found to improve student academic performance and increased student self-esteem. However, the DEM analysis of pedagogical appropriateness and the preparation and support of teachers disclosed substantial discrepancies. Findings indicate that despite positive outcomes, the implementation of the co-operative teaching models was flawed, program goals and objectives were frequently confused and contradictory, baseline data were inadequate, administrative roles were undefined, and the teachers did not receive training or administrative support.

Davis, Hanson, Edson and Ziegler, (1993) conducted study to find the relationship between optimism, pessimism, loneliness and level of self-esteem in college students and reported that loneliness and pessimism were negatively related with self-esteem, while optimism was positively related with self-esteem.

Overholser, (1993) reported that subjects low in self-esteem have persistently higher levels of depression, loneliness and self-criticism.

Watkins, and Jiayan (1994) examined possible gender differences in the source and level of self-esteem of male and female under graduates from China. There was little evidence of gender differences in the level of overall self-esteem. However, there was gender difference in both salience and satisfaction ratings of specific sources of self-esteem.
Osbourne, (1995) tested three assumptions underlying C. Steele’s (1992) theory of disidentification in the context of a nationally representative sample of 8th grades:

- African-American student score lower on measures of academic achievement than white students.
- African American students tend not to report lower self-esteem than white students; and
- Correlation between measures of academic achievement and global self-esteem should be moderate.

Data were drawn from 544 African American male and 689 African-American female students and 5,294 white male and 5,473 white female students in the national education longitudinal study. Analyses revealed a pattern of working correlations between self-esteem and academic outcomes from the 8th to 10th grade for African-American students, particularly black male students, whereas the correlations for white students remained stable or increased. Results show general support for Steele’s theory.

Mitchell, and Fandt, (1995) examined the relationship between role defining characteristics and self-esteem of college students and concluded that levels of self-esteem, differ according to students major and race, but no significant difference in self-esteem was found between male or female students.

An examination of an alternative learning program and its effect on student motivation and self-esteem in a large urban school district in the mid-west was conducted by Nichols & William E. Utesch (1998). The dependent variables of interest were student motivation, goal orientation, efficiency, and self-esteem. The primary goal of the project was to determine if this specific alternative learning program could have a positive effect on its participants. In addition, this project was intended to provide feedback to the local school system regarding the effectiveness of their program. Upon their entry and exit from the program, students completed a questionnaire that focused on the dependent variables described above. An analysis of the pre and post-questionnaire data was presented. This study was based upon existing research in motivational theory and additional programs in other education circles that provide alternative forms of educational service for at-risk students.
1.7.6 Research Studies Related to Family Background

Palmer and Larry (1988) found that parents function effectively in fostering the career development of their children, when provided with a structured programme that they can follow.

Sartor (1990) found that parents influenced their children's choice and decisions.

Hilton (et al.) (1991) reported that a significant predictor of persisting interest in a science or technology career was the students perception of their parents and positive attitude towards science. Similar findings were reported by Former et al. (1991).

Hoffman and Hofacker (1992) reported that parents were found to be the primary influences on their offspring career choice.


Cheney, (1992) conducted a study to explore the relationships between family bonding, peer associations, school bonding and success or problems in school. Results indicated that the students perception of family bonding was the major influence on school bonding. Peer associations did not directly influence the school bond but were correlated with family bonding.

Tsai, Den-Mo (1992) investigated family factors that might contribute to the high academic achievement of one group of Asian-Americans, the Chinese-Americans. Results in this study indicate that the families with high achieving Chinese-American students tend to have parents with stable marriages and close relationship among family members. The family values contributing to high achievement include an emphasis on family chosen education, hard work, discipline, and the respect for teachers and elders. Parents also tend to emphasize the importance of mingling with the U.S. mainstream society.

Hsueh, (1992) examined the effects of family background on schooling for a sample of youth from the National Longitudinal Survey of Youth (NLSY). This study replicates and partially confirms Hausen and Wong's (1989) study from the Nebraska and the Kalamazoo sibling samples. Compared with these samples, the NLSY sibling sample shows a smaller differential effects of family background between sibling. This difference may be attributed to the trend of educational convergence and the smaller age range of the NLSY sample.

behaviour from a sample of over 6,000 public school students, with a focus on American Indians. Findings indicate that low family connectedness is associated with decreased educational commitment and an increased risk of absenteeism, substance use before and during school hours, and the purchase of alcohol or drugs on campus. It was found that American Indian youth had lower level of connectedness to family and poorer educational performance than African American and European American peers and engaged in higher rates of risk taking. American Indian adolescents residing outside the reservation may be vulnerable to increased familial stress and encounter cultural conflicts in mainstream educational settings.

Jerry Trusty (1998) Using national data, examined the influence of family and parenting variables on expectations regarding education. Demographic, family, and parenting variables were reported by adolescents and parents while the adolescents were seniors in high school, and educational expectations were reported by adolescents two years beyond high school. Socio-economic status (SES) was most strongly related to educational expectations. Adolescents' perceptions of parents' personal involvement and parents' reports of their own behaviour were both related to educational expectations. Also, both seemed to interact with SES. Variables quantifying the affective dimension of family relationship were only weakly related to educational expectations.

Zellman, Waterman's (1998) findings indicate that parent school involvement contributes to positive child outcomes. However, such involvement appears to be a manifestation of parental enthusiasm and positive parenting style. Parent-involvement programs might be more effective if they focused on such underlying constructs.

1.8 JUSTIFICATION OF THE PROBLEM

Ever since the formal system of education came to existence in civilized societies for the transmission of accumulated knowledge and experiences to the next generation, a number of instructional methods and strategies have been devised and tried out. The different methods and techniques for imparting instruction in a formal classroom setting has been continuously changing in which the old ones were replaced by the new ones. This activity has not come to an end today and the researches are going on to device still newer approaches of instruction. The motivation behind these efforts has been the need as desire to device a strategy which when used in the classroom situation will help to produce desirable changes in the learner's behaviours.

Till mid-fifties it was generally felt that students learn the same amount, whether teacher delivers lectures, holds discussions, combines lectures and discussions, or students learn on their own. Since, significant differences reported in research literature...
were rare, improvement of teaching was not taken up seriously. Hence, the problem of low and very low academic achievement remained unattended. After mid-fifties, interest in individualized instruction got momentum in the west and in the coming years various individualized instructional strategies were developed to bring improvement in teaching learning process. So there came a change in the thinking that all can learn well under set of certain conditions. The change in thinking has revolutionized, in a way, the whole concept and process of teaching in the classroom. The concentration of the teacher now is not only limited to a small section of students rather it takes into its folds all the students in the classroom.

A critical review of the literature in the field of mastery learning reveals that little work has been done to examine the conditions under which mastery learning is more or less effective and the limits of student learning through the mastery learning approach. Moreover, there are few studies conducted in India in relation to mastery learning.

A review of the related literature reveals that tribals in Indian Society seem to be at a lower level as far as general health status, economic status and academic achievement are concerned. Effort are being made to boost up the status of these people. One of time major concerns of the present investigation is to ensure higher levels of achievement, for all students.

Classroom teaching is usually geared to the average and sometimes to the above average and to a lesser degree, the average manage to achieve the instructional objectives but not the learners with different needs. These needs may refer to student learning styles, their entry behaviours or specific affective needs, which cover, tribal children under investigation. Such children may be helped to master learning tasks by providing sufficient time and appropriate instruction, which they are not able to get at home.

The research literature revealed that only a few studies have been conducted on Tribal's education, especially the Bodo Tribes. The investigator himself always felt the need of improving educational status of these people. In the dearth of some kind of guidelines for these people with varied family background, most of whom were also first generation of learners, the investigator thought of examining the impact of cooperative mastery learning strategies on achievement and self-esteem of these students.

Hence the following problem was selected and stated as follows:
1.9 STATEMENT OF THE PROBLEM

"A COMPARATIVE STUDY OF LEARNING LANGUAGES THROUGH CO-OPERATIVE MASTERY LEARNING STRATEGY AMONG TRIBAL & NON-TRIBAL FIFTH GRADERS".

1.10 DELIMITATIONS OF THE STUDY

- Effectiveness of Mastery learning was studied in respect of the three languages Viz: Mother-tongue Assamese, National language Hindi, and Foreign language English.
- Only Bloom's mastery learning strategy with co-operative remediation was used.
- The study was conducted on fifth grade Tribals (Bodo, Kakrajgar) and Non-Tribals (Dhubri).
- The study was conducted by drawing sample from Educated Family Background and Uneducated Family Background.

1.11 OBJECTIVES

The study was conducted with following objectives:

1. To study the effect of mode of instruction i.e Co-operative Mastery Learning and Conventional Group Learning on self-esteem and achievement of fifth graders in English, Hindi, and Assamese.
2. To investigate the effect of habitat i.e Tribal and Non-tribals on self-esteem and achievement of fifth graders in English, Hindi and Assamese.
3. To study the effect of Family Background i.e Educated and Uneducated on self-esteem and achievement of fifth graders in English, Hindi and Assamese.
4. To investigate interaction effect of mode of Instruction (CML Vs CGL) and type of habitat (Tribal Vs Non-Tribal) on self-esteem and achievement of fifth graders English, Hindi and Assamese.
5. To investigate interaction effect of mode of Instruction (CML Vs CGL) and Family Background (Educated and Uneducated) on self-esteem and achievement of fifth graders in English, Hindi and Assamese.
6. To study the interaction effect of type of habitat (Tribal Vs Non-Tribal) and Family Background (Educated and Uneducated) on self-esteem and achievement of fifth graders in English, Hindi, and Assamese.
7. To investigate the interaction effect of mode of Instruction (CML-Vs CGL) type of habitat (Tribal Vs Non-Tribal) and Family Background (Educated and
Uneducated) on self-esteem and achievement of fifth graders in English, Hindi and Assamese.

1.12 HYPOTHESES
To test these objectives following hypotheses were formulated:

For English Language
Ho.1 (E,): The Instructional Treatment yield equal level of learning outcomes as measured by achievement scores in English.
Ho.2 (E,): The different habitation (Tribal and Non-tribal) groups result in equal level of learning outcomes as measured by achievement scores in English.
Ho.3 (E): Comparable achievement scores in English are yielded on Educated and Uneducated Family Background.
Ho.4 (E,): The difference in performance as measured by achievement scores in English through Co-operative Mastery Learning and Conventional Group Learning are not qualified by habitat status.
Ho.5 (E,): The difference in the performance as measured by achievement scores in English through Co-operative Mastery Learning and Conventional Group Learning are not qualified by Educated or Uneducated Family Background.
Ho.6 (E): The effect of Tribal and Non-tribal habitat does not qualify the achievement scores in English of students with Educated or Uneducated Family Background.
Ho.7 (E): The treatment group yield comparable achievement scores in English for Tribal and Non-tribal groups coming from Educated and Uneducated Family Background.

For Hindi Language
Ho.8 (H,): The Instructional Treatment yield equal level of learning outcomes as measured by achievement scores in Hindi.
Ho.9 (H,): The different habitation (Tribal and Non-tribal) groups result in equal level of learning outcomes as measured by achievement scores in Hindi.
Ho.10 (H): Comparable achievement scores in Hindi are yielded on educated and Uneducated Family Background.
Ho.11 (H,): The difference in performance as measured by achievement scores in Hindi through Co-operative Mastery Learning and Conventional Group Learning are not qualified by habitat status.

Ho.12 (H,): The difference in the performance as measured by achievement scores in Hindi through Co-operative Mastery Learning and Conventional Group Learning are not qualified by Educated or Uneducated Family Background.

Ho.13 (H): The effect of Tribal and Non-tribal habitat does not qualify the achievement scores in Hindi of students with Educated or Uneducated Family Background.

Ho.14 (H): The treatment group yield comparable achievement scores in Hindi for Tribal and Non-tribal groups coming from Educated and Uneducated Family Background.

For Assamese Language

Ho.15 (A,): The Instructional treatment yield equal level of learning outcomes as measured by achievement scores in Assamese.

Ho.16 (A,): The different habitation (Tribal and Non-tribal) groups result in equal level of learning outcomes as measured by achievement scores in Assamese.

Ho.17 (A): Comparable achievement scores in Assamese are yielded on Educated and Uneducated Family Background.

Ho.18 (A,): The difference in performance as measured by achievement scores in Assamese through Co-operative Mastery Learning and Conventional Group Learning are not qualified by habitat status.

Ho.19 (A,): The difference in the performance as measured by achievement scores in Assamese through Co-operative Mastery Learning and Conventional Group Learning are not qualified by Educated or Uneducated Family Background.

Ho.20 (A): The effect of Tribal and Non-tribal habitat does not qualify the achievement scores in Assamese of students with Educated or Uneducated Family Background.

Ho.21 (A): The treatment group yield comparable achievement scores in Assamese for Tribal and Non-tribal groups coming from Educated and Uneducated Family Background.
For Self-Esteem

Ho.22 (SEI): The Instructional treatment yield equal level of learning outcomes as measured by achievement scores in Self-esteem Inventory.

Ho.23 (SEI): The different habitation (Tribal and Non-tribal) groups result in equal level of learning outcomes as measured by achievement scores in Self-esteem Inventory.

Ho.24 (SEI): Comparable achievement scores in Self-esteem Inventory are yielded on Educated and Uneducated Family Background.

Ho.25 (SEI): The difference in performance as measured by achievement scores in Self-esteem Inventory through Co-operative Mastery Learning and Conventional Group Learning are not qualified by habitat status.

Ho.26 (SEI): The difference in the performance as measured by achievement scores in Self-esteem Inventory through Co-operative Mastery Learning and Conventional Group Learning are not qualified by Educated or Uneducated Family Background.

Ho.27 (SEI): The effect of Tribal and Non-tribal habitat does not qualify the achievement scores in Self-esteem Inventory of students with Educated or Uneducated Family Background.

Ho.28 (SEI): The treatment group yield comparable achievement scores in Self-esteem Inventory for Tribal and Non-tribal groups coming from Educated and Uneducated Family Background.