CHAPTER : 2

Review of the Related Literature

2.0 Introduction

2.1 Mastery Learning-Thematic Approach
   2.1.1 Mastery Learning- Definition
   2.1.2 History of Mastery Learning
   2.1.3 Typical design of a Mastery Learning Programme
   2.1.4 The Vital Elements of Mastery Learning
   2.1.5 Key words used for Mastery Learning Programme
   2.1.6 Advantages of Mastery Learning
   2.1.7 Disadvantages of Mastery Learning

2.2 Researches done in Foreign Countries

2.3 Researches done in India

2.4 The place of present research in the context of literature reviewed

2.5 Epilogue
CHAPTER : 2

Review of the Related Literature

2.0 Introduction :

The present chapter mainly deals with the review of the previous relevant literature. The purpose of this review is to find: (i) to what extent earlier investigators had been taken up in the identical areas, to which present research study is concerned, and (ii) to find out the unexplored areas of studies. It is hoped too, that through this review, certain corroboration may also be established between the earlier findings of various researches of the past, and the results of the present investigation, which will be discussed in the subsequent chapters.

The review of related literature gives the researcher an understanding of the research methodology which refers the way the study is to be conducted. It helps the researches to know about the tools and instruments which proved to be useful & promising in the previous studies.

This chapter provides a thematic presentation incorporating research studies taken up in the foreign countries as well as in India in the area of mastery Learning.

2.1 Mastery Learning-Thematic Approach :

2.1.1 Mastery Learning- Definition :

Mastery learning refers to the idea that teaching should organize learning through ordered steps. In order to move to the next step, students have to master the prerequisite step. It suggests that the focus of instruction should be the time required for different students to learn the same material.

According to the Encyclopedic Dictionary and Directory of Education (Vol.I) Mastery Formula is “A term used by Morrison for the method of securing mastery of a subject matter, in which testing forms the beginning, middle and end of a teaching learning process so that teaching may be appropriately adopted to the need of the learner.
Guskey, (1997). "Mastery learning is usually implemented through a careful process of organization and planning, followed by specific procedures for classroom application and student assessment and evaluation." Mastery learning does not challenge teacher's professionalism or academic freedom, but instead offers a useful instructional tool that can be flexibly applied in a variety of teaching situations." Although it is not an educational cure-all, mastery learning significantly increases the positive influence teachers can have on student learning.

2.1.2 History of Mastery Learning:

According to Davis & Sorrel (1995), “The mastery learning concept was introduced in the American schools in the 1920’s with the work of Washburne (1922, as cited in Block, 1971) and others in the format of the Winnetka Plan.”

It was revived in the late 1950’s with programmed instruction.

According to TIP, Caroll in 1963 was the first to argue in favor of some kind of mastery learning. Bloom in the 1960’s defined the modern model and also was actively engaged in promulgation and evaluation.

The mastery learning concept was introduced in the American schools in the 1920’s with the work of Washburne (1922, as cited in Block, 1971) and others in the format of the Winnetka Plan. The program flourished during that decade; however, without the technology to sustain a successful program, interest among developers and implementers steadily diminished (Block). Mastery learning was revived in the form of programmed instruction in the late 1950’s in an attempt to provide students with instructional materials that would allow them to move at their own pace and receive constant feedback on their level of mastery. During the 1960’s Bloom’s (1968) Learning for Mastery focused new attention on the philosophy of mastery learning. Bloom (1968) is now generally recognized as the classic theoretical formulation on the mastery model. He is widely viewed as the major theoretician and promulgator of mastery learning. Bloom made a number of specific predictions about the gains from mastery learning procedures. One is that in classes taught for mastery, 95% of the students will achieve at the level previously reached by the top 5%. That means that typical scores in a mastery classroom should be around the ninety-eighth percentile, or approximately two standard deviations above the mean. Bloom has also argued that students do not have to put in
much more time on school tasks to achieve this level of proficiency. Although students taught for mastery may need more time to reach proficiency in the initial stages of a course, they should need less time to master more advanced material because of the firm grasp of fundamentals that they should gain from their initial efforts. Bloom maintains that besides mastery of the material to be learned, mastery learning increases the attitude and interest of students (Fehlen, 1976). He and his students have conducted many empirical studies that demonstrate the effectiveness of mastery programs in a wide variety of circumstances (Levine, 1987). Bloom suggests that mastery learning procedures are likely to enhance learning outcomes in most all subject areas. However, he suggests that effects will be largest in mathematics and science since learning in these subject areas is generally more highly ordered and sequential (Guskey & Gates, 1986).

Mastery learning is not a new method of instruction. It is based on the concept that all students can learn when provided with conditions appropriate to their situation. The student must reach a predetermined level of mastery on one unit before they are allowed to progress to the next. In a mastery learning setting, students are given specific feedback about their learning progress at regular intervals throughout the instructional period. This feedback, helps students identify what they have learned well and what they have not learned well. Areas that were not learned well are allotted more time to achieve mastery.

2.1.3 Typical design of a Mastery Learning Programme:

Huynh and Jones et al, (1985) "There are many different formulations of the Mastery Learning approach. All of these formulations share some common theoretical elements. Mastery Learning begins with an assessment of the skills and background that students bring in to the class. Once this is accomplished, the instructor is able to determine the level of understanding that students bring in to the course. Secondly, specific learning objectives are developed, which organize the material in to specific components for the students to learn. Formal instruction proceeds according to these components and students are provided with the opportunity to practice these specific skills. During practice, students are given guidance and reinforcement to maximize their abilities to master these skills. After practice, students are given an assessment to determine their level of mastery of the component. If a student demonstrates mastery, then he or she moves to the next component of the course. If not, the student receives additional teaching and practice until mastery is demonstrated."
Though there are different formulations, the common typical design of a Mastery Learning Programme can be derived as under:

1. Definition of clear objectives of what has to be taught/learnt
2. Subject is divided into relatively small learning units. Each unit will have:
   - objectives (i.e. a clear definition of what has to be mastered”);
   - a brief diagnostic test to be administered before the unit (they may lead to supplementary instruction);
   - learning materials and instructional strategies;
   - formative evaluation (that in turn should lead to remediation) and summative evaluation.
3. Time to learn is adjusted for each student in order to master at least 80% of the material
4. Assessment whether global objectives have been met.

The mastery learning method divides subject matter into units that have predetermined objectives or unit expectations. Students, alone or in groups, work through each unit in an organized fashion. Students must demonstrate mastery on unit exams, typically 80%, before moving on to new material. Students who do not achieve mastery receive remediation/learning experiences through mentoring, assignments, work cards, tutoring, peer monitoring, small group discussions, or additional homework. Additional time for learning is prescribed for those requiring remediation. Students continue the cycle of studying and testing until mastery is met.

It has been said that ninety percent of learning population can master a subject when mastery learning methods are implemented. We can develop effective mastery learning methods when we determine how the learning and teaching process relate to the individual needs/differences in learners. Different students do not learn at the same pace. Mastery learning provides the students own pace to learn something well. Time to learn must be adjusted to fit aptitude. No student is to proceed to new material until basic prerequisite material is mastered.
Bloom, Block, and Carroll believe that mastery learning can be handled in a normal classroom. Learners should have specific learning procedures to follow. Tutors that work with mastery learners should be trained in mastery learning methodologies. Mastery learners should be provided with opportunities to participate in group study. The study should be joyful. Alternative learning materials should be available to mastery learners. Mastery learners must feel that they are evaluated by their performance. Diagnostics for mastery learners must prescribe specific processes for the learner to overcome difficult tasks. Assessment shouldn’t be fearful.

2.1.4 The vital elements of mastery learning:

Since Bloom first set forth this idea, much has been in this theory of Mastery Learning and its accompanying instructional strategy. Still programme labeled Mastery
Learning are known to vary greatly from setting to setting. The main vital elements defined as essential are as follows:

- Allow students to learn at their own pace;
- Assess student progress and also provide appropriate feedback or remediation;
- Test to find achievement according to final learning criterions described.

The students in the same class differ in learning abilities. Some are slow learners while the others grasp very fast. The task of the teacher is to bring forth the best of all students. In this programme teacher facilitates the students learning at their own pace. To find out the progress formative tests or certain activities can be used. The students below mastery learning are provided remedial in a form of assignments, self learning material, peer group teaching or one to one mentoring. At the end of teaching learning process to find the achievement according to final learning criterions summative test is administered. The students are being helped until they reach the mastery level. At the same time the high achievers are provided challenging work.

The teaching learning process is generally perceived as having three major components. (A). learning outcomes. (B). instructions that is intended in to result in to competent learners. (C). evaluation. Mastery Learning adds an additional component feedback and correctives.

### 2.1.5 Key words used for Mastery Learning Programme:

- **Enough time means**: Time required to demonstrate mastery of objectives
- **Appropriate instruction means**:
  1. Break course into units of instruction
  2. Identify objectives of units
  3. Require students to demonstrate mastery of objectives for unit before moving on to other units
- **Grades may be determined by**:
  1. Actual number of objectives mastered
  2. Number of units completed
3. Proficiency level reached on each unit
4. Any combination of above
   • Students can work at own pace if course is so structured, but mastery learning can be accomplished with group instruction.

2.1.6 Advantages of Mastery Learning:
   • Students have prerequisite skills to move to next unit
   • Requires teachers to do task analysis, thereby becoming better prepared to teach the unit
   • Requires teachers to state objectives before designating activities
   • Can break cycle of failure (especially important for minority and disadvantaged students)

2.1.7 Disadvantages of Mastery Learning:
   • Not all students will progress at same pace; this requires students who have demonstrated mastery to wait for those who have not or to individualize instruction
   • Must have a variety of materials for reteaching:
   • Must have several tests for each unit
   • If only objective tests are used, it can lead to memorized and learning specifics rather than higher levels of learning

2.2 Researches done in foreign countries:

From John Carroll (1963), Bloom derived a critical and quantitative ingredient of instruction—time. In Carroll’s formulation, learning is a function of time spent divided by time needed. One important variable related to time needed is student aptitude, which Carroll defines as the amount of learning time necessary for a student to master an objective under optimal conditions. Carroll indicates that if a student is allowed the time he/she needs to achieve a particular level and if he/she spends the amount of time needed, he/she should achieve at that level. Bloom has attempted, through mastery learning techniques, to ensure that almost all students demonstrate high levels of competence on school material and to reduce the amount of time the student needs to learn school-related content.
Benjamin S. Bloom (1968) took up the task of transforming Carroll’s conceptual model for school learning into a working model for classroom instruction. By this way, the teaching learning strategy came into existence by Bloom which was labeled as ‘learning for mastery’ which later on shortened to simply ‘mastery learning’. One of the first attempts to implement mastery learning strategies on a continuing basis took place at Olive-Harvey College in Chicago by the teacher/development approach. The success of this attempt at Olive-Harvey College (1972) led to the development of a country wide mastery learning programmer which included in-service training of instructors from all eight junior colleges in Chicago city college system. Within this programme, mastery learning strategies were applied in nine different subject areas (English composition, mathematics, biology, nursing, psychology reading and Spanish) and in a wide variety of educational settings.

Guskey and monsaas (1979), in their study of the city college Mastery Learning programmer found that the results of these efforts were similar to those experienced at Olive-Harvey college. In nearly every subject area, students enrolled in mastery classes; received higher final grades, did better on common final examinations, and were less apt to withdraw than were students in non-mastery sections of the same course. It was not long before similar mastery learning programmer began appearing in public school systems across the United States. Extensive programmer have been developed in Chicago, Denver, New York city, and Lorain, Ohio, to name only a few. Most of these programmers use the teacher/development approach in which groups of teachers have worked together to devise the materials necessary for them to implement mastery learning in their classrooms.

Mastery learning’s effect on achievement and motivation was examined by Clark, Guskey, and Benningan (1983). The study examined a mastery learning group and a traditional group that used the lecture format. The main variable for this study was motivation and its effect on student achievement. These authors found that the mastery learning group demonstrated higher levels of achievement, fewer absences, and more motivation toward learning course material.

Guskey and Gates (1986) conducted a meta-analysis which contained 27 studies addressing five areas: student achievement, student retention, time variables, student effect, and teacher variable. They found that achievement results were overwhelmingly
positive. Students in mastery learning programs at all levels showed increased gains in achievement over those in traditional instruction program; effects were somewhat larger in elementary and middle school classes. With regards to student achievement, a positive effect was obtained as a result of the application of group-based mastery learning strategies. Bloom (1968) suggested that mastery learning would enhance learning in all subject areas with larger effects in mathematics and science. This analysis also found more positive effects in language arts.

Guskey and Pigott (1988) conducted a meta-analysis in an attempt to answer several questions about group-based mastery learning. Those questions were: How effective is the typical group-based mastery learning program? What types of educational outcomes are affected by the use of mastery learning? A synthesis was of findings from 36 mathematics studies on group-based applications of mastery learning strategies. Meta-analytic procedures were used to combine the results of the studies and to calculate estimates of the effects of group-based applications. Mathematics studies included basic math, general math, consumer math, algebra, matrix algebra, cartography, fractions, geometry, graphs, and probability. Studies in mathematics yielded a somewhat large weighted average effect size of 0.70. The research found students who learned under mastery conditions generally liked the subject they were studying more, were more confident of their abilities in that subject, felt the subject was more important, and accepted greater personal responsibility for their learning than students who learned under non-mastery conditions. Another aspect of the meta-analysis was the effects on teachers. In general, the synthesis found that teachers and teaching interns expressed much more positive attitudes toward the philosophy and practices of mastery learning after they had used these practices.

Kulik, Kulik and Bangert-Drowns (1990) conducted a meta-analysis involving 108 evaluations of mastery learning programs. The outcome measures used were performance on examinations at the end of instruction, attitude towards instruction, attitude toward content, and course completion. Performance on examinations at the end of instruction showed positive effects on student achievement although these effects were higher on locally prepared criterion examinations than on nationally standardized test. The majority of studies showed a positive correlation in student attitudes towards instruction and content of mastery learning program. Although this synthesis did not
report overall effect sizes for mathematics, there were interesting results related to student attitudes in general. Eighteen studies examined student ratings of the quality of the instructional method used in the course. Sixteen of the eighteen studies found more positive attitudes, and two studies found more negative attitudes in the mastery learning class. Overall, the average effect size in the 18 studies was 0.63. Likewise, fourteen studies examined the effects of mastery programs on student attitudes toward the subject matter that they were being taught. Twelve of these 14 studies reported that student attitudes were more positive in mastery classes than in conventional classes (with two studies finding negative effects). The average effect size for student attitudes toward subject was 0.40.

Ritchie and Thorkildsen (1994) examined achievement and accountability. This study compared two mastery learning groups. The treatment variable was that one group was aware they were in a mastery learning program while the other group was unaware. There was a statistically significant difference between the two groups with the informed group showing higher levels of achievement.

The literature indicates positive effects of mastery learning on students, especially in the areas of achievement, attitudes toward learning, and the retention of content. School systems that have implemented mastery learning have found it to be a very effective teaching and learning method. (Davis & Sorrell, 1995).

The study carried out by Johnson M. Changeiywo, Patriciah W. Wambugu and Samuel W. Wachango (2003-2004) was to find out the effects of Mastery Learning Approach (MLA) on students’ self-concept in Physics. The study was Quasi-experimental and Solomon Four Non-equivalent Control Group Design was used. The target population comprised of secondary school students in Kieni East Division of Nyeri District. The accessible population was from two students in district co-educational schools in the division. Purposive sampling was used to obtain a sample of four co-educational secondary schools. 161 students were involved. Random assignment was done to obtain the schools in experimental and control groups. Random sampling was used to obtain one class where a school had made than one stream. The students were taught the same Physics topic of Equilibrium and Centre of Gravity. In the experimental group MLA teaching method was used while the Regular Teaching Method (RTM) was used in the control groups. The experimental groups were exposed to MLA for a period of three weeks, Pre-
The test was administered before treatment and a post-test after the treatment. The instruments used in the study were the Physics Students’ Self-Concept Questionnaire (SSCQ) to measure self-concept in Physics. The instruments were pilot tested to ascertain their reliability. Experts ascertained their validity before being used for data collection. Data was analyzed using t-test, ANOVA, and ANCOVA. Hypotheses were accepted or rejected at a significant level of 0.05. The result of the study shows that MLA teaching method resulted in positive academic self-concept but gender had no significant influence on their self-concept. The researcher concludes that MLA is an effective teaching method, which physics teachers should be encouraged to use and should be implemented in all teacher education programmes in Kenya. The researcher recommends that a study to give insight into the effects of group mastery learning and individualized MLA on students’ academic self-concept.

Zimmerman & Dibenedetto, (2008) conducted a qualitative study of a mastery learning mathematics curriculum in Algebra. It was performed at Dryersburg High School located in a town of 17,406 residents near the Mississippi River has an enrollment of 886 students across the four grades. More than 40% of the students at Dryersburg High School are eligible for free and reduced lunch, and the curriculum is organized on a quarter-year round system. Chapters or modules are broken down into smaller units. Students are tested after each unit and must score 80% or higher to achieve mastery. Students who do not pass are then given correctives and retested. Students are provided the opportunity to retake a unit three times. The correctives tests focus on class material that had not been passed. One teacher commented, “The biggest plus is that when they finish the year, they remember what they have learned. They don’t forget it. In addition, students participating in the mastery learning curriculum feel good about their learning and gain self-confidence in their ability to earn a B or an A in math, an academic subject with which many had previously struggled (p.214).” Teachers in this program also reported that the organizational skills used to attain mastery in math class appeared to generalize to other classes. The teachers indicated that with the mastery learning curriculum they had higher expectations for their students and expressed a sense of empowerment and satisfaction in their ability to educate students. The study concludes that in the traditional approach of teaching algebra, students do not know exactly what is important and may feel overwhelmed and anxious by the amount of material to be studied in preparation for the one time summative exam. In contrast, mastery learning procedures focused students...
on the exact competencies that will be tested. Unlike traditional students’ apprehensions about testing, the mastery learning students at Dryersburg High School reported a high sense of confidence and self-efficacy for math, high self-evaluative satisfaction with their progress, and high goal standards. The teacher concluded that, “And you know that is the main thing, when kids experience success, they’re willing to work harder. (p.214)”

Effective Programs in Middle and High School Mathematics: A Best-Evidence Synthesis by Slavin, Lake & Groff, (2009) is a meta-analysis that reviewed research on the achievement outcomes of mathematics programs for middle and high schools. Study inclusion requirements included the use of a randomized or matched control group, study duration of at least 12 weeks, and equality at pretest. Six studies of mastery learning in mathematics met the criteria.

<table>
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<tr>
<th>Study</th>
<th>N</th>
<th>Grade Level(s)</th>
<th>Sample Characteristics</th>
<th>Overall Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aitken (1984)</td>
<td>60</td>
<td>8th</td>
<td>Southwest U.S.</td>
<td>+0.22</td>
</tr>
<tr>
<td>Anderson (1988)</td>
<td>86</td>
<td>Junior High</td>
<td>Suburban</td>
<td>-0.05</td>
</tr>
<tr>
<td>Monger (1989)</td>
<td>70</td>
<td>7th</td>
<td></td>
<td>-0.25</td>
</tr>
<tr>
<td>Olson (1988)</td>
<td>567</td>
<td>7th and 8th</td>
<td>Rural</td>
<td>+0.02</td>
</tr>
<tr>
<td>Slavin and Karweit (1984)</td>
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<td>9th</td>
<td>General math in Urban schools</td>
<td>+0.01</td>
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<td>Sullivan (1987)</td>
<td>232</td>
<td>Junior High</td>
<td></td>
<td>-0.29</td>
</tr>
</tbody>
</table>

Overall, the synthesis found a weighted mean effect size of -0.05.

Most of the mastery learning programs that have been studied appear to have some positive effects on achievements, although observers have noted that if left on their own, students procrastinate and consequently make little progress. Notwithstanding these limitations, these well tested programs provide teachers with models of evaluation that are based on a mastery standard. Outcomes can extend beyond academic skills. They can also include motivational orientations.
2.3 Researches done in India

In India less attention is given to the researches on mastery learning; Few researches have been conducted in this field, some of them are mentioned below:

Hooda (1983) conducted a Project on the “effect of Mastery Learning Strategy on pupils’ achievement”. This study was conducted for VI grade pupils in a Boys’ Government middle school, for eight units only in mathematics. In this study, it was found that experiment groups significantly achieved higher score than that in controlled Group. It was concluded that Mastery Learning strategy helps in improving the achievement of Pupils.

Omkar sing (1983) studied “Effect of Mastery Learning on certain non-cognitive variable of high school students.” This study was conducted to study and compare the effect of:

(i) (a) Programmed instructions, (b) Bloom’s Mastery Learning Strategy, (c) Convention method of teaching; on self concept of high school students after taking instruction in social studies.

(ii) (a) Programmed instructions, (b) Bloom’s Mastery Learning Strategy, (c) Convention method of teaching; on achievement motivation of high school students after taking instruction in social studies.

(iii) (a) Programmed instructions, (b) Bloom’s Mastery Learning Strategy, (c) Convention method of teaching; on test anxiety of high school students after taking instruction in social studies.

Finding of this study shows that Bloom’s Mastery Learning strategy was found to be a superior strategy in comparison to Programmed instructions. The Programmed instruction does not seem to be suitable strategy in Indian conditions, due to the cost and time required for the developments of the Programme, Bloom’s Mastery Learning Strategy Seems to fit well as it does not involve that cost and time which Programme instruction does.

More over it is so designed that it does not require extra teaching Material but makes use of those books which already stand Prescribed for conventional method of teaching and ensure to covers the syllabus in the academic session.
Romesh Chand (1984) studied “Effect of personalized system of instruction and Bloom’s Mastery Learning Strategy of the retention of high school students in a segment of science”. From this study it was revealed that PSI (Personalized System of Instruction) and Bloom’s Mastery Learning Strategy have equal effect on immediate and delayed retention. Thus both these strategies help the students equally well in retaining the material for a long time. In the light of this it would be worthwhile for a teacher to make use of these strategies in the classroom situation. However, it may be pointed out that the introduction of PSI may need a lot of finances because for every discipline additional Material in the forum of study guides has to be prepared. The schools which can afford to spend some extra finance can safely make use of this strategy, but the schools which cannot afford extra expenditure, can make use of Bloom’s Mastery Learning Strategy, because this strategy needs an extra effect on the part of teacher and no financial implication are involved.

YADAV, P.S., (1984) Studied the “Effect of Mastery Learning Strategy on Pupils’ Achievement in Mathematics, their Self-concept and Attitude towards Mathematics.” The objectives of the study were (i) to compare the mean achievement scores of two groups of pupils taught mathematics with and without the use of mastery learning strategy, (ii) to compare performance scores of two groups of pupils taught mathematics with and without the use of mastery learning strategy, (iii) to compare the attitude towards mathematics of two groups of pupils taught mathematics with and without the use of mastery learning strategy, and (iv) to compare the mean self-concept scores of two groups of pupils taught mathematics with and without the use of mastery learning strategy. In pursuance of these objectives it was hypothesized that the groups of pupils taught mathematics through mastery learning strategy would score significantly higher on the criteria of achievement, attitude towards mathematics and self-concept.

The study employed a pretest post-test control group design involving two groups of pupils, the experimental group using mastery learning strategy, and the control group using the conventional method of teaching mathematics. As a sample six high schools in a rural area of Haryana were selected and paired in three sets each comprising one from the experimental group and the other from the control group, matching them on the basis of institutional characteristics. The experimental group had 173 students from three schools of grade IX in five sections taught by five different teachers. The control group
had 189 students from three schools of grade IX in five sections taught by five different teachers. The students in the experimental and control groups were equated on their scores on intelligence, socio-economic status and previous knowledge in mathematics. The sample students were administered the following tools: (i) the Mathematics Attitude Scale which had a split-half reliability of 0.85 and had content validity; (ii) the Mathematics Achievement Test which had a split-half reliability of 0.73 and had content validity; (iii) the Swatva Bodh Parikshan – a test of self-concept developed by Sherry et al., having test-retest reliability 0.733 and validated against content. The data so collected were analyzed with the help of t-test.

The result showed the positive effect of Mastery Learning Strategy. Before the experimental treatment, the experimental group (mastery group) of pupils and the control group (conventional group) of pupils evinced no significant differences in respect of their achievement in mathematics, self-concept and attitude towards mathematics. After the experimental treatment, the experimental group of pupils exhibited a significantly higher achievement in Mathematics than the control group of pupils and higher gain scores of achievement in Mathematics. Different percentile achievement scores of the experimental group of pupils were found to be significantly higher than those of the control group of pupils at post-test stage. The achievement distribution curve in the case of the experimental group of pupils in respect of their post-testing was highly skewed in the positive direction, whereas it was nearing normal in the case of the control group of pupils. There was minimum overlapping in the two curves, showing thereby the large differences in achievement of the experimental and control groups. When the achievement distribution curves in the case of gain scores of experimental and control groups were compared, it was found that the curve in the case of the control group extended to the negative side, which implied that some of the pupils in control group did not show a positive gain. After the experimental treatment, the experimental group of pupils evinced a more positive attitude towards Mathematics than the control group of pupils. After the experimental treatment, the improvement in self-concept of the experimental group of pupils was found to be significantly higher than that of the control group of pupils.

Harsha Patadia (1986) took out the study to validate the effectiveness of the developed strategy in 5th grade Geometry. The research was carried out on sample of pupils in Convent Jesus and Mary High School, Baroda. The experimental method was
used by forming two groups in term of I.Q. Out of 94 Students 51 were in experimental
group and 43 students were in controlled group. From the research sample 68.63 percent
of pupils did achieve mastery level in geometry. 88.24% of pupils of experiment group
had scored minimum 70% of marks. There were several cases where in pupils with low
I.Q. scored higher marks as those having higher I.Q. The researcher mentioned that the
developed strategy was much more superior to the conventional method used by another
teacher to teach the controlled group. The strategy helped the students to increase learning
rate, to remove the inferiority complex and to build in them a greater self confidence.
The pupils were found increasing ability to work continuously for achieving the mastery
once they started scrolling well in formative tests of the first unit.

Mathur R.G. (1988) tried to find the effect of Mastery level Learning Programme
in Statistics on the achievement, self-concept and attitude towards Statistics of Nursing
students. The study attempted to investigate the large scope for self-paced diagnostic
corrective instruction leading to the desired level of competence and its effective outcome
in tems of self-concept and attitude.

The objectives of the study were to study the effectiveness of the mlp in terms of
(a) performance of students on formative and summative tests in Statistics. (b) Change
in the academic self-concept and attitude of Nursing students towards Statistics as a
subject and to study the similarities and differences between repeaters and non-repeaters.
The sample comprised final year B.Sc. Nursing and M.Sc. Nursing student of RAK
College of nursing, Delhi. Consecutive batches i.e. 1984-85 and 1985-86. The 40 final
year students of 1986-87 served as the contrast group. The tools used included attitude
scale (semantic differential type0 self-concept scale of Brookover’s adaptation, Arithmetic
Skills Test, Raven’s Standard Progressive Matrix, Test A to E Achievement Motivation
and Mukherjee’s Sentence Completion Test.

It was found that the majority of students (75% or more) attained mastery in each
study year. Gains were observed after MLP in Arithmetic Skills, Self-concept, and attitude
and in achievement on subsequent forms of unit formative tests in each of the unit
formative tests in each of the study years. The relationship of the achievement with self-
concept and attitude was not significant in each of the study years. The difference between
repeaters and non-repeaters on arithmetic skills etc. was not found significant. The mean
summative score were higher in treatment group than in the contrast group.
Vaidya, S. (1990) “Conducted a study on Effect of mastery learning strategy on pupils achievement, their self-concept and attitude towards Hindi”. The experimental-control group pre-test, design was used. The sample of the study was chosen from Class VI students of a higher secondary school of Indore. In all 144 students were selected on the basis of IQ and SES, and Groups I, II and III were given respectively, the treatments of Mastery Learning Strategy, Concept Attainment Model and Traditional Method. The measuring tools used for data collection were: Cattell’s Culture Fair Intelligence Test, Kuppuswami’s SES Scale, Sherry et al.’s Self Concept Test, one Achievement Test and one Attainment Scale prepared by the investigator. The instruction tools included: Hindi Grammar Lessons, 33 Lesson Plans, Group Corrective and Revaluation Test and Achievement Test. All the three groups were taught for 30 minutes for 33 days. However the mastery learning group took some additional time. Correlated ‘t’ test and one way ANOVA were used for data analysis.

It was found that the mastery learning strategy was more effective in facilitating learning and raising the achievement of the learners than either the Concept Attainment Model or the Traditional method. The Mastery Learning Strategy was more potent and beneficial in bringing about improvement in the self-concept of the pupils’ and in changing their attitude favorably towards the Hindi subject than either the Concept Attainment Model or the Traditional method.

Navab AbdulKadir A. (1993) took out his study to find the effect of Mastery learning on the Achievement of students of std VIII in science. The sample groups were Surat city with the hypothesis that i) There will be no significance difference in Achievement of students, of experimental and controlled group ii) There will be no significance difference between the Learner’s mastery level in science either through Mastery learning strategy or traditional Method. iii) There will not be significance difference in the development of interest of pupils in both the group. The conclusion was that the strategy of Mastery Learning was found effective. The self learning material helped experimental group to achieve mastery level in study of science subject.

Kamalnayan Parmar (2009) took out study on “Effectives of mastery Learning Programme with reference to teaching of mathematics”. Research was conducted on the students of standard six and standard nine of Anand district in the context of mathematics interest, Teaching methodology and Exam anxiety. Major findings were:
• Exam anxiety was reduced in experimental group in both standard sixth and standard ninth in experimental group.
• Mathematical interest was increased in both standard sixth and standard ninth in experimental group.
• Achievement of the subject mathematics was higher in Experimental method in both standards.
• Students were enthusiastic to learn with the teaching method as a mastery learning.
• Different method of teaching was totally adopted by students.

2.4 The place of present research in the context of literature reviewed:

The above researches done in India are in consonance with the methodology of research from the studies abroad. Hence, the experimental method has been adopted and comparison of Mastery Learning Programme with traditional method has been made.

The studies taken up in India are related mostly on Mathematics, Science and Social study. Accountancy is the subject that deals with basic Principles like the subject of mathematics. It is also called science as it has facts and theories. Yet no research has been done in this subject. In this study mastery learning programme for the Accountancy subject is developed by the researcher. To find the effect of Mastery Learning Programme on Gender, I.Q., Attitude and Retention of the students of Class XI “Attitude scale” is constructed and standardized by the researcher. The Integrated Test /summative assessment test was also standardized.

Thus, the research is of unique type from the researches reviewed by the researcher.

2.5 Epilogue:

In this chapter 2 the review of related literature i.e. theoretical perspectives of the concept and researches done in India and foreign counters are concluded. Through this, the investigator has tried to give an overview of the literature in the past and relevant researches done in the past. Catching the end of the thread of the subject, the investigator tried to outline her investigation and made an attempt to support her work with the work already done.

The next chapter, therefore, takes the thread and planning for the Mastery Learning Programme for the subject of Accountancy is put forth.