CHAPTER : 1

Introduction

1.0 Introduction
1.1 Statement of the problem
   1.1.1 Explanation of Terms
1.2 Objectives
1.3 Field of research
1.4 Hypothesis
1.5 Variables under Study
1.6 Area of research
   1.6.1 Limitations of the study
1.7 Rationale of the Study
1.8 Planning of Research work
1.9 Data Collection
1.10 Data Analysis and Interpretation
1.11 Scheme of Chapterization
CHAPTER : 1
Introduction

1.0. Introduction :

In spite of investing maximum time, energy and finance in education, the dissatisfaction and very poor performance of Gujarat State Students in national level competitive exams like I.A.S., U.P.S.C., U.G.C., C.A.T, NET, TOEFEL, etc. indicates that something wrong is prevailing in the education process of the state.

In fact the prime aim of education of the state must be to bring out the complete achievers or the master achievers after education. Our criteria of 40 % of marks for passing the exam means it doesn’t matter if the learners do not know 60% of the content or the knowledge of the Subject. What does it indicate? Isn’t it a strange fact? What contribution of such students having 40% achievements will provide in development and upliftment of his own, the society and the nation?

Rapid economic growth of the individual as well as the nation has been the urgent need and expectation of the present era with the advent spread of commerce and our expectation of making India “a developed nation” and one of the competitive nations in world market, the importance of Subject of Accountancy has also been gradually increased. The experts of this subject are day by day becoming professional consultants for the investors, money lenders, administrators, sponserers, and workers too. Such skilled consultants minutely analyzing and interpreting the varied data provide timely help and guidance for the traders to take perfect decisions.

In reality, the consultants are the true policy makers. The students of today shall be shrewd traders, skillful organizers, modern industrialists, and competitive professional of tomorrow’s world. For this, they must have to attain complete mastery and efficiency in the subjects they study i.e. Accountancy.

It’s a question how to increase pupils’ learning efficiency? In last two decades the ratio (strength) of students has been increased in the classrooms. We find 30 to 70 students in each class. A teacher can’t give learning experiences according to their individual
difference. Teachers in our classes work at their own pace. They keep in mind the efficiency of average students and plan their teaching work and activities accordingly. So as a result ¾ of populations learn well and others remain back in studies. These students either take more time in learning or leave the study. If such students, learning at slow speed are given enough instructions time they can also reach at the level of good students.

Bloom (1982) points out “if the communication processes between tutor and learner are ideal, it is likely that there would be a minimum error in both the teaching and learning. Whether or not group approach the reduction in error present in ideal tutor-student relationship, it is likely that a systematic way of identifying and correcting errors in group instruction and individual learning might minimal error system in the process of schooling.”

Many experiments in this area of research have been taken up in western land. B.F. Skinner (1958) investigated programme-learning method. Derrin prepared school learning programme. Benjamin S. Bloom (1968) developed Mastery learning Programme according to thinking of Carol and Bruner. This programme or approach studies pupils’ individual learning difficulties and provide remedial work in accordance with the stated learning difficulties of an individual in particular and all the pupils in general. Moreover this approach provides the learners ample time to learn the learning topics. This approach can be considered totally a pupil centered approach because it helps at all or almost all the learners to reach up to the maximum level of achievement in mastery learning.

Mastery Learning Programme came into existence in western countries in 1968, Since then satisfactory research studies in numbers have been done in this area, but in India, such studies / researches are ‘few’. During the end of 90th decade attempts had been made for studying the effectiveness of said programme, in certain topics of Mathematics and Science subjects. The studies in other subjects i.e. Economics, I.T. and History has also been carried out during 2000 to 2006 at M.Ed. level but in a very small number. The researcher has not found any work done in this area in the subject of Accountancy.

The investigator has reviewed various research studies of different levels in this subject i.e. M.Ed., Ph.D, etc. and concluded that few studies have been done on mastery learning Programme. As no research work done in Accountancy Subject for the mastery learning approach, the investigator intends to take up this study.
According to Bloom’s taxonomy, Mastery Learning is a set of old and new individualized instructional ideas and practices that consistently help most students to learn excellently, quickly and self confidently. These ideas and practices produce instruction that is systematic: provide help to student when and where they have learning difficulties; provide sufficient time for students to achieve mastery.

Basically, above study focuses on teaching area of teacher and models of teaching simultaneously study and research will be useful to teacher and students to achieve mastery. Following will be the changes after the study.

- Study will improve the approach and attitude of the student towards the subject of accountancy.
- Retention of the students will be improved after the use of some techniques.
- Students will reach at their Mastery level.
- Teacher will be innovative and boost up students in the subject Accountancy.
- Teacher will use different qualitative methods in classroom teaching.
- Student will be free from the burden of examination.
- Teacher will find poor students in Accountancy subject and give them proper treatment.
- Society will get qualitative mass in reference of Accountancy
- There will be a proper channel for the students to be progressive.

According to new educational policy of India (1986) “continuous and comprehensive evaluation of pupil”, is one of the basic objectives of school education. The said programme can become very useful to achieve that objective. Any education system or process must apply such a proper tool which can evaluate how far the objectives of education or teaching – learning process are attained. In this context mastery learning programme can be very helpful for evaluating pupils’ learning achievement done through mastery learning programme. Thus, the programme shall serve two purposes.

1.1 Statement of the Problem:

The title of the present study is:

“Effectiveness of Mastery Learning programme in teaching of Accountancy at Class XI.”
1.1.1 **Explanation of Terms** :

In order to analyze the problem it would be necessary to be precise about the connotations and meaning of the key words used in the statement of the problem. This study is to find out the effectiveness of Mastery Learning Programme on dependent variables like Gender, I.Q. Attitude and Retention. Thus, the explanations of the following terms are as under :

- **Effectiveness** :

According to Dictionary the term effective means, “having power to produce a definite result; efficient”

According to Wikipedia, the free encyclopedia, “Effectiveness is the capability of producing a desired result. When something is deemed effective, it means it has an intended or expected outcome, or produces a deep, vivid impression”.

In the present study this term is measured by students’ achievement in subject of Accountancy.

- **Mastery learning** :

Mastery learning is an instructional method that presumes all children can learn if they are provided with the appropriate learning conditions. Specially, Mastery learning is a method where by students are not advanced to a subsequent learning objectives until they demonstrate proficiency with the current one.

Mastery learning curricula generally consist of discrete topics, which all students begin together. Students who do not satisfactorily complete a topic are given additional instruction until they succeed. Students who master the topic early engage in enrichment activities until the entire class can progress together. Mastery learning includes many elements of successful tutoring and independent functionality seen in high-end students. In mastery learning environment, the teacher directs a variety of group-based instructional techniques, with frequent and specific feedback by using diagnostic, formative tests, as well as regularly correcting mistakes students make along their learning path.

Mastery learning is based on Benjamin Bloom’s Learning for Mastery model with refinements made by Block. The term 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. Mastery learning engages the learner in multiple instructional methods, learning levels and multiple cognitive thinking types. According to Davis & Sorrel (1995) “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 through 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. Block (1971) states that students with minimal prior knowledge of material have higher achievement through mastery learning than with traditional methods of instruction.”

- **Mastery Learning Programme:**

  The programme developed by the researcher for three units of Accountancy in std.11th is considered as a Mastery Learning Programme for this study. The said programme is developed and was conducted according to the concept of Mastery Learning Model. The following points were kept in mind for the development of the programme.

1. **Definition of clear objectives of what has to be taught/learnt.**
   a. Objectives (i.e. a clear definition of what has to be mastered).
   b. Brief diagnostic test to be administered before the unit (they may lead to supplementary instruction).
   c. Learning materials and instructional strategies.
   d. Formative evaluation (that in turn should lead to remediation) and summative evaluation.

2. **Time to learn is adjusted for each student in order to master at least 80% of the material.**

3. **Assessment whether global objectives have been met.**

- **Mastery Level:**

  80% achievement was considered as Mastery Level.
• **Achievement**:
- The act of accomplishing or finishing.
- Something accomplished successfully, especially by means of exertion, skill practice or perseverance.

• **Student**:
  According to Webster’s Dictionary the word student means “a person who is enrolled for study in school, college” etc.
  
  According to Winston Dictionary the term student defines as under: “one who attends school, college, university, a scholar.”

• **Accountancy**:
  Accounting means the systematic recording, reporting, and analysis of financial transactions of a business.

  According to American institute of Certified Public Accounts (AICPA) “Accounting is the art of recording, classifying and summarizing in a significant manner and in terms of money transactions and events, which are in part at least of financial character and interpreting the result there of.”

  For the purpose of this study, Accountancy means the syllabus of the subject Accountancy at class XI by Gujarat Higher Secondary Education Board.

• **Class XI**:
  For the present study Class XI/ std. 11th means the group of students studying in the first year of higher secondary school of commerce stream.

• **Gender**:
  The dependent variable sex means Boys and girls of the sample. To find out the effect of mastery learning of programme the researcher has selected the class XI of Accountancy having co-education.

• **I.Q. Test**:
  An intelligence quotient, or I.Q., is a score derived from one of several standardized tests designed to assess intelligence. The abbreviation “I.Q.” comes from
the German term Intelligenz-Quotient, originally coined by psychologist William Stern. For this study the investigator has used R.S.Patel’s Verbal-Nonverbal group I.Q. Test for the students of Std. 8 to 12. The test was implemented and scoring of the test was done according to Manual given by the constructor of the test.

- **Attitude:**
  
  Attitude is a personal disposition common to individuals, but varying in degrees, which impels individuals to react to object, situations or prepositions in ways that can be called favorable or unfavorable. It is the degree of positive or negative disposition associated with some psychological object. Attitude towards subject of Accountancy denotes the positive or negative feeling or disposition associated towards the subject. Hence the statements to measure this dimension were constructed in terms of the attitude the student is likely to have, whether it is positive or negative.

- **Attitude Scale for the subject of Accountancy:**

  The scale was constructed and standardized by making use of Likert’s methods of summation to get a five point judgment on each item. (The details of the procedure of standardization and scoring is included in chapter 4)

- **Retention:**

  The retention means the power or capacity of retaining, remembering.

  According to the Webster’s dictionary retain means to keep in mind. For the purpose of this study, retention means grasping and remembering power. To find the effect on retention the researcher applied the same achievement test after a period of 20 days.

1.2 **Objectives:**

Purpose of the study is to know the relative effectiveness of mastery learning programme on Gender, I.Q., Attitude and Retention of the students in the subject of Accountancy.

The specific objectives of the study are as follow:

1. To construct mastery learning programme (learning material) on selected topics in Accountancy subjects from std. 11th syllabus.
(2) To enrich almost all or all the students of the class up to maximum level of achievement in (through) mastery learning programme.

(3) To increase pupils’ interest in Accountancy subject.

(4) To study the effect of mastery learning programme in relation to Gender.

(5) To study the effect of mastery learning programme in relation to I.Q.

(6) To study the effect of mastery learning programme in developing learners’ attitude towards the subject.

(7) To study the effect of mastery learning programme in relation to Retention.

1.3 Field of research:

Looking at the nature, objectives and process, the present study touches psychological foundation of education, accountancy subject and Educational technology.

Mastery Learning is one of the strategies of the Education process. The investigator has developed and applied the Mastery Learning programme to find out the effectiveness of this programme. Thus, the study is associated with the field of teaching techniques.

During the experiment the attitude scale, progressive and integrated tests were constructed, standardized and applied. So the study is involved as a field of evaluation.

During the study Mastery Learning Programme was developed and conducted on experimental group, so the study is experimental study.

1.4 Hypotheses:

\[ Ho_1 \] There will be no significant difference between the mean scores of students treated by Mastery Learning Programme and Traditional method.

\[ Ho_2 \] There will be no significant difference between the mean scores of boys treated by Mastery Learning Programme and Traditional method.

\[ Ho_3 \] There will be no significant difference between the mean scores of girls treated by Mastery Learning Programme and Traditional method.

\[ Ho_4 \] There will be no significant difference between the mean scores of high I.Q. students treated by Mastery Learning Programme and Traditional method.

\[ Ho_5 \] There will be no significant difference between the mean scores of low I.Q. students treated by Mastery Learning Programme and Traditional method.
Ho_6: There will be no significant difference between the mean scores of students having positive Attitude treated by Mastery Learning Programme and Traditional method.

Ho_7: There will be no significant difference between the mean scores of students having negative Attitude treated by Mastery Learning Programme and Traditional method.

Ho_8: There will be no significant effect of Attitude on the relation of Teaching Methodology and Gender.

Ho_9: There will be no significant effect of Attitude on the relation of Teaching Methodology and IQ.

Ho_{10}: There will be no significant effect of Attitude on the relation of Teaching Methodology and Retention.

Ho_{11}: There will be no significant effect of Gender on the relation of Teaching Methodology and Attitude.

Ho_{12}: There will be no significant effect of Gender on the relation of Teaching Methodology and IQ.

Ho_{13}: There will be no significant effect of Gender on the relation of Teaching Methodology and Retention.

Ho_{14}: There will be no significant effect of IQ on the relation of Teaching Methodology and Attitude.

Ho_{15}: There will be no significant effect of IQ on the relation of Teaching Methodology and Gender.

Ho_{16}: There will be no significant effect of IQ on the relation of Teaching Methodology and Retention.

Ho_{17}: There will be no significant difference between the mean scores of Retention treated by Mastery Learning Programme and Traditional method.

1.5 Variables under Study:

Identification of variables under a research study is an important step towards the process of research.

Variable is such a characteristic of a thing or a unit or a product which takes different values. Variable is also a characteristic which distinguishes individuals or things according to their group behavior under different environment Conditions.

With reference to this experiment research, the followings are the types of variables:
I. Independent Variable:

Methods of Teaching
(a) Mastery Learning Programme
(b) Traditional way of teaching

II. Dependent Variables:

(a) Gender
(b) I.Q.
(c) Attitude towards subject of Accountancy
(d) Retention

III. Controlled variable:

1. Environment of the school
2. Class XI
3. Subject Accountancy

The details of the variable and the level of variables are shown in chapter 4.

1.6 Area of the research:

As, this is an experiment based study, the work is carried out in Class XI of Accountancy in one of the schools of Anand city.

The area of the research is students of Class XI of Accountancy subject of Gujarati Medium School studying the syllabus of Gujarat Madhyamik Shikshan Board, Gandhinagar.

1.6.1 Limitations of the study:

1. The present study is limited to the subject of Accountancy at class XI only.
2. The present study is limited to the subject of Accountancy at class XI of Gujarati medium schools of Anand city only.
3. The present study is limited to the three units of the syllabus i.e.-
   (i) Bad debts and provision for doubtful debt
1.7 **Rationale of the study:**

The knowledge of Accountancy is fruitful to all stakeholders in order to analyze the present financial condition of a firm (company/business) in which one's interest lies. Also, the entry into the Accountancy Profession needs not just technical knowledge such as entries in the books of accounts, calculating profits and so on, but also “broader based skills & competencies”. The term “broad based skills” here includes critical thinking, communication, teamwork, ethical awareness, technological competence, and independent learning.

Today’s student is future investor or stakeholder, so he needs to master the basic principles of the subject. Mastery learning is one of the best teaching strategies adopted in teaching Accountancy to students. The main objective of teaching Accountancy is not only to develop the intellectual skills of students but also to provide them with opportunities to work individually, in pairs, small and large groups. Students in addition to intellectual skills also need to equip themselves with professional skills like writing, speaking out, presenting, computer and information literacy, decision making and teamwork. In order to achieve this, new concepts, strategies, and methodologies have to be introduced in the teaching of Accountancy.

However, in the modern paradigm the teachers are considered as facilitators and mainly provide their services in the form of guidance to students. This modern approach allows room for students to develop their Accountancy skills at their own pace and seek information as much as required, thus providing opportunities for self-development. The teaching strategies used must therefore be in line with the contextual learning theory.
where the aim of education is the integration of content learnt with the real world experiences. Therefore, learning experiences such as active participation in discussion, simulations and games, group work are widely recommended by several research organizations. High importance of this study is, as the Accountancy industry faces rapid changes such as the advancement of new Accountancy software and packages, which have the capacity to manage the large volumes of Accountancy information. Thus, the teaching of Accountancy should be developed to suit the needs of students when they enter the workplace.

The rote learning method used by teachers traditionally made learning more difficult. Therefore to make learning more pleasant and approachable by students at large, lecturers have to move on from the traditional teacher centered approach and move on to the modern student centered approach. It has been the accepted truth by all educationists that do not teach but get the students to learn by creating ‘ learning situation environment ’. Teaching is not mere instructing, learning is rather more important than teaching. In this context, as the title words themselves indicate “Mastery Learning Programme is an approach that makes the learners to learn according to their levels, pace, attempts and so on. There is psychology of ‘Learning Process; in this model, that helps the teacher to be a real facilitator instead of a teacher (instructor). Hence the investigator has taken this study.

In this strategy, the emphasis is on the student centered approach. In this approach Accountancy students get their input or learn through demonstrations, question answer sessions, open book discussions, Filling up blanks of the given sum, problem based learning, group learning by teamwork, cooperative learning, visual and computer based instructions.

As a lecturer of Accountancy at a higher educational institution, one of goals is to spread the beneficial techniques of teaching Accountancy to make all students become effective learners by promoting deep learning and not surface learning. In order to achieve this goal, students should be provided various stimulating learning situations. From several modern teaching strategies I found Mastery Learning fit for the purpose.
1.8 Planning of Research work:

Mastery learning Model (Programme) was prepared for three units in the subject of Accountancy of class XI. The opinions, suggestions, and recommendations from the subject teachers of the schools and the research experts were taken into consideration for selecting the units and preparing learning material.

The students were given pre test before conducting the programme. One class was considered as a controlled group, while the other class was taken as an experimental group. Controlled group was taught through traditional method and Experimental group was given treatment based on Mastery learning. The planning of Research work is shown in figure 1, and the planning of experiment work is shown in figure 2.
Figure 1

Planning of research work

Construction of objectives and Hypotheses

Implementation of Research work

Identification of Variables

Independent Variable

Teaching Methods
*Traditional
*Mastery Learning Programme

Dependent Variable

Gender I.Q. Attitude Retention

Development of M.L.P

*Content
*units
*small learning units
*objectives
*learning materials and strategies
*formative evaluation
*remediation
*summative evaluation

Tools and tests

Population

*Opinion-ire
*pretest
*I.Q. test
*Attitude scale
*progressive tests
*integrated test
*learning material

Sampling
Figure 2  
Planning of Experiment Work

Selection of Content and Planning of work

Methods of Teaching

Mastery Learning  
Traditional Method of Teaching

Teaching an unit

Achievement Test

Mastery Group  
Below Mastery

Treatment/Remedials

Achievement Test

Mastery Group  
Below Mastery
1.9 **Data Collection**:  

The standardized achievement test (of the units taught) was administered to both the groups (i.e. traditional group and controlled group) at the same time (simultaneously); and the scores was attained. Moreover, I.Q. test and Attitude test (scale) on subject of Accountancy were given to both the groups at the same time at the beginning of the programme and at the end of the programme, and the required data and scores were obtained.

1.10 **Data Analysis and Interpretation**:  

The impact of independent variable on different dependent variables was found out by ANCOVA (Analysis of covariance) and the impact of Gender, I.Q., Attitude and Retention on achievement of students of both the groups was found out by t test.  

To decide reliability and validity of the integrated test and Attitude scale r was found. The calculation and standardisation are discussed in chapter-4.

Results, interpretations, recommendations and Suggestions derived from the study by the statistical analysis is included in chapter 6.

1.11 **Scheme of Chapterization**:  

*Chapter1. Introduction*  

This chapter deals with the statement of the research problem with clarity of the key words, importance of the study, the objectives, Hypothesis of the study, limitations and the scheme of chapterization.

*Chapter2. Review of related Literature*  

The review the past researches done in this field are included in this chapter to have proper perspectives. This chapter deals with theoretical perspectives i.e. meaning, advantages and disadvantages of the mastery learning and researches done in foreign countries and in India.

*Chapter3. Planning and Development of Mastery Learning Programme*  

In this chapter investigator has discussed the role of mastery learning in education and has planned and developed the Mastery Learning Programme of three units of Accountancy of class.IX.
Chapter 4. Planning, Procedure and Data Collection

In this chapter, the selection and construction of the tools is discussed in detail. Mainly this chapter deals with the method of sampling, execution of the experiment and data collection.

Chapter 5. Analysis of Data

The analysis and interpretation of the data is discussed in this chapter. This chapter deals with the result of data of variables of Experimental group and controlled group.

Chapter 6. Summary, conclusion and Suggestions

The investigator draws out some conclusions based on the statistical results. Suggestions for further researches and the implication of the study is presented in this chapter.