6.0.0 INTRODUCTION

Education plays a vital role in the building of a nation. The progress of a country in various spheres like science, technology, literature, commerce etc. depends on an effectively planned educational system. Right to education has come to be accepted as one of the fundamental human rights all over the world. Makers of our constitution, well aware of the importance of providing education to all citizens, included it in the Directive Principles of the state.

Since independence, India has faced a great challenge in the field of education. There has been persistent dissatisfaction over the state of education in the country. In response to countrywide discontent, various education committees and commissions at different stages were set up by Govt. of India from time to time. These education commissions were expected to visualize the future aspirations and requirements of society, to consolidate and vitalise the existing progressive trends and to recommend the strategies for implementation so that the objectives of teaching-learning process are gainfully achieved.

A critical analysis of the reports of different education commissions, right from 'Secondary Education Commission' (1955) to the 'New Education Policy' (1986) reveal that, by and large, the problems,
drawbacks and corrective measures pointed out are not really very different. This indicates that the necessary improvement in education over the years has not been realized. The main cause of lack of improvement in education is the fact that most of the recommendations of various education commissions have remained confined to educational writings only. They are seldom reflected in actual teaching-learning operations of the classroom. Till date, the classroom which is a means to reach the desired ends, represents an inadequate conception of teaching and learning.

In India, commendable efforts have been made to make curriculum more meaningful and realistic for the child but very little has been done by way of preparing the teacher to achieve the goals of education through an effective use of school curriculum. As a result of this, the students in the classroom do not understand the specific items of knowledge and are unable to comprehend knowledge gained. Thus real understanding is hardly achieved by the students as they try to cram the subject matter to pass the examination. Hence the talent of the child is not developed fully and so a voice of dissatisfaction is audible about the quality of education in schools. Educationists, planners, teachers and enlightened parents have raised their voice to improve the quality of education. A high level of achievement is expected from the students but in actual practice, it has been observed that a high degree of underachievement is present at all the different stages of education.
The question - how to raise achievement of largest number of pupils to the optimum level has received considerable attention from researchers and teachers. To raise achievement and hence to improve quality of instruction in the classroom and to make the effective use of school curriculum, it is required to select and implement the appropriateness of teaching strategies which is determined by the proper synchronisation of educational objectives, nature of subject matter and nature of the learner and his environment.

Crawford and others (1972) found that some new curricula and instructional strategies result in superior learning by pupils as compared with more conventional approaches. At the same time, Joyce and Weil (1972) also observed the same thing. Similarly, the model developed by Carroll is also based on the assumption that the achievement of pupils can be optimized provided suitable techniques are used in a systematic manner. Based on Carroll's model of school learning, a teaching approach was developed by Bloom which is known as Mastery Learning Strategy while the different teaching approaches summarised by Joyce and Weil (1992) have been given the name Models of Teaching.

6.1.0 EMERGENCE OF THE PROBLEM

The proponents of the Mastery Learning Model and other Models of Teaching believe that these methods can prove very effective in utilising the potential of the learners to the maximum level and these can be used effectively in the classroom regardless of the resources, time or the
conditions needed to do so. These methods of teaching can, thus, help to overcome, to a large extent, the problems of underachievement and failure. This is evident from the studies conducted in India and abroad.

Block (1971) summarised the work of Auasian (1967, 1969), Ausubel (1964), Bloom (1968), Biehler (1970), Collins (1969, 1970), Gentile (1970), Green (1969), Keller (1968), Kersh (1970), Kim, Hogwon (1969, 1970), Mayo et al (1968), Moore (1968) and Sherman (1967) who had worked on MLS. These studies revealed that inspite of the varying backgrounds possessed by the subjects, this strategy was effective in bringing most of the students to a high degree of achievement by the end of the course.

In India also research work has been done in the field of Mastery Learning. Hooda (1983), Singh (1983), Chand (1984), Yadav (1984), Kaul (1986), Patadia (1987), Mathur (1987), Aranha (1988), Sangwan (1992), Dahiya (1995) and Renu (1997) have reported that achievement of students taught through MLS is significantly higher than those taught through conventional method. Effect of MLS on other variables like self-concept, attitude towards a particular subject, classroom trust behaviour, adjustment etc. has also been studied.

Researches have been conducted in India as well as abroad to show the effectiveness of different models of teaching. For example, Bergman (1980), Lettieri (1980), Rawe (1981), Gerston et al (1983), Chitriv (1983), Passi, Singh and Sansanwal (1985), Pandey (1986), Cangrade
(1986), Gangrade (1987), Sushma (1987), Budhisagar (1987), Baveja (1988) have done studies to compare the effects of different models of teaching.

Chaudhari and Vaidya (1988) reported the effectiveness of CAM and MLM in the learning of Hindi Grammar. Vaidya (1989) conducted a study to show the effectiveness of mastery learning strategy and concept attainment model on the achievement of students in Hindi.

The effectiveness of gaming has been studied by Sushila (1982), Sharma (1986), Grover (1987), Hooda (1988), Kumar (1989), Kaur (1992) and Kumar (1996). The results of these studies indicate that gaming is effective in improving achievement and self-concept of the pupils.

Review indicates that very few studies have been done to show the effect of gaming on self-concept of pupils. Besides this, very little work has been done to test the effectiveness of mastery learning model and gaming model on pupils' achievement in Hindi. Present investigation is an attempt to study the effect of mastery learning model and gaming model on pupils' achievement in Hindi and their self-concept.

6.2.0 STATEMENT OF THE PROBLEM

A COMPARATIVE STUDY OF THE EFFECTIVENESS OF GAMING AND MASTERY LEARNING MODELS ON PUPILS' SELF-CONCEPT AND ACHIEVEMENT IN TEACHING OF HINDI.
6.3.0 DEFINITION OF THE TERMS USED

6.3.1 Gaming

The term gaming is used in various ways. The investigator follows the academic gaming. These are currently very popular in India. Some specific type of gamings are used on the television e.g. Quiz Time, Quest-a program produced by Calcutta Doordarshan, and On the Spot Program etc. These all are examples of gaming.

6.3.2 Mastery

80% of the learners acquired at least 80% of the content taught through the use of appropriate material and they attain 80% level in summative evaluation.

6.3.3 Mastery Learning

Mastery learning is essentially an instructional technique for the teaching and learning of hierarchical sequential material. It is systematically planned programme of instruction adopted by a teacher to raise the achievement of students to predetermined mastery level. It involves presentation (cues), feedback (mastery testing), correction (using alternative instructional material and method) till practically all students achieve the desired mastery level.
6.3.4 Mastery Learning Model

In order to achieve the goal of raising teaching and learning to optimum level, Bloom and his associates developed mastery learning strategy. In developing the mastery learning strategy, they have tried to identify some pre-conditions, operating procedures and evaluations of outcomes. Based on Bloom and his associates work Hooda and Jangira (1980; 1983) developed Mastery Learning Model to meet the peculiar conditions of Indian Educational System. The Mastery Learning Model developed by Hooda and Jangira has been used in the present study.

6.3.5 Conventional Method of Teaching

In Conventional Method of Teaching, the teacher is the only active participant in the teaching learning process and the pupils are the passive listeners. He gives lecture to a class of nearly thirty five students, gives home assignments and administers test periodically. These tests are given only to give marks to the pupils and have no value in terms of improving the quality of instructions.

6.3.6 Achievement in Hindi

It is the level of learning in a particular area of the subject in terms of knowledge, understanding, skill and application. It is the performance as indicated by the scores of pupils on the Hindi achievement test developed by the investigator.
6.3.7 Pupils' Self-Concept

Pupils' self-concept means those perceptions, beliefs, attitudes and feelings which individual views as a part of characteristic of himself. It is his own conception of his health and physique, intellectual abilities, academic status, behaviour, temperamental qualities, mental health, emotional tendencies and socio-economic status. In this study the measure of self concept is summative score of any pupil on the self concept test developed by Sherry, Verma and Goswami.

6.3.8 Formative Tests

Formative tests, also called Mastery tests, have been used here as they provide the information necessary to make instruction appropriate to the needs of the individual for achieving mastery level. Formative tests are administered during the course of mastery learning to find out the levels of student's achievement in a particular area of content and to diagnose pupils' difficulties. These tests are given at the completion of each learning unit. They serve the vital function of providing feedback necessary to design the quality of instruction accordingly.

The scores on different formative tests indicate the pupils' achievement of mastery level. For purpose of present study, the mastery level decided is 80% learning achieved by 80% of the pupils.
6.3.9 Summative Test

Summative test, also known as criterion achievement test, is administered at the end of major units taught. Its primary aim is to assess or evaluate the degree of the students' achievement and to grade them according to their performance.

6.4.0 OBJECTIVES

1. To compare the mean achievement scores on the criterion achievement test in Hindi, of the three groups of pupils, taught Hindi with the use of Mastery Learning Model (MLM), Gaming Model (GM) and Conventional Method (CM) of teaching, before the experimental treatment.

2. To compare the mean achievement scores on the criterion achievement test in Hindi, of the three groups of pupils taught Hindi with the use of MLM, GM and CM of teaching, after the experimental treatment.

3. To compare the mean gain scores, on the criterion achievement test in Hindi, of the three groups of pupils, taught Hindi with the use of MLM, GM and CM of teaching, after the experimental treatment.
4. To compare the mean scores, on the test of self-concept, of the three groups of pupils, taught Hindi with the use of MLM, GM and CM of teaching, before the experimental treatment.

5. To compare the mean scores, on the test of self-concept, of the three groups of pupils, taught Hindi with the use of MLM, GM and CM of teaching, after the experimental treatment.

6. To compare the mean gain scores, on the test of self-concept, of the three groups of pupils, taught Hindi with the use of MLM, GM and CM of teaching, after the experimental treatment.

6.5.0 HYPOTHESES

In order to realise the objectives of the study following hypotheses were tested:

\[ H_1 \] There is no significant difference in the mean score, on the criterion achievement test in Hindi, of the three groups of pupils, taught Hindi with the use of MLM, GM and CM of teaching, before the experimental treatment.

\[ H_2 \] There is a significant difference in the mean scores, on the criterion achievement test in Hindi, of the three groups of pupils, taught Hindi with the use of MLM, GM and CM of teaching, after the experimental treatment.
$H_3$ There is a significant difference in the mean gain scores, on the criterion achievement test in Hindi, of the three groups of pupils, taught Hindi with the use of MLM, GM and CM of teaching, after the experimental treatment.

$H_4$ There is no significant difference in the mean scores, on the test of self-concept, of the three groups of pupils, taught Hindi with the use of MLM, GM and CM of teaching, before the experimental treatment.

$H_5$ There is a significant difference in the mean scores, on the test of self-concept, of the three groups of pupils, taught Hindi with the use of MLM, GM and CM of teaching, after the experimental treatment.

$H_6$ There is a significant difference in the mean gain scores, on the test of self concept, of the three groups of pupils, taught Hindi with the use of MLM, GM and CM of teaching, after the experimental treatment.

6.6.0 DELIMITATIONS

Keeping in view the time available and limited resources the study has been delimited as under:

1. The study was confined to a single school in Charkhi-Dadri in order to control effectively the variable of institutional variation.

2. The sample for the study constituted the girl students of VI Class.
3. The study was conducted in the subject of Hindi only. In Hindi the content was further limited to Hindi Grammar only.

4. Only six chapters of the prescribed syllabus of Hindi Grammar for VI standard in Haryana Schools were chosen for the study.

5. Although there are various teaching models, the present study was confined to gaming and mastery learning model.

6. The study can be conducted on a variety of other educational outcomes but it was conducted only on achievement and self-concept.

7. The experiment was limited to fourteen weeks of the academic session.

**6.7.0 METHOD AND PROCEDURE**

**6.7.1 Design**

The purpose of the present study is to find out the effect of mastery learning model and gaming model on pupils' achievement in Hindi and their self-concept. In this study pre-test -- post-test control group design was used. It involved three groups of pupils - experimental group I taught through mastery learning model, experimental group II taught through gaming model and control group taught through conventional method of teaching.
Methods of teaching Hindi, i.e. conventional method, mastery learning model and gaming model, constituted the independent variables. While achievement in Hindi and self-concept were the dependent variables. The intervening variables were controlled either statistically or administratively. The scores of intelligence test and socio-economic status scale were adjusted statistically and nature of school, grade level and subject matter were controlled administratively.

The design of the study consisted of three stages. The first stage involved pre-testing of students on achievement in Hindi, intelligence, socio-economic status and self-concept. The second stage involved treatment of twelve weeks. The experimental treatment consisted of teaching of Hindi through mastery learning model to experimental group I and through gaming model to experimental group II. The third stage, the stage of post-testing, included testing of achievement of pupils in Hindi, and their self-concept.

6.7.2 Sample

The sample consisted of 105 pupils studying in three sections of class VI of a private aided school in Charkhi-Dadri. Each section contained 35 students. One section formed the experimental group I, second section formed the experimental group II and the third section constituted the control group.
6.7.3 Tools Used

For the purpose of collecting data related to different variables covered in this study, following tools were used:

1. Criterion Achievement Test in Hindi developed by the investigator to measure the achievement of pupils in Hindi.
2. Self-concept Test by Sherry, Verma and Goswami to measure self-concept of pupils.
3. Cattell’s Culture Fair Intelligence Test to measure intelligence of pupils.
4. Socio-Economic Status Scale (URBAN) by Kuppuswamy to measure socio-economic status of pupils.

6.7.4 Experimental Procedure

The investigator was trained in using mastery learning model and gaming model for the experimental treatment involved in the present study. For this, many meetings were held with the supervisor.

The experimental treatment for the present study involved the following three stages:

Pre-Test Stage

The following tests were administered to the pupils of experimental group I, experimental group II and control group:

1. Intelligence Test
2. Socio-Economic Status Scale
3. Self-Concept Test
4. Achievement Test in Hindi
Experimental Treatment Stage

The experimental group I was taught through mastery learning model, experimental group II was taught through gaming model and the control group was taught through conventional method of teaching. The criterion decided for mastery learning was 80% of mastery over each unit by 80% pupils. A school period of forty minutes was utilised for teaching Hindi. The pupils of control group were also taught by the investigator herself utilizing the same amount of time. Both the experimental groups took more time than the control group to complete the units. The pupils of the control group utilized the remaining time on supervised self-study.

Post-Test Stage

After the completion of experimental treatment, the following tests were administered to both the experimental groups and to the control group:

1. Achievement Test in Hindi
2. Self-Concept Test

6.7.5 Statistical Analysis

In order to achieve the objectives of the study, the following techniques were employed to analyse and interpret the data:
1. Analysis of Co-Variance (ANCOVA) was used to adjust pupils' achievement in Hindi and their self-concept on intelligence and socio-economic status. ANCOVA was used on pre-test, post-test and gain scores of achievement in Hindi and self-concept.

2. Mean and Standard Deviation were computed in respect of intelligence, socio-economic status, achievement in Hindi and self-concept.

3. The 't' test was used for testing the significance of difference between the means of pupils' achievement in Hindi and their self-concept. 't' test was used on post-test and gain scores.

4. Histograms for the mean scores on the test of achievement in Hindi and self-concept.

6.8.0 FINDINGS

1. The results of the present study showed that the post-test achievement mean scores of the group of pupils taught Hindi through mastery learning model and the group of Pupils taught Hindi through conventional method differ significantly.

2. The group of pupils taught Hindi through mastery learning model showed significantly higher gain in achievement than the group of pupils taught Hindi through conventional method.
3. At the completion of the experiment, group of pupils taught Hindi through mastery learning model achieved significantly higher mean score on the test of self-concept than the group of pupils taught Hindi through the conventional method.

4. The mean gain score of the group of pupils taught Hindi through mastery learning model was found to be significantly higher, on the test of self-concept, than that taught Hindi through conventional method.

5. The post-test achievement mean scores of the group of pupils taught Hindi through gaming model was found to be significantly higher than the group of pupils taught Hindi through conventional method.

6. The group of pupils taught Hindi through gaming model showed significantly higher mean gain score in achievement than the group of pupils taught Hindi through conventional method.

7. At the completion of the experiment, the group of pupils taught Hindi through gaming model achieved significantly higher mean score on the test of self-concept than the pupils taught Hindi through the conventional method.
8. The mean gain score of the group of pupils taught Hindi through gaming model was significantly higher on the test of self-concept than the group of pupils taught Hindi through conventional method.

9. The post-test achievement mean score of the group of pupils taught Hindi through mastery learning model was found to be significantly higher than the group of pupils taught Hindi through gaming model.

10. The group of pupils taught Hindi through mastery learning model showed significantly higher mean gain score in achievement than the group of pupils taught Hindi through gaming model.

11. The difference in the mean scores of the group of pupils taught Hindi through mastery learning model and the group of pupils taught Hindi through gaming model, on the test of self-concept, was significant at post-test stage.

12. It was found that the mean gain score of the group of pupils taught Hindi through gaming model was significantly higher than the mean gain score of the group of pupils taught Hindi through mastery learning model, on the test of self-concept.
6.9.0 CONCLUSIONS

On the basis of the findings, the following conclusions have been drawn:

1. The results of the present study showed that the post-test achievement mean scores and the mean gain achievement scores of the pupils of experimental group I and those of the control group differ significantly in favour of experimental group I. This implies that the pupils who were taught Hindi through mastery learning model have shown significant improvement in their achievement in Hindi than the pupils who received instruction through conventional method. This suggests that mastery learning model contributes in raising the achievement of pupils.

2. It has been found that at the completion of the experiment, pupils of the experimental group I achieved significantly higher mean score on the test of self-concept than the pupils of the control group. Mean gain score of the pupils of experimental group I was also found to be significantly higher than that of the control group. It can be concluded from this finding that mastery learning model, by helping in improving pupils' achievement, is effective in improving their self-concept as well.

3. Another important finding of the present study is that the post-test mean score and the mean gain score of the pupils of
experimental group II was significantly higher than that of the control group on the test of achievement. This implies that the pupils who were taught Hindi through gaming model showed significant improvement in their achievement in Hindi than the pupils who received instructions through conventional method. This suggests that gaming model contributes in raising the achievement of pupils.

4. At the end of the experimental treatment, the mean score and mean gain score, on the test of self-concept, was found to be significantly higher for the pupils of experimental group-II than the pupils of the control group. This implies that gaming model approach, by helping in improving pupils' achievement, is effective in improving their self-concept also.

5. The post-test mean score and the mean gain score, on the test of achievement was found to be significantly higher for the pupils of experimental group I than those of experimental group II. This implies that mastery learning model approach is better than gaming model in improving the achievement of pupils in Hindi.

When the pupils are taught through gaming model approach, they are put in a novel situation and they are required to compete with other pupils which may or may not help in retention of the content at the later stage. Thus, this approach involves the active interaction of the pupils which results in better learning but poor
retention of the concept even at a later stage. On the other hand, the pupils are taught the same content again and again until they masters it. Hence, the pupils learn by exercising their cognitive abilities and practice which helps in retention of the content at the later stage. Therefore, the mean score and mean gain score, on the test of achievement, of the group of pupils taught Hindi through mastery learning model was found to be significantly higher than the group of pupils taught Hindi through gaming model.

6. A significant difference was found in mean scores and in mean gain scores, on the test of self-concept, of the pupils of experimental group I and experimental group II, at post-test stage. This implies that gaming model approach is better than mastery learning model in improving the self-concept of the pupils.

It can be concluded from the above findings that both the mastery learning model and gaming model improved significantly the scores of the pupils of experimental group I and those of experimental group II, as far as their achievement and self-concept are concerned. It was found that gaming model approach is better than mastery learning model approach in improving the self-concept of pupils, whereas mastery learning model approach is better than gaming model approach in improving the achievement of pupils in Hindi.
6.10.0 EDUCATIONAL IMPLICATIONS

The results and conclusions arrived at during the course of this study have clearly shown that both the mastery learning model and gaming model are effective in raising the pupils' cognitive and affective achievements. These findings have many implications for teachers, educational planners, teacher educators, curriculum designers and for the society.

(i) The first finding of the present study indicates that the pupils taught Hindi through mastery learning model and gaming model achieve significantly higher than the pupils taught through conventional method.

The Indian Constitution has envisaged the equality of opportunities but it is meaningful only when equality of learning outcomes become a goal of education. This can be achieved if the teacher makes use of the mastery learning model. This requires that the teacher gives help and encouragement to each child, i.e. unequal treatment may have to be given to the pupils at certain stages of the learning process. Some of the pupils may take longer time and may require extra help from their peers and teachers. It is evident from the results of this study as well as from other researches that the large majority of pupils in a class can learn up to as high a level as the most able pupils in the group. Hence equality of outcome as a goal of education is practicable and achievable.
The pupils taught through gaming model also achieve significantly higher than those taught through conventional method. Gaming model helps the pupils to acquire concepts and thus improve their comprehension power and thought process which enables them to make responsible choices and decisions in their life. The gaming model holds promise for future because the schools of the future will be designed not only for ‘learning’ but for ‘thinking’. More and more insistently today's schools and colleges are being asked to produce men and women who can think, who can make new scientific discoveries, who can find more adequate solutions to impelling world problems, who cannot be brainwashed, men and women who can adapt to change and maintain sanity in this age of acceleration (Chaudhari, 1986).

(ii) The cognitive outcome of the pupils can be achieved to the maximum level if the mastery learning model and the gaming model are employed efficiently in the class. This is possible only if the teachers are trained in using these approaches since certain specific steps are to be followed for obtaining good results. It, therefore, becomes essential that the teacher-educators should incorporate the theoretical and practical aspects of both the approaches in teacher education curriculum and the teacher educators be equipped to translate these approaches into practice by giving demonstration of the usability of these models to the student-teachers. Working teachers should be given the training of these approaches through summer institutes, workshops and seminars so that
they become an integral part of the various methods used in schools.

Concerned and sustained efforts should be made by the national institutions of teacher's training and research to develop the understanding of these approaches so that the teachers' training institutions get adequate know-how and support to further ventilate these innovative practices to schools.

(iii) Even after providing necessary training to the teachers in the use of mastery learning model and gaming model, the teachers cannot be expected to prepare and provide all the necessary material to the students themselves. It is, therefore, necessary that curriculum developers should prepare packages of instructional material and provide detailed and practicable guidelines to the teachers regarding the selection and use of material to suit the requirements of their students.

Successful execution of both the mastery learning model and gaming model depends to a great extent on the structure and organization of the subject matter. Mastery learning model envisages teaching of learning units in hierarchical order. A student equipped with the pre-requisites learns the learning unit more efficiently and in a shorter period. This implies that courses should be constructed keeping in view hierarchical relationships in the units to be taught. Same is true for teaching through gaming model because structured pattern of learning experiences prevents rapid loss of memory and narrow the gap between advanced and elementary knowledge.
(iv) It has been observed that nearly 60% children drop-out between classes I-V and 75% between classes I-VIII (National Policy on Education, 1986). This staggering rate of dropouts results in huge wastage of human resources, money and efforts which a developing country like ours cannot afford. Mastery learning model as well as gaming model can prove very effective in controlling and even reducing the rate of drop-outs in the schools as both these approaches help the students to raise their achievement. This increase in achievement cultivates in them a sense of confidence and a desire to learn more.

(v) Both mastery learning model and gaming model can prove specially useful in Indian classroom conditions as they do not require the use of any expensive technology and material. They require only the development of instructional material and the training to the teachers for using these models. The fact that these models do not involve extra expenditure makes them all the more suitable for a poor country like ours and many other countries of the third world.

(vi) Another important finding of the present study is that the pupils who learn through mastery learning model and gaming model tend to show significantly higher improvement in affective outcomes than the pupils who learn through conventional method. This has a very important implication for the society as a whole. Improved self-concept is reflected in all areas of individual's life. Thus the society gets individuals with greater self-confidence who can make a positive contribution in its progress so that
the society having high morale individuals can ensure, for itself, a place of pride and prosperity amongst various nations. Both these approaches (mastery learning and gaming) can, thus, contribute effectively in achieving this goal by making our educational system an efficient agency of social transformation.

6.11.0 SUGGESTIONS FOR FURTHER RESEARCH

In this age of rapidly advancing science and technology, education can be equated to training for life. It is, therefore, not only desirable but also essential to find and develop ways and means to make our educational system fully responsive to the emerging needs of today. The present study is an attempt to test the effectiveness of mastery learning model and gaming model in coping with the problems and challenges being confronted by students, teachers, parents and educational planners. But because of the limitations of the present study and the constraints under which it was conducted, the findings do not warrant wide generalizations. In order to supplement the outcomes of the present endeavour, further studies can be taken up on the following themes:

1. In order to confirm the present study, it is desirable to investigate the effect of mastery learning model and gaming model on the achievement of learners of different age groups, grade levels, subject areas, sex, socio-economic status and intelligence levels.
2. Relative effectiveness of various types of mastery learning strategy (such as Personalized System of Instruction) and gaming model can be studied.

3. The effect of mastery learning model and gaming model on achievement, self-concept and classroom trust behaviour of disadvantaged (culturally deprived) and low ability students also need further and deeper probing.

4. Further research can be done to explore the effect of mastery learning strategy and gaming model on the educable mentally retarded and pupils having low self-concept.

5. Another challenging area of research is to investigate the effect of mastery learning model and gaming model on the learning and retention of habitual truants, and emotionally disturbed pupils.

6. The present study can be replicated by drawing samples from rural and slum population where incidence of failure is high. Different socio-economic and cultural backgrounds have a casual relationship with students' achievement. Since the present study was conducted on a sample taken from a school at Charkhi-Dadri, studies are warranted on schools located in rural areas, urban slums and on students of scheduled castes and scheduled tribes. Such studies can provide useful information about how to make
mastery learning model and gaming model more efficient in the conditions under which students of socially, economically and culturally backward sections of our society have to work.

7. The present study has covered only one area of affective domain viz., self-concept. Effectiveness of mastery learning model and gaming model can be investigated in other areas (such as classroom trust behaviour, adjustment, attitude etc.) of affective domain as well.

8. Another area for potential research is provided by the effects of using mastery learning model and gaming model on the teacher and his role in his class. Since the two approaches involve a measure of personal interaction between the teacher and the taught, it makes the teacher more observant, innovative and responsive to the needs of each student. An examination of the various effects of mastery learning model and gaming model on teacher's role and on inter-personal relations of students can thus provide new insights into the outcomes of mastery learning model and gaming model.

9. So far no study in the psychomoter area has been conducted in India. Thus this is another promising field for further research. With increasing importance of vocational education, industrial
training and sports coaching, it is worthwhile to investigate the effects of mastery learning model and gaming model on psychomotor outcomes.

10. A review of the literature on mastery learning model and gaming model shows that no meta-analysis has been made so far of the studies conducted in India. In order to arrive at precise conclusions about the effects of mastery learning strategy and gaming model in Indian conditions, a detailed meta-analysis of the studies related to the two approaches can be taken up.

Clearly, much more research is needed to explore and sort out the issues connected with the mastery learning strategy. More studies of practical, long-term applications of mastery learning assessing the effects of these programmes on broadly based measures of achievement that register coverage as well as mastery are especially needed. Today, what we need is not an abandonment of mastery learning, but development and evaluation of more effective methods based on mastery learning theory (Slavin, 1987). Similarly, gaming model also has tremendous promise and potential for future as the schools and colleges of future will be increasingly asked to prepare children and youth to face emergencies and uncertainties in the complex society of tomorrow. In order to enable students to cope with the challenges of change, the teacher must employ such models and methods of teaching which solicit greater involvement of the pupils and encourage them to think productively.