CHAPTER-V
FINDINGS, CONCLUSIONS, IMPLICATIONS
AND SUGGESTIONS FOR FURTHER RESEARCH

5.0.0 INTRODUCTION

The ultimate purpose of research is to draw out valid conclusions which can be generalised, within limits, to other situations and to other sections of the population than the one studied. Such generalisations must not be hasty and far-fetched and must be compatible with the limitations of the research design. Thus this Chapter has been devoted to focus on the conclusions of the study which are drawn on the basis of results obtained and their discussion. The wide range of implications, emerging during the course of this discussion, will also be focussed on. A research done opens many more areas to be searched out. Hence an effort has been made to provide some such areas for further research in the field related to this study.

5.1.0 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.
5.2.0 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.
5.3.0 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 is 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.

5.4.0 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 psychomoter 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.