CHAPTER NO VII

CONCLUSION
In the light of the discussion of the results in chapter VI the conclusions that are drawn are given in this chapter. This chapter includes the following points:

7.1. Conclusions.
7.2. Educational Implications.
7.3. Suggestions for further research work.

7.1. Conclusions:

The research study was conducted according to the plan given in chapter III. Materials were developed in chapter IV. Field trials were conducted which were discussed in chapter V and data were critically analyses in chapter VI. Critical analysis of the results lead to the following conclusions:

7.1.1. With respect to the achievements of mathematical concepts of different groups it was found that urban group was superior to rural group which in turn proved to be superior to adivasi group.
The same conclusion was drawn with respect to the relations of three different groups on the mathematical concepts learnt by the children. The degree of relation was high in urban group, it was medium in rural group and was very poor in adivasi group.

7.1.2. All the methods were found to be effective in all the three groups. Students can learn the subject matter through any method with equal efficiency i.e. the students can learn in any one of the three methods independently used. However in case of adivasi group ionic method was predominant, in rural group enactive method was found to be effective and in urban group all the three methods were equally effectively.

7.1.3. Though the students are able to learn through any one of those methods, it was found that while expressing the knowledge there were differences with respect to different modes. Students show different performances with this respect. Normally enactive mode was found to be effective in rural group, ionic mode was found predominant in adivasi group and all the three modes, preferentially symbolic mode were effective in urban group.
7.2. Educational Implications:

Educational implications of the conclusions drawn in the previous section are given below.

7.2.1. The stage at which this research work was conducted was concrete operational stage. At this stage logical operations start developing. In this context it was found that all the methods, using three modes of representations as proposed by Bruner, are equally effective, at global level, to understand mathematical concepts.

7.2.2. But if each group is considered separately, it was found that in urban groups all the methods are equally effective. Enactive method was more effective in rural group. Whereas ikonic method was predominant in adivasi groups.

7.2.3. According to Bruner symbolic mode is prominent one which integrates the experiences obtained by other two modes, viz enactive and ikonic and knowledge is stored in the mind of the learner. Hence, in teaching of mathematics learning experiences, should be on the interaction of three modes. So that the learner can integrate these experiences, process them and deduce generalizations of the subject matter. Teacher should take care while creating educational environment to have rich enactive and ikonic bedding with respect to the subject at hand.
7.2.4. During the field trials it was experienced that the students were very much interested in enactive mode training. So at concrete stage, activity method should be used, while teaching mathematics. More emphasis should be given to audio-visual aids which will provide iconic experiences. More practice should be given to express their knowledge through language i.e. symbolic mode.

7.3 Suggestions for further Research works:

In this work an intra-cultural study is carried out on the effectiveness of three instructional programmes based on three different modes as proposed by Bruner on the acquisition of mathematical concepts by the children of age 11, belonging to three different groups in Maharashtra state.

7.3.1. In order to increase the scope and generalizability i.e. external validity of the research work more replica studies of this sort can be undertaken in different content areas like physics, chemistry, geography, languages etc. at different age level, in different socio-cultural level of our country.

7.3.2. This study was based as individual comparison between the modes. The results of the study further suggest that perhaps interaction of the modes could lead to the better achievements on the part of the mode.
Hence there is prominent and rich field for a prospective research worker to engage in the research work to use the interaction of three modes for enhancement of the learning process leading to the better achievements on the part of the students.

7.3.3. It was found that ikonic mode to be predominant in adivasi area and enactive mode in rural area. This result is somewhat contradictory to our expectation. This issue may be further settled by conducting a few more replica researches of this study.