Chapter – VI
FINDINGS, CONCLUSIONS,
IMPLICATIONS AND
SUGGESTIONS
FOR
FURTHER RESEARCH
“The time has come,” Walrus said, “Talk of many things,” yes, look back into what has been done is necessary at this stage to understand the relevancy of this venture. However, valid, reliable and adequate the data may be, it does not serve any worthwhile purpose unless it is carefully edited systematically, classified and intelligently interpreted and rationally concluded. After trespassing many odds, the investigator has reached a destination where she can prove the worth of her study in the form of conclusion. This chapter deals with the major findings of the study, conclusions and implications for research in multimedia and recommendations for future research in this field.

6.1 FINDINGS OF THE STUDY

Role of Multimedia in the field of education is emerging as a growing concept in all parts of the world. Multimedia is the integration of multiple forms of media. This includes text, graphics, audio, video, etc. for example, a presentation involving audio and video clips would be considered a “multimedia presentation”. Today we are right in the midst of digital age that is heavily influenced by Multimedia. Multimedia is bombarding us from every conceivable arena right from cinema theatres, televisions and various other audio equipments to computers and all the new generation electronic gadgets. Multimedia has become much more powerful in the present century than ever before. Multimedia is an amalgamation of various conventional and non-conventional media put together. Multimedia is the order of the day employing various kinds of mediums and devices for its all-pervasive usage. Depending upon the nature of application, budget, time frame and target audience, appropriate medium is chosen. The type of medium selected for delivery influences the nature of multimedia contents. Multimedia is being used in the field of education for a variety of application. It can be broadly classified as interactive and non-interactive multimedia. Multimedia is the
technology that employs different kinds of media like text, audio, video, graphics and animation, either separately or in combination-using computers, to communicate ideas or to disseminate information. Multimedia has no standard static or fixed physical form and is, therefore changeable (and interchangeable). The impact of multimedia on class VII students for instance, may depend upon the content and media used for development but more than that it depends on the way; a teacher uses it for teaching learning process.

So, application stage is very vital. Multimedia are just a tool and a teacher / instructor can make or mark it with the individual potential. Multimedia is the creation of a visual rhetoric appropriate for interactive display and function. In designing a multimedia application, it is not possible to predict in advance how a particular combination of text, graphics, audiovisual material, and other elements will interact or appeal to the audience. So development of a multimedia programme demands a great deal of knowledge of computer (hardware and software), creativity, and understanding of the content, level of the target group, effort and perseverance.

Multimedia can play a major role, in the field of education due to its multi-sensorial approach. It offers opportunities for learners in every aspect and especially it can play a vital role in improving student’s academic achievement. The effectiveness of Multimedia Method of Instruction over Conventional Method of Instruction has been established through the present study.

Based on the analysis of data and interpretation of results, a set of findings and conclusions can be drawn on the basis of their discussion, a wide range of implications and suggestions also need to be focused on for further research in the field related to this study. Some of the significant possibilities and provisions in the terms of findings of this piece of research may be as follows:
At pre-test stage, no significant difference was found in the mean achievement scores, on the criterion achievement test in environmental awareness of class VII students as a result of Multimedia method and Conventional method of Instruction.

The result arrived at during this study show that the post-test achievement mean scores of the experimental and control group differ significantly in favor of the experimental group. This implies that the class VII ‘B’ students taught Environmental Science through Multimedia Method of Instruction scored significantly higher on the criterion achievement test in Environmental Awareness than the class VII ‘A’ students who received instruction through the Conventional Method of Instruction. It suggests that Multimedia Learning Package based instructions contributes towards raising the achievement on Environmental Awareness of class VII students in Environmental Science.

The group of students taught Environmental Science through Multimedia Method of Instruction scored significantly higher mean gain on the criterion achievement test on Environmental Awareness than the group of students taught through Conventional Method of Instruction.

6.2 CONCLUSION

It may be safely concluded from the above findings that Multimedia Method of Instruction (MMLP) learning significantly improves the scores of students of the experimental group in their achievement on environmental awareness and the method of Multimedia Learning proves more meaningful and effective than the conventional classroom learning instruction. The conclusion of the study needs also to be expressed in terms of their global importance for educational purposes vis-a-vis the tested hypotheses of the study.

Prima-facie, the main focus of the study addresses the multi-sensorial approach of the innovative learning process (Multimedia Method of Instruction) and its impact on
education for sustainable development of each and every individual learner in a school situation which is deemed to be a miniature technology based society in itself.

The two fold fundamental variables of the study obviously include:

(a) The learning strategy, especially the Multimedia Method of Instruction.
(b) The learning outcomes, in terms of performance- Achievement on Environmental Awareness.

The retention of the hypotheses of the study namely

H1- At pre-test stage, no significant difference was found in the mean achievement scores, on the criterion achievement test in environmental awareness of class VII students as a result of Multimedia Method and Conventional Method of Instruction.

H2- At the end of the experimental treatment, there was a significant environmental awareness in the class VII students taught Environmental Science through (MMLP) Multimedia Method of Instruction and they scored significantly higher on the criterion achievement test on environmental awareness than the group of class VII students taught through the Conventional Method of Instruction.

H3- At the end of the experimental treatment, the group of class VII students taught through (MMLP) Multimedia Method of Instruction showed significantly higher mean gain score on the criterion environmental awareness test in Environmental Science than the group of students taught through the Conventional Method of Instruction.

The result of the study can be interpreted in the context of global perspective of education expected by world organizations like UNESCO. In the Multimedia Digital Learning Conference held in United States in August, 2006 in which countries like USA, Japan, England, Germany, and global organizations like UNESCO participated, applauded multimedia as an innovative delivery model for Education, which has the potentials to surpass all expectations of the quality and has established as making landmark contributions to the cause of education. This global accolade of multimedia provides a robust platform to Multimedia Method of Instruction (MMLP) based
learning designed meticulously to meet the emerging challenges of a new world order through the process of education.

6.3 EDUCATIONAL IMPLICATIONS

The present research clearly shows that in changing from a conventional “chalk and talk” method of instruction to a Multimedia method of instruction enriched class VII student’s achievement on environmental awareness does not diminish; rather it significantly improves. It implies that MMLP proves to be more tangible in its effectiveness on achievement than the conventional classroom approach. Multimedia Method of Instruction proves to be more practical and widely acceptable to teachers. Also the students of all percentage groups in the class attain comparably on achievement which shows that (MMLP) Multimedia Method of Instruction of learning enables all types of students to perform better.

- Multimedia Method of Instruction helps the teachers to make his/her teaching-learning process totally interactive.
- Multimedia Method of Instruction (MMLP) suggests a new role for the teacher – the role of a Facilitator. A teacher accustomed to being the sole source of information for teaching the passive learners in the classroom, has to change to be a facilitator in the learning process to actively encourage the student to learn in a more effective manner, participate in discussion, participation in making of MMLP and give textual, audio, video, graphical and animation input for Multimedia Method of Instruction. So students feel being a part of the entire teaching learning process.
- The study has important implications in today’s world of education. Given the current widespread use of Multimedia Learning globally at all levels and for all the subjects, it is imperative that teachers should learn this new technology. The teachers should understand how to develop and run MMLPs.
MMLP learning lessons in class may act as a source of edutainment (education plus entertainment) as well. The session may include games, Recreational activities like solving puzzles and riddles, holding group discussions on some general topics related to current affairs to create more interest among class VII students. So teacher becomes more interesting, resourceful among students and classes get livelier.

Important skills such as creative thinking, critical analysis and the synthesis of knowledge can easily be accomplished through MMLP based learning in the classroom.

“Science for all” and “science literacy” needs an important strategy of teaching to be developed to ensure, learning of the total instruction by all the pupils. Multimedia method of Instruction is interactive and participatory in approach.

Equality of educational opportunities can be a goal of education rather than equality of learning outcomes. Such a goal suggests that teachers must find ways of giving each child the help and encouragement he/she needs. A Learning environment must be created during teaching where Multimedia Method of Instruction plays an important role.

6.4 SUGGESTIONS FOR FURTHER RESEARCH

The present study brings light to a number of new areas to be covered by future researchers. The following problems, if studied would help to broaden the perspective of the present study.

- The study should be repeated to explore how Multimedia Method of Instruction, learning affects the student of various abilities on cognitive, emotional and motivational dimensions.
- There is need to compare Multimedia Method of Instruction learning with other methods of instructions at different grade levels.
- The study was tested for teaching of Environmental Science for class VII. This may be done for other subjects and at all levels of education.
Research is needed to compare the combination of various mediums/elements (text, audio, video, animation and graphics) of MMLP i.e. up to what extent a medium is superior to others.

There is need to study the integrated effect of MMLP with other instructional treatments. Also research is needed to study the role of MMLP as a compliment to conventional method of teaching.

The study may be replicated for various grade levels and for different topics in science to test the generalizations of the results and conclusions of this study.

The syllabus of various subjects may be evolved through studies on the lines of Multimedia Method of Instruction.

The researches could be conducted on the perceptual changes in the students, on being taught through MMLP using different scales.

The use of Multimedia Method of Instruction (MMLP) to the education of various disadvantaged groups, handicaps, gifted and the likes may be helpful. This method can offer an effective instructional procedure to help students needing special care and attention.

Studies can also be taken to study the effect of Multimedia Method of Instruction on high and low intelligence students.

Effectiveness of (MMLP) Multimedia Method of Instruction may be researched at large scale for learners of both sexes to find out any difference in achievement on the basis of sex.

Teachers definitely have preferences for different methods and use some of them more frequently than others in the teaching of their subjects.

6.5 OVERVIEW

Findings of the study clearly indicate that multimedia can be perceived as a big change for education, and there is a lot of scope of research in this field. MMLPs method can revamp the conventional teaching learning process and make it more effective. The findings suggest that multimedia can play a vital role in teaching of
Environmental Science, so educationists need to develop more sophisticated understandings of the conditions, circumstances, means and mechanisms through which multimedia can be closely connected to the students and their classrooms.