

**CHAPTER V**

**SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.**

## CHAPTER V

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1. Introduction :

The motive behind the study was to determine the effect of the multimedia package on the students learning science. The investigator opted for the experimental method and had selected two groups namely the experimental group and the control group for study. To measure the effect of the experimental variable, the investigator conducted tests based on each sub-unit and two comprehensive unit tests based on the entire unit. The scores obtained were then analysed and interpreted.

This chapter deals with the summary, conclusions of research, and recommendations and suggestions given by the investigator.

#### 5.1.1. Summary of Research :

The report consists of five chapters. The first chapter deals with need and importance of study and the importance of teaching and learning. It includes the

statement of the problem, **definitions** of terms, scope and limitations of the study, objectives behind the study, assumptions of study and the hypotheses are also stated by the researcher.

The second chapter stresses on the need for the review of related literature and its importance. It also reviews the various studies based on educational technology. This study helped the investigator a great deal and provides a direction to the research work carried out by the investigator.

The third chapter describes and deals with the methodology of research. Here the investigator has thrown light on the experimental method and its design. It includes sampling, the validity of the design and description of variables involved in the study and their control. It also includes the preparation for the study, analysis of the syllabus, nature of the science, text-book of class VIII, determination of media and preparation of the package according to the content, development of tools for the study and conducting of the experiment. It also gives an idea about the tools used for measuring the achievement.

Fourth chapter is related to the interpretation and inferential analysis of data obtained on the test based on previous knowledge and actual data obtained from the tests after using various media packages. The means and the standard deviations of all the tests were calculated to determine the difference in their performances. ANOVA was used to test the hypotheses. The results were then interpreted and various observations were penned down by the investigator in this chapter. It also explains the calculation of the coefficients of correlations between various tests of each group.

## 5.2. Conclusions :

The following conclusions were drawn from the study :

1. The use of transperencies while explaining the various types of micro-organisms affects the knowledge of the learners favourably.
2. Explanation of the preparation of curd and preparation of bread by using transperencies affect the students ability of comprehension.

3. The transperencies also helped recall the various differences between the preparation of curd and that of bread.
4. The transperencies, flashcard helped in the better understanding of microbial fermentation and focussed light on conversion of complex Carbohydrates, proteins, fats, vitamins, minerals into simple food material.
5. Transperencies helped highlight the various uses of micro-organisms in daily life and made the learners more familiar with situations they encounter in day to day life.
6. The flashcards, pictures used by the investigator helped in better retention and made the lesson interesting.
7. The flashcards used helped in better recall of the various chemicals produced by the micro-organisms.
8. The use of multimedia packages aroused the interest and creativity of the students. The

students prepared the transparencies themselves describing the havoc played by nuisance micro-organisms, taking illustrations from their daily life.

9. The transparencies and flashcards also helped in analysing various ways for the protection and preservation of food. The students easily gave the names of the preservatives used in the food products they used daily like jams, sauces, squashes.
10. Students applied their knowledge to answer questions like why did curd become sour when kept outside the refrigerator.
11. Demonstration of the bacteria found in curd and yeast in bread using a microscope and slides affect the skill of the learners and made learning interesting.
12. Watching micro-organisms under the microscopes gives the learners a concrete and first hand experience which makes teaching-learning more efficient and productive.

13. The tape recorder played a vital role in recalling the main ideas and events in the lesson clearly.
14. Tape recorder increased the comprehension of the passage to a great extent.
15. The use of tape recorder played an important role to develop the listening ability of the learners which resulted in the learner's progressive performance.
16. The use of charts and pictures helped the students understand and comprehend the various uses of natural resources.
17. Group discussion found an important place in the package as the students were more attentive during the lesson and it acted as a reinforcement to do better in their respective groups.
18. Group discussion also helped better understanding and application and analysis of the topics.

19. The learners opened up on their own and gave suggestions regarding how they used the various resources of nature and how to save them. The learners also put these into practice in their day to day life.
20. The students also used printed materials whereby the students understood the objectives behind inclusion of use of Natural resources and its conservation in their syllabus.
21. Students brought different articles and notes published on ' Environment ' in various magazines.
22. The use of ' printed material ' as a teaching aid also changed their opinion and the students realised the danger to the environment in the twenty first century.
23. The slides of the ' fauna and flora ' also helped the students understand how the animal and plant life of a country affects the cultural life of that place.



24. The use of ' multimedia ' package also helped develop a scientific attitude in the learners.
25. These packages created a sort of interest in the students and learning was fun. The packages stimulated their senses and learning became productive.
26. The students had great fun collecting articles, photographs for the project work given to them for unit II.' Use and conservation of Natural resources. All the students enthusiastically prepared their projects.
27. The computer assisted instruction was used by the investigator and she concludes that it was an effective self learning machine and feeded the learners curiosity.
28. Finally, the investigator has concluded that the experimental method i.e. the use of multimedia package was certainly a good method and as a result the performance of group ' E ' was certainly better than control group ' C ' which was taught by the traditional method.

### 5.3. Recommendations :

1. This study ' Use of Multimedia Package in the Teaching of Science ' will add to the already existing store of studies conducted by various researchers from different universities in the field of education. This research work has an important bearing on education. Where the traditional method of teaching is still in vogue. The study concludes that students can be taught better by the multimedia package by using media like flashcards, flannel board, charts, maps, pictures, transparencies, slides, tape recorders, computers etc. The findings of the study indicate that teaching through media not only have an effect on the achievement of learners but also develops the learner's ability of retention and recall. It also increases the self confidence of the learners, arouses their interest, develops curiosity and allows them active participation in the lesson. It also develops a scientific attitude in the students.
2. The details of the findings, included in this chapter have some recommendations for the

teachers, educators and administrators. This method is more reliable and effective than the 'chalk' and talk method and the media approach proved to be most productive for the teaching of science, as the learners were more involved during the lesson. The investigator gave the students a chance to conduct various activities and indulge in project work which provided food for the curiosity of the learners. This finding should encourage the science teachers to use this approach while teaching if they desire good performance from the learners.

3. The teacher should make use of the media approach effectively to develop all the abilities given in the cognitive domain for the teaching of science.
4. The investigator recommends the administrators and teachers to be in constant touch with the changes taking place in the field of education. This will introduce the teachers to new methodologies and this could make their teaching effective and impressive.

5. The investigator advises the teachers to acquaint themselves with new emerging medias, include these media/teaching aids in their daily teaching.
6. The schools which are run by the private trusts must realise the importance of these emerging media and should provide the necessary facilities. They should encourage the teachers to use more and media in their teaching.
7. ' Computers ' are the rule of the day. Keeping this in mind, the teachers should also be well acquainted with their use and should explore their utility in the teaching of science.
8. The schools must set up a science club and the teachers concerned must guide and direct his students to prepare pictures, charts, transperencies and other such teaching aids. The teacher must involve the students in preparation of various aids.
9. The investigator **cautions** that each of teaching technique be used with utmost care. The determination of teaching strategy depends upon

the subjects and type of teaching material. The teacher's cautious choice of the strategy can help his students to gain more knowledge, instill more confidence and arouse interest. The teacher should bear in mind the nature of the subject matter and objectives of the subject while making choice of the media for teaching of science.

10. All the headmasters / administrators must encourage the use of teaching aids and must try to purchase good audio visual aids.
11. There should be a workshop for making useful and attractive teaching aids in the schools and these can also be provided to other schools at a minimal cost.
12. The Headmaster should frequently observe lessons and must pressurize and inspire new media.
13. The teacher should attend all the in-service training courses to upgrade their knowledge and renew it with time.

14. A workshop should be held on the appropriate use of instructional materials in teaching a particular unit.
15. New instructional material such as television tape recorder, computer must be used in teaching science.
16. Care must be taken that the various audio-visual aids are properly kept and maintained.

**5.4. Suggestions for Further Study :**

While carrying out the study, the investigator experienced certain hindrances, which she feels need further exploration through research. These stumbling blocks were not directly released the investigator study and thus she chose to ignore them.

The experiences of the researcher can benefit, other future researchers in the field of education. The suggestions put forth by the investigator are as follows.

1. The study can be replicated by selecting students from rural areas separately.

2. The preparation of media package and the various problems encountered during their preparation can be a topic for research and study.
3. An identical study can be carried out in other units at the same class level.
4. A similar study can be carried out from standards V to XII.
5. This type of study can be conducted in convent, public schools.
6. Comparison in the use of these new emerging media in the private unaided schools and government run aids schools should be conducted.
7. This type of study can also be conducted in various different subjects other than science.
8. Ability-wise and media combination-wise comparison can be a subject for further study.