CHAPTER 5

MAJOR FINDINGS AND CONCLUSIONS

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5.1. Introduction

Effective and fruitful research in any field should end in serving the needs of the society. In case of education, the true research should aim at helping either the teacher or the pupil in dissemination of knowledge or its learning. The main focus of an instructional system is to bring about desirable changes in the behaviour of the learner. Traditional teachers make use of particular mode for presenting the content which seems to be best suited to them. Innovative teachers always look for educational technology to increase the effectiveness of teaching. The practicing teachers in educational institutions who have not undergone any professional training and are not familiar with educational technology believe in the traditional way of teaching. It is the duty of the researcher to convey the effectiveness of the new instructional system through their valid research findings. In this chapter the investigator has noted the major observations.

The present study was an experiment to decide the effectiveness of video instructional package. Here, the investigator developed video instructional package on balanced diet for VIIth standard students to study its effectiveness in terms of the students achievement.

5.2. Major Findings and Conclusions

As a result of the experiment the following findings were arrived at:

1. There was significant difference between mean achievement of high S.E.S. and low S.E.S. group of students studied through video

instructional package in urban area on immediate retention test scores. This indicates that the students of experimental group with high and low S.E.S. scores from urban area differed significantly on immediate retention test. It can be concluded that the students from urban area in experimental group with high S.E.S. performed significantly better than the students of low S.E.S. on immediate retention test.

2. There was no significant difference between mean achievement of high and low S.E.S. group of students studied through video instructional package in urban area on delayed retention test scores. It can be concluded that the students of experimental group with high and low S.E.S. scores from urban area did not differ significantly on delayed retention test.

3. There was significant difference between mean achievement of high S.E.S. and low S.E.S. group of students studied through video instructional package in rural area on immediate retention test scores. This indicates that the students of experimental group with high and low S.E.S. scores from rural area differed significantly on immediate retention test. It can be concluded that the students from rural area in experimental group with high S.E.S. performed significantly better than the students to low S.E.S. on immediate retention test.

4. There was significant difference between mean achievement of high S.E.S. and low S.E.S. group of students studied through video instructional package in rural area on delayed retention test scores. This indicates that the students of experimental group with high and low S.E.S. scores from rural area differed significantly on delayed retention test. It can be concluded students from rural area in

experimental group with high S.E.S. performed better than the students of low S.E.S. on delayed retention test.

5. There was significant difference between mean achievement of high J.I.M. and low J.I.M. group of students studied through video instructional package in urban area on immediate retention test scores. This indicates that the students of experimental group with high and low J.I.M. scores from urban area differed significantly on immediate retention test. It can be concluded that students from urban area in experimental group with high J.I.M. performed significantly better than the students of low J.I.M. on immediate retention test.
6. There was significant difference between mean achievement of high J.I.M. and low J.I.M. group of students studied through video instructional package in urban area on delayed retention test scores. This indicates that the students of experimental group with high and low J.I.M. scores from urban area differed significantly on delayed retention test. It can be concluded the students from urban area in experimental group with high J.I.M. performed better than the students of low J.I.M. on delayed retention test.
7. There was significant difference between mean achievement of high J.I.M. and low J.I.M. group of students studied through video instructional package in rural area on immediate retention test scores. This indicates that the students of experimental group with high and low J.I.M. scores from rural area differed significantly on immediate retention test. It can be concluded that the students from rural area in experimental group with high J.I.M. performed significantly better than the students of low J.I.M. on immediate retention test.

8. There was no significant difference between mean achievement of high J.I.M. and low J.I.M. group of students studied through video instructional package in rural area on delayed retention test scores. This indicates that the students of experimental group with high and low J.I.M. scores from rural area did not differ significantly on immediate retention test. It can be concluded that the students from rural area in experimental group with high and low J.I.M. group performed equally delayed retention test.
9. There was significant difference between mean achievement of high anxiety and low anxiety group of students studied through video instructional package in urban area on immediate retention test scores. This indicates that the students of experimental groups with high and low anxiety scores from urban area differed significantly on immediate retention test. It can be concluded that the students from urban area in experimental group with low anxiety performed significantly better than the students of high anxiety on immediate retention test.
10. There was significant difference between mean achievement of high anxiety and low anxiety group of students studied through video instructional package in urban area on delayed retention test scores. This indicates that the students of experimental group with high and low anxiety scores from urban area differed significantly on delayed retention test. It can be concluded that the students from urban area in experimental group with low anxiety performed significantly better than the students of high anxiety on delayed retention test.
11. There was significant difference between mean achievement of high anxiety and low anxiety group of students studied through video instructional package in rural area on immediate retention test

scores. This indicates that the students of experimental rural group with high and low anxiety scores from rural area differed significantly on immediate retention test. It can be concluded that the students from rural area in experimental group with low anxiety performed significantly better than the students of high anxiety on immediate retention test.

12. There was significant difference between mean achievement of high anxiety and low anxiety group of students studied through video instructional package in rural area on delayed retention test scores. This indicates that the students of experimental group with high and low anxiety scores from rural area differed significantly on delayed retention test. It can be concluded that the students from rural area in experimental group with low anxiety performed significantly better than the students of high anxiety on delayed retention test.
13. There was significant difference between mean achievement of male and female students studied through video instructional package in urban area on immediate retention test scores. This indicates that the mean achievement of female students from urban area of experimental group was better than male students. It can be concluded that the female students from urban area in experimental group performed significantly better than the male students on immediate retention test.
14. There was significant difference between mean achievement of male and female students studied through video instructional package in urban area on delayed retention test scores. This indicates that the mean achievement of female students from urban area of experimental group was better than male students. It can be concluded that the female students from urban area in experimental group performed significantly

better than the male students on delayed retention test.

15. There was significant difference between mean achievement of male and female students studied through video instructional package in rural area on immediate retention test scores. This indicates that the mean achievement of female students from rural area of experimental group was better than male students. It can be concluded that the female students from rural area in experimental group performed significantly better than the male students on immediate retention test.

16. There was significant difference between mean achievement of male and female students studied through video instructional package in rural area on delayed retention test scores. This indicates that the mean achievement of female students from rural area of experimental group was better than male students. It can be concluded that the female students from rural area in experimental group performed significantly better than the male students on delayed retention test.

17. There was no significant difference in mean achievement on immediate retention test between urban and rural students. This indicates that students belonging to urban and rural area did not differed on their achievement on the immediate retention test score. It can be concluded that area did not influence achievement of students on immediate retention test score.

18. There was significant difference in mean achievement on immediate retention test of students belonging to experimental group and control group. This indicates that the students who were exposed to video instructional package showed better performance than that of control group studied through traditional method of teaching. So it can be concluded that video instructional package was effective on immediate lretention test.

19. There was no significant difference between mean achievement on immediate retention test of high S.E.S. group and low S.E.S. group. This indicates that high S.E.S. group and low S.E.S. group did not differ significantly on achievement on immediate retention test. It can be concluded that S.E.S. did not influence achievement of students on immediate retention test scores.

20. There was no interaction between area and methods of teaching on immediate retention test scores. It can be concluded that area and methods of teaching jointly did not affect the immediate retention test scores.

21. There was no interaction between area and S.E.S. on immediate retention test scores. It can be concluded that area and S.E.S. jointly did not affect the immediate retention test scores.

22. There was no interaction between methods of teaching and S.E.S. on immediate retention test scores. It can be concluded that methods of teaching and S.E.S. jointly did not affect the immediate retention test scores.

23. There was no interaction between area, methods of teaching and S.E.S. on immediate retention test scores. It can be concluded that the area, methods of teaching and S.E.S. jointly did not affect the immediate retention test scores.

24. There was no significant difference in mean achievement on delayed retention test between urban and rural students. It can be concluded that the students of urban and rural area did not differ on their achievement on delayed retention test. It can be concluded that area did not influence achievement of students on delayed retention test.

25. There was significant difference in mean achievement on delayed retention test of students belonging to experimental group and control group. This indicates that the students of experimental and control group differ in their achievement on delayed retention test. It can be concluded that video instructional package was effective on delayed retention test.

26. There was no significant difference between mean achievement on delayed retention test between high S.E.S. group and low S.E.S. group. This indicates that high S.E.S. and low S.E.S. group did not differ significantly on achievement of students on delayed retention test. It can be concluded that S.E.S. did not influence achievement of students on delayed retention test.

27. There was interaction between area and methods of teaching on delayed retention test scores. This indicates that area and methods of teaching jointly influenced achievement on delayed retention test.

28. There was no interaction between area and S.E.S. on delayed retention test scores. This indicates that area and S.E.S. jointly did not influence delayed retention test scores.

29. There was no interaction between methods of teaching and S.E.S. on the performance of delayed retention test scores. It can be concluded that methods of teaching and S.E.S. jointly did not influence the performance on delayed retention test scores.

30. There was no interaction between area, methods of teaching and S.E.S. on delayed retention test scores. This indicates that areas, methods of teaching and S.E.S. jointly did not affect the delayed retention test scores.

31. There was no significant difference in mean achievement on immediate retention test between high J.I.M. group and low J.I.M. group. This

indicates that the students belonging to highly motivated group (high J.I.M. group) did not differ on their immediate retention test score from the students belonging to low J.I.M. group. It can be concluded that J.I.M. did not affect achievement of students on immediate retention test.

32. There was no interaction between area and J.I.M. on immediate retention test scores. This indicates that area and high J.I.M. jointly did not affect the immediate retention score of the students.

33. There was no interaction between methods of teaching and J.I.M. on immediate retention test scores. This indicates that the methods of teaching and J.I.M. jointly did not affect the immediate retention test scores.

34. There was no interaction between area, methods of teaching and J.I.M. on immediate retention test scores. This indicates that area, methods of teaching and J.I.M. did not affect the immediate retention test scores.

35. There was no significant difference between mean achievement on delayed retention test of high J.I.M. group and low J.I.M. group. This indicates that high J.I.M. group and low J.I.M. group did not differ on the delayed retention test scores. It can be concluded that J.I.M. did not affect achievement on delayed retention test.

36. There was no interaction between area and J.I.M. on delayed retention test scores. This indicates that area and J.I.M. jointly did not affect the delayed retention test scores.

37. There was no interaction between methods of teaching and J.I.M. on delayed retention test scores. This indicates that methods of teaching and J.I.M. jointly did not affect the delayed retention test scores.

38. There was no interaction between area, methods of teaching and J.I.M. on delayed retention test scores. this indicates that area methods of teaching and J.I.M. did not affect the delayed retention test scores.

39. There was no significant difference between mean achievement on immediate retention test between high anxiety group and low anxiety group. This indicates that the mean score on immediate retention test of high anxiety group did not differ from that of low anxiety group. It can be concluded that anxiety did not affect achievement of students on immediate retention test.

40. There was no interaction between area and anxiety on immediate retention test scores. This indicates area and anxiety jointly did not affect the immediate retention test score.

41. There was no interaction between methods of teaching and anxiety on immediate retention test scores. This indicates that methods of teaching and anxiety jointly did not affect the immediate retention test scores.

42. There was no interaction between area, methods of teaching and anxiety on immediate retention test scores. This indicates that area, methods of teaching and anxiety jointly did not affect the immediate retention test scores.

43. There was no significant difference between mean achievement on delayed retention test of high anxiety group and low anxiety group. This indicates that levels of anxiety did not affect the delayed retention score of the students. It was found that both the groups showed same score on delayed retention test. It can be concluded that anxiety did not affect achievement of students on delayed retention test.

44. There was no interaction between area and anxiety on delayed retention test scores. This indicates that area and anxiety jointly did not affect the delayed retention test scores.

45. There was no interaction between methods of teaching and anxiety on delayed retention test scores. This indicates that the methods of teaching and anxiety jointly did not affect the delayed retention scores.

46. There was no interaction between area, methods of teaching and anxiety on delayed retention test scores. This indicates that the area, methods of teaching and anxiety jointly did not affect the delayed retention test scores.

47. There was no significant difference in mean achievement of male and female students on immediate retention test scores. It can be concluded that the performance of male and female students on immediate retention test did not differ significantly. So it can be said that sex did not affect achievement of students on immediate retention test scores.

48. There was no interaction between area, and sex on immediate retention test scores. This indicates that area and sex jointly did not affect the immediate retention test scores.

49. There was no interaction between methods of teaching and sex on immediate retention test scores. This indicates that the methods of teaching and sex jointly did not affect the immediate retention test scores.

50. There was interaction between area, methods of teaching and sex on immediate retention test scores. This indicates that area, methods of teaching and sex jointly affect the immediate retention test scores.

51. There was no significant difference in mean achievement on delayed retention test between male and female students. This indicates that male and female students did not differ on their achievement on delayed retention test scores. So it can be concluded that sex did not affect achievement of student on delayed retention test.
52. There was interaction between area and sex on delayed retention test scores. This indicates that area and sex jointly influenced the achievement of students on delayed retention test.
53. There was no interaction between methods of teaching and sex on delayed retention test scores. This indicates that the methods of teaching and sex jointly did not affect the delayed retention test scores.
54. There was no interaction between area, methods of teaching and sex on delayed retention test scores. This indicates that area, methods of teaching and sex did not influence the delayed retention test scores.

5.3. Observations

During the process of investigation, the investigator made certain observations which are described at length in the following lines:

For the present study, during conducting the experiment in four different primary schools of urban and rural area of Vadodara, the investigator made important observations concerning male and female students, school authorities, text books and teachers.

During the pilot study, the investigator observed that the both male and female students belonging to pilot study were eager to learn balanced diet through video instructional package. The schools belonging to pilot study appreciated the work that was conducted by the investigator. It was observed that teachers of the school, belonging to pilot study were eager to know about the project.

During the treatment, the investigator observed that both the experimental groups belonging to urban and rural area were more eager than that of control groups. It was observed that the experimental group belonging to rural area was more eager than that of experimental group belonging to urban area. It was observed that both the experimental groups belonging to urban and rural area showed keen interest and readiness concerning, learning through video instructional package.

During the treatment, the investigator observed the both urban and rural school authorities kindly co-operated.

During the pilot study as well as treatment it was observed that the students belonging to experimental groups of urban and rural area were eager to learn other units and subjects through video instructional package. It was observed that the same students were in need of Science textbook having big colourful pictures.

It was observed that pupils of the schools, selected for the present investigation, were not acquainted with standardized tests. This shows that they were not administered this type of texts in the part. As such they were found anxious and having fear of examination. Of course, the present

investigator had tried to convince them that it was not a test or examination, but it was for the research purpose only. It was observed that pupils were very much anxious to appear in the tests. It was further observed that pupils were very much anxious to know their scores on the standardized tests.

During the conduct of experiment it was observed that pupils were very eager to know about the video instructional package. They were very happy to learn through video instructional package. It was their demand that all the units of science should be taught through video instructional package in both urban and rural area school.

It was also observed that pupils were not familiar with immediate and delayed testing procedure. Generally for school test, they get sufficient time for preparation. Students were not ready to appear for immediate retention test, but investigator had to convinced them.

5.4. Suggestions and Implications

A perusal of related studies show how limited are the studies in this area. Video technology offers considerable potential for improvement of the quality of education. The use of video instructional package at primary school level must employ to enrich learning experiences of the students. There is a academic try to create awareness about learning balanced diet through video instructional package. The study in its attempt to fulfill certain research gaps has thrown open more avenues for research. The video instructional package is prepared in accordance with a pool of well defined

instructional objectives. This study is in the direction to provide awareness regarding nutrition education through video instructional package and study its effectiveness in terms of achieving pre-decided instructional objectives. The present study is essentially aimed at producing a video instructional package on balanced diet, meant for the standard VII students and validating its effectiveness through consultation with experts and a tryout on a sample of students to study the comparison between the effectiveness of video instructional package over traditional method of teaching and to study the achievement of the students. For this the correlates of achievement like Socio-Economic Status (S.E.S.), Junior Index of Motivation (J.I.M.), Anxiety and sex have also been studied. It was found that the students of experimental group with high S.E.S.. high J.I.M. and low anxiety in urban and rural area performed significantly better than students of the same group with low S.E.S., low J.I.M. and high anxiety in the experimental and control groups on immediate and delayed retention test. The cluster of findings that have been arrived at as an outcome of the experiment gives empirical and valid predictions regarding the effectiveness of the video instructional package with regard to the achievement of the instructional objectives and their suitability for the students.

In the present study, findings belonging to correlates of achievement indicated that the students from urban area in experimental group with high S.E.S. performed significantly better than the students of low S.E.S. on immediate retention test. But the students of experimental group with high and low S.E.S. scores from urban area did not differ significantly on delayed retention test. The students from rural area in experimental group with high S.E.S. performed significantly better than the students of low

S.E.S. on immediate as well as delayed retention tests. As the S.E.S. plays an important role in the determination of their achievement, the knowledge of the students' S.E.S. to the teacher will help in planning the instructions, which will ultimately help in achieving their goal. The students from urban area in experimental group with high J.I.M. performed significantly better than the students of low J.I.M. on immediate as well as delayed retention tests. The students from rural area in experimental group with high J.I.M. performed significantly better than the students of low J.I.M. on immediate retention test. But the students from rural area in experimental group with high and low J.I.M. group performed equal on delayed retention test. From the above findings it is evident that students with high J.I.M. performed better than their counterparts.

So this indicates that teacher should try to motivate the students by creating a healthy educational climate in learning situations of the school. The students from urban and rural areas in experimental groups with low anxiety performed significantly better than the students of high anxiety on immediate and delayed retention tests. This findings clearly show that students with low anxiety performed better and vice-versa. This shows that every teacher should try to create such educational climate in the classroom so that students must keep low anxiety while learning. This helps to them, in the better achievement.

Findings clearly indicates that instructional video technology has high potential for imparting education effectively. There is an urgent need to create awareness in the students through a well planned educational activities with the help of video technology. There is a need that every teacher should employ such ready-made potential, instructional

video cassette in the classroom. Teachers may obtain such educational video cassettes from Educational Media Research Centre, Ahmedabad; Gujarat Institute of Educational Technology, Ahmedabad; Chetna a Women Organization, Ahmedabad; Kaveri a Women Organization, Ahmedabad. Indira Gandhi National Open University, Vadodara Centre, Department of Education and Extension, Faculty of Home Science, The M. S. University of Baroda, Vadodara and Door Darshan Centre, Ahmedabad. The use of media will certainly enrich learning experiences of the students which would help better achievement.

Teacher must make use of such facilities so that the school students must come in touch with advanced technology. As a school student at every stage level every one must take the gain of video technology. Parents must allow to watch educational video programmes to their wards. During inspecting the school, district education office staff must suggest the school authority concerning the use of video technology. School authority must maintain and make use of educational video programmes prepared by developmental agencies, research students, departments of educational extension of universities. There is need to prepare more and more quality educational video programmes at every stage level in every subject in every medium. Gujarat Textbook Board must take action concerning the curriculum through educational video programmes.

Every teacher should know S.E.S. of students. The S.E.S. of students should form basis for planning and implementation of curricular and co-curricular activities of the throughout the academic year. Teacher should organize such activities by which students are motivated. Teacher should use more and more instructional video cassettes available on various school

content areas. Teacher training programme should include about development and use of instructional video. Teacher must be exposed to preparation of script for video. Teacher education programme should include the topic like the correlates of achievement in their curriculum. In service education of teachers should also include this area of teaching and learning checked through video.

5.5. Suggestions for Further Research

It is observed that studies seeking to establish or compare effectiveness of various instructional media involving audio visual modalities in the field of education and studies concerning effective teaching learning process through instructional video have been established by different researches in this field. Now it is the proper time to focus the other aspects of above-mentioned studies. There is need regarding studies concerning development and tryout of instructional video and its comparison with traditional method of teaching in different subjects. More researches are needed in the area of multifarious use of instructional video e.g. its use concerning effective teaching-learning process, its use concerning development and tryout and its use concerning comparison with traditional method of teaching.

As television and cable network reaching cities, towns and villages very fast, the possibilities of using instructional video is increased at different level. Some researches should be taken for findings effectiveness of instructional video lesson to develop awareness about literacy programme. Emphasis should also be given to application of instructional

video programmes and extensive researches should be conducted to find out the possibilities of using the same with different levels of learners from primary school to higher secondary school and even to technical-education learners. Developmental agencies and educational institutions should develop instructional video programmes in the field of primary health, consumer education, civil rights, population, education and environmental education.

In the present investigation, the investigator developed a video instructional package to teach balanced diet to the students of standard VII and tried to study its effectiveness in terms of the students achievement. This way the investigator tried to provide awareness regarding nutrition education through video instructional package and studied its effectiveness in terms of the students' achievement. The investigator tried out a video instructional package in the urban and rural schools of Vadodara and found that teaching through video instructional package was effective as compare to traditional method of teaching.

Since video is an effective media for instruction, it is suggested that video instructional material must be prepared on many topics related to our emerging problems learners of various levels. Video can be fruitfully used to inculcation of certain values also.

As a result of the experiences of the investigator during this long process of research could see that there is still enough scope of further research.

The problems could be as follows:

1. To develop video instructional package on balanced diet in Hindi language for the students of Standard VII and studying its effectiveness in terms of the students' achievement.
2. To develop video instructional package on balanced diet in English language for the students of Standard VII and studying its effectiveness in terms of the students' achievement.
3. To develop video instructional package on environment in Hindi language for the students of Standard VII and studying its effectiveness in terms of students' achievement.
4. To develop video instructional package on Physics-Chemistry and Biology in Hindi and English language for the students of higher secondary level and studying its effectiveness in terms of students' achievement.
5. To study the effectiveness of school T.V. programmes in Science at primary level.
6. A comparative study of the use of video instructional package in teaching Science at primary schools of urban and rural areas.
7. A comparative study of the use of video instructional package in teaching Science at Secondary Schools of urban and rural areas.
8. The preparation of an instructional video recorded lesson in Science education for urban and rural areas of students to compare the effectiveness of instructional video over traditional method of teaching in terms of the achievement of the students.
9. A comparative study to find out effectiveness of instructional video lesson over traditional lesson in teaching Science at primary schools of Vadodara city.

10. A comparative study to find out effectiveness of instructional video lesson over traditional lesson in teaching Science at Secondary Schools of Vadodara city.
11. A comparative study to find out effectiveness of instructional video lesson over traditional lesson in teaching Science at primary schools.
12. A comparative study to find out effectiveness of instructional video lesson over traditional lesson in teaching Science at secondary schools.
13. The use of an instructional video recorded lesson to study the reaction of the students concerning learning-problems and reaction of the teachers concerning teaching-problems.