CHAPTER 4

SUMMARY AND CONCLUSION

The universe is believed to have started with great explosion releasing an enormous amount of energy. This energy is distributed in entire universe having life on it.

Men used nastural resources like air, water and soil for his wellbeing. He also learnt slowly to utilise these resources for survival and betterment. In the utilization of the available resource man became master of his environment harne--ssing natural energy to lighten his workload. In doing so man disturbed the whole environment and balance of nature by destroying the forest by polluting the environment resulting into the loss of energy wealth for which nature had taken years to creat.

Energy scene in India is becoming more complex. The commercial sources are being used in the industries and non-commercial sources like firewood, agricultural waste, animal dung, animal and human man-power, kerosene are used for domestic purpose. There is need for more fuel for cooking the required amount of food.

The Government of India at central, state and regional level has established nodal agencies like Department of Non-

conventional Energy Sources, Energy Development Agency, Khadi Village Industry Commission etc. for working out solution for the energy problems. These agencies are thus working for promotion of conventional fuels like solar energy and biogas as well as improved cook stoves. They also have worked out different communication strategies for promotion of devices using conventional non-conventional fuels for cooking.

However most of the communication strategies are produced and used for consumer group in informal situation. No special attempt is known to have been made for imparting formal class room instructions concerning devices using non-conventional energy sources and improved cookstoves till the time this study was undertaken. So the investigator was interested in taking the present study.

Keeping this in mind the present experiment was undertaken to study the relative effectiveness of the two selected strtegies namely live programme vs videoed programme of Bhavai and Exhibition cum Demonstration for promotion of Solar Cooker.

4.1.1 MAJOR OBJECTIVES OF THE STUDY

1. To develop Bhavai as motivational programme and Exhibition cum Demonstration as educational programme.

2. To produce a video tape of Bhavai as motivational progamme and Exhibition cum Demonstration as educational programme.

3. To study the relative effectiveness between the two selected strategies namely live and videoed Bhavai as motivational programme and Exhibition cum Demonstration as educational programme for promotion of Solar Cooker in relation to the selected variables.

4. To study the effectiveness of live and videoed Bhavai as motivational programme and Exhibition cum Demonstration as educational programme independently for promotion of Solar Cooker in relation to the selected variables.

5. To study the relative effectiveness within the selected strategies namely live/videoed Bhavai as motivational programme and Exhibition cum Demonstration as educational programme for promotion of Solar Cooker in relation to the selected variables.

4.1.2 ASSUMPTIONS OF THE STUDY

1. The selected concepts and generalizations related to Solar Cooker are available in literature like books, journals, periodicals and thesis. They can be identified organised and presented through different communication strategies for promotion of Solar Cooker.

2. The students of secondary and higher secondary classes of urban and rural areas can be motivated through live and videoed Bhavai and effect of motivation can be measured in terms of motives through motivational scale after the experimental condition.

3. The students of secondary and higher secondary classes of urban and rural areas will be able to learn through live and videoed Exhibition cum Demonstration and their effect can be measured in terms of knowledge gained through knowledge test after the experimental condition.

4. The selected students of secondary and higher secondary classes of urban and rural areas will participate in the experiment planned and will be able to respond to the developed evaluative measures, namely, motivational scale and knowledge test before and after the experiment for promotion of Solar Cooker.

5. There is a group intelligence test available to measure level of intelligence of urban and rural adolescence to which the students will respond.

4.1.3 NULL HYPOTHESIS OF THE STUDY

1. There will be no significant difference in the adjusted posttest mean scores achieved on motivational scale and knowledge test by selected students due to their exposure to live and videoed Bhavai as motivational programme and Exhibition cum Demonstration as educational programme for promotion of Solar Cooker.

2. There will be no significant difference in the adjusted posttest mean scores achieved on motivational scale and

knowledge test by selected students due to their exposure to live and videoed Bhavai as motivational programme and Exhibition cum Demonstration as educational programme in relation to selected variables namely place of habitation, class of study, sex and level of intelligence for promotion of Solar Cooker.

. There will be no significant difference in the mean scores of pretest and posttest achieved on motivational scale and knowledge test by the selected students under two experimental conditions namely live and videoed Bhavai as motivational programme and Exhibition cum Demonstration as educational programme independently for promotion of Solar Cooker.

-. There will be no significant difference in the mean scores of pretest and posttest achieved on motivational scale and knowledge test by the selected students under two experimental conditions namely live and videoed Bhavai as motivational programme and Exhibition cum Demonstration as educational programme independently in relation to selected variables namely place of habitation, class of study, sex and level of intelligence for promotion of Solar Cooker.

5. There will be no significant difference in the mean scores of pretest and posttest achieved on motivational scale and knowledge test by selected students under the

experimental conditions namely live/videoed Bhavai as motivational programme and Exhibition cum Demonstration as educational programme in relation to selected variables namely place of habitation, class of study, sex and level of intelligence for promotion of Solar Cooker within each of these strategies.

4.1.4 LIMITATIONS OF THE STUDY

1. The study is limited to the boys and girls of 9th and 11th standard of selected urban and rural schools in the year 1990-91 of Baroda Taluka.

2. The experiment is limited to motivate as well as educate the students through Bhavai and teaching selected concepts on Solar Cooker through Exhibition cum Demonstration.

3. The study is limited to use selected strategies namely live programme and videoed programme shown only once to the selected students.

4.1.5 SCOPE OF THE STUDY

1. The present study will provide systematically selected concepts and generalizations on Solar Cooker for 9th and 11th standard students of Baroda Taluka.

2. The study will also experimentally test the relative as well as independent effectiveness of the two selected

communication strategies namely live and videoed Bhavai as motivational programme and Exhibition cum Demonstration as educational programme for promotion of Solar Cooker.

4.2 Method of Procedure

4.2.1 METHOD OF SELECTING AND DEVELOPING COMMUNICATION STRATEGIES

4.2.1.1 Selection of Bhavai as Motivational Programme. The Video film on "Surya Mitra No Vesh" in form of Bhavai was produced by Parliker and the investigator under a project on "Developing Communication strategies for promotion of conven--tional and non-conventional fuels using new devices under the grant received from DNES of the Ministry of Energy, Government of India. This was selected as motivational programme in the present study.

4.2.1.2 Selection of Exhibition cum Demonstration as Educational Programme. Selection of Exhibition cum Demonstration as educa--tional programme was done on the basis of concepts and generalizations selected from this study.

Identification of Concepts and Generalizations.

The different concepts and generalizations leading to content were identified and selected from authentic sources. The content validation was done by experts in terms of adequacy, Suitability and organisation of concepts and generalizations. Objectives were formed based on the selected content. Majority of the objectives fell under the cognitive domain at

knowledge and comprehension level.

4.2.1.3 Selection of Media Class. Selection of media class II printed material, VII Audio Visual Motion and VIII physical objects was done from media selection chart suggested by Anderson (1976, Pp.16-29).

The communication strategies evolved were live and videoed strategies for Bhavai as motivational programme and Exhibition cum Demonstration as educational programme.

4.2.1.4 Preparation of Educational Script. An educational script on Exhibition cum Demonstration for live as well as videoed strategis was written keeping in mind the selected content. The script was written in Gujarati and visuals developed were same for both the selected strategies namely live and videoed Exhibition cum Demonstration as educational programme. The main features of the script were commentry, visuals, length of the shots and time required for each shot.

4.2.1.5 Video Production. The video production was done by using the equipments of the videographer with the following steps.

* Selection of video equipment.
* Plan of Indoor, Outdoor shooting.
* Actual shooting and Editing.

4.2.2 METHOD OF STUDY

4.2.2.1 Research Tools. The following tools were selected and developed for different purposes.

Desai Bhatt Group Intelligence Test was used to arrive at the IQ level of the students under study. It is a standardised test developed by Desai and Bhatt.

Motivational scale was developed and used to study the motivational level of the students before and after exposure to motivational programme of Bhavai.

Knowledge test was developed and used to study the gain in knowledge of the students before and after exposure to educational programme of Exhibition cum Demonstration.

4.2.2.2 Experimentation. The present experimentation was conducted in the following manner.

* Administration of Group Intelligence Test.
* Administration of Motivational scale before entering the experimental conditions to test motivational level of students.
* Exposure to Live or Videoed Bhavai as motivational programme.
* Administration of motivational scale after exposure to the experimental conditions to study the increase in motivational level.
* Administration of knowledge test for identifying the extent of knowledge possessed before their exposure to Live or Videoed Exhibition cum Demonstration.
* Exposure to Live or Videoed Exhibition cum Demonstration.

* Administration of knowledge test for identifying the extent of gain in knowledge of the students after their exposure to Live or Videoed Exhibition cum Demonstration.

4.2.2.3 Population and Sample. The population under study comprised of boys and girls from secondary and higher secondary classes of urban and rural schools of Baroda Taluka during the year 1990-91. The students who were present from the selected classes for the entire period of experiment from administraton of various tools and experimentation with the selected strategies were finally selected as sample.

4.2.2.4 Statistical Analysis. The following statstical measures were used for differnt purposes.

* To report background information percentages were calculated.
* To find the IQ level of the students under study key prepared by Desai Bhatt Group Intelligence Test was used after suitable modfication in consultation with experts. Median scores was used to classify high and low intelligence.
* The mean values were calculated for the pretest and posttest score of motivational scale and knowledge test to predict the level of motivation and gain in knowledge of the selected students under study.
* Paired t test was used to find out the significant difference in the pretest and posttest mean scores on

motivational scale and knowledge test of both the selected strategies independently.

* Analysis of covariance was used to judge the efficiency of one communication strategy over the other in terms of increase in motivation and knowledge independently as well as in relation to selected variables.

4.3 Majaor Findings of the Study

Section I Bhavai as a Motivational Programme

1. There was no significant difference in the adjusted posttest mean scores on motivation of the students under study between the two selected strategies independently. However, there was significant difference in motivation of the students under study due to selected variables namely place of habitation and level of intelligence indicated by 't' test arrived at on the basis of mean scores between the two selected strategies.

2. There was significant difference in the pretest and posttest mean scores achieved on motivation scale by the students under two experimental conditions namely Live and Videoed Bhavai irrespective of the selected variables. However, the findings further lead to conclude that there was significant difference in motivation of the selected students under study under each of the two selected strategies in relation to selected variables namely place

of habitation, class of study, sex and level of intelli--gence.

3. There was no significant difference in the adjusted posttest scores on motivation of the students under study within the two selected strategies namely Live/Videoed Bhavai as motivational programme. However, there was significant difference in motivation of the students under study within the Live strategy due to selected variable namely class of study.

4. There was significant difference in the pretest and post--test mean scores of motivation of the students under two experimental conditions namely Live/Videoed Bhavai irrespective of the selected variables. Moreover, the findings further lead to conclude that there was significant difference in motivation of the selected students under each of the two selected strategies in relation to selected variables namely place of habitation, class of study, sex and level of intelligence.

Conclusion

Experiments conducted to study effectiveness of Live as well as Videoed Bhavai as motivational programme independently as well as in relation to selected strategies lead to conclude that both live as well as videoed Bhavai lead to increase in motivation of students under study.

However, the comparision between effectiveness of Live vs. Videoed Bhavai for increasing motivation of students under study in relation to selected variables revealed that place of habitation was found to be related to increase in motivation. In that those from rural areas were found to be benefited more by videoed strategy, when compared to their counter parts exposed to Live Bhavai. Secondly level of intelligence was also found to be related to increase in motivation for the students with low intelligence and they were found to be benefited more by videoed strategy. When compared to the students with low intelligence exposed to Live Bhavai.

The difference in the level of motivation within the strategies namely Live/Videoed Bhavai of students under study due to selected variables revealed that class of study was responsible in increasing their motivation. In that the students from 11th standard were benefited more by Live strategy when compared with 9th standard students.

Experiment conducted to study effectiveness of Live/ Videoed Bhavai as motivational programme in relation to selected variables lead to conclude that Live Bhavai lead to increase in motivation of the students under study.

Section II Exhibition cum Demonstration as Educational Programme

1. There was no significant difference in the adjusted post--test mean scores indicating no difference in gain in knowledge of the students treated with two selected

strategies. However, there was significant difference in the gain in knowledge of the students under study exposed to the two selected strategies due to selected variable namely place of habitation.

2. There was significant difference in the pretest and post--test mean scores indicating gain in knowledge of the students under two experimental conditions namely live and videoed Exhibition cum Demonstration as a result of their exposure to these strategies independently. The findings further revealed that there was significant gain in knowledge of the students under study under each of the selected strategies due to the selected variables namely place of habitation, class of study, sex and level of intelligence.

3. There was no significant difference in the adjusted post--test mean scores indicating no difference in gain in knowledge of the students under study within the two selected strategies namely Live/Videoed Exhibition cum Demonstration as educational programmes. However, further examination of data revealed that there was significant difference in terms of gain in knowledge of the students under study within the Live strategy due to selected variables namely place of habitation and class of study, and within the videoed strategy due to selected variables class of study, sex and level of intelligence.

4. There was significant difference in the pretest and post--test mean scores of the students under two experimental conditions namely live/videoed Exhibition cum Demons--tration indicating gain in knowledge as a result of their exposure to these two strategies. Further examination of data revealed that there was significant difference in gain in knowledge of the students under each of the two selected strategies in relation to selected variables namely place of habitation, class of study, sex and level of intelligence.

Conclusion

The Experiment conducted to study the effectiveness of live as well as videoed Exhibition cum Demonstration as educa--tional programme independently as well as in relation to selected strategies lead to conclude that both live as well as videoed Exhibition cum Demonstration lead to increase in gain in knowledge of the students under study.

However, the comparision of these two strategies in terms of their effectiveness in increasing the gain in knowledge of the students under study in relation to selected variables revealed that place of habitation was found to be related to increase knowledge. In that those from rural areas were found to be benefited more by live strategy when compared to their counterparts exposed to videoed strategy.

The relative effectiveness within the strategies namely live/videoed Exhibition cum Demonstration for increase in gain in knowledge of students under study in relation to selected variables revealed that place of habitation and class of study were found to be responsible in increasing knowledge. In that the students from rural schools and those from 11th standard were benefited more by live strategy when compared to their counterparts.

RECOMMENDATIONS

The investigator on the basis of her experience during experimentation and Findings of the study recommends that

1. Similar study can be taken up for promotion of other alternate energy sources namely biogas and improved cookstoves using conventional, commercial as well as non-commercial sources of energy.

2. The present study can be replicated in non-formal situations for school dropouts on users group of young men and women from rural, sub-urban and urban areas.

3. The present study can be replicated on the similar sample with control group being taught with the use of conventional methods.

4. A comparative study of extent of motivation leading to gain in knowledge under each selected strategy be done independently or comparatively.