Chapter-V

SUMMARY OF THE FINDINGS AND SUGGESTIONS
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In the previous chapter, the analysis and interpretation of data have been presented in detail. In this chapter, the researcher presents a brief summary of the research which indicates the statement of the problem, major objectives, hypotheses tested, methodology followed by the researcher, sampling and the tools and techniques used in the analysis of data. It also includes the conclusions drawn on the basis of interpretation of the findings, educational implications of the study and suggestions for further research.

5.1 NEED AND IMPORTANCE OF THE STUDY

Till recently man was unaware of the fact that his technology is creating environmental imbalance, but now it has been realized that the earth's resources are finite and hence, are to be preserved and ecological balance must be maintained. The present problem of exploiting environment results largely from ignorance. The environmental problem has become one of the burning issues in our society, as people are not aware of environmental degradation. People need to be made aware of environment and its problems. They need to gain knowledge about how it functions, how human and the environment interact, how problems arise, and how they can be solved.
They need to acquire about the environment and feel motivated and committed to repair, maintain and improve it.

The environmental problems have reached a level where almost everyone is conscious of them. This rising conscious has also given to a wide spread responsiveness of the idea for the need to do something about it. Education is obviously a powerful vehicle for bringing about change and there has been a growing interest in environmental education to serve the function. In act, environmental education at all levels of formal education was mandated by Supreme Court in 1991 in a response to public interest law suit on the need for action to create environmental awareness among the citizens of India.

Environmental problem exists in all countries and at all stages of development, but they vary in nature, magnitude and complexity. Environmental problems of developing countries are mostly related to improper modes of development and underdevelopment such as poverty, hunger, malnutrition and diseases. In developing countries, on the other hand, environmental problems rise due to fast development, which results in depletion of the resources, wastage of resources and pollution, India was an underdeveloped country and now being a developing country both these problems exists in India. The present environment is being degraded as a result of unsustainable exploitation of natural resources and environmental practices of human being. This is done in the form of mismanagement of natural environment, faulty
practices, negative attitudes and deteriorating value structure in society. The agricultural and industrial revolution and subsequent modernization process have been responsible for the pollution and degradation of air, water, soil and with consequent adverse effect on human health and well being.

Environmental awareness is most important because people in developed countries are rapidly consuming earth’s natural resources and because world population is increasing rapidly. Hence Human beings must take individual and social responsibility for the environment. It is pathetic to notice that younger generation of India is much behind in the concern for environmental balance. Therefore it is felt necessary to study the environmental awareness, attitude and knowledge among the secondary school students. It is very important to raise awareness among the teaching and student community. The awareness raising programmes are mostly concentrated around certain areas and the rest of the country is left out. Preparing the teaching community for effective integration of environmental concepts and creating positive attitudes in the young minds are greatly needed in every strata of the educational system. Unfortunately, the present efforts get diluted in the mad rush for academic achievements.

India faces significant challenges in protecting the environment from further damage. Population growth and urbanization make the task all the more difficult for the Indian government. It has made significant
efforts in the field of environmental protection, and developing environmental standards for both products and processes. The Indian government's ability to safeguard the country's environment depends on policies and educational systems. The quality of life of people living in urban areas has declined considerably because of pollution. Protection of the environment is one of the major challenges facing the world. Hence human beings are asked to reduce, reuse and recycle their resources. Even the learned people do not know which objects are to be reduced, reused and recycled. These three words if followed each and every person would be helpful to protect our environment.

Environmental education has been recognized all over the world as a viable tool for creating environmental awareness in people and motivating them to act for the environment. With the acceptance of Tiwari Committee Report in 1990, the country realized the need of environmental education. It is needed in order to meet the demand of every day life and maintain a mental equilibrium for the fulfillment of the needs and wants of every citizen on earth, and for balance and harmony between humanity and environment. It helps in developing new knowledge, skills and values in a drive towards better quality of life. It is needed for biomedical awareness and solution to health problems. A properly guided awareness is necessary to instill and enlighten the mind of Indians. Awareness leads to action. Without
proper educational efforts the awareness analysis action chain does not move smoothly and effectively.

The relationship between environment and human kind is indeed deep and has been recognized from the Vedic period. Furthermore, non-violence towards both animate and inanimate components of biosphere has been ingrained as a guiding principle in the Indian psyche. Therefore, awareness and education of environment is the paramount concern of all the citizens of society. Environment protection starts by creating awareness among the people so that it becomes part of their lifestyle. The key to achieving this goal lies in environmental and its related programmes. The objective of environmental education includes awareness, knowledge, attitudes, skills and participation of people in protecting the environment.

The role of younger generation is crucial in achieving these objectives. Hence the investigator feels that, it is necessary to know about the awareness of younger generations about environment and environmental problems. In this present study, the researcher has made an attempt to analyse the environmental awareness, attitude and knowledge among secondary school students of different localities of Davangere District. The investigator has tried to identify the environmental awareness, attitude and knowledge among the secondary school students and studied the relationship of the environmental awareness, attitude and knowledge among the Boys and Girls, Urban
and Rural, Government and Private secondary school students of Davangere District.

The proposed study will be confined to the secondary school (9th standard) students presently studying in Davangere District as they will be in the middle of the secondary education. 8th standard students are fresh for high school education as they have come from primary education. They are lacking in the basic concepts of environment. Hence they are not selected as sample. Even 10th standard students are not selected as sample because they will be busy in preparing for the board examinations and also the lack of cooperation from the heads of the schools. Hence the sample covers randomly selected rural and urban secondary school (9th standard) students of Davangere District.

5.2 STATEMENT OF THE PROBLEM

The problem of the present study is "An Investigation into the Environmental Awareness, Attitude and Knowledge among the Secondary School Students of Davangere District".
5.3 OBJECTIVES OF THE STUDY

The present study was undertaken with the following broad objectives:

(i) To identify the environmental awareness among the secondary school students

(ii) To identify the environmental attitude among the secondary school students.

(iii) To identify the environmental knowledge among the secondary school students.

(iv) To suggest measures to develop environmental awareness, attitude and knowledge among the secondary school students of Davangere District.

Specific Objectives of the Study

a) To find out the environmental awareness among the secondary school Boys and Girls of Davangere District.

b) To find out the environmental awareness among the Rural and Urban Secondary school Boys and Girls of Davangere District.

c) To find out the environmental awareness among the secondary school Boys and Girls of Government and Private secondary schools of Davangere District.
d) To find out the environmental attitude among the secondary school boys and girls of Davangere District.

e) To find out the environmental attitude among the rural and urban secondary school boys and girls of Davangere District.

f) To find out the environmental attitude among the secondary school boys and girls of government and private secondary schools of Davangere District.

g) To find out the environmental knowledge among the secondary school boys and girls of Davangere District.

h) To find out the environmental knowledge among the rural and urban secondary school boys and girls of Davangere District.

i) To find out the environmental knowledge among the secondary school boys and girls of government and private secondary schools of Davangere District.

j) To find out the interaction effect of sex and locality on environmental awareness, attitude and knowledge of secondary school students.

k) To find out the interaction effect of sex and types of schools on environmental awareness, attitude and knowledge of secondary school students.
1) To find out the interaction effect of Locality and Types of school on Environmental awareness, attitude and knowledge of secondary school students.

5.4 HYPOTHESES TESTED

Based upon the discussions of variables and also keeping in view the objectives of the study, the following research hypotheses have been formulated.

1. There is no significant difference in the environmental awareness among the secondary school Boys and Girls.

2. There is no significant difference in the environmental awareness among the Rural and Urban Secondary school students.

   Sub Hypotheses

   2.1- There is no significant difference in the environmental awareness among the Rural and Urban secondary school Boys.

   2.2- There is no significant difference in the environmental awareness among the Rural and Urban secondary school Girls.

3. There is no significant difference in the environmental awareness among the students of Govt, and Private Secondary schools.
Sub Hypotheses

3.1- There is no significant difference in the environmental awareness among the Boys of Govt, and Private Secondary schools.

3.2- There is no significant difference in the environmental awareness among the Girl students of Govt, and Private Secondary schools.

4. There is no significant difference in the environmental attitude among the secondary school Boys and Girls.

5. There is no significant difference in the environmental attitude among the Rural and Urban Secondary school students.

Sub Hypotheses

5.1- There is no significant difference in the environmental attitude among the Rural and Urban secondary school Boys students.

5.2- There is no significant difference in the environmental attitude among the Rural and Urban secondary school Girls.

6. There is no significant difference in the environmental attitude among the Students of Government and Private Secondary schools.
Sub Hypotheses

6.1- There is no significant difference in the environmental attitude among the Boys of Govt, and Private Secondary schools.

6.2- There is no significant difference in the environmental attitude among the Girl students of Govt, and Private Secondary schools.

7. There is no significant difference in the environmental knowledge among the secondary school Boys and Girls.

8. There is no significant difference in the environmental knowledge among the Rural and Urban Secondary school students.

Sub Hypotheses

8.1- There is no significant difference in the environmental knowledge among the Rural and Urban secondary school Boys.

8.2- There is no significant difference in the environmental knowledge among the Rural and Urban secondary school Girls.

9. There is no significant difference in the environmental knowledge among the Students of Government and Private Secondary schools.
Sub Hypotheses

9.1- There is no significant difference in the environmental knowledge among the Boys of Government and Private Secondary schools.

9.2- There is no significant difference in the environmental knowledge among the Girl students of Government and Private Secondary schools.

10. There is no significance interaction effect of sex and locality on environmental awareness.

11. There is no significance interaction effect of sex and types of secondary schools on environmental awareness.

12. There is no significance interaction effect of types of schools and locality on environmental awareness.

13. There is no significance interaction effect of sex and locality on environmental attitude.

14. There is no significance interaction effect of sex and types of secondary schools on environmental attitude.

15. There is no significance interaction effect of types of schools and locality on environmental attitude.

16. There is no significance interaction effect of sex and locality on environmental knowledge.

17. There is no significance interaction effect of sex and types of secondary schools on environmental knowledge.
18. There is no significance interaction effect of types of schools and locality on environmental knowledge.

5.5 METHODOLOGY AND SAMPLING

In the present study, the data regarding independent variables such as secondary school boys and girls, urban and rural secondary school students, government and private secondary school 9th standard students of Davangere District was collected.

The investigator has used the following tools for the collection of the data.

1. Environmental Awareness Ability Measure (Praveen Kumar Jha, 1998)
2. Taj Environmental Attitude Scale (Haseen Taj, 2001)
3. Environmental Knowledge Test constructed by the researcher was used to investigate the Environmental Knowledge among the secondary school students.

Sampling

For the purpose of present study, 1440 students were selected from the 9th standard classes of Davangere District. Stratified random sampling technique was used to select the sample. Totally 36 secondary
schools were selected proportionately on random basis; 14 were government secondary schools and 22 were private secondary schools. Among the 14 government schools, 7 were urban government secondary schools and remaining 7 were of rural government secondary schools.

Among the 22 private secondary schools, 12 were urban private secondary schools and 10 were rural private secondary schools. The proportion of the sample of urban and rural secondary school students is almost in the ratio of 1:1 (760:680); boys and girls sample is also in the ratio of 1:1(720:720).

Statistical techniques used for the analysis of the data

The researcher has used the following statistical techniques for the analysis of the data - Mean, and Standard Deviations were calculated for the scores in the groups, test of significance i.e. paired- ‘t’ test was calculated to compare the independent variables in between the groups. The hypotheses formulated were tested using the Two way ANOVA.

5.6 FINDINGS AND CONCLUSIONS OF THE STUDY

The following are the findings of the present study,

1. Gender does not play any role on Environmental awareness.

2. Localities of the schools play an important role on environmental awareness.
3. Gender and locality have joint effect on environmental awareness.

4. Gender and types of schools does not have any joint effect on environmental awareness.

5. Types of secondary schools play an important role on environmental awareness.

6. Locality and type of schools have joint effect on environmental awareness.

7. Gender does not play an important role on environmental attitude.

8. Localities of the schools play an important role on environmental awareness.

9. Gender and locality does not have any joint effect on environmental attitude.

10. Types of secondary school play an important role on environmental awareness.

11. Gender and type of secondary school does not have any joint effect on environmental attitude.

12. Locality and type of school have joint effect on environmental attitude.

13. Gender does not play an important role on environmental knowledge.

14. Localities of the schools play an important role on environmental knowledge.
15. Gender and locality does not have any joint effect on environmental knowledge.

16. Types of schools play an important role on environmental knowledge.

17. Gender and type of schools have joint effect on environmental knowledge.

18. Locality and type of schools have joint effect on environmental knowledge.

Conclusions

The researcher has drawn the following conclusions on the basis of interpretations of results which are as follows,

1. Lack of better exposure to information via all kinds of media is the cause of lower environmental awareness in the rural students.

2. Meagre opportunities to become familiar with the environment and community centered co-curricular programmes in government schools is the cause of lower environmental attitude among the students of government schools.

3. Lack of concrete concepts about environmental aspects and less polluted environment in rural areas is the cause of lower environmental knowledge among rural students.
4. A lower education level of parents in rural areas is also one of the causes of lower environmental awareness, attitude and knowledge among the rural students.

5.7 EDUCATIONAL IMPLICATIONS OF THE STUDY

The following educational implications may be suggested based on the results obtained in the study.

1. Environmental awareness, attitude and knowledge are significantly and positively related to locality of the schools. Lower environmental awareness, attitude and knowledge of the students in rural areas are due to lack of better exposure to information via all kinds of media. Hence they must be provided better opportunities to gather information regarding environment by conducting symposiums, seminars and exhibitions.


2. The results of the study indicate that the students belonging to urban background are comparatively better in terms of their
environmental awareness, attitude and knowledge as compared to the student belonging to rural background. This difference is due to the difference in the educational level of the parents of urban and rural students and the approaches of the media is also an important factor and also the poor environmental quality in urban areas leads to individuals facing serious health problems. Hence individuals adopt measures to improve their environment quality only if they perceive the associated health problems.

Bapat, M.N and Nagaraja Rao, N.R (4:10-19), Gutteling, J.M and Weigman, O (7:433-447), Legault, et, al (11:243-250), Arcury, T and E, Christianson (2:19-25), Shahnawaj have found that students belonging to urban background are comparatively better in terms of their environmental awareness, attitude and knowledge as compared to the student belonging to rural background.

3. The study revealed that, environmental awareness, attitude and knowledge are significantly and positively related to types of schools. Lower environmental awareness, attitude and knowledge of government school students are due to lack of better facilities.

Hence it is very important to arrange community activity programmes and make students to actively participate in it. Government and other policy makers should invite authors, field workers and artists
to work with creativity to produce special modules to promote environmental awareness, attitude and knowledge.

Makki, M.H and Abd-El-Khalick, F (12:21-33), Rane, A.J, (14), Blocker, I.J and Eckberg, D.T,(6:841-858), have found that environmental awareness, attitude and knowledge in government school students can be enhanced by active involvement of students in community activity programmes and also by developing special modules to develop environmental awareness, attitude and knowledge.

4. The environmental education syllabus must be brought near to the day to day life situations. Gihar, S, Saxena, M.K and Kukrethi, B.R (8:69-74) have found that successful environmental education must be activity based and investigative as well as case discussions and action projects must be involved in the education syllabus.

5. Training for government schools students and teachers must be given top priority and programmes may be chalked out accordingly. Praharaj, B (13) has found that by using new strategies or promoting new methodologies in government schools both for the students and teachers is very important to enhance environmental awareness, attitude and knowledge.
6. Teachers must be given special orientations with updated strategies. Gardos et al (9:1121-1122)

7. Students must be provided with more play way type of activities in Environmental Education like motivating them to develop some projects about the environment where they are living. Gopal Krishna, (10) & Jain, S.C (18:26-32).

8. Role of children’s family is important on Environmental Educational Process, hence it is very important to arrange environmental educational seminars for parents.

9. Eco club activities must be strengthened as they play an important role in creating environmental awareness, attitude and knowledge amongst the future generation in the following ways,

   i) They are responsible for motivating the students to keep their surroundings green and clean by undertaking plantation of trees.

   ii) They can also promote ethos of conservation of water by minimizing the use of water.

   iii) To motivate students to imbibe habits and life style for minimum waste generation, source separation of waste and disposing the waste to the nearest storage point and also
about re-use of waste material and preparation of products out of waste.

iv) To educate students to create awareness amongst public and sanitary workers, so as to stop the indiscriminate burning of waste as this causes respiratory diseases.

v) To sensitize the students to minimize the use of plastic bags, not to throw them in public places as they choke drains and sewers, cause water logging and provide breeding ground for mosquitoes.

vi) To organize tree plantation programmes, awareness programmes such as Quiz, essay, painting competitions, poster competitions, rallies, natak etc. etc. so as to create enthusiasm regarding issues pertaining to Plants, Forest, Wildlife, Bio-diversity and Nature.

vii) To organize Nature Trail in Wild Life Sanctuaries, Parks, Forest areas to know about the Bio-diversity.

10. Orientation programmes for Eco Club in charge teachers can be conducted with the help of Environment experts.
5.8 LIMITATIONS OF THE STUDY

1. The sample included the 9th standard students of Davangere District.

2. Sample covers the randomly selected rural and urban secondary school students of Davangere District.

3. Though a number of variables are related to environment; only a relationship of variables such as environmental awareness, environmental attitude and environmental knowledge were studied.

5.9 SUGGESTIONS FOR FURTHER RESEARCH

1. Comprehensive studies on similar lines may be conducted to develop Environmental attitude by taking more variables like, Environmental Ethics, Air pollution attitude, Temperature attitude, Noise attitude, Noise sensitivity, Noise adaptation, Ecological attitude, Environmental values, Environmental behaviour. Etc

2. Similar studies can be conducted at different levels such as primary as well as in college levels.

3. Similar studies can also be conducted in different localities of other Districts.
4. A comparative study of interaction effects of the selected variables among the students studying in state board and C B S E syllabus can be undertaken.

5. An experimental studies can be conducted with innovative methods such as Brain storming, Infusion approach as an independent variable to develop Environmental Attitude at college levels.
REFERENCES


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