CHAPTER V

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CHAPTER V

SUMMARY AND CONCLUSIONS

The world as a whole has never been so challenged about environmental concern as it is today. Now it is realized that the ignorance of the various environmental issues is the sole cause of environmental degradation. As environmental problems has global perspective, the first inter-governmental conference on Environmental Education was held at Tbilisi, USSR, in 1977 which was succeeded by many national, regional meetings, workshops, conference, etc. all over the world.

Since last decade has seen a tremendous surge of interest in educational activities related to the awareness of our environment, popularly clubbed together and known as Environmental Education. NCERT has played a pioneering role in bringing the Environmental Education into school academics.

Schools can play an important role towards environment because it concerns with masses. Though the religious environmental thoughts influences the students at home before starting their formal education; schools i.e. formal education further gives an opportunity to inculcate environmental values as is essential for them and sensitize them.

These values are also reflected in the Constitution of India. Environmental Education for younger generation is very crucial. It widens the horizons of environmental awareness and make acquainted with the total environment and allied problems. It improves all ecological relationships, including relationship of...
mankind with nature and humanity also. It also enables to motivate students to participate in environmental activities which lead to sustainable development.

The increasing environmental stress is newly arising considerable source of conflict the world over. This conflict is also a cause for unsustainable development. In such a scenario wise decisions and appropriate actions towards environment are needful and these can be developed through school co-curricular activities related to environment in order to enhance the environmental sensitivity among students.

Thus, schools can play a paramount role by making today’s school children environmentally more sensitive and make them develop as wholesome personalities who can contribute to the sustainable development of the nation and the world.

Hence, environmental sensitivity among students is very important than mere environmental awareness. Since education performances are associated with intellectual development which is in turn associated with environmental sensitivity of a individual, this research endeavored to probe the environmental sensitivity among secondary school students from Chiplun Tashil of Konkan region of Maharashtra which has enriched biodiversity.
Statement of the problem

'ENVIRONMENTAL SENSITIVITY AMONG IX STANDARD STUDENTS – A STUDY'

Significance of the study

School plays an important role in the personality development of student. In today’s context, environmental sensitivity is necessarily becoming a facet of one’s personality.

However, as far as the knowledge of the investigator goes no study of this nature has been undertaken in this geographical area. Hence, to study the status of environmental sensitivity developed in the secondary school level students is urgently needed as action skills of personality are developed at the secondary stage rather than at primary level of education. During this stage young minds are the most receptive and sensitive.

Hence, it is the right stage to find out the level of environmental sensitivity and take up appropriate activities to develop environmental sensitivity for their own benefit and benefit the earth. Environmental value is enshrined in the Constitution of India and every individual (student) should develop this value.

Besides this, the present study and its results contribute to the development of the knowledge in the area of Environmental Education, whose one aspect is Environmental Sensitivity. The results of the study will assist teachers and parents to correlate the Environmental Sensitivity of the children with their other aspects of the personality as well as their knowledge, skills and attitudes. The school authorities and policy makers can use this study to make appropriate changes in the curriculum to develop Environmental Sensitivity among the students so that the future citizens of the world become environmentally conscious and sensitive human.
Objectives of the study

1. To analyze the text books of IX standard and identify the environmental components therein.
2. To find out the various co-curricular activities undertaken in schools related to environmental components in the text books.
3. To find out the level of environmental sensitivity among secondary school students.
4. To find out the gender difference in the environmental sensitivity among secondary school students.
5. To compare the environmental sensitivity among rural and urban secondary school students.
6. To study the relationship between environmental co-curricular activities and environmental sensitivity levels among secondary school students.
7. To suggest measures to develop environmental sensitivity among secondary school students.

Limitations of the study

1. This study was restricted to Marathi medium schools.
2. The sample was drawn from Chiplun Tahsil of Ratnagiri District.
3. Only 30% of the rural schools were randomly selected for the study.
4. Only one division of IX standard from the selected school was randomly drawn for the study.
5. Only 10% of the sample drawn was interviewed.
6. The analysis of textbooks was restricted only to textbooks prescribed by Maharashtra State Bureau of Textbook Production and Curriculum Research, Pune.

PLAN AND PROCEDURE

Research Design

The present investigation is descriptive research, therefore survey method was used to collect the data.

Sampling Design

The purposive sampling method was used for the selection of a type of school and random sampling method was used for the selection of schools and children therein.

Sample

In order to study the level of Environmental Sensitivity among secondary school students, 18 schools (two urban and 16 rural) from Chiplun Tahsil of Ratnagiri District were selected. There are total 54 Marathi medium co-education schools. Out of which two urban (i.e. 100%) and 16 rural (i.e. 30%) were selected. From each school randomly on division of IX standard was selected and all students from the selected division were covered in study. There were total 828 students.

Data Gathering Tools

For the purpose of this study the following data gathering tools were prepared and used in consultation with experts keeping the objectives of the study in mind.
These research tools were as follows:

1. "Environmental Sensitivity Inventory" for the secondary school students (ESI)
2. Co-curricular Activities Questionnaire for Students (CCAQS)
3. Co-curricular Activities Questionnaire – cum – checklist for Head Masters (CCAQCH)
4. Interview of students for qualitative data collection.

**PROCEDURE OF DATA COLLECTION**

All the textbooks of IX standard were analyzed to identify different environmental components in them. The Environmental Sensitivity Inventory was administered to the IX standard students along with co-curricular activities questionnaire. The co-curricular activities questionnaire-cum-check list was administered to the Head Masters of the secondary schools and data was collected.

**Analysis and interpretation of data**

The analysis of data for different groups was done as per the objectives. The data collected for the study was treated, scored and analyzed on computer using standard statistical technique which helped in objective interpretation. Mean, percentage t-test and chi-square were computed.

The data collected from students through the interview regarding the contribution of co-curricular activities in schools towards the development of Environmental Sensitivity in them, was qualitatively analyzed.
CONCLUSIONS AND DISCUSSIONS

Conclusions have been drawn from the findings of the study keeping in mind the objectives of the study. The sample as stated earlier is drawn from Chiplun Tahsil, District Ratnagiri of Maharashtra state which falls in Konkan belt having a rich biodiversity. Hence the need arose to conduct research and study the environmental sensitivity of students in this geographical area.

The conclusions drawn from the findings of this study are as follows:

1. Except History, Geometry and Algebra, all textbooks of IX standard have some environmental components. The newly prescribed text-book by the Maharashtra State Bureau of Textbook Production and Curriculum Research, Pune entitled as ‘Aāpale Paryāvaran’ (Our Environment) since 2006-07 contains the enriched environment related content which enable to enhance the environmental sensitivity among secondary school students. (Table No.1)

2. Morning Assembly has no variety of environmental programmes. Less weightage is given to ‘environment’ in Morning Assembly. There is no provision to involve IX standard students in Morning Assembly. (Table No.6)

The reason that could be attributed to this may be the academic results of schools. The ninth standard students are being prepared for the board examination of SSC by keeping them apart from involving in morning Assembly.

This conclusion is in conformity with the study of Allan J. Abreo (2003).
3. The environmental information disseminated by Government is not percolating the lower level. NGOs are not working satisfactorily in environmentally sensitizing the students, especially in rural area. (Table No. 7)

This might be due to the fact that the rural schools from this geographical area are located in very remote and hilly region of ranges of Sahyadri Mountains. Besides to heavy rainy season for prolonged time, it is difficult for communication, transport or travelling in this area. Therefore, perhaps NGOs have less interest to go there and take up environment related activities among school students.

This conclusion is in conformity with the study of Gupta N. (1997), Gavli V.V. (2005), Bajracharya R. K. (1986) and Ayodeji Ifegbesan (2002).

4. Schools face the shortage of environmental experts, infrastructure, and time in order to enhance the environmental sensitivity among students.

The reason that could be attributed to this may be financial. Environmental experts are generally not available within the geographical area. Experts from outside often demands high remuneration and allied expenditures. Therefore, schools face this problem.

This conclusion is in conformity with the studies of Sankpal (2002) and Shinde M.A. (2003).

5. There is ‘stress’ occasionally on teachers and students due to environmental co-curricular activities conducted in schools.
The reason that could be attributed to this may be that the teachers are required to conduct environmental co-curricular activities. On the other hand, there is burden to complete the syllabi on time. Students also have some stress because of pressures from their teachers for participating in environmental co-curricular activities. (Table No.14)

This conclusion is in conformity with the study of Patil S.N.(1998).

6. Majority of students of secondary school level have the moderate environmental sensitivity level. (Table No.15)

The reasons that could be attributed to this may be the role of Nature-club established in schools, role of various environmental co-curricular activities conducted in schools and students' own interest.


7. There is significant difference in the environmental sensitivity of male and female secondary school students. Male students have more environmental sensitivity than female students. (Table No.16)

The reason that could be attributed to this may be the more participation of male in environmental co-curricular activities than female students.

8. There is significant difference in the environmental sensitivity of rural and urban secondary school students. Urban students have more environmental sensitivity than rural students. (Table No.17)

The reason that could be attributed to this may be that the urban schools have got many facilities to conduct environmental co-curricular activities in schools. NGOs and experts can available in urban area easily. Rural area devoid of the above facilities. Therefore, perhaps urban school students are more environmentally sensitive than rural school students.

9. There is no relationship between environmental sensitivity levels and students' participation levels in environmental co-curricular activities. (Table No.18)

The reason that could be attributed to this may be students' unwillingly participation in environmental co-curricular activities under the burden of teachers or study. Besides this, there is low motivation from parents as well as teachers to nourish their interests in environmental co-curricular activities.

10. Parents and teachers give low motivation to students for enhancing environmental sensitivity among them.

11. The majority of IX standard students have no specific environment related hobbies.
RECOMMENDATIONS

It has been said that when something stops growing, it starts dying. On this background, the researcher put forward the following recommendations.

The suggestions given here are all tentative conditions by researcher's own limited knowledge and experience. These may be considered as basis for future thinking.

Researcher presented some specific recommendations as follow:

1. Although the most of environmental components are confined to subject 'Environment'; other subject teacher must inculcate some environmental values through their own subject teaching.

2. For enhancing the environmental sensitivity, the number of factors are responsible.
   e.g.  i. Availability of infrastructure,
        ii. Characteristics of learners,
        iii. Learning and evaluation strategies,
        iv. Reinforcement,
        v. Frequencies of environmental incidents happened and motivation given to it, etc.

   Therefore, teacher must take into consideration all these various factors collectively.

3. Environment related co-curricular activities must be the integral part of the school curriculum.

4. It is necessary to include in the school curriculum the following things:
i. Environment related projects.

ii. Special Environmental Study Tours, especially for those students who are more enthusiastic in environmental concerns.

5. Most of students participate in environment related co-curricular activities under the pressure or burden of teachers. Therefore, teachers should re-consider this thing, and should try to motivate them to participate spontaneously.

6. Teachers and parents should give attention towards the environment related hobbies of students and motivate them and try to inculcate the environmental values among young minds.

7. In Morning Assembly, there should be considerable weightage for environment. IX standard students should not be keep apart from Morning Assembly. The potential of students regarding environment must be nourished.

8. Teacher should maintain the integrity between subject teaching, local incidents and global environmental issues.

9. School staff must go together and develop methods to improve the vertical as well as horizontal (peer group) information regarding environment, which can be further disseminated into students to enhance their environmental sensitivity.

10. The government and local bodies should facilitate the secondary school teachers to enrich their knowledge of environment or their surrounding.
11. There is need for networking of various environment related NGOs, research organizations and teaching institutions in order to sensitize students, especially in rural areas.

12. Environmental related information is not percolating up to grass root level. Therefore the government and NGOs should extend their efforts in this concern.

13. Students should take interest in environmental concern, as it is today's need. They should maintain and nourish their own environment related hobbies.

SUGGESTIONS FOR FURTHER RESEARCH

1. Researches may be undertaken to study the environmental sensitivity among +2 level students where subject specialization occurs.

2. Standard-wise and sex-wise researches may be taken up to study the environmental sensitivity among students.

3. Case studies can also be undertaken to study the impact of students' leadership on other students in environmental co-curricular activities.

4. Other important variables like social, economic, personality characteristics, etc. which were not included in this study, could also be included in the similar study.