CHAPTER II

REVIEW OF RELATED LITERATURE

2.1. INTRODUCTION

The purpose of the present investigation is to study of Awareness of Higher Secondary School students towards Environmental Education. Before commencing any new study the investigator should become familiar with the studies previously done on the same or allied areas. The study of related literature save a researcher from working on a worked topic. Besides helping him to select an ideal problem, it helps to adopt suitable design for the study. By understanding the limitations of the previous studies, it ensures perfection in the study to be made. With these aims in view, the investigator has reviewed some of the important studies. The investigator traced out different types of research work’s like dissertations, thesis, journals and varieties of relevant books on Education.

SINGHAL (1969), studied the environmental variants in relation to intellectual performance of children at Calcutta on a sample of 276 children from schools. It was observed that the intellectual performance of high Socio-Economic Status (S.E.S) Children differed significantly when compared to the children studying in low S.E.S. schools.
MURLAIDHARAN (1970), studied the development of children in the light of high stimulation and low stimulation. Sample was related to school children from age 3 to 15 years. She found that the social and intellectual development of school children coming from highly stimulated homes was better. This helps to interpret that if an institution provides better facilities to children they can do better.

SEAN CARSON (1971), conducted a study on, "EDUCATING IN ENVIRONMENT".

Sixth formers in Britain will be able to choose Environmental Studies as a subject for Advanced level ("A" level) General certificate of Education if the syllabus worked out by teachers and University lectures is approved by the examination boards. It includes elements of geography, biology, sociology, history and economics.

A major event of European conservation year (1970) was the third "Countryside in 1970" conference held in London in October, under the presidency of the Duke of Edinburgh.

There were good reasons why educationists should make a special response to this important issue. There had been a growing feeling among many teachers that only by greater consciousness of their surroundings can many young people achieve a purposeful relationship
with the complicated environment of the cities in which they live and with the rest of human society.

In our country as KRISHNASWAMY (1976) puts, it, that illiteracy and ignorance are the two major factors coupled with superstitions, that are responsible for the environmental degradation. Environmental education, therefore, means telling the people about these and motivate them to act. This education should be given right from the beginning of elementary education to the higher level, rather it is a life long education. At the University level, the students would be matter enough to understand the concepts, and therefore, the emphasis should be on developing right attitudes and skills and motivate to action.

SUBRAMANIA PILLAY (1979), conducted a study on "LINKAGE OF HIGHER EDUCATION WITH ENVIRONMENT".

Linkage of Higher education with community, it is but right to mention about the emphasis of the ‘environmental education’ to be integrated in the curriculum. This concept of environmental education is not to be treated as yet another subject to be included in the syllabus. But it should be the integral part of it. The international workshop held at Belgrade in 1975, where the so called ‘Belgrade Cheater’ came into being, emphasised. (i) to give a slant on environmental issues in all our curricul.(ii)
to organise special courses for non-formal learners, and (iii) to develop special course for tertiary-level learners in the Universities.

EXEMMAL, J. (1980) conducted a study on "CONSTRUCTION OF CERTAIN MODELS FOR TEACHING SCHOOL BOTANY USING ENVIRONMENTAL AND ETHNIC RESOURCES AND TESTING THE EFFICACY OF SUCH MODELS".

The major objectives of the study were

i. to construct models for teaching Botany using environmental and ethnic resources.

ii. to test the efficacy of the teaching models by comparing the achievement in Botany of the treatment groups.

iii. to examine the effect of environmental approach on the attitude of pupils towards teaching and learning and

iv. to compare the effectiveness of the environmental approach and the formal approach in realizing certain select educational outcomes.

The tools employed for the study were teaching models in Botany, a rating scale on teaching models, an achievement test in Botany, a scale for measuring the attitude of pupils towards science teaching and learning, a judgement schedule for teachers and pupils, a verbal group test of intelligence, a science interest inventory and a general data sheet. Six
topics from the Botany syllabus of standard IX were selected for the construction of teaching models was the efficacy of the teaching models and tested experimentally (using parallel group design) by comparing the immediate post-teaching achievement, the delayed memory achievement scores and the extent of forgetting scores of the total sample and sub-sample of the environmental approach group and the formal approach group. The effect of the environmental approach on the attitude of pupils towards science teaching and learning was studied by comparing the pre-and post-attitude scores of both the groups. Comparative effectiveness of the environmental approach and the formal approach in realizing certain select educational outcomes was also studied by administering the judgement schedule for teachers and pupils. The experimental study was limited to eight schools. The rating scale was administered to 300 teachers and 100 experts.

The major findings of the study were;

1. The environmental approach was significantly superior to the formal approach in terms of immediate post-teaching and delayed memory scores.

2. Significant difference existed between the rural and the urban students in their immediate post-teaching achievement when the groups were exposed to the environmental teaching.
3. Pupils belonging to low SES groups were significantly superior to those belonging to high SES groups in their achievement when taught the environmental approach.

4. Pupils belonging to rural areas were significantly superior to urban students in their achievement when taught through the environmental approach.

5. The environmental approach was superior to the formal approach in stimulating cognitive growth in pupils, in developing interests in scientific activities and in scoring high marks in the examination.

**SCERT** (1980) made a research work on "**EVALUATION STUDY OF TEXT BOOKS IN ENVIRONMENTAL STUDIES OF CLASSES III AND V BASED ON REVISED CURRICULUM IN SCIENCE**".

The objectives of the study were:

i. To compare the old and new science curriculum of classes III and V with respect to the cognitive load on the students.

ii. To assess the revised science curriculum with respect to instructional objectives attained, and (iii) to assess each unit of the revised curriculum with respect to its emphasis on modernity.
The findings of the study were;

1. Most of the headmasters and teachers felt that the old curriculum was not relevant to the child’s cognitive level as well as needs, but contrary to this, parents felt that the old curriculum was easily understandable to the children.

2. The teachers and headmasters felt that the new curriculum was relevant to the environment in which the children lived but the parents of the children felt that the new curriculum increased the cognitive load of the children.

3. According to the teachers and headmasters, the new science curriculum fulfilled the educational objectives as prescribed by the Directorate of Education.

**SHARMA J.P. (1983), conducted a study on “COMPARATIVE EFFECT ON DIFFERENT SCHOOL ENVIRONMENTS ON REASONING OF PRIMARY SCHOOL CHILDREN”**.

Some evidences can be derived from the related field. Adiseshiah (1965), conducted a study on children of V, VI, VII and VIII classes both English medium and Tamil medium on the development of verbal skills. He found significant difference on number of dimensions.
GUPTA, A. (1986) conducted a study on "A STUDY OF ATTITUDE OF TEACHERS TOWARDS ENVIRONMENTAL EDUCATION".

The Objectives of the study were:

i. to develop a tool to measure the attitude of teachers towards environmental education.

ii. to measure the attitude of teachers towards environmental education, and

iii. to compare attitude of teachers teaching at various levels towards environmental education.

Data were collected from 150 in-service teachers at primary, secondary and junior college levels admitted to vacation course (1983-85) in B.Ed of the University College Education, Nagpur, and 25 lecturers from five colleges of Nagpur. A likert - type attitude scale was constructed with 114 items. The test was constructed with 114 items. The test was tried out at a preliminary stage on 52 teachers. At the final stage, after item analysis, 78 positive and 36 negative statements were included in the scale. The chi-square test were used for analysis of data.
The findings of the study were:

1. The mean attitude score for all the groups of teachers showed a favourable attitude towards Environmental Education (EE).

2. The order of favourableness was junior college, secondary college and primary teachers.

3. The mean attitude score of teachers at college level was found to be less than the mean attitude score at the junior college and secondary levels and slightly higher than the mean attitude score at primary level as the college teachers opined differently to the other groups.

4. The college teachers felt the need for organisation of EE teaching for the general group and special group of learners.

SWATANTRA DEVI T.K. (1992), conducted a study on "ENVIRONMENTAL EDUCATION: SOME NEW STRATEGIES".

The objectives of the study were:

1. To provide every person, with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment.

2. To create new patterns of behaviour of individuals, groups and societies as a whole towards the environment.
3. To foster clean awareness of, and concern about, economic, social, political and ecological interdependence in urban and rural areas.

4. To identify the actions which will ensure the preservation and improvement of humanity’s potentials and to develop social and individual well being in harmony with the bio-physical and built environment.

5. To define the meaning of basic concepts such as the ‘quality of life’ human happiness in the context of the total environment.

**BEHL R.K. (1993) conducted a study on “ENVIRONMENTAL EDUCATION AND SUSTAINABLE DEVELOPMENT”**.

The life support systems are bounded by well-defined limits. The more the stress we exert on them, the greater is the harm we cause to ourselves. The rapid population growth, deforestation, urbanisation, industrialization, increase in fossil fuel based technology, limitless use of agrochemicals, increase in automobiles, on the one hand, and wasteful exploitation of natural resources, on the other, are creating a counter-productive environment for human beings. Mankind has very rapidly modified the biomes found all over the world and changed the distribution and habitats of species. Consequently the natural flora and fauna, to a large extent, have disappeared.
The third world countries lack the costly means to eradicate air-borne emissions. Acid rains cause devastating effects in some regions of Europe and America, fatal to fish, fresh water life. Moreover sulphur-dioxide and other industrial emissions convert to sulphuric acid and nitric acid in the atmospheric resulting in rain, snow, hail, etc. Sulphur-dioxide and other industrial emissions are causing a serious ecological threat to the historical TajMahal in Uttar Pradesh. The Government of India has adopted a practice of environment audit. The Supreme Court, on 27 August 1993, directed the closure of 212 Industrial units around TajMahal for not setting up pollution control devices.

VIJAY KUMAR T. (1994), conducted a study on, "ENVIRONMENTAL INTERACTIONS ON ACQUISITION OF SCIENTIFIC CONCEPTS".

The children's acquisition of scientific concepts are interlinked with number of factors. The curriculum planners have drafted the curriculum in an ascending order of difficulties of these concepts. This supports the Plagetian invariant sequence of development of concepts along age.

CONCEPT ACQUISITION

Effects of both physical and psychological environments which are caused due to socio-economic condition of family, parents
education, home condition of living, parents love, care and incentives, along with caste and cultural forces, provide a resultant effect for children's acquisition of scientific concepts.

School and concept attainment are both horizontal and vertical. Along horizontal component it encourages attainment of more and more concepts for different areas of particular level of acquisition through interaction with assimilation of new knowledge from different branches of curriculum on the other hand vertical component may be associated with attainment of concepts at higher level of acquisition.

DILIP G. PATEL (1994) conducted a study on “ENVIRONMENTAL AWARENESS OF THE PRIMARY SCHOOL TEACHERS”.

The objectives of the study were;

1. To find the nature of environmental awareness of the primary school teachers.
2. To study the effect of area on their environmental awareness.
3. To study whether the teaching experience would affect their environmental awareness.
4. To check the existence of the sex differences in the environmental awareness.
RESULTS AND DISCUSSIONS

For the main effect (experience and sex) the F-value are found 43.24 and 58.72 respectively, which are significant at 0.01 level. Observing the mean score, it is viewed that (long exp.) (short exp.) and (male) (female).

The primary school teachers should be highly experienced in the educational field. So the State Government and local board should facilitate the primary school teachers for rich acknowledgement of the environment of their surroundings. The researcher thinks that this research work could be very useful as it would create environment awareness among primary teachers and if this happens it would bring awareness among the children of primary schools who are the future citizens of India.

UMMED SINGH (1995) conducted a study on, "VIDEO-INSTRUCTIONAL PACKAGE TO DEVELOP ENVIRONMENTAL AWARENESS IN SECONDARY SCHOOLS".

The objectives of the study were;

1. To develop a video-instructional package for creating environmental awareness among school going children.
2. To try-out the developed video-instructional package in creating environmental awareness among school going children of Gujarat, Rajasthan and Uttar Pradesh.
3. To develop a video-instructional programme on "Environmental crisis" for school going children of Hindi medium schools.

4. To measure the effectiveness of the developed video-instructional package for the students of standard VII and VIII for Kendriya Vidyalaya, Surat.

Major findings of the study were;

1. The study has resulted in the development of a video-instructional package on "Environmental crisis" for creating environmental awareness among school going children of Hindi medium schools. The content of the package consisted of meaning and types of environment and four environmental pollutions such as air pollution, water pollution, soil pollution and noise pollution.

2. The developed video-instructional package was found significantly effective for the students of standard VII (t-value-30.76) and VIII (t-value-26.69) of Kendriya Vidyalaya, Surat.

3. The developed package was also field tested for the students of Government Sardar Vidyalaya, Bareilly. It was also found significantly effective in teaching the students of standard VII (t-value-55.60) and VIII (t-value-28.18)

4. The developed package was also found significantly effective for the students of standard VII and VIII of K.R.S. Vidyalaya, Bareilly (Uttar Pradesh).
GAKAHR, S.C. (1996) made a research work on "RELATIONSHIP OF ENVIRONMENT AND EDUCATION".

Education is a comprehensive term and we can not describe it in water tight compartments. Schooling is one aspect of education and role of environment is supreme in imparting education to the child. In any educational process, environment plays a unique role. As defined by Dewey, in educational system, we can represent the three-students, the teacher and environment by the three vertices of a triangle.

Also, we emphasize the child-centred education. What does it mean? It simply suggests that education of child should be according to the needs, interests, abilities and environment of the child. So, we can not deny the fact that environment has a pivotal point in educational process and enjoys a good position in that process.

It suggests that what kind of the components and factors should be there, which are congenial and encouraging for the education of a child. Misra (1984) studied the two factors i.e. Home and school environment in the learning and creative process.
ARCHANA TOMAR (1997) made a research work on “EDUCATION FOR ENVIRONMENTAL AWARENESS”.

“Environmental Education should be there so that individual and social groups, can acquire awareness and knowledge, develop attitudes, skills and abilities to participate in solving real life environmental problems. Environmental education should be inter disciplinary and holistic in character”.

Environmental Education has 3 aspects in itself.

1. Education through environmental where the environment is a medium for education, the use of real life situation as the basis of enquiry.
2. Education about environment. Environment as the subject of investigation.
3. Education for environment education for conserving and improving the environment.

FINDINGS OF THE STUDY

By making EE. interdisciplin ary, this education is provided in small pieces. Whereas the objectives of EE advocates for a holistic approach. EE has given lot of lip services. But in reality less work is done. Our environmental problems are different from that of foreign countries, we cannot blindly copy them.
NANUBHAI D.PATEL (1997) conducted a study on, "AN INVESTIGATION INTO THE ENVIRONMENTAL AWARENESS OF SECONDARY STUDENTS AND EFFECT OF ENVIRONMENTAL STUDY MULTIMEDIA PACKAGE ON ENVIRONMENTAL AWARENESS".

The objectives of the study were;

1. to study the secondary students environmental awareness with context to IQ and sex.
2. To study the effect of the environmental study multimedia package on environmental awareness of secondary school students.

The findings of the study were;

1. Total students revealed positive significant relationship between IQ and environmental awareness. It means that as the IQ of the students increases there is increase in their environmental awareness.
2. The mean difference of pre-test and post-test of controlled group was not significant and the mean difference of pre-test and post-test of experimental group was significant at 0.01 level. From this it can be concluded that the environmental awareness multimedia package is more effective than the traditional lecture method.
3. It is found that the mean difference between controlled group and experimental group of total students was not significant at both levels.
0.05 and 0.01, means that the students of both groups controlled and experimental revealed the same level of response to environmental awareness.

JANAKAVALLI (1998), "IMPACT OF MULTIMEDIA APPROACH IN TEACHING ENVIRONMENTAL EDUCATION AT THE SECONDARY LEVEL".

The objectives of the study were;

1. To study the impact of multimedia approach in enhancing the achievement of students through teaching Environmental Education at the secondary level.
2. To investigate the relative influence of audio-visual media approach in enhancing the achievement of students through teaching Environmental Education at the secondary level.
3. To compare the efficacy of audio-visual, multimedia and traditional approaches in Environmental Education. A total of 540 students from four standard (sixth, seventh, eighth and ninth) from two schools in Coimbatore were selected as the sample of the study. The students of each standard were grouped into three groups in which each group consisting 45 students of these three groups, two groups were treated as experimental groups and one group was treated as control group. One of the experimental groups was exposed to audio-visual method
and the other to multimedia method whereas the control group was exposed to traditional method of teaching.

The findings of the study were;

The pre-test and post-test scores of three groups that are exposed to audio-visual and multimedia and traditional approaches were analysed through using t-tests for all the four standards. The results of this analysis indicate that there is a significant difference between the means of pre-tests and post-tests of respective audio-visual and multimedia groups for all four standards. Hence, it may be concluded that both media, audio-visual and multimedia had an impact upon the achievement of students in Environmental Education.

ASHOK SIDANA conducted "A STUDY OF ENVIRONMENTAL INTEREST TOWARDS ENVIRONMENTAL EDUCATION AMONG SECONDARY SCHOOL STUDENTS".

The objectives of the study were;

i. To find out the level or general performance of interest environmental education among students.

ii. To compare an interest towards environmental education among urban and rural students.
iii. To compare an interest towards environmental education among boys and girls.

The findings of the study were:

1. The performance of students in general come under the category of good interest towards environmental education.

2. There exists a significant difference between urban and rural students in interest towards environmental education. The rural students possess more interest than urban students.

3. The boys and girls show a significant difference among them at .05 level. The girls have more interest towards environmental education than the boys.

CONCLUSION

It is observed from that only one t-value is significant at .01 level. This means that the girls studying in English medium voluntary schools have displayed high reasoning ability as compared to the boys studying in these types of schools, viz., central school (English medium), Government, schools (Hindi Medium), and voluntary, schools (Hindi Medium), the t-values are not significant. This means that the two sexes do not differ in their reasoning ability.
2.2. CONCLUSION

In this chapter the investigator reviewed related researches for the present investigation. The next chapter deals with plan and procedure for this study.