Chapter-I

INTRODUCTION
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1.0 BACKGROUND OF THE STUDY

Today man is living in a world of crises. The social, economic, political and value crises are some of the threats which are quite alarming. Added to this, in the recent decades, the environmental crisis has become another important factor that has made everyone in the world to think of its gravity. Ever since man has been on this earth, there has been a constant interaction between him and the natural world. In the beginning man lived in harmony with nature, but as his numbers grew and his scientific discoveries and inventions led him on the path of industrialization, he became the predator and his increasing demands on the environment and its resources has led to its exploitation and degradation. The role of education in understanding, protecting and solving problems related to environment has been realized all over the world since 1970.

Today environmental problems are matter of concern. The very survival of man depends on the solution of these problems. Awareness is essential for action and education can play a vital role in this direction. It is education which can make man aware, conscious of and knowledgeable about environment and environmental problems. (18:3-5)
Over the last quarter of a century, environmental education has been a widely discussed and highly politicized cross-curricular area in most of the countries. Environment and nature study programs were thus intended to equip children with moral and spiritual insights. These were to be initiated through early casual acquaintance, observation, and curiosity, leading towards the aesthetic enjoyment of nature, and hence not only to an effectual response to environment but also to the development of a self-reliant, morally brave and wholesomely humble character. (25:6-29)

Environmental education promotes good science, serious debate, and thoughtful action. Environmental education engages the student's minds and hands, often in real-world investigations that are inquiry based, interdisciplinary, and supportive of a standard-based curriculum. (2) Environmental education also familiarizes the students with career in environmental fields. Career opportunities related to environmental protection range from manual labor to high-tech jobs. (9)

Environmental education can help redress the significant source of skilled jobs with good pay for low-income persons and also the process of creating an integrated environment based curriculum heightened the professional team spirit of the schools teachers. Environmental education has long been seen by many teachers as an add that is difficult to fit into a crowded schedule. (3)
The environment in which the children live and plays an important role in which the acquisition of environmental concepts and there by an environmental attitude develops in children.(19:21-26) The goal of environmental education is to develop a world population that is aware of, and concerned about, the environmental and its associated problems, and which has the knowledge, skills, attitudes, motivations and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones. (4)

Further, environmental education is rooted in the belief that humans can live compatibly with nature, humans can act equally towards each other, human well being is inextricably bound with environmental quality, we and the systems we create-our societies, political systems, economics, religions, cultures, technologies impact the total environment.

Environmental pollution has become a world wide problem. In eradicating environmental pollution, the programs conducted should study the level of awareness and attitude of the target group. Among the many strategies suggested by psychologists, the study of attitude remains an important one. In changing the attitude of the masses towards environmental pollution, environmental education plays a major role. (22:34-36)
The main objective of introducing the environmental studies in school curriculum is to help children to acquire a set of values and feelings of concern for the environment and motivation for feelings of concern for the environment and motivation for activity participating in environmental improvement and protection. (21:21-26)

The objectives of environmental education is to provide the individual and social groups sufficient scope so that they should acquire awareness and knowledge, develop attitudes, skills and abilities, and participation in solving real-life environmental problems. The perspective should be integrated following an interdisciplinary approach, and should be holistic in nature. The important objective of environmental education is therefore not to introduce a new subject but to evolve a new approach to education to integrate the concept of preserving environment with the existing content of a subject-discipline. Hence environmental education is an approach, which is expected to provide the necessary methodology to integrate the consciousness about environment.

The role of younger generation is crucial in achieving these objectives. Hence it is necessary to know about the awareness of younger generations about environment and environmental problems. In these present studies, the researcher has made an attempt to analyze the environmental awareness, attitude and knowledge among secondary school students of different localities.
1.1 GENESIS OF THE PROBLEM

Limitless greed, reckless consumption of natural resources and unkind treatment meted out to environment has increasingly damaged the world. The earth is fast losing its treasures. The soil we cultivate, the water we drink and the air we breathe are all polluted. This has caused a global concern about the conservation and protection of the earth's environment. A number of world conferences have emphasised the need for generating, through education, awareness and sensitivity towards this alarming situation in order to protect the environment. (12)

The unprecedented increase in population and intensity of human activities, which have occurred largely in this century, has been brought about by the growing mastery of science and its application. This has produced prosperity, improved standards of life and expanded opportunities beyond what earlier generations could have imagined. But these developments have damaged and deteriorated the ecological systems and caused widespread destruction of natural resources base, on which human life and well being depended. The co-operation of world's people is essential to mitigate or avert these environmental risks. Students constitute a major portion of our community. Therefore students participation is essential in any program. (20:25-26)

The planet, earth is the only place in the whole universe where mankind can live. We need to take care of it. Today developing and
developed countries are facing severe and serious environmental problems. We not only face environmental problems but also create them. Our environment has an effect on us and is affected by us. For example, our cities are warm during night unlike the villages. This is due to the large concrete buildings, which store heat from the sun. At night, as the air begins to cool, the buildings give off the heat. In addition, pollutants in the air around us create heat. Hence cities take long time to cool off. The quality of our life depends on 3p's namely pollution, poverty and population. Among the 3p's population is the main problem that affects the environment. Population leads to poverty, unemployment and pollution. (23:5-13)

Rapid degradation of environment quality is the most hazardous event of this century. Generally there is misconception that it is the responsibility of polluting industries alone to take care of the environment. No doubt, they need to be cautious about controlling industrial pollution, but that is not the end of the process. The population explosion causes a greater need for more food, more energy and more things of daily use such as housing, clothing and automobiles. As a result there is an increase in the use of water resources, fertilizers and pesticides for more production which in turn increases the level of all sorts of pollution besides disturbing the ecological balance in the ecosystem. Among other factors, degradation of environment and depletion of resources are caused by improper disposal of domestic and
other wastes. This is due to lack of awareness about the need for preservation and conservation of environment. There is an urgent need to create environmental awareness among the people in respect of protection, preservation and conservation of environment.

India is a unique country with great cultural diversity, associated with all kinds of climates and rich flora and fauna. Living in harmony with nature has always been emphasised with the philosophy to take from nature only what we actually need and not more. We must conserve resources for our future generations. The sums of physical, chemical factors to which we are exposed constitute our environment. Today environmental education is an important segment within the educational system. It includes all educational activities consciously confronting and attempting to overcome the environmental crisis. The objective of environmental education is to acquire awareness and knowledge, develop attitudes, skills and abilities to participate in solving real life environmental problems. Environmental learning is learning about the factors, causes and solutions to the environmental crisis.

Man faces physical, emotional, religious, economic and vocational problems in his entire life. Also he faces environmental problems. He disturbs the ecological balance due to his wrong practices such as explosion of population, production and consumption pattern causing stress and strain on natural resources affecting the life support
systems. Aversion, attitude of conquest, desire, religious fundamentalism are some of traits of mind pollution which lead to war, inturn war produces pollution, poverty, sickness and so on. We can erase the pollution in mind with the help of values. The teaching and learning of academic disciplines needs to be informed by the concerns and values of environmental responsibility; peaceful use of energy; avoidance of pollution of air, water and soil, conservation of flora and fauna and ecological sustainability.

Over the past two centuries human development has taken place in leaps and bounds. But along with enormous growth in science and technology, man has brought brutal and catastrophic changes in our environment. Environmental protection has been neglected. There by all the progress what ever developed do not posses human face. It has been only during the past few decades that an awareness of the need for a harmonious relationship with the Nature has become concretized. The importance of environmental education for creating environmental awareness and responsibilities towards environmental protection for ecological balance, in the responsibilities towards environment has been considered in NPE 1986 and POA 1992 of India. It is certainly praise worthy to make the children aware about the environment and cultivate a healthy attitude and responsibility among them for the protection of environment through education to check the rapid resources deterioration of the present day.
The difficulties faced by developing countries like India, in reconciling today’s environmental imperative with the need for economic growth can be turned to positive effect and the two can become self reinforcing with the environmental education. It is important to consider about how to increase attention and resources for implementing environmental education, communication and training and to achieve a balance between environmental and development constraints. Industrialization and urbanization led to massive depletion of natural resources and environmental pollution on a wide scale in developing countries. Over recent decades, global problems related to degradation of natural resources and to pollution have increased dramatically.

Natural resources are depleted by excessive use. Fresh water scarcity on a global scale, deforestation, degradation of coastal and marine ares, soil depletion and loss of bio-diversity are just some of the instances. Air and water pollution, in particular mega cities, has reached levels that are already giving rise to serious human health problems, as well as to negative impact on the environment, inevitably influencing prospects for long term economic growth. The handling and disposal of solid waste is now a major issue. (6:35-37)

Natural and physical environment influences man’s physical and mental health directly. For the welfare of man, the study of environment is a dire necessity to maintain proper environment for the
physical as well as mental health of a man. If he neglects environment, man’s life will be in danger. So, environmental education should be encouraged to protect environment through formal and non formal education and to educate the people to save the environment.

Good physical environment and social environment decide the quality of life. While physical environment is highly stressed; the social environment is being neglected. Strangely enough, there has been a gradual erosion of ethical and moral values. Proper utilization of environment, protection and nourishment are needed for the healthy life of the population. Then one can at least control pollution. (13)

Hence there is a paramount need to create a consciousness of the environment. It must permeate all ages and all sections of society, beginning with the child. Environmental consciousness aspect must be integrated in the entire educational process. (21:30-44)

1.2  NEED AND IMPORTANCE OF THE STUDY

The environment refers to sum total of all the conditions and influences that affect the life and development of organisms. The qualitative development and quantitative progress of man kind depends on the quality of the environment. Therefore there are no two views about the fact that, it is the primary responsibility of man not only to preserve the environment but also to improve it qualitatively. (10:10)
Environmental awareness is most important because people in developed countries are rapidly consuming earth's natural resources and world population is increasing rapidly. Hence Human beings must take individual and social responsibility for the environment. (8)

It is pathetic to notice that younger generation of India is much behind in the concern for environmental balance. Therefore it is felt need to study the environmental awareness, attitude and knowledge among the secondary school students. (5)

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. (18:3-5)

In the formal system of education followed in our schools, the environmental education aspect attracts low prioritization and is still treated as an 'extra curricular activity', despite the efforts of various governmental and nongovernmental bodies to infuse the necessary environmental values. The follow-up programmes are also not being carried out regularly due to the difficulty in organizing programmes for the same group. (20:225-230) from the available literature and reports,
it is evident that many governmental and non-governmental agencies are taking up many measures in educating the masses on environmental matters.

The National Curriculum for Elementary and Secondary Education—a framework formulated in 1988 (NCERT, 1988) marked the first concerted and systematic effort to bring environmental education into the school curriculum. This took the form of an infusion of environmental concerns, i.e., the introduction of descriptions of environmental problems and suggested solutions into existing subjects, primarily physical and social sciences. A whole range of environmental concerns was thus infused into the NCERT model textbooks published between 1987 and 1989. (16)

In 1987 the Ministry of Human Resources Development also announced a scheme, Environmental Orientation to School Education to support innovative work in the field of environmental education. Under this scheme a number of non-government organizations have experimented with various approaches to environmental education. (12) The programmes implemented by the government and non-governmental agencies lack coordination. The approach of the government in educating the masses is not directly linked with the school community. As a result, the efforts to create awareness among school children through various programmes get watered down in due course.(12:11-14)
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. (21:30-44)

It is usually accepted that if the present trend of environmental imbalance continues unchecked, it will lead to annihilation of living beings from this planet. (10:11-14) The main focus of environmental education programs is to change environmental behavior through increasing environmental awareness, attitude and knowledge. As many environmental studies have failed to apply successfully attitude theory in researching environmental attitudes, hence the present study investigates the awareness, attitude and knowledge among the secondary school students. Considering the aforesaid lacunae in
Environmental awareness, attitude and knowledge the investigator decided to take up the present study.

Environmental issues have been steadily occupying the international policy agenda for the past several years. Acid rain, desertification, global warming, ozone layer depletion, pollution of air, water and soil, radioactive contamination of large areas and species extinction are some of the most urgent environmental threats to be dealt with at present and in the future.

Around the world there are several crises—there is an environmental crisis, an energy crisis, a food crisis and a population crisis. There is intense competition among growing populations for limited resources. Modern industrial and economic growth was fueled by abundant resources, obtained either domestically or from less developed countries in Asia and Africa. Natural resource consumption patterns vary widely, the affluent consume a grossly disproportionate share of the world's resources. It is estimated that doubling of living standards in rich countries would increase the consumption of world resources six times as much as doubling of population in poor countries. High levels of consumption of natural resources are leading to depletion. Forests considered as carbon sinks of the world, are shrinking, particularly rain forests. (6:35-37)
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 polices 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 object are to be reduced, reused and recycled. These three words if followed each and every person would be helpful to protect our environment.

1.3 STATEMENT OF THE PROBLEM

The problem of the present investigation is — "An Investigation into the Environmental Awareness, Attitude and Knowledge among the Secondary School Students of Davangere District"
1.4 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.

1.5 EDUCATION AND ENVIRONMENT

The role of education is to prepare young minds to appreciate the importance of environment in a holistic manner, not only for human survival but for all life forms on Earth, to inculcate a positive attitude towards environment, and to encourage pro-active action for a sustainable future. (24:4)

The overall objectives of environmental education is to develop in the learner an awareness of the environment and its problems, basic knowledge and understanding of the environment and its inter-relationship with man including indigenous tradition and cultural practices related to the environment. Habits, values, attitudes and emotions to maintain and promote quality environment for human survival. To attain skills to solve environmental problems, ability to assess the outcomes of environmental action and initiatives with a sense of responsibility and urgency to ensure appropriate action to solve environmental problems. (17:256-257)

At the secondary stage, the focus of environmental education as a compulsory subject should not mainly be on knowledge and information
processing but on acquisition of skills, development of attitudes and values and participation in actions through activities, projects, field interactions and co-curricular activities. The school environment should be both a demonstration and a manifestation of the environmental education process. Environmental values have to be suitably integrated with the curriculum, teaching-learning process and teacher education. (18)

The efforts to educate ourselves about nature are a continuous and lifelong process. For the past few decades we have been trying to preserve and protect the natural resources through various means and measures. Even after so many years of talking about the environment, we have not achieved the desired results in conserving the natural resources. The intellectual arguments and international deliberations at various floras fail to yield tangible results. The reason may be attributed to many factors ranging from lack of commitment, low prioritization, exploitative culture, scarcity of economic resources, disparity in growth and distribution of resources. In short, the unsustainable way of life lacks fresh initiatives and a real concern for nature. (19)

It is a known fact that the growing population and ever increasing needs mount enormous pressure on the natural resources. To counter the pressure on natural resources, we must intensify our efforts to conserve the environment. Raising awareness among the people about
the importance of the environment is vital and has to be a continuous and sustained process. In the same way, preparation of teachers and teacher educators also needs concentrated effort. The existing infrastructure and methods should be upgraded and intensified. (19) Environment is a good teaching aid and research studies have shown that learning through the environment facilitates better conceptual understanding. (7)

Education is the catalyst for the desire to live together in their own society on the one hand, and the global village on the other, through the teaching of universal values such as tolerance and human rights, the diversity of cultures, respect for others and for the environment by searching for the right balance between the society's concerns and the integrity of the individual. (1:36-40) Concern for preserving our environment for a sustainable development has been felt by all quarters. Education, particularly school education, could play a greater role by making an impact on the thinking of young minds to protect the universe from deterioration. (18)

There needs to be complete awareness of the total natural environment and its problems. The awareness must include being sensitive to possible and actual problems. Societies must develop the awareness. Social groups and individuals must achieve a basic understanding of the environment and discern which are major as well as minor problem areas to consider. A value system is required to
indicate concern as well as participating in protecting and improving the environment. Knowledge must result in the use of skills to identify and solve problem areas. Active participation of individuals and groups are needed in working toward solutions to environmental problems. (14:17-19)

Environmental education has developed as pragmatic educational response to the problems and concerns of environment. The concept of environmental education is still evolving and awaiting institutionalization in the educational system. As such there is dire need to understand the subject in proper perspective. Environmental education has two components, viz., environmental education is the process of recognizing values and the clarifying concepts in order to develop the skill and attitudes necessary to understand and appreciate the interrelations among man, his culture and his biophysical surroundings.

Environmental education is an interdisciplinary process that equips people with the knowledge, attitudes, skills and motivation they need to help resolve environmental issues. Unlike the formal education, environmental education is aimed at effecting behavioral change. However, this definition is subject to enormous debate. Research in developed countries suggests that despite twenty or so years of environmental awareness and education, people have not substantially changed their value systems. This experience reveals the fact that
knowledge acquired through environmental education should lead to change in people's values and attitudes. Thus environmental education is defined not by knowledge alone—it should foster a diversity of values, not only in the classroom, but in society as well. (15)

Environmental education is valuable and necessary. Starting from a very young age, children should be taught about the environment that surrounds them. As they grow, their environmental awareness and knowledge of the area in which they live should grow. Their education should be sequential and integrated with core disciplines. In addition to a sound knowledge base, students should be taught critical thinking skills and recognize that they have the right to act on their beliefs if they choose. Environmental education includes science, maths, social science and language arts, Health and physical education.

The environmental education should be education, not advocacy. Environmental education should give information on 'actions'. But, responsible and informed action has been a goal of environmental education. Environmental education also emphasizes on personal and social decision making. Personal and social decision making is seen as ultimate goals of environmental education. Environmental education programmes must teach knowledge based on a balanced presentation of current scientific information. Media has a greater role in promoting environmental education. Basic environmental education provides the foundation for all future environmental education and learning. (11)
To protect the environment, environmental education is inevitable—education for the environment, education about the environment and education through the environment. So environmental education should be given more importance and be taught at different levels and different stages.

An important reason for linking environment and education is that environmental education can contribute significantly to transformation and development. Environmentally literate citizens are able to consider the ecological sustainability of development, to actively work to reverse environmental degradation, and to manage and use the countries natural resource base more wisely and democratically. They can use information, legislation, and community action to protect and improve human and environmental health. Environmental education also contributes to transformation through better education. (13)

Environmental education is a necessity to develop and maintain clean and sustainable air, land, and water habitats for life in its diverse forms. Pollution is common in society, and its effects are numerous. It behoves school to develop quality objectives. Learning opportunities, and evaluation procedures in environmental education to encourage students to become good stewards of natural environment. The environment must be conserved to make quality living as well as for generations.
Environmental protection has not yet received the attention from citizens and the public policy on it will only be implemented successfully. If the citizens take up the issue in all its intensity. The solution to the present day environmental crisis does not lie either with the government or with the scientist but with a well educated citizenry. It is only an aware citizenry that can play a vital role in environmental preservation. The immediate issue is to replace shorter attitudes to environment which see it as a commodity to be exploited, with attitudes which look to sustainable rather than maximal level of progress and development. The route to the long term attitudes invariably is education. The media must, therefore, through its popular reach inform people about the environmental problems, relationship and help them to sort out facts from emotional rhetoric.

Environmental education should be to the desire of directing ones activities towards improving the quality of the environment. It should enable an individual to perceive and solve the existing problems. In this regard it is the school, colleges and universities which have a very important role to play as they contain a more mature class of students on the one hand and well developed faculties for research and development of environment on the other. They are also training grounds for both the future environmental experts who will deal with the problems in the field and future academicians who will be the
teachers of environmental education in primary and secondary schools. But it is often becomes too difficult to achieve this multidisciplinary objective.

1.6 SCOPE OF THE STUDY

The present study has tried to study the environmental awareness, attitude and knowledge among the secondary school students 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 (9\textsuperscript{th} standard) students of Davangere District.

1.7 RESUME OF THE SUCCEEDING CHAPTERS

The research report is presented in five chapters. The chapter plan is as follows- Chapter I titled introduction, which deals with the background of the study which consists of genesis of the problem, need and importance of the study, statement of the problem and objectives of the study. It has also dealt with the education and the environment and scope of the problem.

Chapter II titled review of related literature, deals with the review of related studies which helped the researcher to design the present study. The reviews include the studies related to environmental awareness, attitude and knowledge among the students.

Chapter-III under the heading Methodology of the study, gives the details regarding selection of variables, discussion and definitions of variables and terms, hypotheses needed to be tested, description of the various tools used for the collection of data, sampling, administration and scoring of the test, and statistical techniques used for analysis of data.
Chapter- IV titled analysis and interpretation of data deals with analysis techniques, tables, figures and description of findings pertinent to each hypothesis. In this chapter, the research hypotheses set-up have been tested by using the test of significance of difference between the means and also by using Two way ANOVA.

Chapter-V titled summary of the findings and suggestions, deals with the brief summary of the earlier chapters, findings and conclusions of the study, educational implications of the study, and limitations of the study and suggestions for further research.
REFERENCES


