

CHAPTER-I

INTRODUCTION

1.0 INTRODUCTION

Environmental education is a process that allows individuals to explore environmental issues, engage in problem solving, and take action to improve the environment. As a result, individuals develop a deeper understanding of environmental issues and have the skills to make informed and responsible decisions.

Environmental Education (EE) is a methodology in which people pick up familiarity with their surroundings and secure learning, abilities, values, experiences, and passion, all of which will empower them to act – separately and aggregately – to take care of present and future environmental issues.

Earth is a unique planet in the solar system with the physical facilities to support life and life systems which took millions of years to reach the present stage of living. The foundation of human civilization marked the beginning of damage to the delicate natural system gradually as man tried more and more to explore from the nature to satisfy his needs and comfort. But unlimited exploitation of nature by man disturbed the ecological balance between the living and non living components of bio sphere. The unfavorable conditions created by man himself threatened the survival of man as well as other living organisms. Rapid growth of human population coupled with way to attain high standards of living through technological advancement has resulted in widespread contamination of the environment at the global level. The life supporting systems have been going to be collapsed due to rapid industrialization, wanton exploitation of natural resources and excessive use of environmentally abhorrent materials

1.1 ENVIRONMENT: A Conceptual Framework

The growing concern about environment made many to think about the nature, significance and development of natural environment. The term environment means surroundings. Everything which surrounds us may collectively be termed as environment. Thus environment is a complex of many variables which surround man as well as living organism.

Any external force, substance or condition which surrounds and affects the life of an organism in any way becomes a factor of its environment.

The sum of all living and non-living factors makes the environment of an organism. It includes the Physical and Biological components. The physical component of the environment are soil, water, air, light, temperature etc. which are termed as a biotic components. The biotic components include plants, animals and human beings. The biotic components are further listed as producers, consumers and the decomposers and the abiotic components are classified as climatic (water, air) and edaphic (land/soil) on the other hand if ecospheres are taken into consideration then the components of Environment are as follows:

- (1) Hydrosphere
- (2) Atmosphere
- (3) Lithosphere
- (4) Biosphere (Flora/Fauna/Microbes)
- (5) Anthrospher

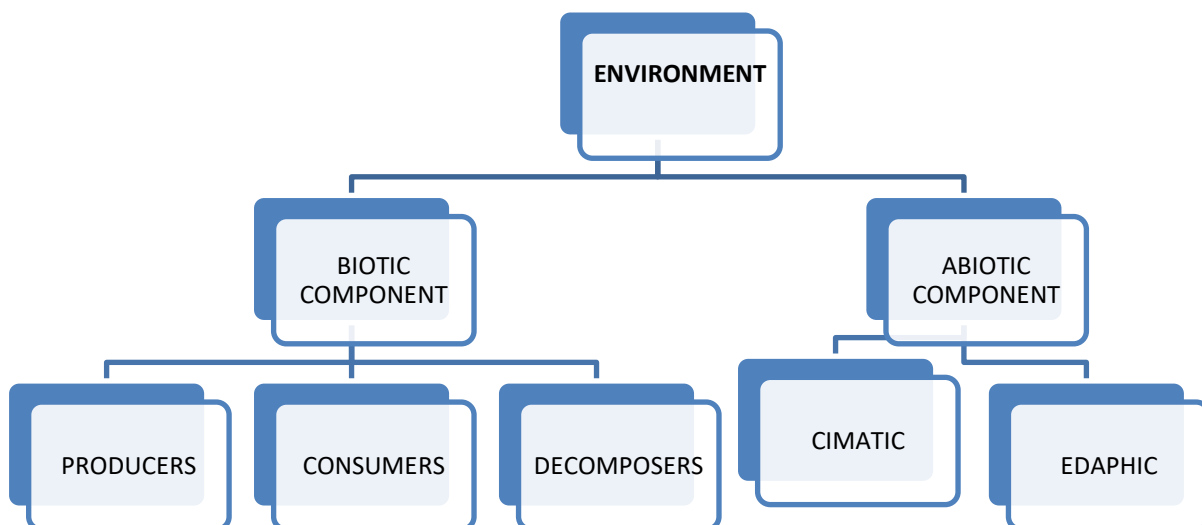


Fig.1.1: Classification of the Environmental Components

It is the study of relationships and interactions between natural and human systems. In short, environmental education is provided so that people can have a better understanding of the world around them and know how to take care of it properly so that the world can be a better place.

The term environment is well-read and understood by every man on the planet. As a man being an integral part of environment, has always relied for food, shelter, and security purposes on the environment. This dependence is seen from the primitive stages of human existence with early men feeding and living in the hands of the environment. The ancient bunnan with his primitive sense of knowledge has made the best use of nature and has transferred the knowledge to coming generations. Depending on nature has thus created a sense of respect, care, love and most important attachment for the environment. This is observant in the personification of many natural objects like sun, moon, earth, trees and rivers as deities. Traditional worships and long kept traditions are a mark of moral values that human have passed to younger generation all along many years. This phenomenon of worshipping natural objects is not limited to ancient Indian civilization, but could be found in ancient Greek civilizations. Buddhism, Jainism, Taoism have also imparted religious teachings in form of hymns hold environmental values as their core beliefs. All these religious sects' stresses on the importance of environment conservation and ways to live harmoniously with abiotic and biotic components oof environment.

With less demand and increased respect towards environment, resource consumption took in a sustainable manner, but industrial revolution in 19 century demanded more raw materials, goods and resources that put pressure on environment for all the needs of industries. Capitalist economy and industrial growth went hand in hand with complete alienation of man from nature. Exploratory work in science and philosophy during this same period presented many works that talked about origin of world and discoveries. One such discovery was by Charles Darwin, in his book *Origin of Species* (1859) talked about how environment through process of natural selection gave rise to living creatures. Another work by Ernst Haeckel (1893), coined the term 'ecology' in "*History of creation*". This term established the relation between living things and physical environment around them. These initial works, provided a space too correlate education with our environment backed by scientific facts and this paved a way for environment education.

All these components of the environment work together, interact and modify the effect on each other. Environment includes various types of forces such as physical, intellectual, social, moral, economic, political, cultural and emotional environment is the aggregate of all the external forces, influences and conditions which affect the life, nature, behavior and the growth, development and maturation of living organisms.

Goudie 1984, has taken environment as the representative of physical components of the earth where in man is an important factor affecting the environment. Environment has been defined more comprehensively by holistic view of die world as it functions at any point of time.

Goudie further remarks, “The definition and in turn the scope could be governed by our concern and priorities, our immediate concern is the quality of space we live in, the air we breathe, the food we eat, the water we drink and the resources we draw from the environment to support our economy”.

Whatever found around may be covered by the term environment. Literally the word environment is derived from a French word ‘Environner’ which means ‘to surround or encircle’. In simple words environment is the sorroundings of self.

Accordingly to the Encyclopaedia Britanica (1994) “Environment is the complex of physical, chemical and biotic factors that act upon an organism or an ecological community and ultimately determine its form and survival.” The meaning of Environment has been viewed and defined in different ways from different angles by different groups of people but it may be safely

1.1.1 ENVIRONMENTAL POLLUTION

For normal and healthy living a conducive environment is required by all living beings including humans livestock, plants, micro-organisms and the wild life. The favorable unpolluted environment has a specific composition when this composition gets changed by addition of harmful substances the environment is called polluted environment and the substances polluting it are called pollutants. Environmental pollution can, therefore be defined as any undesirable change in the physical, chemical or biological characteristics of any component of the

environment (air, water, soil) which can cause harmful effects on various forms of life or property. The level of the environmental pollution can be estimated according to the changes in geographical distribution of various groups of organisms and also their morphological, cytological, physiological, biochemical and chemical changes. Disturbance in the natural cycle creates ecological imbalance, a root cause of environmental pollution. Unscientific extraction and disposal of the natural resources alter the natural cycle adversely so as to add a composite article, which the ecosystem has failed to recycle. The synthetics and the composites are the two groups of materials a contribution of newer technologies that pose problems of disposal and recycling. Synthetics are the byproduct of fossil fuel, e.g., plastics, and the composites are a group of materials consists of the metals and non-metals reinforced by fibers of such materials such as glass, carbon and boron. The pollutants like, mercury, lead, oil, carbon dioxide, nitrogen, waste heat, pesticides, nuclear radiation, and noise, etc. have caused immense damage to natural resources like air, water and soil that supports animal and plant life.

The substances of an ecosystem undergo naturally occurring cyclic process. However the Non-degradable pollutants like polychlorinated biphenyls or PCBs, and dioxins, plastics, aluminum, mercuric salts, DDT etc; are chemical substances that get accumulated and do not degrade into harmless components, remain in the state for a very long period of time. Its cyclic process is very slow or never. Bio-degradable pollutants are nutrients and other materials that can be easily broken down and absorbed in the environment within a short period of time. As a result they do not get accumulated in the environment. But they do create problems when they are released into environment in large quantities. The pollutants are categorized based on its type like : smoke pollution, lead pollution, radioactive pollution, noise pollution, air pollution, water pollution and land or soil pollution, etc. Every pollutant has its own origin, pathways and effects but all the pollutants can spread throughout the biospheres through air, land or water.

1.1.2 Types of Environmental Pollution

- a) ***Air pollution*** - Air pollution is caused by the release of gaseous particles, molecules, and particulates into the atmosphere. Small particulates are released as by-products from industrial reactions at high temperatures and pressures and from the exhaust pipes of vehicles. Dangerous gaseous molecules such as greenhouse gases (carbon dioxide, methane, ozone, nitrous oxide), sulphur dioxide, and chlorofluorocarbons (CFCs) are

released via the combustion of fossil fuels, industrial processes, agriculture, and deforestation.

- b) **Water pollution** - Water pollution involves the addition of polluting gaseous, liquid, and solid particles, molecules, or particulates that alter the composition of a water source. There are many causes of water pollution from human activity: the over application of pesticides and fertilizers in agriculture may cause them to runoff into nearby waters, industrial discharge contains dangerous chemicals like metal compounds, solvents, acids, and alkalis, while improperly treated sewage contains millions of disease-carrying pathogens and unwanted nutrients. The addition of heat energy can pollute the water too, this can gradual as a result of global warming or instant from power plant cooling water.
- c) **Soil pollution** - Soil pollution involves the influx of unwanted chemicals to soils, causing them to become contaminated and less fertile. The overuse of fertilizers can cause soils to contain too many nutrients, while the overuse of pesticides can poison soils and reduce biodiversity. Industrial discharge from landfills can introduce a host of unwanted chemicals (hydrocarbons, metal compounds, radioactive elements) to soils.
- d) **Noise pollution** – Noise pollution is an increase in the amount of noise heard in a certain area. Causes of noise pollution include heavy industrial machinery and vehicles (e.g. on a construction site), or loudspeakers and megaphones at events with lots of people. Noise pollution can put stress on ecosystems and people that live near the source of the noise.

1.2 ENVIRONMENTAL EDUCATION: A Conceptual Framework

Environmental Education is a process which develops awareness, knowledge and understanding of the environment, positive and balanced attitudes towards it and skills which will enable students to participate in assessing the problems of the environment.

The environmental education plays a significant role to make the people aware about various problems of environment which are very dangerous to the lives of human beings.

Environmental Education enhances critical thinking, problem solving and effective decision making skills and teaches individuals to weigh various sides' of an environmental issue to make informed and responsible decisions. The components of Environmental Education include awareness and sensitivity to the environment and environmental challenges, knowledge and understanding of the environment and environmental challenges, attitudes of concern for the environment and motivation to improve or maintain environmental quality, skill to identify and help to resolve environmental challenges and participation in activities that lead to the resolution of environmental challenges.

1.2.1 Environmental Education:

Its Meaning According to **UNESCO** Working Committee (1970) “Environmental education is the process of recognizing values and clarifying concepts in order to 21 develop skills and attitude, necessary to understand and appreciate the interrelatedness among man, his culture and his bio-physical surroundings. It also entails practice in decision making and self-formulation of a code of behavior about problems and issues concerning environmental quality.”

According to United States Environmental Education Act (1970) : “It is the educational process dealing with man’s relationship with his natural and man-made surroundings, and includes the relation of population, pollution, resource allocation and depletion, conservation transportation, technology, and urban and rural planning to the total human environment.

1.2.2 Characteristics of Environmental Education

The characteristics are given below:

1. A process of recognizing the interrelatedness among men, his cultural and biological surroundings.
2. A process that equips human beings with awareness, skills, attitudes, values and commitments to improve environment.
3. Refers to the knowledge and understanding of physical, biological, cultural and psychological environment and to perceive its relevance for real life situation.

4. Identifies the imbalances of environment and tries to improve it in view of sustainable development.

5. Develops skills, attitudes, feelings and values needed to play a productive role in improving life and values.

1.2 RATIONAL OF THE STUDY

Environment education in schools is the need of the hour to sensitize youth about the same and thus it is crucial to understand the environment and concerns related to it effectively. The most common points one must not forget before initiating environment education is to have a close understanding of attitude and awareness of environment among prospective teachers. Attitude towards environment suggest itself for studies on environmental awareness. Environment education target group includes children, youth, women groups, community leaders and politicians.

Environment sustains life and in present is facing deep state of deterioration due to anthropogenic reasons. Rapid industrialization, advancement in science and technology and mistreatment of scientific technologies is posing a threat to human civilization and to globe altogether. It is high time that we as citizens of globe should understand the damage that we have caused to planet in fulfillment of our needs and unsustainable consumption patterns. In order to bring any social changes, one always looks up to education as a potential tool to bring the transformation. Bringing behavioral change and building positive and responsible attitude towards environment is the need of contemporary education. As teachers are the warriors of any educational system and facilitators of learning experiences of a child, it becomes the responsibility of the learning system and in particular of the teachers to be hold accountable of the same environmental change that we want to bring in society.

Environment education is the need of the decade and is seen as a response to aggravated conditions of environment. In addition to promote this, universities and colleges are already running courses in environment sciences at undergraduate and master's level (Misiazek, 2020) However, the convergent response to restrict it to level of universities is restricting the overall goal

of education altogether. Teacher education intuitions should play a proactive role in learning, understanding and dissemination of learned values to schools, and other learning institutions to sensitize the learning masses of environmental values necessary for a sustainable future and a green planet.

1.3 STATEMENT OF THE PROBLEM

Attitude And Awareness Of Secondary Level Students Towards Environmental Education

1.4 DEFINITIONS OF THE OPERATIONAL TERMS USED

1.4.1 Environmental Education-

Environmental education aims at the study of the natural environment. It also enables individuals to explore, resolve related problems and work for the betterment of our environment.

Through environmental education, individuals develop a much deeper understanding of the environment and the environment's issues. It enables them to make responsible decisions towards the betterment of the environment.

"All education springs from images of the future and all education creates images of the future. Significant part of education must be seen as the process by which we enlarge, enrich and improve the individual's image of the future. "(Alvin Togfer 1992)

1.4.2 Awareness-

Awareness is one of the fundamental objectives that any subject of study offers. Through environmental education, awareness about the environment, the issues of the environment, and

the solutions for the problems are generated. In addition, there is a proper understanding as to why there are various functions present in the environment. Knowledge of students concerning environment related issues and educating the students about die rapid growth of environmental problems and its consequences. It is represented by the scores obtained by the sample students on environmental awareness test.

1.4.3 Attitude –

In psychology, **attitude** is a psychological construct that is a mental and emotional entity that inheres or characterizes a person, their attitude to approach to something, or their personal view on it. Attitude involves their mindset, outlook and feelings. Attitudes are complex and are an acquired state through life experience. Attitude is an individual's predisposed state of mind regarding a value and it is precipitated through a responsive expression towards oneself, a person, place, thing, or event (the attitude object) which in turn influences the individual's thought and action.

Tendency of Secondary school students to react favourably and unfavourably towards Environmental Education. It is represented by the scores obtained by the sample students on the environmental attitude scale towards Environmental Education.

1.5 OBJECTIVES :-

1. To study the attitude of secondary level student towards Environmental education.
2. To study the awareness of secondary level student towards Environmental education.
3. To study the difference in environmental awareness between boys and girls.
4. To study the difference in environmental attitude between boys and girls.

1.6 HYPOTHESES:

1. There will be no significant difference in environmental awareness between boys and girls.
2. There will be no significant difference in environmental attitude between boys and girls.

Components:

- **Awareness and sensitivity** to the environment and environmental challenges
- **Knowledge and understanding** of the environment and environmental challenges
- **Attitudes** of concern for the environment and motivation to improve or maintain environmental quality
- **Skills** to identify and help resolve environmental challenges
- **Participation in activities** that lead to the resolution of environmental challenges

1.7 DELIMITATION OF THE STUDY

- ❖ The study was restricted to the secondary schools of Bhopal district.
- ❖ This study was delimited to students studying in class 10th.
- ❖ This study was delimited to 120 students.
- ❖ This study was restricted to four schools of Bhopal District.
- ❖ The study was completed in the duration of 15 days.
- ❖ The study will be focuses on the Attitude and Awareness towards Environmental education in some students of Bhopal.