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## ENVIRONMENTAL ADULT EDUCATION FOR SOCIO-ENVIRONMENTAL CHANGE

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**ABSTRACT:** *Human perceptions of the environment, and attitudes towards it, have evolved as an integral part of the long history of human interactions with the rest of nature. Consequently, these interactions cause untold damage or deplete the natural resources on which humans depend. Contemporary public attitudes reflect today's environment, today's information, and today's economic, social and political circumstances. Changing human behaviour towards the environment similarly demands the alteration of perception and attitudes and especially the creation of circumstances under which the new behaviour is seen both rational and possible. People will accept a new ethic for sustainable living when they are persuaded and convinced that it is right to do so, when they have sufficient information, and when they are enabled to obtain the required knowledge and skills. This is the necessity for environmental adult education for socio-environmental change which is the focus of this paper.*

**KEY WORDS:** environmental adult, education, socio-environmental change

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### INTRODUCTION

Human activities and impact on the global environment have become a concern to world governments and subject of discourse in international fora. Development has resulted in the indissoluble relationship between economic activities and ecological imperatives. Through this interface, human activities so deeply interfere with the natural environment. Every turn of the century leaves behind, a state of an irreversible environmental decline thus exacerbating global environmental crisis. This escalating cost of pressure in obtaining environmental resource base has led to disproportionately number of environmental problems such as climate change and global warming, acid rain, deforestation, pollution, ozone depletion, man-made disasters and avoidable hazards as some examples of the general state of the environment.

Social and environmental changes now characterize the human environment. Several natural consequences follow from floods and other natural pestilences which have increased in their occurring incidence. The future is sacrificed to meet the survival challenges of today's world. Between and within nations, grace disparities now characterize the new world environmental; order. Unrestricted consumption habits in the North, and a corresponding decrease in environment-friendly production practices in the countries of the North make high standards of living difficult to attain. Thus, the global ecological system is over-stretched in a manner that the life-support system of the environment and the Earth's carrying capacity are at a breaking point. Following this is rapid disappearance of species in the ecosystem at an alarming rate (Usang, 1998).

This is the age of globalization, and no country exists in isolation. Environmental problems have effects which transcend geo-political boundaries. Environmental concern both challenge and task governments, institutions and all actors to act with urgency to stem the overwhelming danger of ecological damage. The missing gaps of ecological concerns in the development matrix must be restored with urgency, and institutional policies must consider mainstreaming green thinking in environmental policy formulation and production processes. Many of the world's population, particularly those who live in marginal and disaster-prone areas and cannot cope with because of the loss of the carrying capacity of their environment, have been rendered environmental/ refugees. In the same vein, human pressure and the consequent encroachment on the rainforest by unsustainable practices such as deforestation, over-fishing, over-hunting, bush burning etc deepen the problem of food security and environmental balance.

In the light of the above premise, sustained education and awareness creation through environmental adult education have become imperative. This is why knowledge and understanding are so crucial. People change their attitude and outlook in response to the new knowledge that has become available to them. The importance of knowledge and understanding of the environment has led to developments in the broad field of environmental ethics in the last 40 years. In UNEP's (1992) view, an ethical imperative linking the actions of the current generation to future generations, that is, the debate about intergenerational equity, has become a central element in the definition of sustainable development. The new strategy for Sustainable Living (IUCN/UNEP/WWF, 1991) begins with a call for a new ethic that expresses the respect and care that people owe to one another and to the Earth. Questions about the kind of world that we wish to sustain into the foreseeable (and unforeseeable) future occupy the debate on environmental policy. According to UNEP (1992), the new interest in environmental ethics is, in part, a reflection of concern that placing an environmental value on the environment is insufficient to capture its significance to human well-being, and provides insufficient motivation for the action that needs to be taken. This has led to calls for Declarations and Covenants which preceded major International Environmental Agreements and Conventions that commit states to the world ethics for living sustainably, and define their rights and responsibilities accordingly. Similarly, following the recommendations of Stockholm 1972, UNNEP and UNESCO launched an 'International Environmental Education Programme' (IEEP) aimed at fostering the exchange of information and experience in the field of environmental education. Under the aegis of the IEEP, an 'International Workshop on Environmental education' was held in Belgrade in 1975, which led to the adoption of the 'The Belgrade Charter – Global Framework for Environmental Education'

### **Education as an Educational Intervention Strategy in Environmental Adult Education.**

Tracing the origin of educology reveals that the term educology would mean the science of 'leading' or 'developing the natural powers' (Steiner, 1977). Elizabeth Steiner examines the merit of educology from the perspective of philosophy of science and its significance for the methodology of educational enquiry. As she posits, "the term educology implies a body of knowledge with scientific merit that is unique to the description and explanation of teaching-learning processes".

Educology is used as an approach to environmental issues and concerns using education intervention strategies. It brings together the use of separate disciplines to deal with ecological problems, and seeks an environmentally focused education as well.

In exploring social ecology using educology as an educational method of enquiry, the claims of environmental education and those of popular school education converge. In this way, it is possible to rediscover the relationship between humans on the one hand and the natural components of the environment on the other. Seen from this perspective, educology is directed at creating or establishing links with the environment so that the interaction between human beings and the environment can lead to sustainable development.

Educology as a socio-ecological education approach has an intentional quality of creating new links with the environment within a particular ethic. Socio-ecological education also takes into consideration the significance of educology because it applies knowledge from socialization in a manner which helps appreciation of what other people know to create new understanding. This type of education has ethical postulates and encourages an integration of the science of life and the science of successive survivors against catastrophes. It is through the lens of educology or environmental education that this can gain meaningful expression. It deals with the manifestations and destruction of life and the desirable attitudes which support ecosystem equilibrium within the sphere of life. Through this process, people are integrated into a global vision of new environmentalism through local actions which visualize and sustain environmental interaction.

It is postulated that interactions among ecological, social and economic systems create complex cause-and-effect relationships that are not easily unraveled. In many developing countries, majority of the poor work in agriculture, fisheries and forestry sectors of the economy. Industrialization is fast making its impact on these sectors. On the other hand, traditional practices are fast being over-taken by rapid rate of urbanization and quick turn-over from rural-based jobs. The impact of all this is increased level of natural resource degradation which are the consequence of socio-cultural and environmental development. Action plans at the national and local levels are needed to restore harmony between the environment, society and the economy.

In this approach, the economic activities of the people can be integrated into ecological processes to promote environmental protection through the adoption of the following strategies:

- People will be involved around sustainability issues and initiatives if these relate to their daily conditions of life. To this end, it is needful to identify the different communities of interest and build bridges or partnerships.
- Focus on both individual and collective actions and work with existing agencies on environmental priorities.
- Be holistic in relating human beings, nature and the universe to demonstrate the interdependence of life-forms on earth.
- Health, hunger and degradation of the environment must be placed in historical context.
- Recover, recognize, respect, reflect and recycle traditional environmental knowledge.
- Promote participatory empowerment of people in primary environmental care (PEC)

- Use authentic dialogue to promote desirable change in behaviour.
- Engender green ethics for responsible environmental well-being to sustain life on earth.

The imperative challenge in this strategy is to identify the concerns, issues and priorities of difference interest groups and to focus and build on areas of mutual needs in ways that are relevant to the management of communal resources. As the world forges a common front for environmental protection and sustainability, that task stares at all of us. It must be said, however that the utmost task in this educational intervention strategy must be to link poverty, job creation and environmental protection so that sustainable human development becomes the predetermined objective for sustainable living.

### **Eco-Didactics as an Approach in Environmental Adult Education**

Jackson (2013) acknowledges sustainability as the greatest challenge facing mankind. It permeates all aspects of human life and manifests itself at all levels of society. Jackson (2013:5) cites Capra (2007) who points out that “One of the great challenges facing environmental educators is to prepare students to participate effectively as members of sustainable communities in an ecologically healthy world. According to Norman Jackson, it is in Capra’s view that this is not only a matter of environmental education, it is of concern to everyone who is involved in education. And by viewing our learning as an ecological process we have the potential to raise learner’s awareness of the ecological world they inhabit and co-create.

The organization of learning experiences for the purpose of changing people’s attitude is an educational process which requires a lot of ingenuity. The Target Audience Group (TAG): the Chentele, students or learners as the case may be are vital to the choice of teaching methods applied. The curriculum programme of desired experience to be shared is of critical significance. Perhaps of greater value is the experience to be shared which is equally fundamental. Of greater significance is the experience of the participants/learners and the task they set forth to achieve.

From the foregoing discussion eco-didactics can be seen as a new science and art of helping individuals to learn about the environment, become aware and develop dynamic and committed interest to act in environmentally friendly manner for the purpose of achieving sustainable development. In simple broad terms, eco-didactics deals with the dynamic methods of environmental education. It is a didactic approach which integrates the preferences of the learner and the perspectives of the environment and subject mastery of the facilitator in order to facilitate rapid attitudinal change for conservation of environmental resources.

Ecology of learning is both a social and philosophical structure and a series of relationships with humans, their community and their environment. Hill et al (2004) express the view that the study of ecology of learning is constructivist in nature, acknowledging how previous life experiences shape human life.

Eco-didactics as a dialectical process takes a historical view of the condition of the environment and raises questions about the anthropocentric decline of its resources. It is an approach that relates nature to nurture together. The anthropocentric approach is not dependent upon scientific

rationality. It raises ethical questions of how much of nature humans should occupy, control and nurture as an integral part of the whole of creation.

Eco-didactics as a social change approach stems from the following axioms:

- That purely cognitive learning is not always productive for most (mature) learners. Learning by doing (action oriented, task specific experience) is preferable to them and profitable to environment conservation.

- Knowledge *per se* does not affect change in environmental behaviour.

It is generally assumed that in eco-didactics approach to environmental education, all dimensions of learning (cognitive, reflective, action oriented, ethical and affective or perceptive sensuous) should be utilized especially in dealing with mature learners. Their past, present and preferred experience and those of others form the basis for their reflection about environmental harmony. As an ecological phenomenon, Barab and Plucker, (2002) agree that learning is not only individualistic, it is a phenomenon that is distributed and enables the learner to engage in progressively more adaptive individual- environment relations. Just as Jackson (2013) attests that it is most definitely not only a cognitive process, rather it is a process of contextualized participation involving in a holistic way the multiple dimensions of learning. People are interconnected to the systems of nature, society and thoughts that surround and flow through (Briggs and Peat, 1999) in a complex web of being and knowing that underpin life.

### **Environmental Literacy: Key to Environmental Perception and Sustainability**

The Oregon State University (OSU) (2020) defines environmental literacy as “an individual’s understanding, skills and motivation to make responsible decisions that considers his or her relationships to natural systems, communities and future generations”. It further explains environmental literacy as the desired outcome of environmental education which strives to provide learners with: sound scientific information; skills for critical thinking; creative and strategic problem solving; and decision-making.

An environmentally literate person, therefore, both individually and together with others, makes informed decisions concerning the environment, able to act on these decisions to improve the well-being of other individuals, societies, and the global environment, and is able to participate in civic life. Environmental literacy gives a basic understanding of how ecosystems function and the impact of our choices on the environment.

In a study conducted by Gratiela and Sarachi (2019) at the North Center University of Baia Mare in which 358 students participated, a positive relation was identified between the perception, attitude, and environmental behaviour of students. This study indicates that environmental literacy (environmental education) has an important impact on training and preparing the future generation for a green society.

The UNESCO/UNEP ‘Intergovernmental Conference on Environmental education held in Tblisi in 1977 underscores the need for concerted environmental education at the global level. One of resolutions of the Tblisi Conference stresses that environmental education should strive to enable individuals and communities to understand the complexities of the man-made environments

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arising from the interaction of their biological, physical, chemical, social, economic, cultural, ethical and political aspects, and of critical consideration, 'acquiring the knowledge, values, attitudes and practical skills needed for solving of environmental problems and in the management of environmental quality (UNEP, 1992).

The Tblisi Conference is in consideration of the importance of environmental education to the development of environmental perceptions and attitudes for sustainability. Perceived in this way, environmental literacy promotes lifewide learning in an ecological perspective. Mainstreaming ecological perspective into environmental literacy encourages learners to see learning as a process that connects them in a holistic way to other people and to their environment (Jackson, 2013). On the value of an ecological perspective to the learner, Jackson (2013) further explains:

In particular it enables them to appreciate the ways in which they engage with or create contexts, use existing or develop new relationships, and utilize their personal technologies to find the resources they need to learn. The ecological perspective emphasizes that this is a living dynamic process which they orchestrate and improvise according to the effects of their actions and the responses they receive. Such an appreciation lends itself to the idea that we continually nurture and grow our learning ecologies rather than starting with a blank sheet of paper each time we have to learn something new. An ecological view of the relationship between learning, developing and living will also help prepare student learners for the ecological worlds of organizations they will inhabit when they progress into work and perhaps raise their awareness of the important link between their learning ecology and living a sustainable life.

The above view is corroborated by Barab and Roth (2006) cited by Jackson (2013) who sees learning far from being simply scoring high on a test or assignment, but involves increasing possibilities for action in the world. It is rather about participating successfully as part of an ecosystem, an intentionally bound, and fundamentally involves increasing opportunities for action in the world. Life-world expansion, they says, is the ultimate trajectory of learning.

### **Environmental Adult Education and Attitudinal Change**

Change is inevitable because society is in a state of constant flux. This change arises from the transformation of culture, behaviour, social institutions, and social structure over time (Barkan, 2012). These changes result in either 'cultural lag' or what could be referred to as 'environmental lag'. While cultural lag refers to a delayed change in one sector of society in response to a change in another sector of society, environmental lag may refer to a delayed change in ecosystem dynamic functions as a result of human activity on the environment in response to a corresponding change in the mechanism to deal with the environmental damage. Environmental problems caused by the interaction between human behaviour and the natural and physical environment are what has created the branch of sociology called environmental sociology.

The environment according to Oduro-Mensah (1992:252) "consist of all the external factors and forces with which one interacts from conception until death. It includes the physical, chemical, biological, psychological and socio-cultural dimensions and indeed everything that makes up the context in which the individual lives". Education on the other hand is seen as a process of

developing in an individual certain attitudes, skills and knowledge by means that prepare and enable the individual to identify with the society and to participate in the development of the society.

Environmental adult education can be defined as the process of developing in an individual certain attitudes, skills, knowledge and awareness that will enable him to interact successfully and live in harmony with the forces and elements that surround him and to act individually and collectively to sustain the environment. As a corollary to this, man's survival is directly related to the survival of the earth and its resources. It is therefore imperative for man to learn (formally or non-formally) to live in harmony with nature and nurture it rather than trying to subdue and destroy it. This implies that man has an abiding responsibility to *man* the Earth in which he is the chief superintendent by constantly renewing his capabilities to help solve environmental problems.

Through the development and renewal of appropriate skills, knowledge and awareness, the adult would be in a better position to act in more appropriate ways to protect the environment. Environmental adult education is designed with the following concrete objectives to help bring about attitudinal change in order to help the adult perform his task of environmental stewardship:

- (i) To develop knowledge and understanding of the environment, the forces that contribute to its deterioration and how environmental quality could be improved.
- (ii) To identify specific chemical, biological, physical, psychological and socio-cultural characteristics of the environment that constitutes potential hazards to life and health.
- (iii) To develop skills for solving environmental problems and improving environmental quality.
- (iv) To develop appropriate attitudes and sense of responsibility that will enable man to live harmoniously with his environment.
- (v) To develop appropriate curricula for environmental education and train personnel for the management of natural resources.
- (vi) To develop aesthetic values that will encourage a culture of environmental beautification and maintenance.
- (vii) To plan appropriate action programmes and mobilize citizens to actively participate in the protection and restoration of the quality of the environment (Oduri-Mensah, 1992:253-254).

To achieve the above objectives, Oduri-Mensah (1992:257) suggests the following themes which constitute the content of non-formal environmental education programmes for adults.

- Public adults;
- Management of natural resources;
- Population structure, growth, trends and related problems;
- Man- environment interaction;
- Human settlement patterns and related issues;
- Effects of industrialization on the environment;
- Environmental policy, quality control, laws, planning and development.

In integrating these themes into non-formal environmental adult education programmes, efforts are geared to relate them to the occupational needs of the target groups in the population. In a fast modernizing world with its devastating impact on the repercussions of man-environment interaction and living with the constant reminder that the total life of an individual, his behaviour patterns, decisions and well-being affect and are conditioned by the environment within which he lives and interacts. The role of environmental adult education in the task of environmental sustainability cannot be overemphasized. Towards this end, efforts must be geared towards mainstreaming of the environment into all forms of education programmes, government policies and production process.

## CONCLUSION

In a world ravaged by pollution, ozone depletion, war, acid rain, deforestation, global warming and climate change etc., education has been recognized as one of the environmental tools to combat the current spate of environmental damage. A driving force behind the action to deal with environmental problems, especially those of regional and global character, is the recognition of its importance in building global security. The links between peace, environmental and development have been established. Thus environmental degradation creates tensions leading to social unrest, political instability and armed conflict.

The definition of security is now being broadened to take on some current environmental threats which are as real as armed threats and which have transboundary impacts. The current global efforts at the mobilization of institutions and infrastructure for dealing with virtually every conceivable kind of environmental issue, combined with environmental education need to be intensified. Environmental adult education therefore will continue to play a crucial role in developing the capacities of adult men and women in dealing with environmental challenges. It is the crucible that would put the world on a common cause to save the environment for all humanity.

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