

Axiological perspectives in environmental education: Assumptions, perceptions and issues for sustainable development

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Abstract

Educational inquirers and philosophers have for many centuries investigated into the theory of value which is paramount in education and environment. The values which benefit the individual are personal while those which promote the knowledge and skills of individuals for economic and social well-being of society care said to have public values. In environmental education, the values are of public good. Therefore, education has axiological significance to the extent that its aims and objectives are directed toward the development of attitudes, knowledge, skills, and understanding for participation in environmental preservation. To this end, the axiological assumptions, perceptions and issues which underlie the study of environmental education for sustainable development is the subject of this paper.

Keywords: axiological perceptions, axiological assumptions, axiological issues, environmental education, sustainable development

Introduction

Environmental education has been defined in various ways. The United States Environmental Protection Agency, EPA (2018) ^[9] defines it as “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”. The Arizona Association for Environmental Association, AAEE (2013) ^[1] sees it as an organized effort to empower people and communities to work together towards a more sustainable future through education about how the natural environment functions, and how humans can manage their behaviour to live sustainably. It future adds that EE teaches the public about current and past environmental issues as well as provides citizens with unbiased facts. It engages citizen’s critical thinking skills and empowers them to make sound decisions to change behaviour and cultural processes.

Environmental education transcends the narrow referent of just creating environmental awareness, to embrace a multi-dimensional concept of global environmental degradation and pollution, to embrace our obligations to, and attitudinal changes towards the environment; to embrace the skills, competencies and the rational use of natural resources, as well as the development of new ethical and institutional means of ensuring the stability of the ecosystems (Anijah Obi, 2001) ^[1]. UNEP (1992) ^[21] report indicates that formal environmental education has played a major part in moulding public attitudes and perceptions, stimulated by both inter-governmental and NGO activities. Following the recommendations of Stockholm 1972, UNEP 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 auspices of the IEEP, an “International Workshop on Environmental Education” was held in Belgrade in 1975

which led to the adoption of “The Belgrade Charter – A Global Framework for Environmental Education”.

The UNESCO/UNEP “Inter-governmental Conference on Environmental Education” held in Tblisi in 1977 underlined the need for concerted environmental education at the global level. One of the resolutions of the Tblisi Conference stresses that environmental education should strive to enable individuals and communities to understand the complexities of the natural and man-made environments arising from the interaction of their biological, physical, chemical, social, economic, cultural, ethical and political aspects, besides acquiring the knowledge, skills, values and practical skills needed for participating in a responsible and effective manner in the anticipation and solving of environmental problems and in the management of environmental quality. It was further resolved that environmental education should ideally demonstrate the economic, political and ecological inter-dependence of the modern world, wherein environmentally detrimental decisions and actions of individual countries can have international repercussions.

Since 1977, the International Environmental Education Programme (IEEP) has been associated with the worldwide effort to incorporate an environmental dimension into the educational systems and practices of states. This has been widely achieved through the production and widespread dissemination of resource material and a continuous series of international, regional and local workshops and seminars for teacher trainers and curriculum developers as well as educational administrators.

In 1987, ten years after Tblisi, UNESCO and UNEP organized the Moscow Congress on Environmental Education and Training which produced a global strategy. This “International Strategy for action in the field of Environmental Education and Training for the 1990s, provided member states and institutions with a framework and guidelines for the succeeding decade, and a basis for the preparation of their own national strategies for Environmental Education and Environmental Training for

the 1990s.

According to UNEP, since the IEEP entered its sixth phase in 1990 – 91, it has become a major force in the development of environmental education world-wide, involves over 25,000 educators, and has been active in more than 140 countries since 1975. Environmental education lays the foundation for longer-term sustainable development. Recent trends in its evolution include a strong emphasis on environmental ethics, and on the practical front, on the development of innovative, often multi-media teaching-learning material adapted to each region or locality.

The period between 1972 and the intervening years has seen a considerable increase in the provision of general environmental training, which attempts to build awareness of the environment as a whole and to develop individual capacities to deal with environmental concerns. The UN agencies have been involved to some extent in environmental training, but UNEP, ILO, UNESCO, UNIDO and UNU, together with non-UN organizations such as IUCN, have played a major part. UNEP has to a considerable extent provided the necessary coordination.

As the world marches through the 21st century, the provision of environmental education and training should be supported in tempo and in magnitude by all progressive governments and stakeholders amidst evolving environmental challenges from socio-economic activities.

Axiological Assumptions about the Environment

The axiological assumptions about the environment derive from the objectives of environmental education outlined in the Belgrade Charter and published by the UNESCO-UNEP (1989) and incorporated by the U.S Environmental Protection Agency, EPA (2018) ^[9] and in Anijah-Obi (2001) ^[1] which are:

1. Awareness and sensitivity to the environment and environmental challenges. EE should help individuals and social groups acquire an awareness of and sensitivity to the total environment and its allied problems.
2. Knowledge and understanding of the environment and environmental challenges. EE should help individuals and social groups acquire basic understanding of the total environment, its associated problems and humanity's critical responsible presence and role in it.
3. Attitudes of concern for the environment and motivation to improve or maintain environmental quality. EE should help individuals and social groups acquire social values and ethics, strong feelings of concern for the environment and the motivation for actively participating in its protection and improvement.
4. Skills to identify and help resolve environmental challenges. EE should help individuals and social groups acquire the skills for solving environmental problems. This has to do with the psycho-motor domain of learning experiences whereby the individuals and social groups acquire conservation and environmental management skills such as tree-planting, flood and erosion control measures, low cost waste management strategies, sustainable agricultural practices, etc., aimed at protecting the environment for the present and future generations.
5. Participation in activities that lead to the resolution of

environmental challenges. EE should help individuals and social groups develop a sense of responsibility and urgency regarding environmental problems so as to ensure appropriate action to solve those problems.

6. Evaluation of issues that affect the environment. EE should help individuals and social groups evaluate environmental measures and education programmes.

The objectives of environmental education are hinged on the assumption that it will help people take actions that are friendly to the environment, and intended to preserve natural resources, promote the aesthetic value and scenic beauty of the environment. As Permilovskiy (2012) ^[16] posits:

In philosophy, “values” means specific social definitions of surrounding world objects which reveal their positive and negative value for man and society. To a man, values serve as the points of his interest, and for his consciousness fulfil the function of everyday landmarks in objects and social reality, designation of his different practical attitudes to surrounding objects and phenomena.

According to Mikhail Permilovskiy, scientific literature reviews, both in the field of ecological and constitutional law and in the field of philosophy, show that it is advisable to examine the right to a favourable environment in terms of axiological approach. Owing to this approach the right to a favourable environment is granted a special priority in relation to other human rights and fundamental freedoms.

In regard to the ecological value notion, environmental protection should lie in the root of everybody's actions. The axiological approach to the right to a favourable environment is seen in the growth of a man's role himself, his inner characteristics, that is, his orientation on ecologically significant behaviour. Such orientation may be expressed in agreement with given tasks, achieving targets and decisions with ecological component. It also means that when human targets, tasks and decisions negatively affect the environment, it should be given up or corrected in such a way that they do not contradict ecological sustainability.

Mertens (2016) ^[13] affirms that philosophical assumptions in evaluation contexts are made about the nature of the problems being addressed that lead to assumptions about the design, implementation, and evaluation of an intervention to address the problems. The example of climate change and environmental destruction provides a window through which to examine the detrimental effects of climate change in the context of the exclusion of the marginalized populations from the benefits of economic and technological advances. In the search for solutions such as alternative energy sources that reduce waste and pollution, the challenges are tremendous. Assumptions are myriad about the nature of the problem and potential solutions. Transformative evaluators would begin their work by trying to make these assumptions visible and by including the voices of members of marginalized communities in a conscious and culturally respectful way.

In practical educational approach to axiological assumptions, Payne and Riddell (1999) ^[15] citing Hart (1996) articulates that in environmental education enquiry, particular modes of enquiry into teacher thinking and action should converge with certain paradigmatic underpinnings and beliefs about the field. He recommends, and in concert with Hart action research as consistent, in principle, with a participatory, praxis orientation in environmental education. In their own assertion, Mendie and Eyo (2016) ^[12] maintain

that one of the greatest challenges faced by ecologists, philosophers of environment, biologists, marine scientists etc is the problem associated with how the physical and non-physical environment can be conserved, protected and controlled from the demise of natural disaster. Axiology is the umbrella word that describes the philosophical studies of value in its origin, nature and scope. It examines values from all perspectives: the value of the protection of animal personality; the value of the procurement of animal rights; the value of animal and ecological species freedom; the value of sanctity of animal and other ecological species life; the value of moral protection; the value of eco-law; the value of ecological feminism; the value of environmental equality; the value of environmental conservation and the value of ecological holism. These values are connected to the movement for environmental protection.

Axiological Perceptions on the Environmental

Perception as a determinant of human behaviour has always been a source of investigation in philosophical thought. Liobikiene and Juknys (2016) ^[11] point out that the concept of values is not new in the field of environmental psychology as most studies have been conducted with reference to value-belief-norm (VBN) theory. It was found out that values, particularly biospheric ones, determine environmental attitude – hence values help to shape the judgments people make about the world around them. Similarly, values form the central guiding principles of life and determinants of attitudes. Therefore scholars assert that values mostly influence behaviour via behaviour-specific beliefs, attitudes and norms, while some are of the view that values have direct effects on behaviour.

In the analysis of the impact of values on environmentally-friendly behaviour, it is important to consider goal framing theory, as value orientation is mostly related to guiding goals that determine behaviour. Thus values are seen as desirable goals that serve as guiding principle in one's life.

Research has shown that there are three different types of goals that govern environmental behaviour on a given situation. Genovaite Liobikiene and Romualdas Juknys highlight these goals as hedonic goals, gain goals and normative goals. Hedonic goals lead individuals to focus on the ways to improve their feelings of pleasure or seeking excitement while avoiding any effort. It is hypothesized that people with hedonic goals may be motivated to engage in environmentally-friendly behaviour because it is enjoyable and pleasurable. Gain goals seek material benefits. Normative goals elicit environmentally-friendly behaviour because they think protecting the environment is the right thing to do.

However, previous studies indicate that egoistic values influence the chronic accessibility of gain goals and predispose a person to safeguarding or increasing his or her resources. Altruistic values reflect a key concern for the welfare of others and biospheric values follow a key concern with nature and the environment for their own sake. Both altruistic and biospheric values affect the chronic accessibility of normative goals in a given situation. A final group of individuals who are in a neutral position are those who strongly value nature and the environment, but do not see themselves as acting pro-environmentally. This value orientation may result from the perception that environmental problems could not be mitigated through individual actions and underplay individual actions. This

therefore underscores the importance of evaluating the impact of environmental problem perception, awareness of the consequences, and the willingness to assume responsibility as the main determinants of environmentally-friendly behaviour.

Three perspectives on relational value (RV) of nature have been identified by Stalhammar and Thoren (2019) ^[20]. The concept of relational value is said to capture how people and collectives perceive of their wellbeing and make choices that involve the natural world. The concept addresses problems in three fields that deal with environmental values namely environmental ethics, ecosystem services valuation, and environmental psychology.

In another perspective, Cooper *et al* (2016) ^[5] maintain that there are spiritual and aesthetic cultural values associated with ecosystems. They argue that humans derive some benefits from their aesthetic and spiritual experiences of nature. The aesthetic and spiritual understanding of the value of nature enable people to develop moral responsibilities towards nature which are considered more significant than aesthetic and spiritual benefits from nature. In addition, the aesthetic and spiritual values challenge economic conceptions of ecosystems and of value, and decision-making in production processes.

From the point of view of the relational motions of value, Chan *et al* (2016) ^[3] discuss policy applications to how people relate with nature, and how these impact negatively on the ecosystems in order to enhance positive outcomes in environmental management. According to them, this should reflect a rethinking on conservation in the context of local narratives and struggles over a good life.

Environmental issues about the Environment

Environmental issues that trigger environmentalism form the agenda of world politics. Lazutina and Baksheev (2016:10379) ^[10] attribute this to the production of social wealth through the interaction of individuals and social community – a process called human civilization. They identify factors determining global environmental issues to include:

- The worsening of the state of the ecosphere, caused in a natural way (e.g., forest fires, volcanic eruptions, and wind erosion).
- The growing role of the anthropogenic factor (e.g., deforestation, ozone layer depletion, littering the environment, especially near cities).

The current level of degradation of the ecosphere has been aggravated by an increase in man's consumption pattern facilitated by new technology and expansion of existing production capacities. This unnatural process has led to the degradation of the natural ecosystems and consequent international repercussion such as acid rain, forest decline, greenhouse effect, ozone depletion, pollution etc. A solution to these environmental issues will require concerted efforts by all governments.

Environmental issues are part of the environmental ethics debate, and a major aspect of environmental ethics that helps define man's moral and ethical obligations toward the environment either as individuals or collectives. Ethical debates help to solve environmental problems because individuals have different viewpoints. Environmental problems that have international repercussions raise critical and new ethical questions for the human race.

Issues of environmental ethics have increasingly assumed

prominence in international discourse because of the moral choices that we make and are compelled to make. Patra (2014:38) ^[14] maintained that our moral responsibility to nature and to the future is of great significance and urgency, and a responsibility that cannot be evaded. Citing Singer (1993) and Regan (1983/2004), Reena Patra encapsulates the whole essence of environmental ethics this way:

...extending moral standing to animals also leads to the formulation of particular types of environmental obligations. Animal welfare is relevant to environmental ethics because animals exist within the natural environment and thus form part of environmentalists' concerns. Essentially, these ethics claim that when we consider how our actions impact on the environment, we should not just evaluate how these affect humans (present and/or future), but also how they affect the interest and rights of animals.

Patra concludes that given the increasing concern for the environment and the impact that our actions have upon it, it is clear that the field of environmental ethics is gaining more attention. This gives a lot of responsibilities to states and governments in ensuring that environmental ethics emerge. It is therefore morally wrong for human beings to pollute and destroy parts of the natural environment and to consume a huge proportion of the planet's natural resources. It is wrong because a sustainable environment is essential to (present and future) human well-being. It is also wrong because the natural environment and/or its various components have certain values in their own right that ought to be respected and protected. These are among the issues investigated by environmental ethics. Some of the issues are specific to individuals in particular circumstances, while others are specific to groups, communities and governments. Yet others are more abstracted speculations concerning the value and moral standing of the natural environment and its nonhuman components.

Axiology and Environmental Education

Values mould our beliefs, understanding, attitudes, worldview and our notions of the environment. The axiological basis for environmental education is to produce an environmentally responsible personality able to live in harmony with the natural world, and other humans and living/nonliving organisms.

Ponomarenko *et al* (2016:1) identify the aims of environmental education to include:

1. Correct human understanding of social norms;
2. Selection of a specific line of conduct;
3. Protect nature.

The above aims of environmental education give expression to the formation of attitude which is an important condition for the development of environmentally responsible personality or behaviour. The formation of attitude invariably gives vent to the following features of human environmental responsibility by Ponomarenko *et al* (2016) citing Karopa (1995):

1. Formation of interest in social ecology and contemporary environmental issues;
2. Development of socially valuable motives of the individual attitude to nature;
3. Disclosure of the universal value of nature;
4. Development of moral and ecological knowledge, relevant skills, generalized principles and patterns of behaviour and activity in the natural environment.

5. Direct involvement in nature protection activities.

Thus, understanding the value of nature will not only improve the environmental situation, but also raise the level of culture and consciousness of man as an integral part of the living world.

Costel (2014) ^[7] adopts a didactical approach to the study of environmental education. As Esi Marius Costel explains:

For this purpose, the term "environmental education" should be, in our opinion, analyzed from a didactical perspective at the level of the educational process... The pragmatic perspective of such a model of environmental education illustrates a methodological correspondence between goals for curriculum development and the strategies of implementation that validate the didactical approach. Such a paradigm also requires, from a pedagogical point of view, the correlation between a substantial volume of information about environment with the need for specific training programmes/viable financial programs. For example, at the level of learning process of within the (interdisciplinary) teaching activities we can achieve a series of programs that, through a simulation process specific to environmental education, gain a practical finality.

From the foregoing citation, it is important to stress that environmental education should aim at the development and implementation of active methodologies for the learning process that would constitute a solid base for teaching-learning activities. All this will be helping man live in harmony with nature thus promoting sustainability and sustainable development. To achieve this aim, sustainability must be integrated into the culture of man through environmental education.

Development and technology-driven economies are expected to poster human well-being directly but they also indirectly undermine human well-being because of their adverse effects on the environment. Environmental education is predicated on sustainable development. Environmental issues, therefore cannot be seen in isolation, but must be addressed together with the process of development. As Anijah-Obi (2001:227-228) ^[11] posts:

The relationship between man and nature has always been dominated by economic rather than ecological considerations, particularly since the Industrial Revolution. At the time, it was felt that there were no limits to economic growth as long as man had the necessary technology to exploit and process the resources in the environment. Today man has come to realize that there could be limits to economic growth as a result of the negative impact of the application of technology in the pursuance of economic growth. It has also been realized that uncontrolled population growth can hinder economic growth because high population growth rate is likely to increase the demand for goods and services which are supplied from the resources in the environment which may be at the risk of over-exploitation.

Human impact on the environment is usually determined by three factors which include the nature and characteristics of the environment; the needs of the people; and the way the environmental resources are exploited to satisfy these needs. The damage being done appears to go beyond the regenerative power of nature to repair thereby creating problems and reducing the ability of the natural environment to support man on this planet. It is this tragedy

of development that has brought to focus the need for environmental management and protection to ensure sustainable development – the agenda for development.

Conclusions

From all social, economic and political considerations, the environment has to be integrated into decision making. This requires the enforcement of sustainability in a wider range of responsibilities for anticipated positive impacts of decisions. It also requires changes in the legal and institutional frameworks that enforce the common interest. These necessary changes are predicated on the understanding that an environment adequate for health and well-being is essential for all humans including future generations. Such an understanding gives credence to the right to use public and private resources in their right social and economic scale.

The reliance on law alone for the enforcement of common interest may undermine long-term interest. It will therefore entail community knowledge, support and participation in decision-making that affect the environment. This can be achieved by decentralizing the management of resources upon which local communities depend, and giving these communities an active voice on the use of these resources. It will also entail promoting citizens' initiatives, empowering people's organizations and strengthening local democracy. It will also entail the adoption of an ethic for sustainable living, under which every person takes responsibility for his or her impacts on nature, and each generation undertakes to leave to the future a world as diverse and prosperous as the one it inherited. To this, the incorporation of environmental education at all levels of formal and non-formal systems, effective training services (including extension services), action by governments to make people aware to stabilize resource consumption and population, encouraging 'green consumer' movements, a range of actions to strengthen the capacity of local communities to care for their own environments, and citizens' groups playing an increasingly crucial role in environmental care and sustainable management, information, education and communications will be essential tools for sustainable development.

The axiological significance of environmental education, therefore, is the preservation of natural resources and the restoration of scenic beauty of the environment while adopting sustainable strategies for economic development.

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