Review Article

The Imperatives of Environmental Education for Sustainable Development

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Abstract

Education is undeniably a potent tool for facilitating latent knowledge and development of skills. But more importantly, education has come to play a significant part in cultural re-orientation and social engineering. In this era of cultural integration and environment sensitization, education (and even more so environmental education) has come to play a central role in determining individual and group cultures (locally and internationally) and in their modification are they relate to the environment. These are the issues highlighted in this paper which examines the imperatives of environmental education for sustainable development in a constantly degrading environment.
Keywords: Imperatives, Environmental education, Sustainable development.

INTRODUCTION

Environmental education has been a focal point of interest since the Stockolm Conference of 1972. The social, economic and political changes that occurred have had trans-boundary repercussions. Governments and their citizens have had to assume new roles to cope with new environmental challenges. Environmental education thus became an international norm for sustainable development.

Consequently, the international conferences in Tbilisi [1], Stockholm [2], Belgrade [3], Rio [4] and Johannensburg [5], all related with environmental issues, inspired the guiding principles of environmental education which are according to Yearbook of International University College [6]:

making individuals and communities understand the complex nature of the natural and the built environments resulting from the interaction of their biological, physical, social, economic and cultural aspects and acquire the knowledge, values, attitudes and practical skills in a responsible and effective way in anticipating, and solving environmental problems and the management of the quality of the environment.

It further stated that the basic aim of environmental education is clearly to show the economic, political and ecological interdependence of the modern world, in which decisions and action by the different countries can have international repercussions. Environmental education should enhance a sense of responsibility and solidarity among countries and regions. Attention is therefore paid to understanding the complex relation between socio-economic activities and the improvement of the environment.

The United States Environmental Protection Agency, EPA [7] defines environmental education as a process that helps individuals to explore environmental process, 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 objectives of environmental education are outlined as:

- 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;
- Sills to identify and help resolve environmental challenges; and
- Participation in activities that lead to the resolution of environmental challenges.

Environmental education facilitates understanding and ability in individuals and people to weigh various sides of an environmental issue through

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critical thinking and enhance their own problem-solving and decision-making skills. Given the above premise environmental education becomes a stopgap mechanism not only in the short run but also in the long run for ensuring a mutual and sustainable international effort at containing the global environmental crisis.

Education and the Determination of Cultural Pattern and Social Engineering

Environmental education is rooted in the international parlance of *think globally and act locally,* generated to underscore the local and global impact of social and economic activities on the environment. Environmental education is a movement that provides threshold for industrial methods and consumption patterns for sustainable development. Changes in the natural environment are a consequence of increase in human activity at both the local and global level.

This global momentum for promoting environmental education has received impetus from an understanding that only by raising people's awareness and making they understand the functioning of the life support systems and the relationship between the quality of the environment and the necessity of resource exploitation, will lead to a decrease in human impact on the environment.

Education is an instrument for determining cultural patterns and social engineering. To achieve this, requires the gamut of education ranging from formal education (including traditional methods of teaching in schools and training institutions) and non-formal education (including clubs, associations, foundations, mass media, adult education institutions) to government organs of mass education. The promotion of cultural patterns and social engineering through education that will lead to the creation of a new kind of relation between individuals, society and nature phenomenology is imperative in order to have an accord that will forestall the irreversible damage to the natural environment. This calls for constantly new forms of knowledge that will enhance new forms of living for individuals and social groups, institutions and communities.

Behaviours are learned and enforced by culture. Education is an instrument of social change and behaviour patterns. Education determines individual and collective culture in any society. Thus it plays an important role in the socialization process. This may occur in norms, values, cultural products and symbols in society, and attitude to the environment. Cultural norms and social skills are learned through education.

As Kapur [8] agrees, citing Understanding Education Quality [9], education is an instrument in bringing about changes within an individual. Education on the one hand, acculturates an individual, and on the other hand, preserves, transmits and develops the culture of the society. It has been stated that education and culture are mutually interdependent, complementary and supplementary in all their aspects and activities.

Education and culture are intimately and integrally connected. It is therefore correct to postulate that when deep ecology is integrated into the education of the society, the culture can play a significant role in helping the individual in adjusting and in developing positive attitude to the natural environment. Education is the vital configuration of the social system, shaping the personality of younger generation and their culture, raising them for life and preparing them for the kind of society they live in and then should live in. Through the means of education, an individual learns how to abide by the cultural values [1]. Education guarantees the development and sustenance of knowledge, skills, interests, attitudes, aspirations, and values, facilitation of social, economic and cultural levels.

Education is the vehicle by which social engineering is evolved in the society resulting in transitions and alterations in the society such as norms of values and thinking modes, changes in material world and culture including knowledge of and attitude to the environment, patterns of material culture, ideas, family relations, political culture and patterns of administration at different levels. It is through education that the individual becomes aware of the various modes of conduct acceptable to a particular culture, and learns behaviour modification. Through this process, the individual learns adaptive capacities and adjust to changes in the society.

Values Formation and Behaviour Modification through Education

The concept of value has different denotations and connotations, with varying perspectives applied to different disciplines. But the socialization perspective will suffice here since sociology is a variable applied to the environment. Value is defined by Turkkahraman [10] citing Soykan [11] as the importance, worth, desirability and the respect something gets in return. It is seen by Ergil [9] as similarities and shared demands. Social values are moral beliefs and principles accepted by the majority so as to ensure the continuity of a society.

Social values guide the conscience and consciousness of members of society. Some of the functions of values in any social system are: to show the ideal ways of thinking and behaving; standards of judgment; guide to adopt and realize social roles; tools for social control and restraint; promote solidarity and social cohesion; guide focus on useful and important cultural objects.

Education is the anvil upon which society thrives. Mialaret [12] cited by Turkkahraman [10] maintains that societies maintain their existence, development and permanence by means of educational institutions. Education is a process which aims at biological, psychological, social and moral development of members of society. Education thus conceived, is an institutional structure which helps to develop the identity of an individual, by transmitting worthwhile values to him. Education performs three vital functions: protective function, cumulative function, and formative function. The protective function transmits values and culture of the society to the people. The cumulative function transforms individual behaviour into desirable patterns. Formative function promotes cultural innovation and scientific development in a society.

Values are man's creation. Environment as a sociological variable is conditioned by material culture developed and sustained in human institutions such as family, school and society. The environment is the life support upon which man's survival depends. The creation of values therefore is paramount to environmental consciousness and action required by man to sustain natural resources in development activities. Environmental education in this case provides requisite environmental skills and knowledge for dealing with environmental challenges – hence societies are obligated to take into account values inherited and transfer them to their members in the process of socialization.

Values are social standards consisting of fundamental beliefs that help distinguish right and wrong for human beings. By adding balance and meaning to life, values enhance good interpersonal relationship within society. Environmental changes are constantly occurring thereby necessitating appropriate environmental education to help man remain an accommodating species in harmony with his environment. Societies exist with identifiable values and are recognized by their values. Consequently, values constitute the basis for each culture, and a culture without values will be torn apart and will lose its homogeneity, unity and value. Thus, environmental education is imperative for development of skills and attitudes, knowledge and understanding, an awareness creation for members' participation in sustaining the environment.

Environmental Education and Sustainable Societies
The Gro Harlem Brundtland World Commission on Environment and Development produced a document, Our Common Future [13] in which threats to the environment were addressed. The World Commission's report identified the present method of production as unsustainable, and the need for corrective action. The overriding theme, (which has also become a political concept) of the World's

Commission's report isn sustainable development, defined as satisfying the needs and aspirations of the present generation without compromising the ability of future generations to meet their needs. It is a form of progress for social and economic development that enhances the resource-base rather than degrades it – requiring a more equitable distribution of wealth than currently prevails within and among nations, which aims at eradicating global mass-poverty, keeping options open for the future.

In order to achieve sustainable development and/or societies, everyone needs to become aware of the need for such development and make appropriate changes to their own behaviour. This makes Environmental Education an over-all priority in all its ramifications:

Formal, non-formal and informal, and should address people in a variety of age groups and positions. There is therefore need for education for environmental citizenship to develop the dispositions, skills and competencies to enable citizens develop environmental awareness. Environmental education focuses on promoting environmental knowledge and enhancing environmentally friendly attitudes and values as well as achieving higher-order cognitive skills necessary to promote sustainable societies.

Environmental education for sustainable societies refer to the type of education that cultivates a coherent and adequate body of knowledge as well as the necessary skills, values, attitudes and competencies that an Environmental citizen should be equipped with in order to be able to act and participate in society as an agent of change in the private and public sphere (including organizational behaviour), on a local, national and global scale, through individual and collective actions, in the direction of solving contemporary environmental problems, preventing the creation of new ones, in achieving sustainability as well as developing a healthy relationship with nature [14]. This education is important in order to empower citizens to exercise their environmental rights and duties, as well as to identify the underlying fundamental causes of environmental challenges, develop the willingness and the competencies for critical and active engagement and civic participation to address these fundamental causes, by means of individual and collective action within democratic means and taking into account the inter-and intra-generational justice [14].

In an era where trans-boundary effects of environmental degradation has become a phenomenon, educating the citizenry in about how for example, air and water pollution affect human health, how collective movement can solve an environmental injustice and prevent conflicts, is essential. It is imperative that the citizenry understand that the environment embraces and

encompasses all spheres that relate to societal structure in order to understand the problems and seek their solutions. Resilient human systems depend on resilient ecosystems. The economy and all its constituents operate within the economy [15].

Understanding the imperative need to maintain the proper functioning of eco-systems will help man to reconcile with the environment. The world cannot continue to advance as a sustainable society while turning its back on nature. It is for this reason that knowledge and skills are required to defend the foundation of human well-being, as education is the driving force promoting social changes. The development of environmental knowledge and values leads to higher levels of environmental responsibility as only those with knowledge have the capacity to act. Citizens with environmental knowledge have the responsibility to support and foster future behavioural changes in different spheres. The exercise of environmental responsibility will depend on the level of understanding and perception of environmental principles by people and by society. This demands education for environmental stewardship by teaching in participatory ways, not only theoretically but actively, forming motivated citizens who are capable of participating in collective problem solving and decision-making processes. This will promote ways of committed thinking and regulating citizen actions, inter-personal commitment and individual and collective responsibility. Being conscious of one's own behaviour and consequence is the first step to modify attitudes and assume responsibility. It can be seen as preparatory to an ethical relationship with all of society and Mother Nature [16].

Plotica [16] argues that citizens can exert substantial influences via their actions as members, employers or representatives of organizations by joining green initiatives such as environmental clubs in schools, communities and institutions, and purchase of environmentally responsible products. However, these individual actions should not displace or replace political organizational and/or institutional ones.

Environmental Education and the Trajectory of Development Priorities
Environmental education and the trajectory of development priorities recognize the complex linkages between sectoral activities, macro-economic policies and sustainable development and to internalize them in polices and development strategies. This new method will require far greater collaboration among all concerned agencies and governments for the promotion of sustainable development. It will also require better procedures to review and evaluate the effectiveness of current industrial methods and trade-offs among countries of the North and South. To this end, international cooperation need be strengthened to meet the common challenges.

The World Commission on Environment and Development, WCED [13] report that economic growth is essential for development – for, without it, poverty will win against dignity and solidarity. Without growth there cannot be the capacity to solve environmental problems. But this will have to be a form of growth that is based on a different content than that experienced in the industrialized post-war world. It will also be one where environment is an ally, not a victim. Growth rates have soared over the last century at the expense of the environment and favourable conditions for human health. Future growth which is consistent with sustainable development, therefore, must be more energy-efficient and more material-efficient than currently prevails. Environmental considerations must be fully integrated into decision-making processes at all levels – hence economic and social development can and should be mutually reinforcing.

Sustainable development as defined by the World Commission on Environment and Development is aimed at meeting today's needs without compromising those of future generations. This definition was used at UN Earth Summit in Rio in 1992, and forms the basis for LA 21 programmes together with a declaration that sustainable development requires community participation. It is a form of progress for social and economic development that enhances the resource-base rather than degrades it. It requires a more equitable distribution of wealth than currently prevails within and among nations (rich and poor) and it aims at the eradication of global mass-poverty, keeping options open for the future. Environmentalists, therefore, argue that equality of place for policies which compromises the ability of people in other regions to meet their needs could not be said to be sustainable.

From the foregoing discourse, it is evident that the economic development model of many developed countries is fundamentally unecological and unsustainable. This emphasizes that forms of production and trade should seek possibilities for ethical sustainable enterprise with new, low impact and energy efficient technologies, for trade and good labour conditions. Reordering development priorities for sustainable development would also imply reducing long journeys work to save fuel, encouraging local employment, reducing or abandoning car and aeroplane use, supporting local food producers, insulating homes to reduce fossil fuel use and recycling waste. It has also necessitated different kinds of energy use, reducing polluting emissions, use of land, air and water, protection of wildlife and the maintenance of genetic diversity; and this would involve reduction in existing consumption patterns on a vast scale. It is imperative in social justice terms for a gross reduction of resource use in the developed countries.

CONCLUSIONS

The treaty on Environmental Education for Sustainable Societies and Global Responsibility recognizes environmental education as a dynamic process and the central role of education in shaping values and social action. Environmental education is a continuous learning process based on respect for all life, which contribute to human and social transformation and ecological preservation. This kind of education advances collective understanding of the systemic nature of the crises that threaten the world's future. Inherent in this crisis are an erosion of basic values and the alienation and non-participation of members of the world community in the building of their own future. Environmental education should ultimately bring about change in the quality of life and a greater consciousness of personal conduct, as well as harmony among human beings and between them and other forms of life.

As a consensus building platform, UNEP [4, 17, 18] emphasizes the need for more and better information, education and training. It calls for the world-wide 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 achieve this aim, the incorporation of environmental education at all levels of formal and non-formal systems, stronger training services (including extension services) action by governments to make people aware of the need to stabilize resource consumption and population, encouragement to green consumer movements, and a range of actions to strengthen the capacity of local communities to care for their own environments, have all become imperative. It is anticipated that local communities and citizens' groups will play an increasingly crucial role in environmental care and sustainable management, with information, education and enhanced communications as essential tools.

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