



Education for Sustainable Development

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Abstract

Education is an important tool for achieving sustainability around the world. It is the only medium that enables people to understand work for and benefit from sustainable development. Sustainable development is a development that addresses the needs of the present without compromising the abilities of forthcoming generations to meet their specific needs. The basic principle behind sustainable development is a combination of economic, social and environmental conditions that are shared by all of us. Education for sustainability utilizes the entire education system to provide students with what they need to do to transform our societies to achieve a sustainable future. Sustainable development should also include an acknowledgment and respect for the positive heritage and legacy of past generations. Education for Sustainable Development (ESD) is a dynamic concept that includes a new vision of education that seeks to balance human and economic well-being with cultural traditions and respect for the earth's natural resources. It emphasizes the importance of learning in the build-up to the transition towards sustainability with additional education in citizenship education, education for a culture of peace, gender-equal opportunity, respect for human rights, health education, population education, education for protecting and managing natural resources and education for sustainable utilization. Consequently education needs to be transformed into a constructive tool for creating awareness among students and citizens of the world. ESD uses transdisciplinary educational systems to develop ideas for permanent learning, nurtures respect for human needs that are compatible with sustainable utilization of natural resources and encourages an awareness of global solidarity. Education for sustainable development has come to be seen as a practice of learning how to make decisions that determine the long-term future of the economy, ecology and social welfare of all communities. Thus ESD provides a way to maintain equilibrium between humans and nature.

Keywords: Development, Education, Education for Sustainable Development (ESD), People, Society, Environment, Generation, Need, World.

Introduction

Education has earned much-appreciated backing for development worldwide and it is acknowledged for playing a notable role in improving livelihoods globally. People throughout the world believe that existing economic development trends are not sustainable and that public awareness, education and

training are the key components for affecting society's progress towards sustainability. People contend regarding the meaning of sustainable development and whether or not it is possible. They have distinct concepts of what sustainable societies will look like and how they will perform. The absence of an agreement has blocked efforts to move education toward sustainable development (ESD) onward. It is important to note that while we have trouble imagining a sustainable world, we have no problem identifying what is unsustainable in our societies. We can quickly form a laundry list of teething problems like water conservation, unproductive use of energy, increased pollution, overuse of private transportation, misuse of human rights, consumerism etc. But we should not blame ourselves for lacking a clear definition of sustainability.

The purpose of sustainable development is to stabilize our economic, environmental and social needs, permitting prosperity for our present and future generations. Sustainable development depends on a long-standing integrated process of developing and becoming a strong community by together addressing economic, environmental and social issues as well as avoiding the over-consumption of key natural resources. Sustainable development cannot be managed solely through technical solutions, political supervision or financial mediation. We have to modify the way we think and act. This requires quality education and learning that supports sustainable development at all stages and from all social perspectives.

The thought of sustainable development is an important landmark in environmental theory because it puts forward how society itself should be organized and not just what particular environmental security needs should be recognized and how they can be best implemented. Similarly this aspiring interpretation is broadly shared by business leaders, policy activists and academics. Of course just how much social and economic change is essential to achieving sustainability depends upon how unsustainable one considers it to be. Many supporters of the idea consider the present to be quite unsustainable and thus are prepared for radical changes.

The basic principle behind sustainable development is the creation of a combination of economic, social and environmental settings. Without a proper ecosystem, a better society and economic development for us and future generations are impossible. Thus the environmental dimension can be seen as the ultimate borderline for sustainable development. The social dimension meets the fundamental needs of the entire population without going beyond the boundaries of the ecosystem. The economic dimension is a way to recognize goals within the limits of a socially and environmentally sustainable way of doing things. Education for sustainable development is intended to educate all participants, incorporating the students, community, corporate communities etc. about the importance and need for sustainable development in the present world. It cannot be considered as having links not only with the environment but with the development of social and economic aspects.

Incorporating important sustainable development matters into teaching and learning may consist of teaching on climate transformation, disaster risk decrease, biodiversity, poverty decline and sustainable utilization of food and water. It also requires participatory teaching and learning techniques that motivate and allow learners to change their behaviour and take action towards sustainable development.

Accordingly ESD supports competencies like critical thinking, imagining future situations and making decisions mutually.

Education for sustainable development (ESD) is an important educational tool in the interdependence connecting human beings and every unit of an ecosystem. The Brundtland Report of 1987 also adds up a very important point with this perspective stating “Sustainable development requires meeting the basic needs of all and extending to all the opportunity to fulfill their aspirations for a better life”. The role of ESD which is based on the three pillars of the economy, society and environment is critical in changing the prevalent perceptions and attitudes of people towards themselves, society and the environment.

ESD is centered on ideas and principles that underlie sustainability such as inter-generational equity, gender equity, social tolerance, poverty alleviation, environmental preservation and renovation. This is stated in the Rio Declaration which contains 27 principles of sustainability. These principles can help governments, societies and schools regularly classify knowledge, principles, skills and values as they help build education and reorient existing education to improve sustainability.

Meaning and Definition

Education for sustainable development implies a degree of modification in educational thinking and practice that is not simply lectured on in a single definition. This characteristic is reflected in the number and variety of definitions that have emerged in recent years internationally. The following are the key definitions of education in sustainable development that will be used by the panel for all its areas of work and which provide a supporting indication of its scope.

In the year 1998 the Sustainable Development Education Panel (SDEP) stating:

“Education for sustainable development is about the learning needed to maintain and improve our quality of life and the quality of life of generations to come. It is about equipping individuals, communities, groups, businesses and government to live and act sustainably; as well as giving them an understanding of the environmental, social and economic issues involved. It is about preparing for the world in which we will live in the next century and making sure that we are not found wanting”.

According to UNESCO “Education for Sustainable Development empowers learners to take informed decisions and responsible actions for environmental integrity, economic viability and a just society for present and future generations, while respecting cultural diversity”.

World Commission on Environment and Development defined sustainable development in 1987 as “Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs”.

“Education is critical for promoting sustainable development and improving the capacity of people to address environment and development issues...It is critical for achieving environmental and ethical awareness, values and attitudes, skills and behaviour consistent with sustainable development and for effective public participation in decision making”. (Chapter 36 of Agenda 21, Rio Declaration 1992).

Sustainable development has been defined in different ways, but the most frequently quoted definition is from the Brundtland Report:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept

of "needs" in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet both present and future needs".

Education for sustainable development empowers the general public to acquire the information, values and skills to take part in decisions about the way we do things individually and collectively both locally and globally that will improve the quality of life now without damaging the globe for the future.

Need for Sustainable Development and Education for Sustainable Development

The Earth has long been considered a remarkably stable, self-correcting machine, responsible for all of humanity's misadventures and assaults on the fragile biosphere. But this misunderstanding of nature cannot be taken for granted. Modern technology, industry and agriculture with other developmental activities of modern society are very much exploitative in the natural world with pollution enhancing and causing enormous damage to the environment. Emissions of smoke and gases from industrial vehicles have led to increased carbon dioxide content in the atmosphere. Effluents from industry and mining are contaminating water bodies and degrading the land. High doses of fertilizer are polluting lakes. Pesticide residues in the soil contaminate water bodies. Developmental activities like agriculture hasten the desertification and reduction of genetic diversity. Pollution of air and water are challenged that is intimately connected with the health of populations and ecosystems. Inland water bodies and coastal areas have up to now been considered as dumping grounds for waste, thus affecting aquatic and marine life. Environmental degradation refers to the deteriorating of a local ecosystem or the biosphere as a whole, due to human being activity. The long-term outcome of environmental degradation may be the unsustainability of the human population.

There is a need for new organizational forms and educational institutions that are mobile, synergetic, creative, future-oriented that promotes the implementation of new objectives and new historic forms of education. To do so, it is necessary to incorporate the principles of sustainable development into all spheres of life. These spheres of life should not only be considered at the individual level but the community level. There is significant scope for regional and global cooperation in sustainable development. Education for sustainability is the latest paradigm for a lifelong learning process that will lead to a knowledgeable and participating citizenry with innovative problem-solving skills, scientific, technical, social literacy and a commitment to take accountable actions that will help to ensure an environmentally sound, socially just and economically well-to-do future for all.

Education in its ongoing development should aim to "foresee" and form and satisfy the needs of future generations of people. This means that education should be anticipatory to social, economic-cultural life and it should form part of a desirable sustainable future for all of us. For that it is required that every sphere of society be integrated whenever feasible leading to the assumptions that lead to sustainable development. A new educational paradigm will be a micro-model of a sustainable society. But such ideas have not been realized in the old organizational forms of the education system.

There is an urgent need for a general evaluation of the existing approach in the education system with a sharper focus on attaining ESD which can sensitize knowledge, skills, critical thinking and value issues towards attaining sustainable development. ESD should be included in the entire curriculum from pre-

schooling to higher education, which should be performed in a meaningful way using suitable educational techniques. Looking at research conducted in the past, which was more concerned with creating environmental awareness and studying environmental attitudes and trends in a world of concern focused on sustainable development, it was intended to explore the ESD's role in creating a sustainable environment for all of its citizens.

Role of Education in Sustainable Development

"Education is a fundamental right and the basis for progress in every country. Parents need information about health and nutrition if they are to give their children the start in life they deserve. Prosperous countries depend on skilled and educated workers. The challenges of conquering poverty, combating climate change and achieving truly sustainable development in the coming decades compel us to work together. With partnership, leadership and wise investments in education, we can transform individual lives, national economies and our world".

— Ban Ki-Moon, United Nations Secretary-General.

Education plays an important role in the social, spiritual and cultural development of our society. It contributes towards improving the standard of living and livelihoods of the community. Quality education should inculcate in people diverse skills and values that prepare them to participate actively in social, political and economic environments and make informed and responsible decisions. It has one of the basic characteristics of imparting culture from generation to generation.

Education covers teaching and learning specific skills, exposure to knowledge, positive decisions and well-developed perceptions. It is the application of pedagogy, a body of theoretical and applied research associated with teaching and learning. The fundamental aim of the educational system for sustainable development is to 'educate a new generation of sustainable thinking', a world leader of Cosmo-planetary awareness with a universal world outlook, who has a culture of sustainability, high socio-cultural needs and deep moral-ethical values, who is proficient in solving global responsibilities faced by mankind and promoting the creation of a sustainable society.

The goals of ESD are to promote awareness of the interdependence of natural, socio-economic and political systems at local, national and global levels to encourage analytical reflection and decision making. This is reflected in personal lifestyles encouraging the active participation of the citizenry in building sustainable development, developing interactive and participatory skills, developing appropriate environmental understanding based on an understanding of the independence of nature and skills of problem-solving. ESD increases civic capacity by enhancing and improving the workforce, social tolerance, environmental stewardship and participation in community-based decision making, which is enhanced by combining formal, non-formal and informal education. An attitude of concern for the quality of the environment is important to motivate people to develop skills and a willingness to take necessary decisions and actions to solve environmental problems. Thus education has become an indispensable element in achieving sustainable development. Education for sustainable development (ESD) offers opportunities for learners to take part in independent debates about what is important to them personally and to their society in the future. It also develops and strengthens the capacity of individuals, groups, communities, organizations and countries to make judgments and choices aimed at

making our world safer, healthier and more prosperous, thus improving the quality of life for millions of people throughout the world. It includes processes for example critical reflection, greater awareness and empowerment so that new visions, methods, tools and concepts can be explored. Hence a fundamental principle in developing sustainable development is the idea of each individual's involvement, responsibility and commitment to local and global discussions on a common future that gives democracy a central role in a sustainable future.

Since ESD is about creating awareness, skills and values, so that a child can take his/her place responsibly in society for sustainable development in the future the pedagogical methods to be followed should be different. The pedagogical situation should be created in such a manner that makes the child sensitive to the world around him and creates meaning from his surroundings and his own experiences. Thus Education for Sustainable Development is a vision of education that seeks to balance human and economic security with cultural traditions and respect for the earth's natural resources. It highlights the characteristics of learning that will contribute to the evolution of sustainability.

The Emergence of Environmental Education for Sustainable Development (EESD)

The ideas behind environmental education can be seen from 1969 onward and the inspiration received from international organizations such as UNESCO, UNICEF and UNEP has leveraged these initiatives to further the development of the environment. The UN observed World Environment Day for the first time to raise awareness on environmental issues on the 5th of June 1974. UNESCO sponsored a conference in Belgrade, Yugoslavia during which the Belgrade Charter was framed and outlined the basic structure of environmental education. Likewise in 1977 UNESCO in cooperation with the United Nations Environment Programme (UNEP) held the International Conference on Environmental Education in Tbilisi, Republic of Georgia. The delegates at the Tbilisi Conference accepted the Tbilisi Declaration, which argued for environmental education to create awareness and values among people to advance the quality of life and the environment.

Objectives of Environmental Education

The most important outcome in Tbilisi was the specification of the objectives of environmental education viz: awareness, knowledge, attitudes, skills and participation. Most environmental educators from across the world have adopted these objectives. A brief explanation is provided to support these objectives:

- **Awareness** – to help social groups and human beings acquire an awareness and sensitivity to the total environment and its related problems.
- **Knowledge** – to help social groups and individuals gain a variety of experience in and to acquire a basic understanding of the environment and its associated problems.
- **Attitudes** – to help social groups and individuals acquire a set of values and feelings of concern for the environment and the motivation for actively participating in environmental improvement and protection.
- **Skills** – to help social groups and individuals acquire the skills for identifying and solving environmental problems.

- **Participation** – to provide social groups and individuals with an opportunity to actively involve at all levels in working toward the resolution of environmental problems.

Objectives of Sustainable Development

The term 'sustainable development' became distinctly recognized following the Brundtland Commission's Report "Our Common Future" (1987) chaired by Gro Harlem Brundtland. It was first endorsed at the UN General Assembly in 1987 and a parallel concept of education to promote sustainable development has also emerged.

Taking account of the existing economic environment and the falling natural resources, objectives for sustainable development should focus on maximizing the satisfaction of the population but also a more efficient use of resources.

As the Brundtland Report shows, sustainable development can be defined as having three categories of objectives:

- **Objectives of the Economic System** - maximizing the number of goods and services produced in the techno sphere, maximizing the efficient use of mineral resource flows, biological, energy and information flows as well as adaptive technologies, mineral resources and reprocessing products.
- **Objectives of the Social System** - equitable allotment of goods and services between the social contract partners at the local, national or global; adequate training of all members of the society in the socio-economic development; creating, using and adapting stable structures and mechanisms of political, institutional or related to information management systems that provide flexibility and self-regulation of the social and economic; correlation systems evolution economic, social and environmental; preserving cultural diversity to support the faster adaptation of chance.
- **Objectives of the Ecological System** - maintaining biodiversity in support of the possibility of adapting the scheme to changing conditions in the geo-biosphere; compliance mechanisms of self-regulation; and the natural cycle times in the biosphere.

Specifically sustainable development ensures fuller knowledge of the function of the natural environment and how it is arranged with man and society (influencing positive direct and indirect effects on quality of life). The practice is beneficially associated with an encouraging landscape, a place of leisure and time spent on activities that are substituted by radio, television and film.

The importance of sustainable development came to the international stage at the United Nations World Conference on Environment and Development (WCED) known as the Earth Summit that was held in Rio de Janeiro in 1992 and was strongly influenced by the terminology that was introduced by the Brundtland Report. It was an important milestone in making the concept of 'sustainable development' more concrete. It gave an explicit message that changes in our behaviour and attitudes would result in changes that are necessary to bring about a sustainable future for all of humanity. To achieve this goal, an emphasis on promoting education, public awareness and training on the environment and development was recommended.

Ten years after the WCED conference in Rio de Janeiro a new conference was organized in Johannesburg in 2002 to inspire its member states to commit to efforts to rejuvenate the agenda of sustainable development and to meet emerging challenges. Although no new agreements were made a

new implementation plan was developed. This foundation was laid for a UN Decade for Education for Sustainable Development (UNDESD) from 2005 to 2014. UNESCO is now responsible for planning the decade and developing an implementation scheme. Thus the concept of ESD (Education for Sustainable Development) took a concrete form. The decade pursues a global vision 'of a world where everyone has the opportunity to benefit from quality education and learn the values, behaviours and lifestyles required for a sustainable future and for positive societal transformation'.

The goal of the decade as drawn up by UNESCO is to integrate the principles, values and practices of sustainable development into all phases of education and learning. This aims to inspire changes in behaviour that will create a more sustainable future. One of the key features of the Decade for Education for Sustainable Development (DESD) is the recognition that ESD must connect a wide range of stakeholders from governments, non-governmental organizations, the private sector, civil society and the general public.

In its International Implementation Scheme (IIS) for DESD, UNESCO states that ESD is fundamentally about values, particularly respect for others, including those of present and future generations, for difference and diversity, for the environment and for the planet's resources (UNESCO, 2006). Education empowers us to recognize ourselves and others and our links with the broader natural and social environment; this perception serves as a durable basis for building respect. Together with the principles of justice, responsibility, investigation and dialogue; ESD aims to move us in the direction of adopting behaviours and practices which will help us all to live a full life without being deprived of the basic needs of the human being.

The fourth International Conference on Environmental Education was held from 24th to 28th November 2007 at the Centre for Environment Education in Ahmadabad, India. The five-day conference was attended by over 1500 participants from 97 countries. On behalf of the Government of India the Conference was hosted by the Centre for Environment Education, Ahmadabad. Two ministries of the Government of India namely the Ministry of Human Resource Development and the Ministry of Environment and Forests were co-organizers of the event, which was sponsored by UNESCO and UNEP. This Conference aimed to understand what has emerged out of the discipline of Environment Education (EE) since the Tbilisi declaration and the role of EE within Education for Sustainable Development (ESD). The conference offered an opportunity to consider how EE and ESD can partner and strengthen each other in building a sustainable future.

Twenty years after the Earth Summit in Rio de Janeiro in 1992 the "United Nations Conference on Sustainable Development (Rio+20)" was held in Rio de Janeiro, Brazil in June 2012. The conference addresses the agenda "The Future We Want" at the conclusion of the conference. In chapter V "Framework for action and follow-up – A. Thematic areas and cross-sectoral issues – education 233" it is described "We resolve to promote education for sustainable development and to integrate sustainable development more actively into education beyond the United Nations Decade of Education for Sustainable Development". (The United Nations, 2012).

The outcomes of the above-mentioned conferences have in several ways served as the basis for various environmental education programs. Certainly having both a commonly accepted goal statement and an

associated set of objectives has allowed many educators to better address the desired outcomes for their programs. Equating the need to identify both a common goal and set of objectives requires consideration of the characteristics of environmental education.

UNESCO considered its efforts to promote ESD within an International Implementation Scheme (IIS) (UNESCO, 2005a) which included the Millennium Development Goals (MDGs), Education for All (EFA) and the United Nations Literacy Decade (UNLD).

The IIS was based on the four major thrusts of the ESD along with seven strategies:

Four Major Thrusts of ESD

1. Improving access and retention in quality basic education
2. Reorienting existing educational programs to address sustainability
3. Increasing public understanding and awareness of sustainability
4. Providing training to advance sustainability across all sectors

Seven Strategies for ESD

1. Vision-building and advocacy
2. Consultation and ownership
3. Partnership and networks
4. Capacity-building and training
5. Research and innovation
6. Use of Information and Communication Technology (ICT)
7. Monitoring and evaluation

Conclusion

Education for sustainable development is a dynamic perspective that includes a new approach to education that encourages people of all ages to shoulder responsibility for forming and enjoying a sustainable future. There is increasing international appreciation of Education for Sustainable Development (ESD) as an important part of quality education and a key enabler for sustainable development. Sustainable development is one of the major goals of environmental education that has become an important part of education at all levels. We have to take responsibility for our conservation and protection. Development takes care of the environment and when we talk about development, it needs to be sustainable and ethical. The pathway to ESD is an important one and nations that tread it cautiously. Using it to their benefit would make available their present populace and give their future generations an environment that would empower them to fulfil their needs and aspirations by the striking equilibrium between the economy and the environment. Otherwise the consequences would be mildly disastrous. As the Indian Economist and Scholar, Amartya Sen points out, "a fouled environment in which future generations are denied the presence of fresh air will remain foul even if future generations are so very rich".

The overall aim of ESD is to encourage citizens to act towards positive environmental and social change while involving a participatory and action-oriented approach. Thus education needs to be enhanced to lead the world toward a more sustainable way of living.

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