

***EDUCATION FOR SUSTAINABLE DEVELOPMENT:
A THEORETICAL PERSPECTIVE***

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Abstract

Basic education which promotes functional literacy, livelihood skills, understanding of the immediate environment and values of responsible citizenship is a precondition for sustainable development. Such education must be available to every child as a fundamental right, without discrimination on the basis of economic class, geographical location or cultural identity. Adequate resources and support for education for sustainable development are essential. An understanding must be promoted among key decision makers of the potential of education to promote sustainability, reduce poverty, train people for sustainable livelihoods and catalyze necessary public support for sustainable development initiatives. The empowerment of women and girls must be supported by actions to improve their access to basic and higher education, training and capacity building. Collaborations and partnerships between and among scientists, government and all stakeholders, on scientific research and development and its widespread application need to be improved. This research paper gives a theoretical understanding of sustainable development as well as themes of education for sustainable development. It also sheds light on how education affects sustainability.

Acronyms/Abbreviations

UN: United Nations; UNESCO: United Nations Educational, Scientific and Cultural Organization; ESD: Education for Sustainable Development, ICTs: Information and Communication Technologies, OECD: Organization for Economic Co-operation and Development; WSSD: World Summit on Sustainable Development.

Introduction

“We hold the future in our hands, together, we must ensure that our grandchildren will not have to ask why we failed to do the right thing, and let them suffer the consequences.”(UN Secretary-General Ban Ki-moon, 2007).

UNESCO is the lead agency for the UN Decade of Education for Sustainable Development (2005-2014). Education for Sustainable Development allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. In order to understand Education for Sustainable Development (ESD), one needs to understand sustainable development. After all, the UN Decade of Education for Sustainable Development is about engaging the world’s educational systems to work for a more sustainable future. However, we need to envision a more sustainable world before we work towards creating it.

Education is an essential tool for achieving sustainability. It is a comprehensive process and imparting of instruction is one of the processes of achieving the goals and objectives of Education. Education for sustainable development implies a quality of change in educational thinking and practice. It is a unique investment in the present and future. It develops manpower for different levels of the economy. It is also the substrate on which research and development flourishes. People around the world recognize that current economic development trends are not sustainable and that public awareness, education, and training are the key to moving society towards sustainability. Therefore, let us first understand the concept and principles of sustainable development and then know about its importance for education.

Meaning and Definition of Sustainable Development

Sustainable development is a difficult concept to define; it is also continually evolving, which makes it doubly difficult to define. One of the original descriptions of sustainable development is credited to the Brundtland Commission: "Sustainable development is
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development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

There are four dimensions to sustainable development – society, environment, culture and economy – which are intertwined, not separate. Sustainability is a paradigm for thinking about the future in which environmental, societal and economic considerations are balanced in the pursuit of an improved quality of life. For example, a prosperous society relies on a healthy environment to provide food and resources, safe drinking water and clean air for its citizens.

One might ask, what is the difference between sustainable development and sustainability? Sustainability is often thought of as a long-term goal (i.e. a more sustainable world), while sustainable development refers to the many processes and pathways to achieve it (e.g. sustainable agriculture and forestry, sustainable production and consumption, good government, research and technology transfer, education and training, etc.).

Principles of Sustainable Development

Many governments and individuals have pondered what sustainable development means beyond a simple one-sentence definition. The Rio Declaration on Environment and Development flashes out the definition by listing 18 principles of sustainability.

- People are entitled to a healthy and productive life in harmony with nature.
- Development today must not undermine the development and environment needs of present and future generations.
- Nations have the sovereign right to exploit their own resources, but without causing environmental damage beyond their borders.
- Nations shall develop international laws to provide compensation for damage that activities under their control cause to areas beyond their borders.
- Nations shall use the precautionary approach to protect the environment. Where there are threats of serious or irreversible damage, scientific uncertainty shall not be used to postpone cost-effective measures to prevent environmental degradation.

- In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process, and cannot be considered in isolation from it. Eradicating poverty and reducing disparities in living standards in different parts of the world are essential to achieve sustainable development and meet the needs of the majority of people.
- Nations shall cooperate to conserve, protect and restore the health and integrity of the Earth's ecosystem. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.
- Nations should reduce and eliminate unsustainable patterns of production and consumption, and promote appropriate demographic policies.
- Environmental issues are best handled with the participation of all concerned citizens. Nations shall facilitate and encourage public awareness and participation by making environmental information widely available.
- Nations shall enact effective environmental laws, and develop national law regarding liability for the victims of pollution and other environmental damage. Where they have authority, nations shall assess the environmental impact of proposed activities that are likely to have a significant adverse impact.
- Nations should co-operate to promote an open international economic system that will lead to economic growth and sustainable development in all countries. Environmental policies should not be used as an unjustifiable means of restricting international trade.
- The polluter should, in principle, bear the cost of pollution.
- Nations shall warn one another of natural disasters or activities that may have harmful transboundary impacts.
- Sustainable development requires better scientific understanding of the problems. Nations should share knowledge and innovative technologies to achieve the goal of sustainability.
- The full participation of women is essential to achieve sustainable development. The creativity, ideals and courage of youth and the knowledge of indigenous people are

needed too. Nations should recognize and support the identity, culture and interests of indigenous people.

- Warfare is inherently destructive of sustainable development, and Nations shall respect international laws protecting the environment in times of armed conflict, and shall cooperate in their further establishment.
- Peace, development and environmental protection are interdependent and indivisible.

The "Rio principles" give us parameters for envisioning locally relevant and culturally appropriate sustainable development for our own nations, regions, and communities. These principles help us to grasp the abstract concept of sustainable development and begin to implement it. Now let us discuss on importance of sustainable development for education.

Education for Sustainable Development (ESD)

Education for Sustainable Development means including key sustainable development issues into teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for sustainable development. Education for Sustainable Development consequently promotes competencies like critical thinking, imagining future scenarios and making decisions in a collaborative way.

ESD is about the learning needed to maintain and improve 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 success 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. In the way, that Education for sustainable development enables people to develop the knowledge, values and skills to participate 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 planet for the future.

Education is intrinsically intertwined with the development process and constitutes the instrumentality of modernisation of tradition. The role of education in economic development has been noted by the researchers. At the micro level the direct and indirect role of education through value-orientation in economic development has already been established. Education is also vital to sustain competitive markets and viable democracy. Even at the macro level, social benefits of elementary education are immense. Educated parents send their children to school; elementary education leads to perpetuation of benefits from one generation to another.

History of Education for Sustainable Development

From the time sustainable development was first endorsed at the UN General Assembly in 1987, the parallel concept of education to support sustainable development has also been explored. From 1987 to 1992, the concept of sustainable development matured as committees discussed, negotiated, and wrote the 40 chapters of Agenda 21. Initial thoughts concerning ESD were captured in Chapter 36 of Agenda 21, "Promoting Education, Public Awareness, and Training."

Unlike most education movements, ESD was initiated by people outside of the education community. In fact, one major push for ESD came from international political and economic forums (e.g., United Nations, Organization for Economic Co-operation and Development (OECD), Organization of American States). In many countries, ESD is still being shaped by those outside the education community. The concepts and content of ESD in these cases are developed by ministries, such as those of environment and health and then given to educators to deliver.

Key Themes in Education for Sustainable Development

Education for sustainable development shares many common themes with education for all and the United Nations literacy decade. These themes include:

1. Overcoming poverty

2. Gender Equality
3. Health promotion
4. Environmental conservation and protection
5. Rural Transformation : Education for Rural people
6. Human Rights
7. Intercultural Understanding and peace
8. Cultural Diversity
9. Information and Communication Technologies (ICTs)

Poverty alleviation through appropriate economic development is one of the keypillars on which sustainable development will be achieved. It is central to all millennium development goals that recognize the importance of gender issues, education, health and environmental protection to sustainable human development. Gender equality in formal education is also the main objective of the UN Girls' Education Initiative. All these initiatives emphasize the need for gender – sensitive approaches and materials and for the integration of gender perspectives into all educational activities. Environment and health are closely entwined, reflecting the complex links between the social, economic, ecological and political factors that determine standards of living and other aspects of social well being that influence human health. A healthy population and safe environments are important pre-conditions for sustainable development. There can be no long-term economic or social development on a depleted planet. Education to develop widespread understanding of the interdependence and fragility of planetary life support systems and the natural resource base upon human well being depends at the core of education for sustainable development. The challenge of education to serve rural transformation is one of the main themes of the education for all effort. Preventing urbanization and keeping rural people confined to rural areas cannot solve the problems of poverty and deprivation in rural areas and their spillover into urban areas. Half of the people of the world still live in rural areas. Three quarters of the world's poor, those earning less than a dollar a day, live in rural areas. So, educational activities have to be linked to the specific needs of the rural community for skills and capacities to seize economic opportunities, improve livelihood and enhance the quality of life. A multi-sectoral educational

approach involving all ages and formal, non-formal and informal education is necessary. Without respect for human rights there will be no sustainable development. This view emerges in the World Summit on Sustainable Development (WSSD), sometimes referred to as Earth Summit 2002, at which the Plan of Implementation of the WSSD was agreed upon and one of those rights is to quality basic education, of which literacy is a part. It is not just a matter of exercising an individual right, as an adult or child, to be educated, but of arriving at a point where societies see fulfilment of that right as a sine qua non of sustainable development. Many opportunities for education and sustainable human development are being undermined by lack of tolerance and intercultural understanding upon which peace is founded. Sustainable lifestyle and ways of working are central to overcoming poverty and conserving and protecting the natural resource base for all life. "Our rich diversity ... is our collective strength" A key aspect of diversity is respect for indigenous languages in education. A useful tool of learning and expressing the common problem is expanding access to information and communication technology and developing their use to enhance basic education. The relationship between education and sustainable development is complex. Generally, research shows that basic education is the key to a nation's ability to develop and achieve sustainability targets.

Thresholds of Education and Sustainability

Consider for instance, that when education levels are low, economies are often limited to resource extraction and agriculture. In many countries, the current level of basic education is so low that it severely hinders development options and plans for a sustainable future. A higher education level is necessary to create jobs and industries that are "greener" (i.e., those having lower environmental impacts) and more sustainable.

Research has shown that education can improve agricultural productivity, enhance the status of women, reduce population growth rates, enhance environmental protection, and generally raise the standard of living. But the relationship is not linear. For example, four to six years of education is the minimum threshold for increasing agricultural productivity. Literacy and numeracy allow farmers to adapt to new agricultural methods, cope with risk, and respond to

market signals. Literacy also helps farmers mix and apply chemicals (e.g., fertilizers and pesticides) according to manufacturers' directions, thereby reducing the risks to the environment and human health. A basic education also helps farmers gain title to their land and apply for credit at banks and other lending institutions. Effects of education on agriculture are greatest when the proportion of females educated to threshold level equals that of males.

Education benefits a woman in life-altering ways. An educated woman gains higher status and an enhanced sense of efficacy. She tends to marry later and desire a smaller family size and seek the health care necessary to do so. An educated woman has high educational and career expectations of her children, both boys and girls. For females, education profoundly changes their lives, how they interact with society, and their economic status. Education of women increases their ability to participate in community decision making and work toward achieving local sustainability goals. Education directly affects sustainability plans in the following three areas:

Implementation: An educated citizenry is vital to implementing informed and sustainable development. In fact, a national sustainability plan can be enhanced or limited by the level of education attained by the nation's citizens. Nations with high illiteracy rates and unskilled workforces have fewer development options. For the most part, these nations are forced to buy energy and manufactured goods on the international market with hard currency. To acquire hard currency, these countries need international trade; usually this leads to exploitation of natural resources or conversion of lands from self-sufficient family-based farming to cash-crop agriculture. An educated workforce helps the nation to move beyond an exploitative and agriculture based economy.

Decision making: Good community based decisions which will affect social, economic, and environmental well-being also depend on educated citizens. Development options, especially "greener" development options, expand as education increases. For example, a community with an abundance of skilled labor and technically trained people can persuade a corporation to locate a new information-technology and software-development facility nearby.

Quality of life: Education is also central to improving quality of life. Education raises the economic status of families; it improves life conditions, lowers infant mortality, and improves the educational attainment of the next generation, thereby raising the next generation's chances for economic and social well-being. Improved education holds both individual and national implications.

Conclusion:

The paramount importance of education in effecting social change is a well recognized fact. Mainstream education must be realigned to promote awareness, attitudes, concerns and skills that will lead to sustainable development. Education for sustainable development can motivate teachers and pupils resulting in effective teaching and learning to equip the young with the knowledge, values and skills in the area of citizenship and sustainable development that will allow them to participate as full members of society and work towards solutions to sustainable development problems and issues.

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