

Importance of Education for Sustainable Development

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ABSTRACT: Education for Sustainable Development allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. 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. Education is an essential tool for achieving sustainability. People around the world recognize that current economic development trends are not sustainable and that public awareness, education, and training are key to moving society toward sustainability. Beyond that, there is little agreement. People argue about the meaning of sustainable development and whether or not it is attainable. They have different visions of what sustainable societies will look like and how they will function. These same people wonder why educators have not moved more quickly to develop education for sustainability (EFS) programs. The lack of agreement and definition have stymied efforts to move education for sustainable development (ESD) forward.

Keywords: education, sustainable development, environmental education

INTRODUCTION

An important distinction is the difference between education *about* sustainable development and education *for* sustainable development. The first is an awareness lesson or theoretical discussion. The second is the use of education as a tool to achieve sustainability. In our opinion, more than a theoretical discussion is needed at this critical juncture in time. While some people argue that "for" indicates indoctrination, we think "for" indicates a purpose. All education serves a purpose or society would not invest in it. Driver education, for example, seeks to make our roads safer for travellers. Fire-safety education seeks to prevent fires and tragic loss of lives and property. ESD promises to make the world more livable for this and future generations. Of course, a few will abuse or distort ESD and turn it into indoctrination. This would be antithetical to the nature of ESD, which, in fact, calls for giving people knowledge and skills for lifelong learning to help them find new solutions to their environmental, economic, and social issues.

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 development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987, p 43). Sustainable development is generally thought to have three components: environment, society, and economy. The well-being of these three areas is intertwined, not separate. For example, a healthy, prosperous society relies on a healthy environment to provide food and resources, safe drinking water, and clean air for its citizens. The sustainability paradigm rejects the contention that casualties in the environmental and social realms are inevitable and acceptable consequences of economic development. Thus, the authors consider sustainability to be a paradigm for thinking about a future in which environmental, societal, and economic considerations are balanced in the pursuit of development and improved quality of life.

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* fleshes 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 cooperate 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.

Sustainability

Here are some effective explanations of sustainable development created for different audiences.

Sustainable development has three components: environment, society, and economy. If you consider the three to be overlapping circles of the same size, the area of overlap in the centre is human well-being. As the environment, society, and economy become more aligned, the area of overlap increases, and so does human well-being.

The National Town Meeting on Sustainability (May 1999) in Detroit, Michigan, established that the term "sustainable development," although frequently used, is not well understood. We believe that it means new technologies and new ways of doing business, which allow us to improve quality of life today in all economic, environmental, and social dimensions, without impairing the ability of future generations to enjoy quality of life and opportunity at least as good as ours.

The human rights community says that sustainability is attainable through and supported by peace, justice, and democracy.

The Great Law of the Hau de no sau nee (Six Nations Iroquois Confederation) says that in every deliberation we must consider the impact on the seventh generation.

Economics educators say sustainability is living on the interest rather than the principle.

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, Organization of American States). As the concept of sustainable development was discussed and formulated, it became apparent that education is key to sustainability. 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. Conceptual development independent of educator input is a problem recognized by international bodies as well as educators.

Education: Promise and Paradox

Two of the major issues in the international dialog on sustainability are population and resource consumption. Increases in population and resource use are thought to jeopardize a sustainable future, and education is linked both to fertility rate and resource consumption. Educating females reduces fertility rates and therefore population growth. By reducing fertility rates and the threat of overpopulation a country also facilitates progress toward sustainability. The opposite is true for the relationship between education and resource use. Generally, more highly educated people, who have higher incomes, consume more resources than poorly educated people, who tend to have lower incomes. In this case, more education increases the threat to sustainability.

Unfortunately, the most educated nations leave the deepest ecological footprints, meaning they have the highest per-capita rates of consumption. This consumption drives resource extraction and manufacturing around the world. The figures from the United Nations Educational, Scientific and Cultural Organization (UNESCO) *Statistical Yearbook* and *World Education Report*, for example, show that in the United States more than 80 percent of the population has some post-secondary education, and about 25 percent of the population has a four-year degree from a university. Statistics also show that per-capita energy use and waste generation in the United States are nearly the highest in the world. In the case of the United States, more education has not led to sustainability. Clearly, simply educating citizenry to higher levels is not sufficient for creating sustainable societies. The challenge is to raise the education levels without creating an ever-growing demand for resources and consumer goods and the accompanying production of pollutants. Meeting this challenge depends on reorienting curriculums to address the need for more-sustainable production and consumption patterns.

Every nation will need to reexamine curriculum at all levels (i.e., pre-school to professional education). While it is evident that it is difficult to teach environmental literacy, economics literacy, or civics without basic literacy, it is also evident that simply increasing basic literacy, as it is currently taught in most countries, will not support a sustainable society.

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 have greater bargaining power and success in the "marriage market." She also has greater bargaining power in the household after marriage. An educated woman tends to desire a smaller family size and seek the health care necessary to do so. She has fewer and healthier children. 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. Educating women creates more equitable lives for women and their families and increases their ability to participate in community decision making and work toward achieving local sustainability goals.

Where did ESD come from?

The term ESD refers to the pedagogical approach of learning about and developing skills for 'sustainable development'. The principle of sustainable development originates from the United Nations Conference on the Human Environment in Stockholm 1972 where the interrelated nature of human activities and the environment was officially recognised by the international community. It is generally accepted that sustainable development is fundamentally about trying to achieve a balance between the economy, society (people) and the environment.

The concept of sustainable development has gained notable popularity since the United Nations World Commission on Environment and Development (Our Common Future) Report of 1987 and the United Nations Conference on Environment and Development of 1992 (otherwise known as the Rio Earth Summit), that gave rise to the most recognised and referred to definition of:

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (WCED, 1987)

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 is key to moving beyond an extractive and agricultural 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. Citizens can also act to protect their communities by analyzing reports and data that address community issues and helping shape a community response. For example, citizens who were concerned about water pollution reported in a nearby watershed started monitoring the water quality of local streams. Based on their data and information found on the World Wide Web, they fought against the development of a new golf-course, which would have used large amounts of fertilizer and herbicide in maintenance of the grounds.

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. Converse to the traditional way of teaching, Education for Sustainable Development means adopting a more holistic approach to education with the aim of 'creating a better world for this generation and future generations of all living things on planet Earth'. This allows every child to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future.

Humans tend to look at development as a needed and normal process, but when this process becomes increasingly dependent on over-exploitation of our natural resources, the replenishment of these reserves and supplies is affected; and managing this imbalance demands assuming a slightly different school of thought.

One way to cultivate this mindset in our youngsters is by encouraging sustainable lifestyles through Education for Sustainable Development. Living sustainably is about changing our attitudes in a way that helps transform our lives into something that doesn't impact too heavily on our current routines, while using the planet's resources in moderation.

Education for Sustainable Development incorporates key environmental challenges like climate change into core subjects like math, science and art, and involves modifying the teaching-learning process to a more all-encompassing approach. Students are thus able to relate what they learn in the classroom to their real life actions, and will increasingly be in a better position to take the lead in changing behaviours and adopting sustainable lifestyles, the more this type of education is adopted.

By equipping young people with these relevant capabilities in addition to their environmental knowledge, they can excel at living lives which not only further humanity, but that care for and respect our planet's resources too.

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