Expanding Educational Horizons for Sustainable Development

Prof. Marie Perera

Department of Humanities Education, University of Colombo, Sri Lanka
mperera12@gmail.com

I.   INTRODUCTION

This paper is on Education for Sustainable Development and it would focus on the following sub topics.

- Define Sustainable Development.
- Define Education for Sustainable Development
- Goals of Education for Sustainability
- The achievements in relation to the goals
- Challenges and way forward

II.   SUSTAINABLE DEVELOPMENT

There are many definitions on Sustainable Development which shows that it encompasses a wide spectrum of fields. However, even though there is no consensus regarding what it is, there is no uncertainty about its importance. For the purpose of this paper, I would consider the original definition of sustainability stated in the World Commission Report commonly referred to as the Brundtland Commission report.

"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).

The concern for sustainability as a global issue rose as a result of the understanding that economic development while it is the driving force of any nation has its negative effects as well. Sustainable Development includes three main areas as shown in Fig.1

Fig.1: Components of Sustainable Development

In the past it was believed that it was inevitable that economic development would affect the environment and society. However, today it is accepted that the well being of these three domains are inter woven. For example, industrial fumes affects the environment which results in an unhealthy society.

In spite of this concern on Sustainability key challenges to the three main domains continue. Some of these challenges are:

- human-induced climate change,
- the rapid depletion of natural resources, the frequency of natural disasters,
- the spread of (old and new) infectious diseases,
- the loss of biodiversity,
- the violation of human rights,
- Increased poverty,
- the dependency of our economic systems on continuous growth in consumerism

How to overcome the challenges?
Education is an essential tool for achieving sustainability. There is world wide recognition that current economic development trends are not sustainable and that public awareness, education, and training are key to moving society toward sustainability. As Nelson Mandela stated *"Education is the most powerful weapon you can use to change the world."*

The role of Education in Sustainable Development was emphasized in a chapter on Education in Agenda 21, which was adopted as a result of the Earth Summit of 1992.

Recognizing the power of Education for sustainable Development the UNO declared a decade 2005 - 2014 as the United Nations Decade of Education for Sustainable Development. Hence it is fitting that the theme of this conference which is held in 2014 - the end of the decade is Expanding Developmental horizons through Education , Research and Innovations

Education for Sustainable Development
Education for Sustainable Development means including key sustainable development issues into teaching and learning; for example, climate change, disaster risk reduction.

Education for Sustainable Development allows every human being to acquire the **knowledge**, **skills, attitudes and values necessary to shape a sustainable future**. (*http://www.unesco.org/*)

According to the ESD description/definition as provided in the original Decade of Education for Sustainable Development Monitoring and Evaluation guidelines document

Education for Sustainable Development (ESD) is a learning process (or approach to teaching) based on the ideas and principles that underlie sustainability and is concerned with all levels and types of education. ESD supports five fundamental types of learning to provide quality education and foster sustainable human development – learning to know, learning to be, learning to live together, learning to do and learning to transform one self and society (p.26)

Thus is could be seen that ESD is a planned systematic process of education. It emphasizes not only knowledge, but attitudes, skills, and practice. It is a learner centered approach where the types of learning necessary have also been identified. ESD has its own identified goals as well.

Goals of ESD

According to Agenda 21 the goals of Education for Sustainable Development are
1. Improve basic education,
2. Reorient existing education to address sustainable development,
3. Develop public understanding, awareness,
4. Training
(Chapter 36 of *Agenda 21)*

When the above goals are considered the improvement in basic education is apparent in most of the countries. In Sri Lanka the net enrollment in basic primary education is 96%. which is satisfactory .

If one considers the number of 'hits' or websites generated using the search engine, Google, as an indicator of the presence of a phenomenon in society and if the growth in these hits over time is an indicator of an increase of this presence in society, the following statistics is significant regarding the second goal of ESD.

On March 29th 2005, the year of the start of the DESD, a Google search for "Education for Sustainable Development" yielded 89,000 websites. On January 29th 2009, almost four years into the DESD, the same search yields 215,000 of such websites. This represents a 'Google growth of 142 per cent.On August 20th 2014 almost a decade later the same search yields 47,800,000

There are numerous programmes in Sri Lanka to raise awareness among the public regarding different aspects of Sustainable development. Shramadana campaigns, tree planting programmes, mosquito and dengue eradication are some such programmes. These are organized by the public as well as non governmental sector.

This paper concentrates on training in one sector – namely the training of teachers. The National Colleges of Education are the prime institutes for training pre service teachers. They produce around 3000 teachers of various disciplines to the teacher cadre. A training manual has been prepared to train these trainees to integrate peace and sustainability in to the curriculum and pedagogy.

The manual is the outcome of a UNESCO – New Delhi Co – ordinated project supported by Japan Funds –in-Trust Co-operation on Training of Trainers on Post Conflict peace building to promote quality and innovation in Teacher Education through ESD. The manual consists of two parts. While part one contains the theoretical basis for ESD, part 2 consists of an activity guide with 22 model activities reflecting the three dimensions of Sustainable Development - society, environment and economy.

One such activity based on the theme of 'let's manage waste" is given in annexure 1.

The identified objectives of this activity relate to knowledge, skills and practice. Further. five values to be embedded through this activity are also stated. Therefore, it could be claimed that this activity confirms to the definition of Education for sustainable development.

On paper it appears that Goals of ESD have been achieved. Yet, have we really achieved ESD?

The Reality

The following photographs taken in the city of Colombo illustrate the reality of ESD. Is this sustainable development?

Photo 1: Garbage Bin near a hotel in the early morning.

Photo 2: A newly constructed manhole has become a garbage bin!

Photo 3: Different types of garbage dumped together. Further, this illustrates the irresponsible behavior of the person who should have locked the door.

The message that these photos convey is that even though people have the knowledge on Sustainable development, inculcation of values has not taken place.

Lessons from the past

It was the West that had a "disposable culture" . Sri Lankans' on the other hand had a "Handing down culture".   Things were handed down from grandmother to daughter and to the grand daughter. The elder sibling in the family knew that s/he had to look after the clothes or books as they had to give them to the younger sibling. Yet, today the situation has changed. The State provides free textbooks and free uniforms. No one is willing to take an old book. Even though there is a policy that old books have to be reused and only badly damaged books should be sent for recycling in most schools the situation is contrary to the policy. There are no storage facilities in schools to store the damaged books or systematic centralized recycling process. After collecting dust and further polluting the environment in some schools books are at the instruction of the authorities burnt by the pupils themselves.   Can we call this Education for sustainable development? Thus even though the textbooks have many examples of the concept of sustainable development in all subjects taught, what is practiced is different to the theory.

All religions teach the concept of sustainability. In Buddhism, Vinaya Pitakaya states that a Monk is expected to wear a robe when it is torn by darning it. When it is not possible to darn it any further the robe has to be used as a rug. As it becomes unusable as a rug it would be used to be mixed with the clay to build a wall. In Christianity God created the earth, the plants, the animals and finally man.

He was asked to look after the earth and all its in habitants including the fauna and flora in both the Quran and the Hindu Vedas there are many references to the need to protect the environment.

Yet in spite of our cultural roots and religious beliefs we are today moving towards a disposable culture even surpassing the West. How then can we use Education as a weapon to change the world?

The way forward

Many topics inherent in ESD are already part of the formal education curriculum. But these topics are not identified or seen to contribute to the larger concept of sustainability. Identifying and recognizing components of ESD in all subjects is a key to moving forward. In this regard English Language Lecturers can play a major role. As the teaching approach is changing to Content and Language Integrated Learning (CLIL), the lecturers can select content from any subject discipline which can be connected to SD. Such a topic can facilitate the teaching of all four language skills. However, as already discussed knowledge alone is not sufficient.
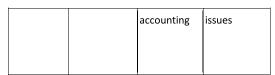
To create an ESD curriculum, educational communities will need to identify

- knowledge,
- issues,
- Attitudes,
- Skills

Central to sustainable development in each of the three components - environment, economy, and society. Figure 1 is one such example.

Table 1 Example of an integrated lesson

	environment	economy	society
Knowledge*	hydrologic cycle	supply and demand	conflict
Issues	protecting and managing freshwater; managing hazardous wastes	combating poverty	changing consumption patterns
Skills	the ability to acquire, manage, and analyze data	the ability to identify components of full-cost accounting	the ability to think critically about value issues

Inculcating values and attitudes are the most important aspect of ESD. It has been argued whether values could be taught overtly in the schools or whether they would be caught. Though values are being taught or caught, they would not become practice unless they are inculcated.

Therefore, the reason as to values inherent in ESD not been practiced may be due to the fact that theyare neither taught nor caught. In both situations, understanding values is an essential part of understanding your own worldview and other people's viewpoints. Understanding your own values, the values of the society you live in, and the values of others around the world is a central part of educating for a sustainable future. Therefore, it is essential that values are both "taught "and "caught."

In order for the values to be taught the teaching approaches need to be changed. Following are some of the approaches that could be used.

- Issue analysis

Issue analysis is a structured technique for exploring the environmental, social, economic, and political roots of problems that face communities. Issue analysis helps pupils identify major arguments related to a community problem as well as key stakeholders and their perspectives, goals, and assumptions related to that problem. Issue analysis also looks critically at the proposed solutions and the costs—financial and otherwise—and at who will bear those costs. Issue analysis can be done briefly or in depth. Issue analysis is interdisciplinary, bridging the natural and social sciences.

- Simulation

Concepts associated with sustainability are often abstract and complex. Simulations reduce complexity and highlight salient aspects. Simulations give concrete ways to teach abstract concepts. Providing concrete examples for abstract concepts is especially important for children and adolescents, many of whom are still in the concrete stages of cognitive development.

- Picture Discussion

  "A picture paints a thousand words" – photos of critical issues would facilitate issue analysis as was shown in this presentation.

In order for values to be caught the most essential factor is role models. As long as teachers and parents are not role models in maintaining sustainability and they contribute to the 'disposable culture" ESD will continue to be a challenge. Therefore it is up to the teachers and parents as Mahatma Gandhi said to "be the change that you wish to see in the world", If you think you are too small to contribute to ESD remember this African proverb,

"If you think you are too small to make a difference, you have not spent a night with a mosquito".

Unless and until you change, you have not achieved the five fundamental types of learning to foster sustainable development – learning to know, learning to be, learning to live together, learning to do and learning to transform one self and society.

REFERENCES

Framework for a DESD communication strategy in support of the UN Decade of Education for Sustainable Development, http://unesdoc.unesco.org/images/0015/ 001512/ 151243e

National Institute of Education, Training Manuel on Education for Sustainable Development

O'DONOGHUE, M. (Ed.) 2008. Education for Sustainable Development . "Images and Objects" Active Methodology Toolkit. Norway :THE CONSUMER CITIZENSHIP NETWORK

UNESCO (2009) Review of Contexts and Structures for Education for Sustainable Development http://www.esdtoolkit.org/discussion/go als.htm

United Nations Decade of Education for Sustainable Development (2005-2014) Education for Sustainable Development Lens: A Policy and Practice Review Tool http://www.unesco.org/new/en/educatio n/theme s/leading-the-international-agenda/education-for-sustainable-development/

United Nations Conference on Environment and Development Report (UNCED), Rio de Janeiro, 3-14 June 1992

World Commission on Environment and Development (WCED) (1987). Our common future. Oxford: Oxford University Press