International Journal on Arts, Management and Humanities **6**(2): 51-54(2017)

ISSN No. (Online): 2319–5231

Education for Sustainability: A Paradigm for Thinking and Doing

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(Received 20 August, 2017, Accepted 23 September, 2017)
(Published by Research Trend, Website: www.researchtrend.net)

ABSTRACT: Sustainability is a paradigm for thinking about a future in which environmental, social and economic considerations are balanced in the pursuit of development and an improved quality of life. Sustainable Development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This paper reflects on education as social transformation for sustainable development that facilitates change by fostering new knowledge, behaviours and practices. This paper gives insightful links between five pillars of education and Millennium Development Goals. The main thrust areas and components of Education for Sustainability are also depicted in this paper.

Key words: Education, Sustainability and Development.

I. INTRODUCTION

Sustainability of education is a learning and change process which is significant to people, communities and organizations. Its objective is to connect learners in philosophy critically and artistically about the future as well as in considering the systemic changes that are needed to progress quality of life across the world (www.westernsydney.edu.au). Sustainability is a paradigm for thinking about a future in which environmental, social and economic considerations are balanced in the pursuit of development and an improved quality of life. The ideals and principles that underlie sustainability include broad concepts such as equity among generations, gender equity, peace, tolerance, poverty reduction, environmental preservation and restoration, natural resource conservation, and social justice. Sustainability is often thought of as a long-term goal, 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.) [5].

Herman Daly (1989) has suggested three conditions of a sustainable society: (1) Rates of use of renewable resources do not exceed their rates of regeneration. (2) Rates of use of non-renewable resources do not exceed the rate at which sustainable renewable substitutes are developed. (3) Rates of pollution emission do not exceed the assimilative capacity of the environment. Donnella Meadows (1992) outlined these general guidelines for restructuring world systems towards sustainability as: (1) Minimize the use of non-renewable resources. (2) Prevent erosion of renewable resources. (3) Use all resources with maximum efficiency. (4) Slow and eventually stop the exponential growth of population and physical capital. (5) Monitor the condition of resources, the natural environment, and the welfare of humans. (6) Improve response time for environmental stress [1,3].

Foundation has been laid for sustainability education all over the world. Current changes in service learning, a focus on literacy's and skills, standards that support interdisciplinary thinking, and the role of systems thinking have all enhanced the visibility of the movement (Dernback, 2002) [12]. The different approaches and strategies of ESD influence people to comprehend the complexities of, and synergies between, the issues frightening planetary sustainability and understand and assess their own values and those of the society in which they live in the context of sustainability [4]. ESD seeks to connect people in bargaining a sustainable future, making decisions and acting on them. While it is generally decided on that sustainabile education must be modified for individual learners (Huckle and Sterling, 2006) according to Tilbury and Wortman, the following skills are essential to ESD [13].

II. SUSTAINABLE DEVELOPMENT

The World Commission on Environment and Development (Brundtland Commission), chaired by former Norwegian Prime Minister Gro Harlem Brundtland, referred to sustainable development in its report, *Our Common Future*, as a concept that covers both aspects of the environment and development for the first time. Brundtland defined sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (World Commission, 1987) [9].

III. PRINCIPLES OF SUSTAINABLE DEVELOPMENT

The Rio Declaration (1992) highlighted certain principles in relation to sustainable development. They are: i) To ensure healthy and productive life; ii) To meet developmental and environmental needs of present and future generations in an equitable way; iii) Eradicating poverty and reducing disparities in living standards; iv) To look into Environmental protection as an integral part of the development process; v) To achieve a higher quality of life for all people, countries should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies. vi) To emphasize the role of public participation in community and governmental decision-making. vii) To encourage women's participation in environmental management. viii) To call for greater transparency and accountability in governmental decision-making etc [10-11].

Source: greencleanguide.com

Fig. 1.

IV. EDUCATION FOR SUSTAINABLE DEVELOPMENT

In wider outlook, ESD is an education for social transformation with the goal of reaching sustainable development. ESD touches every aspect of education including planning, policy making, programme implementation, finance, curricula, teaching, learning, assessment, and administration. ESD aims to provide a coherent interaction between education, public awareness, and training with a view to creating a more sustainable future. ESD includes all three spheres of sustainability – environment, society, and economy – with an underlying dimension of culture. It engages formal, non-formal and informal education in using variety of pedagogical techniques (simulations, class discussions, issue analysis, and storytelling) that promote participatory learning and higher-order thinking skills. It promotes life-long learning. It is based on local needs, perceptions and conditions.

Education for Sustainable Development (ESD) facilitates change by fostering new knowledge, behaviours and practices, by emphasizing creative and innovative approaches. It also builds capacity in individuals and organizations for transformational change. The basic value of Education for Sustainable Development (ESD) is respect: respect for others, both present and future generations; and respect for the planet and what it provides to us (e.g. resources, fauna and flora). Education for sustainable development reorients on interdisciplinary, holistic learning, value-based learning, critically reflective thinking, multi-method approaches (word, art, drama and debate) and participatory decision-making. Goal of the Education for Sustainable Development (ESD) is to integrate the

principles and practices of sustainable development into all aspects learning. This educational effort will encourage changes in behaviour that will create a more sustainable future in terms of environmental integrity, economic viability, and a just society for present and future generations.

There are four important thrust areas in ESD viz., 1) Improving access and retention in quality basic Education, 2) Reorienting existing educational programmes to address sustainability, 3) Increasing public awareness and understanding of sustainability and 4) Providing training to all sectors of the workforce. Formal, non-formal and informal sectors of the education community take vital role to address the four thrust areas of ESD. The four pillars of education as per Delors' Report are: 1) learning to know, 2) learning to do, 3) learning to live together, and 4) learning to be. A fifth pillar was added by UNESCO [8]. This fifth pillar is learning to transform oneself and society. The fifth pillar deeply maps about sustainability. All five pillars are necessary to people in order to sustain their life in the path of peace, prosperity and progress. No doubt, the four thrust areas of ESD and the five pillars of education bring together two compatible educational paradigms. Both are necessary to help people from all walks of life to create a more sustainable future. There is a connection between ESD and achieving the Millennium Development Goals (MDGs). The first thrust area of the ESD (improving access to and retention in quality Basic education is reflecting MDGs #2(Universalisation of Primary Education) [6].

V. COMPONENTS OF EDUCATION FOR SUSTAINABILITY

The main components of education for sustainability are: 1) Better Future 2) Reflection, 3) Participation, 4) Partnership, 5) Thinking and 6) Learning Process.

1) Better Future: Education for Sustainability establishes a link between long term goals and immediate actions. It motivates people to action by harnessing their deep aspirations. It follows vision and explores how to achieve desirable change. It directs and energizes to take action.

2) Reflection: Education for Sustainability advocates questioning and reflection on our actions and decisions, in order to re-think and re-design our activities. It discourages unsustainable practice through thoughtful questions. It provides a new perspective as well as promotes alternative ways of thinking.

3) Participation: Education for Sustainable Development involves people in analysis, planning, and control of local decisions. It empowers individuals to take action and puts decision-making and responsibility for outcomes. It creates a greater sense of ownership and commitment to action and builds capacity for self-reliance and self-organization.

4) Partnership: Education for Sustainable Development builds a shared vision amongst a diverse range of stakeholders and strengthens ownership and commitment to sustainable actions through formal and informal opportunities for learning. It motivates and adds value to initiatives. It builds not only competence but also a strategy which will assist people and organizations to move towards sustainability.

5) Thinking: Education for Sustainable Development talks about futures-oriented thinking that motivates for action. It follows systematic thinking and critical thinking. It recognizes that the whole is more than the sum of its parts to manage complex situations. It identifies connections and relationships. It shifts thinking from 'things' to 'processes'. It integrates decision-making and adaptive management techniques.

6) Learning process: In education, learning process involves with the acquisition of knowledge, skills, and values. ESD involves selecting appropriate knowledge, skills, values, perspectives, and for the environmental, social, and economic spheres of sustainability.

i) **Knowledge:** Education for Sustainable Development gives basic knowledge about ecological and social elements. People need basic knowledge from the natural sciences, social sciences, and humanities to understand: a) the principles of sustainable development, b) how they can be implemented, c) how values can be inculcated and d) ramifications of their implementation.

ii) **Skills:** ESD enhances practical skills for people that will enable them to continue learning, to find a sustainable livelihood, and to live with sustainability. It cultivates abilities to think about systems (natural and social sciences) and time (think ahead, planning). It promotes communicative competencies in oral and written forms. It develops critical thinking abilities to use multiple perspectives. It encourages working cooperatively with other people and promotes the capacity to develop an aesthetic response to the environment and the arts. It analyses certain values intrinsically and extrinsically. It builds capacity to move from awareness to action. Core skills on Education for Sustainability include: taking a holistic view of the current situation; challenging the assumptions that underpin day-to-day practices; creating a new systemic view around which to organize new practices; and drawing on the strengths of collaboration and action learning.

iii) **Values:** It is an essential part of understanding one's own and other people's values. Education for sustainable development focuses on understanding values. It makes one to follow one's own righteous values, the values of the society one lives in, and the values of others around the world. Values from the Earth Charter (2010) may be listed as [2]: 1) Promote a culture of tolerance, nonviolence, and peace.2) Respect the Earth and life in all its diversity. 3)

Focus on gender equality and equity. 4) Care for the community of life with understanding, compassion, and love. 5) Build democratic societies that are just, participatory, sustainable, and peaceful. 6) Secure the Earth's bounty and beauty for present and future generations. 7) Eradicate poverty as an ethical, social, and environmental imperative. 8) Uphold the right of all, without discrimination. 9) Treat all living beings with respect and consideration.

iv) **Issues:** Every community has sustainability issues. Reorienting education includes relevant issues in community. The issues may be listed in connection with a) Agriculture, b) Atmosphere, c) Biodiversity, d) Changing consumption patterns, e) Climate Change, f) Deforestation g) Desertification and drought, h) Fresh water, i) Gender equity, j) Human settlement, k) Indigenous people, l) Land use, m) Oceans, n) Population growth, o) Poverty, p) Protecting and promoting human health, q)Solid and hazardous wastes and sewage.

v) **Perspectives:** Perspectives on sustainability may not be limited to environmental protection and human-centred development. They are commonly statements that project balance and integration of environment, society, and economy. Humans have universal attributes. The family is the foundational social unit. Local issues must be understood in a global context and we should realize that solutions to local problems may have global connectivity. Contemporary global environmental issues are interrelated. Systems thinking should be used in problem solving rather than looking at problems in isolation. Partnerships can achieve more benefits than solitary action. Economic values, religious values, and societal values compete for importance as people with different interests and backgrounds interact. It is to be remembered that technology and science alone cannot solve all of our problems. Multiple views should be considered before reaching a decision or judgement. Community and governmental decision-making must include public participation. Transparency and accountability in governmental decision-making are essential.

However, some researchers believe that Sustainable education is much more than environmental education. It must cover both the natural and built environment, social, economic and governance considerations and personal resilience. It encompass sustainable future, critical and reflective thinking, experiential learning, recognizing the linkages across subject areas and the interconnectedness of all human and natural systems personal behavior change towards sustainability understanding systems theory and thinking systemically.

VI. CONCLUSION

It is acceptable fact that human life has been receiving threat in the domains of environmental degradation, social injustice, and economic inequities. Unfortunately, many educational systems are getting failure to inculcate peace, prosperity, environmental protection, justice and equality in society. In order to live in more sustainable world, we need to rethink the purpose of our education in connection with what is learned, what is tested, and how it is taught. We hope that ESD framework can address contemporary challenges (environmental degradation, social injustice, and economic inequities) by aligning quality primary and secondary schooling with the purpose of sustainability.

REFERENCES

[1]. Daly, H. E. & Cobb J. B. (1989). *For the Common Good*. Boston: Beacon Press Books. Chelsea Green Publishing Company.

[2]. Earth Charter: http://www.earthcharterinaction.org/content/pages/Read-the-Charter.html (Accessed 2 July 2010.)

[3]. Meadows, D. H., Meadows, D. L. & Randers, J. (1992). *Beyond the Limits: Confronting Global collapse, Envisioning a Sustainable Future*. White River Junction: Vermont.

[4]. Nerfin, M. (1977). *Another Development: Approaches and Strategies*, Uppsala: Dag Hammarskjold Foundation, Sweden.

[5]. *Plan of Implementation of the World Summit on Sustainable Development* (Johannesburg Summit). (2002). UN General Assembly, Resolution, 57/254, p.62.

[6]. *The Millennium Development Goals* (http://www.un.org/millenniumgoals/).

[7]. UNDP. (1990). *Human Development Report*

[8]. UNESCO. (2006). Education for Sustainable Development Toolkit. *Learning & Training Tools* No. 1. http://unesdoc.unesco.org/images/0015/001524/152453eo.pdf

[9]. World Commission on Environment and Development. (1987). *Our Common Future*, U.K: Oxford University Press.

[10]. https://www.westernsydney.edu.au/driving_sustainability/sustainability/community_and_engagement/sustainable_uws_rolling_fund_surf/principles_of_education_for_sustainability. Assessed. 04/10/2017

[11]. https://i2.wp.com/greencleanguide.com/wp-content/uploads/2012/12/Millennium-Development-Goals.jpg?fit=1088%2C1024. Assessed. 04/10/2017

[12]. Dernback, J.C. (2002). Stumbling toward sustainability. Environmental Law Institute. p. 608.

[13]. Huckle, J. and Sterling, S.R. (2006). Education for sustainability. Earthscan. p. 139.