Learner-centered Approaches to Education for Sustainable Development

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Abstract

Sustainable Development is defined as 'to meet the needs & aspirations of the present without compromising the ability of future generations to meet their own needs' (Brundtland Report). The aim of ecologically sustainable development is to maximize human well being or quality of life without jeopardizing the life support system and the natural balance of life. The concept of Sustainable Development applies to all fields like agriculture, industry, economy, mining, transportation, forestry, land management, ecosystem, education, etc. To provide for a better and healthy future for our own upcoming generations requires that we embrace Sustainable Development sooner or it will be too late. Awareness and education is one of the important inputs for a correct appraisal of environmental problems. Education can be at various levels: formal, informal and adult education. Environmental ethics is needed. If we change as individuals, then society and even governments can change. Guidance and counseling as an educational service can help to arrest the challenges faced by education for sustainable development. School education is the crucial point where we can build the positive thought process in the children for nature and fellow beings. The education in the school lays the foundations of the students' understanding of life problems and everything around them. The school curriculum should include the concept of sustainable development at every level. In the present paper, the researcher analyses the scope of school curriculum and whether it helps in the understanding of sustainable development. This paper suggests ways in which the concept of sustainable development can be more effectively delivered to the learners.

Keywords: Sustainable Development, School curriculum, Education for Sustainable Development.

Introduction

There should be wisdom in exploiting nature and man should not indulge in his eternal greed at the cost of other species and ecosystem. Sustainability is a process wherein such efforts are taken to not only suffice the needs and improve the

conditions of the present but of the future generations as well. Sustainable development is generally perceived as an overlapping of four pillars namely environment, society, culture and economy (UNESCO, 2008). This simply implies the importance of interrelatedness and interdependence of one component on the other. The concept of sustainable development has been well studied over the years, it's time we incorporate this process into our lives completely. Several studies report the steps taken to inculcate sustainable development in the school curriculum and the involvement of organizations, governmental and non-governmental, towards achieving it. The educational services especially guidance and counselling can in a way help the masses to realize the significance of sustainable development. The analysis of the Millenium Development Goals set forth for United Nations states to be achieved by 2015 also indicates towards encouraging a sustainable future. Education is the process and means by which man acquires knowledge and skills necessary for his well being. The concept of 'education of sustainable development' is thing of the past, now efforts should be directed towards 'Education for Sustainable development'.

Sustainable Development (SD)

The term 'sustainable development' came into prominence in the 'World Conservation Strategy' presented in 1980 by the International Union for the conservation of Nature and Natural Resources. The Brundlandt Report Our Common Future (1987) explains sustainable development as 'to meet the needs & aspirations of the present without compromising the ability of future generations to meet their own needs.' Hamm and Muttagi (1998) explain "sustainability is not a concept referring to some static paradise, but rather a capacity of human beings to continuously adapt to their non- human environments by means of social organizations." According to William Scott (2002) the reasons to change existing modes of social organizations include a number of social, economic and environmental concerns, for instance catastrophic climate change, species loss and deforestation, over-population, diminishing natural resources, etc. In 2002, at the World Summit on Sustainable Development, held in Johannesburg, South Africa, the UN declared the Decade of Education for Sustainable Development (DESD) ranging from 2005 to 2014 and UNESCO was the leading agency for this task. The Ministry of Human Resources Development (MHRD) is responsible for implementation of DESD in India, and has established an expert committee drawing members from government, NGOs, civil society and academia, under the Department of Higher Education (Government of India, 2007, p.241). Thus, an active debate is expected among the academic and non- academic policy making and management bodies in the design and implementation of meaningful and workable plans (Chhokar, 2010).

Education for Sustainable Development (ESD)

Education helps in understanding the world in a better manner. It plays a pivotal role in the societal development by creating awareness among students. Education for sustainable development followed environmental education which came into prominence in 1970s after the United Nations Conference on Human Environment in 1972. Fien (2003) points out that in the UN Conference on Environment and

Development (UNCED), held in Rio de Janeiro, in 1992, it was internationally agreed that achieving SD is essentially a process of learning (Roberto, 2008). Educational institutions and their programmes are valuable tools to achieve continued sustainable development. Education for Sustainable development (ESD) is a holistic approach for school's management and the curriculum. It requires reflection on what to teach, and how to teach in order to clarify and extend the ability of students to think for themselves, encourage students to reflect and debate issues to enable them to form their own opinions and foster learning that emerges from discovery and is relevant to the learner's life experiences (Peter and Juliana,). Education calls for giving people knowledge and skills in terms of lifelong learning to help them find solutions on their environment, economic and social issues. All this requires for a change in the school curriculum. Our education in schools should be aimed at fostering the spirit of sustainable development. The nation builders are the children in our schools. The school curriculum is being used to direct school personnel to issues of development. This can be done through curriculum innovations. In Nigeria, school curriculum has been diversified to include courses that are predisposing to development issues (Osuji, 2004). The innovative curricula include environmental education, population education, family life/ HIV-AIDS education, women (in development) education, and capital market studies. Ministry of Education, British Columbia, created a Sustainability Content Framework (2010), with modules that might be used individually or as an entire course. The modules were so designed that they can be adapted into existing Board/ Authority Authorized Courses. The 7 modules include Introduction to Sustainability, Environmental Ethics & Social Development, Ecology & Nature, Environmental Challenges & Sustainable Solutions, Sustainable Design & Transportation, Balancing Ecology & Economics, and Sustainable Actions. All content in the document offer students sustainability- focused course content. The document touches all topics ranging from natural resources extraction and use to environmental indicators such as water quality and ecosystem diversity, and to social indicators such as human health and economic growth, to design, urban planning and transportation policy. Woo et al. (2012) reviewed the characteristics of sustainability curriculum and teaching methods in formal curriculum by analyzing four appropriate models related to it. The models namely ACES Model (University of Girona, 2013) (Ciurana et al., 2006); Global Seminar (GS) Curriculum Model (Cornell University, 1999) (Savelyeva et al., 2011); Sustainability Tran disciplinary Education Model (STEM) (Central Connecticut State University, 2011) (Clark & Button, 2011) and Sustainable Construction Curriculum Design Model (Liverpool John Moore University, 2010) (Cotgrave et al., 2010) emphasize on producing a flexible and permeability curriculum at discipline level and the need to contextualize in terms of space (local and global) as well as time (past, present and future). There is a need to involve stakeholders also in this contextualization. As far as the teaching methods are concerned, there's an emphasis on authentic learning experiences including real life case study and project based approach. A focused approach on higher education and SD has been seen over the past years. Chhokar (2010) reviews the initiatives geared to sustainable development in higher education in India, namely the mandate by the Supreme Court of India (1991) for an environment course to be taught at all undergraduate institutions, and

innovative experiments to integrate sustainability into courses or programmes by several universities and institutes. 'Samvardhan' (CEE, 2007) provides an example of how suitable pedagogic approaches, adequate clarity of the meaning of SD, and working across disciplines can help students in crossing knowledge boundaries. Roberts (2013) analyzed the forms of experiential education in higher education for SD considering two specific projects at the intersections between sustainability and experiential education- place- based learning and project- based learning. It was concluded that experiential education represents a distinctive philosophical approach to the role of learner, teacher, subject matter, and socio-political milieu. Place- based and project- based learning present exciting synergies between experiential education and ESD with their active, collaborative and practical orientation. Ssozi's (2012) report proposed how ESD can be strategically embedded into curricular programmes in church schools (Catholic, Protestant, Seventh day and Orthodox), herein referred to as Faith Based Organizations (FBOs). A need for curriculum transformation, enhancement of proper capacity building, integrative planning, financing and management to enable sustainable programme growth and development was proposed. The link between ICT and sustainable development has been addressed which recognizes the challenge new technologies bring to reorientation of education towards learning to live sustainably (Makrakis, 2012). The paper dealt with the exploration of web based environment including interactive activities and supportive materials and it was found that transformative learning becomes easier.

Education for sustainable development encompasses all sectors of education, formal, informal, non- formal. It is not for classroom alone, but it creates the necessity to educate each and every section of society be it farmers, industrialists, consumers, decision- makers. Panth argued that ESD should not be mere information sharing, but should be aimed at educating those who can fabricate a sustainable future. The belief is in identifying and targeting the focus groups like decision makers, administrators, consumers, industrialists, farmers, town planners, etc. which can best bring about SD.

The success of ESD lies in 'educating all'. The UN Economic Commission for Europe drew up a separate Education for Sustainable Development strategy in 2005, recognizing that:

"Education for Sustainable Development is a lifelong process from early childhood to higher and adult education and goes beyond formal education. As values, lifestyles and attitudes are established from an early age, the role of education is of particular importance for children. Since learning takes place as we take on different roles in our lives, Education for Sustainable Development has to be considered as a "life-wide" process. It should permeate learning programmes at all levels, including vocational education, training for educators, and continuing education for professionals and decision makers."

Conclusion

There is both a need and a scope for regional and global cooperation in sustainable development. How education defines sustainable development in a manner that

leaves no aspect of human life untouched or unexplored in this context, is interesting. The concept of sustainable development promises to support the present generations while at the same time attempting to qualify for the needs of future world. Whether it is economy, environment, health, society, or even culture, all are threatened in the present scenario. The exploitation of every natural resource to the extent of depletion has raised doubts about the survival of man in the coming years. Every day we are faced with a number of calamities be it climate change or catastrophe, poverty, disease spread, population explosion, etc. the solutions remain a mere knowledge. In order to overcome the fears we are gripped with, the nations came forward to discuss the issues that are now global. Thus, came into being 'sustainable development'. Use of every resource in a conscious and effective manner was encouraged and efforts were made to avoid unsustainable ways of living. But the question was how to make people aware of the sustainable lifestyle? Education came to the rescue. School curriculum and teaching methods changed and are still evolving. A great hope lies in the educational policies which have been trying to incorporate the concept of SD. Knowledge acquisition and skill development (vocational education and training) are to be promoted. Maclean (2008) rightly opined the 'effective skills development for employability and sustainable livelihoods is essential if sustainable development is to be achieved, and this also provides a foundation for peace building through contributing to poverty alleviation and rising levels of income'. Non-formal and informal education sectors too, need to be involved in ESD. Education empowers people and even enhances the status of women in society. At this level, a check on implementation of the proposed methodology and participation at every level is needed. Education for sustainable development requires involving each and every section of the society in this endeavour. Scott (2002) mentioned that educator's responsibility to learners is to help them understand the need of SD; use appropriate pedagogies for active engagement with issues, help learners gain plural perspectives and encourage them to continue thinking beyond their formal education. It is expected that schools and universities exercise their social responsibility and explore with learners what SD might be. They need to share their work with others as well, locally and globally. Higher learning is struggling to prove its worth in maintaining sustainable development a part of education. Students are expecting the curriculum to be goal-oriented, relevant and practical. The study by Roberts (2013) brings experiential education into focus. Accordingly for ESD, place- based learning requires that students are familiarized with their surroundings, ecological systems, and other species apart from humans that dwell in their places. Project- based learning includes 'learning laboratories', curricular activities related to current problems, community- based action research, case studies, etc. Students work in groups and innovate, exchange ideas, and share their knowledge beyond classroom learning. Innovative methods of education with participatory approaches, multidisciplinary, interdisciplinary or transdisciplinary methodologies will help. The ultimate goal as stated by Malhadas (2006) is to form a new generation of professionals guided by a solid socio-environmental ethics, who will influence the decision makers so as to implement an effective process for the sustainable development of Brazil. The emphasis on student learning and understanding is clearly seen in most of the studies which simply means that children are a valuable asset to society. They are

nation building blocks. Therefore, they need to grow in a healthy, fulfilling and enriching surroundings. They need to think beyond the horizon of a nation. The educational services of guidance and counselling can help in tackling problems in all facets of educational implementation. Okon (1984) rightly identified the reasons and influencing forces that show the importance of guidance and counselling in ensuring ESD, vis. Social change, concerns and problems of students, problems of national integration, change in family and home life, need to prepare youth for life, need for skill workforce, etc. Guidance and counselling within education is as Denga (2009) opined, potentially equipped to prospect for talents which can be developed to produce the necessary manpower for nation's development. This service has appropriate programmes to train youth to handle nation's infrastructural needs for SD; counselling centres can be created in rural areas to assist in personal- social problems, health concerns and educational development (Tambuwal, 2009). Thus, there emerges the need for professionally qualified counselors in helping the masses for better understanding and bringing into practice sustainable development. Agbakala et al. (2012) study also supports the fact that guidance and counselling services will assist more individuals attain self realization and this in turn enables individuals to work for human and economic development in a way directing national growth. A study by Iyengar and Bajaj (2011) of the syllabi for multiple subjects for classes 9-12 in schools affiliated to State Board of Madhya Pradesh revealed that syllabi are science dominated esp. environmental education (EE). The theme includes factual scientific knowledge, but it neglects the more socio- cultural aspects of EE. While there is emphasis on ESD in national frameworks but the trends in teaching about the environment related to notions of citizenship, environmental justice, human rights, and sustainable development are missing (Jenkins 1994; Vargas 2000; Spring 2004). A list of guidelines by Cunningham and Billingsley (2003) include planning authentic and diverse range of activities, promoting self-directed learning and higher level of thinking and creativity, encouraging exploration of cross- cultural disciplines, building activities around current events and issues, planning for open ended enquiry, etc. thus, students feel free to discover the unknown, come up with solutions to problems in a better way, development of their skills, knowledge and attitudes, etc. Such enlightened and free souls are definitely a boon for the society.

It is required that the curriculum and pedagogy should be formulated and inculcated in a way that maximally benefits the students in developing a good understanding of their environment, the need to preserve it and the ways in which it can be achieved. Mere emphasis on one aspect will not suffice. Allocating adequate space to the understanding of society, economy, culture and environment in ESD, is essential. Teachers, administrators, policy makers, and as individuals, it is our foremost duty to embrace SD and promote it. The issues we face locally are bound to effect global scenario. Therefore, sustainable development can begin with an individual but spreads to the world today and is sure to affect the future.

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