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Role of Education for Addressing Sustainability

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Abstract

Present paper aims at to discuss the role of education for addressing sustainability. Sustainable development has to hold a stability among social needs and environmental preservation while simultaneously advancing the economy. When we think of Sustainable development, education is an important area which can pave the way to achieve the desired goal of it. Therefore, education and research and innovation in this area can play an important role. SD isn't a brand-new idea to the world. The United Nations decade for schooling (DESD, 2005-2014) has endorsed progressive tactics in schooling that allows you to make a contribution to the societal extrude in the direction of sustainability. Education especially Higher Education in India has undergone a significant change in the recent past. Many trends are emerging in the key areas of education and higher education. Present paper has shown the necessary ways for Sustainable Development and they are recognized through education. Education acts as a vital device of attaining Sustainable Development. Thus, quality education oriented towards the values and skills of sustainability should be promoted.

Keywords: sustainability, education, pedagogy, curriculum, textbook

Introduction

The role of Education for Sustainable Development (ESD) is to help people develop the attitudes, skills, and knowledge to make knowledgeable selections for the advantage of themselves and others, now and for the future, and to behave upon the one's selections. Good quality education is an essential tool for achieving a more sustainable world. This turned into emphasised on the UN World Summit in Johannesburg in 2002 in which the reorientation of present-day training structures turned into mentioned as key to sustainable development. Education for sustainable improvement (ESD) promotes the improvement of the knowledge, skills, understanding, values and movements required for developing a sustainable world, which guarantees environmental safety and conservation, promotes social fairness and encourages financial sustainability. Education for sustainable development is a “dynamic concept that encompasses a new vision of education that Seeks to empower human beings of every age to anticipate duty for growing and taking part in a sustainable future.” The idea of ESD advanced in large part from environmental education, which has sought to develop. The knowledge, skills, values, attitudes and behaviours in humans to take care of their environment. The goal of ESD is to permit human beings to make selections and perform moves to enhance our first-rate of lifestyles without compromising the planet. It additionally ambitions to combine the values inherent in sustainable improvement into all factors and degrees of learning. Education for Sustainable Development permits each individual to accumulate the knowledge, skills, attitudes and values important to form a sustainable future. Education for Sustainable Development way which includes key sustainable improvement troubles into coaching and learning. Education for Sustainable Development therefore promotes talents like important thinking, imagining destiny

situations and making choices in a collaborative way. Education for Sustainable Development calls for far-reaching modifications with inside the manner training is regularly practised today. The finest want of the hour is to re layout curriculum, textbooks, coaching method and children's literature, formal and non-formal instructional systems. Chapter 36 of Agenda 21, adopted at the 1992 Earth Summit in Rio, is devoted to 'Promoting Education, Public Awareness and Training'. It identifies four major thrusts of Education for Sustainable Development:

- Promotion and Improvement of Basic Education
- Reorienting Existing Education at all Levels to Address Sustainable Development
- Developing Public Understanding and Awareness of Sustainability
- Training

ESD and Curriculum

In India, since the mid1980s efforts have been on to bring Environmental education (EE) in formal education at all levels. In 2003, the Honourable Supreme court of India directed that EE should be a compulsory subject at all levels of education. It similarly directed that the NCERT ought to put together a version syllabus for sophistication I to XII, which will be followed through each kingdom of their respective schools. If government officials or school district administrators are unaware of the linkage between Education and Sustainable improvement, re-orienting schooling to reap sustainable improvement will now no longer occur. When human beings recognize that schooling can enhance the probability of imposing countrywide policies, nearby land and resource management programs, then education is in a position to be reoriented to help achieve sustainability. This attention paperwork step one with

inside the reorienting process. Since ESD entails a complete method to academic reform, it must expand past the boundaries of person college topics and calls for the eye of teachers, academic administrators, planners and curriculum agencies. Integrating the objectives, ideas and mastering reviews of training for a sustainable future into syllabuses and teaching programmes is an important part of such reform. [Source: UNESCO (1997) *Educating for a Sustainable Future: A Transdisciplinary Vision for Concerted Action*, paragraph 89].

ESD and Methods of Teaching

Methods of teaching that are particularly effective in the context of education for sustainable development tend to have an actual aspect, allowing college students to narrate their studying to real-lifestyles issues and situations. There is in all likelihood to be a robust interdisciplinary, multidisciplinary or transdisciplinary element, reflecting the interconnected nature of many problems in sustainable development. Experiential and interactive processes also are mainly properly appropriate to training for sustainable development, especially wherein they inspire college students to expand and replicate on their very own and others' values. Critical reflection on values and assumptions may in some cases lead to what is known as 'transformative learning'. In addition, participatory learning approaches, peer-learning and collaboration within and beyond the classroom are encouraged, allowing students to be exposed to multiple perspectives and enabling creative responses to emerge. Prior knowledge and attitudes are taken into consideration in planning teaching and learning activities. Students' learning for and about sustainability while in higher education is not limited to the formal Curriculum: anywhere possible, teaching, gaining knowledge of and evaluation need to take

account of casual and campus gaining knowledge of opportunities. There are a number of teaching methods such as storytelling, case studies, stimulus activities, simulation; experiential project work, problem-based learning etc. are likely to be particularly effective. Depending upon the discipline or the sustainability challenge to be addressed method of teaching should be selected in class room.

[Source: UNESCO (1997) Educating for a Sustainable Future: A Transdisciplinary Vision for Concerted Action, paragraph 89].

ESD and Assessment

The mode of assessment should be institutionally appropriate and align with local assessment policy and processes. Assessment must offer possibilities for college kids to illustrate success of graduate results in the middle regions of worldwide citizenship; environmental stewardship; social justice, ethics and well-being; and futures thinking. In this context, it is also likely to involve: formative tasks that enable the development of critical thinking and problem-solving, opportunities to apply these skills to real-world problems, synoptic assessments that explore the relationship between students' main instructional field and sustainability, and sports that inspire affective gaining knowledge of with inside the domain names of values, attitudes and behaviours.

ESD and Learning Environment

The gaining knowledge of surroundings has a critical function to play in training for sustainable development, as does the assist to be had for body of workers and students. Students'

mastering relates now no longer most effective to the formal curriculum however additionally to the campus environment, the local people and the lifestyle of the institution. Links among those exceptional regions ought to be encouraged, now no longer least due to the fact the bodily getting to know surroundings forms it's a crucial a part of the academic context - and affects each what and the way college students learn. Learning environments which are flexible and adaptable provide the greatest scope for the participatory, collaborative approaches which are beneficial to education for sustainable development.

ESD and Role of Teacher

Teacher plays a pivotal role in the total teaching learning process that is why it is said that there is no substitution of teachers. For introducing sustainability in the field of education a teacher should:

- Democratic, flexible and resourceful in nature.
- Trained properly to address sustainable development.
- Have wonderful mind-set in the direction of sustainability.
- More knowledgeable and dynamic and discuss the issues rather than the content.
- Be a facilitator for the students to understand the process of sustainable development.
- Work in a team with specialists to understand and address the sustainability concept.
- Use best and variety formats of teaching, methodology, and TLM.

ESD Pedagogies

Pedagogies associated with ESD encourage pupils to ask questions, analyse, think critically and make decisions. Such pedagogies move from teacher-centred to learner-centred instructions and from rote memorization to participatory learning. ESD pedagogies are frequently place-primarily based totally or problem/trouble primarily based totally. ESD pedagogies stimulate critical thinking, social critique, and analyses of local contexts. They involve learner's awareness, discussion, analysis and application of values. ESD pedagogies frequently draw upon the humanities the use of drama, play, music, design, and drawing to stimulate creativity and believe opportunity futures. They work towards positive change and for learners it is helpful to develop a sense of social justice and self-efficacy as community members. UNESCO, (2012) described about four teaching techniques: simulations, class discussions, issue analysis, and storytelling. The following are descriptions of and sample activities for four teaching techniques: simulations, class discussions, issue analysis, and storytelling. Each technique stimulates different learning processes such as description, teaching sequence, closure, evaluation and extension.

Simulations

Simulations are teaching/studying situations wherein the instructor defines the context wherein the students interact. The students take part with inside the situations and accumulate that means from them. Simulations:

- Engage pupils with visual, auditory and tactile-kinaesthetic learning modalities, thereby promoting equity.

- Address actual lifestyles troubles that face groups and upload relevance to the curriculum.
- Promote higher-order and logical thinking skills.

Class Discussions

Class discussions are the effective way which allows for the transfer of information amongst pupils and from the scholars to the instructor, similarly to the conventional path from instructor to scholars. Pupils come to the classroom with a wide variety of life experiences that can enrich and reshaped the teaching of the mandated curriculum. Pupils can therefore contribute a great deal to discussions of sustainability with observations from their neighbourhoods about what is sustainable and what is not. Teachers can then incorporate these experiences into their lessons through class discussions, group discussions that provide pupils with real life applications of concepts. Discussions provide scholars possibilities to expand oral communicate skills. Pupils with strong auditory learning modalities learn well from discussions, both from listening and expressing their own ideas.

Issue Analysis Techniques

Issue analysis is a structured technique for exploring the environmental, social, economic, and political roots of problems that face communities. Issue evaluation facilitates students become aware of important arguments associated with a network trouble as well as key stakeholders and their perspectives, goals, and assumptions related to that problem. Issue evaluation additionally appears significantly on the proposed answers and the costs— economic

and otherwise—and at who will endure the ones costs. Issue analysis can be done briefly or in depth. Issue analysis is interdisciplinary which bridges the natural and social sciences. Issue analysis guides pupils through a process that can be used with any issue. It is a popular manner that may be carried out to an extensive variety of environmental, social, and financial problems. Issues assessment starts with naming the difficulty or trouble and being capable of certainly outline it. Several correct problem evaluation frameworks seem withinside the instructional literature. Sample activities section contains two frameworks which has a list of questions to ask about an issue. Pupils’ solution the listing of questions for a network problem or problem. Issue analysis can be done individually, as a small group or as a class.

Story Telling

Telling stories to convey and illustrate sustainability ideas is an engaging form of teaching. Stories may be taken from contemporary events, history, tv programmes, literature, drama, and private experience. Storytelling also draws on the oral traditions of indigenous societies and folk art. Story telling has been practised for generations as a way of entertainment, schooling or cultural renovation and to instil ethical values amongst more youthful generations. Storytelling is a powerful ESD pedagogy because the values contemplated in conventional testimonies regularly incorporate the knowledge of the Elders or stem from advent stories, which facilitates to impart admire for cultural historical past in addition to the environment. A lesson can be structured with a storytelling component that illustrates the academic content or adds a sustainability component to the lesson.

[Source: ESD Source Book UNESCO 2012]

ESD and Values

The values underlying the sustainability paradigm, including human dignity, essential freedoms, human rights, equity, and care for the environment, are the values that underlie ESD. The values to be contained in a particular ESD programme are a matter of discussion for the teachers, school administrators, parents of pupils, community members and where acceptable the pupils themselves. The objective is to create a locally relevant and culturally suitable values component to ESD, one that is informed by the principles and values inherent in sustainable development. Values shape many things within a society (e.g., our worldview, how we treat others, how we view ourselves, our expectations of the government, and our use or abuse of natural resources). Values shape human actions in the world from small (e.g., How private selections are made) to large (e.g., How countrywide rules is written). The approaches wherein nations determine the way to technique sustainable improvement might be carefully related to the values they hold. Understanding values is a vital a part of expertise an individual's very own worldview and that of different people. 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. Each country, cultural group, and individual must learn the skills of recognizing their own values and assessing them in the context of sustainability. A appropriate place to begin for addressing values in ESD-associated coaching and studying is the Earth Charter. The Earth Charter is an ethical framework that includes respect and care for the community of Life, ecological integrity, familiar human rights, recognize for diversity, financial justice, democracy, and a tradition of peace. The Earth Charter is the product of a decade-long,

worldwide, cross-cultural dialogue about common goals and shared values. The Earth Charter has been used successfully in education programmes around the world over the past few years.

Integrating ESD in Curricula and Textbooks

ESD has to be integrated in all curricula of formal education, including early childhood care and education, primary and secondary education, technical and vocational education and training (TVET), and higher education. Mainstreaming ESD requires integrating sustainability topics into the curricula, but also sustainability-related intended learning outcomes. “Curricula need to ensure that all children and young people learn not just foundation skills, but also transferable skills together with crucial thinking, hassle solving, advocacy and war resolution, to assist them end up accountable international citizens” (UNESCO, 2014c: 36). From the improvement of sustainability curricula, it's far predicted to “enhance the potential of our education systems to prepare people to pursue sustainable development” (United Nations, 2012: para 230). The tracking and assessment of the DESD has highlighted many present excellent examples of integrating ESD in curricula. Reviews of legitimate curriculum files display that “many nations now encompass sustainability and/or environmental themes as one of the general goals of education” (UNESCO, 2014a: 30). In number one and secondary training most, development has been made in curriculum improvement in the direction of ESD. “Close to 40% of Member States suggest that their finest success over the DESD has been the combination of ESD Into formal curricula, with any other 5th describing unique faculty tasks as being their maximum crucial contributions to ESD”. (Source: Education for Sustainable Development Goals: learning objectives, key publications, UNESCO, 2017)

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