

ROLE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT TO ACHIEVE SUSTAINABLE FUTURE

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ABSTRACT

Education for Sustainable Development (ESD) empowers young people to be the agents of change for sustainable development by providing them with opportunities for learning and civic engagement, as well as the competencies and tools to participate in ESD as co-creators of individual and societal transformation. ESD aims to develop competencies that enable individuals to reflect on their actions, considering their current and future social, cultural, economic, and environmental consequences on a local and global scale. The ESD aimed to achieve the main goals of fostering environmental values, curriculum, textbooks, and pedagogical approaches in the school community, as well as raising awareness about the importance of environmental preservation and conservation. The objective of the study is to foster environmental awareness by Integrating Education for Sustainable Development in curriculum, Pedagogical approaches, teachers' perceptions, and teaching practices. The methodology for the study is descriptive documentary analysis with a qualitative approach. Through Education for Sustainable Development, there is a continued emphasis on learning about climate and other environmental issues, rather than developing the socio-emotional and action competencies essential to environmental and climate action. Transformative learning for people and the environment is critical to our survival and that of future generations. For a more sustainable future, governments, education policymakers, academics, and education and environmental stakeholders must increase their commitment to Education for Sustainable Development.

Keywords: Education for Sustainable Development, Sustainable Development Goals, Environmental sustainability, Sustainable future.

INTRODUCTION

In the last decade of the twentieth century, the concept of “education for sustainable development” first appeared in UN documents. The evolution of the ESD concept is inextricably

linked to the implementation of the major political documents adopted by the international community at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992. At this summit, it was stressed that education is a critical factor in achieving sustainable development. The world leaders then declared that “education is a decisive factor of change,” implying changes towards a better, more sustainable, and secure future. The World Summit on Sustainable Development, held in Johannesburg in September 2002, also proposed that one of the main priorities be education for sustainable development of the world community’s activity. The United Nations announced the UN Decade of Education for Sustainable Development, a highly regarded and supported initiative (2005-2014). In 2015, 193 countries met in New York to adopt the 17 Sustainable Development Goals (SDGs) drafted by the United Nations General Assembly and set to be completed by 2030. These objectives address all three of the previously mentioned dimensions of sustainability (Saner et al., 2019). All international reports and conferences aimed to ensure education for sustainable development by enabling learners to acquire the necessary techniques, skills, values, and knowledge, as well as education that has a return, whether for humans or societies and includes a lifelong learning perspective (Leicht, Heiss & Byun, 2018). The 2030 Agenda for Sustainable Development prioritises lifelong learning opportunities for all. The new targets build on their predecessors, the MDGs, by broadening and deepening the scope of system-wide quality education systems. Unlike the Millennium Development Goals, which focused on universal primary education, the Sustainable Development Goals incorporate tertiary education into the global development agenda.

ESD aims to develop competencies that enable individuals to reflect on their actions, considering their current and future social, cultural, economic, and environmental consequences on a local and global scale. Individuals should also be empowered to act in complex situations in a sustainable way, which may necessitate taking risks; and to participate in socio-political processes that move their societies towards sustainable development. It has an impact on an individual’s ability to develop their potential and encourage processes that promote peace and recognise the importance of sustainable development. As a result, the United Nations considers education to be its top priority (United Nations, 2017).

ESD entails more than just an understanding of social, environmental, and economic issues. It also includes values, problem-solving abilities, critical thinking abilities, and local and global perspectives on issues. Furthermore, ESD emphasises the importance of democracy and people’s participation in democratic societies. Because sustainable development involves contentious issues and complex systems, teachers must be well-equipped with the qualifications required for effective ESD implementation (Bertschy, Künzli, & Lehmann, 2013). The work of UNESCO on ESD is divided into five main areas: advancing policy, transforming learning environments, building educator capacities, empowering, and mobilising youth, and accelerating local-level action.

ESD can develop cross-cutting key competencies for sustainability that are relevant to all SDGs. ESD can also develop specific learning outcomes needed to work on achieving a particular SDG. Education for Sustainable Development means including key sustainable development issues in teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption.

REVIEW OF RELATED LITERATURE

Soler (2022) research focuses on a correlation analysis of education for sustainable development in both pre-and post-COVID scenarios. The findings indicated a more significant concern for sustainability. The author concluded that students in confinement are more sensitive to sustainable development. The study findings also revealed a decrease rate of interest in participating in environmental projects, possibly due to apprehension about travelling abroad in complete confinement.

Corpuz et al. (2022) examine the incorporation of environmental education (EE) in teacher education programmes: towards sustainable curriculum greening. Environmental education (EE) is critical in dealing with global environmental issues. The integration of EE in Teacher Education Programs (TEPs) in Region III, Philippines, was assessed using a mixed-method study. The findings indicate that incorporating EE into curricular programmes helps to promote environmental knowledge, skills, and attitudes among students, but involving other stakeholders, particularly the family and the community, is also required to ensure application beyond school or classrooms.

Ammonite & Turek (2022) investigate Pre-Service Geography Professional Competencies of Teachers in Education for Sustainable Development. The study plan is positively related to the self-assessed ESD competencies. Pre-service teachers consistently place a high value on ESD competence, regardless of semester number or modules completed. Their findings show that active learning environments in a disciplinary setting have a greater impact on competence assessment than formally integrating ESD into the curriculum. Pre-service geography teachers place a high value on ESD competence.

Kang (2021) investigation on “Predicting Pre-service Teachers’ Intention to Implement Education for Sustainable Development: A Fuzzy-Set Qualitative Comparative Analysis” suggested the ways to strengthen ESD implementation by identifying the factors influencing pre-service teachers’ intention to implement ESD. To that end, the author concentrated on identifying the various conditions that predict Korean pre-service teachers’ intention to implement education for sustainable development.

Nasibulina (2015) conducts research on Education for Sustainable Development and Environmental Ethics. The article examines the current state of education for long-term

development. ESD is viewed as a method of forming new consciousness and behaviour that should be used to adjust human development courses. Environmental ethics plays a positive role in the creation and development of ESD.

Anyolo & Keinonen (2018) Investigate Education for Sustainable Development in Namibia: School Teachers' Perceptions and Teaching Practices. The study attempted to investigate Namibian teachers' perceptions of ESD implementation and teaching practices. The study also found that teachers are enthusiastic about incorporating ESD into the senior secondary school curriculum. Following that, they proposed that ESD can be implemented as a separate subject or integrated with other existing subjects as multi-disciplinary subjects.

OBJECTIVE OF THE STUDY

- To foster environmental values in institutions and community.
- To integrate Education for Sustainable Development in curriculum and Pedagogical approaches.
- To assess Education for Sustainable Development learning outcomes and the quality of Education for Sustainable Development programmes.
- To implement teachers' perceptions and teaching practices on Education for Sustainable Development.

METHODOLOGY

The methodology of the study is descriptive and analytical. The study is conducted through documentary analysis with a qualitative approach. The required information is collected from different primary and secondary sources like books, UNESCO reports, research articles, university magazines and different websites.

DISCUSSION

Education for Sustainable Development (ESD) is crucial for achieving a sustainable future. ESD aims to equip individuals with the knowledge, skills, values, and attitudes needed to create a sustainable world. Here are some key roles of education in achieving sustainable development:

Raising awareness : Education is essential in raising awareness about the interconnectedness of economic, social, and environmental issues. Through education, people can understand the impact of their actions on the environment and the consequences of unsustainable practices. ESD also helps to create awareness of the Sustainable Development Goals (SDGs) and their relevance to local and global challenges.

Fostering critical thinking and problem-solving: ESD helps to develop critical thinking skills that enable individuals to analyse complex issues and come up with innovative solutions. It

encourages learners to think beyond conventional approaches and consider multiple perspectives. This approach fosters creativity, collaboration, and problem-solving skills.

Promoting sustainable lifestyles: Education plays a vital role in promoting sustainable lifestyles by providing individuals with the knowledge and skills needed to adopt sustainable practices. ESD encourages individuals to make conscious choices that reduce their environmental impact, such as using public transport, reducing energy consumption, and recycling.

Building sustainable communities: Education is a critical tool for building sustainable communities. ESD helps to develop a sense of responsibility, social cohesion, and collective action. It encourages individuals to work together towards common goals, such as promoting renewable energy, reducing waste, and protecting natural resources.

Empowering individuals and communities: ESD empower individuals and communities to participate in decision-making processes that affect their lives. It promotes inclusive and participatory approaches that value the contributions of all stakeholders. Through education, individuals can acquire the knowledge and skills needed to engage in sustainable development.

Quality Education: Sustainable development ensures inclusive and equitable quality education and promote opportunities for lifelong learning for all. It helps to develop partnerships between schools, universities and other institutions offering education in different regions of the world. The importance of inclusive and equitable quality education and lifelong learning opportunities for all (formal, non-formal, and informal learning, including ICT use) at all levels is needed for improving people's lives and sustainable development.

Sustainability in the curriculum: ESD may be relevant to each disciplinary area and might be used and adapted as 'entry points' to develop sustainability education further. There are three types of sustainability in the curriculum: Environmental sustainability, Economic sustainability, and social sustainability.

- ***Environmental sustainability:*** Natural resources management, Food and farming Ecological systems, Waste/water/energy, Biodiversity, Climate change.
- ***Economic sustainability:*** Alternative futures, Leadership, and change, Learning organisations, Corporate Social Responsibility, Consumerism and trade, Globalisation of economy, Accountability and ethics, Sustainable and ethical tourism,
- ***Social sustainability:*** Sustainable communities, Intercultural understanding, Sustainability in the built environment, Peace and security, Human rights and needs, and Cultural diversity.

Pedagogical approaches in ESD: While there is no 'correct' pedagogy for sustainability education, there is widespread agreement that it necessitates a shift towards active, participatory, and experiential learning methods that engage learners and make a real difference in their understanding, thinking, and ability to act.

1. **Critical reflection**—which includes traditional lectures as well as newer approaches such as reflexive accounts, learning journals, and discussion groups.
2. **Systemic thinking and analysis**—utilising real-world case studies and critical incidents, project-based learning, stimulus activities, and the campus as a learning resource.
3. **Participatory learning**—focuses on group or peer learning, dialogue development, experiential learning, action research/learning to act, and case studies with local community groups and businesses.
4. **Imagining future scenarios creatively**—through role-playing, real-world enquiry, future visioning, problem-based learning, and allowing for emergence.
5. **Collaborative learning**—including guest speaker contributions, work-based learning, interdisciplinary/ multidisciplinary collaboration, and collaborative learning and co-inquiry.

Action-oriented transformative pedagogy: ESD aims to empower and motivate learners to become active citizens capable of critical thinking and capable of shaping a sustainable future. Learner-centred, action-oriented, and transformative pedagogical approaches are appropriate for this goal. The pedagogical approaches represent the general character or guiding principles of designing learning processes in ESD; specific methods following these principles are required to facilitate learning. Methods that promote competencies through active learning are preferred in ESD. Certain methods are especially suitable for ESD. These participatory teaching and learning methods empower students to act for long-term development. When selecting teaching and learning methods for a specific setting, they must meet the needs of the learner group (e.g., based on age, prior knowledge, interests, and abilities); the context in which the learning takes place (e.g., space in the curriculum, pedagogical climate, cultural traditions); and the resources and support available (e.g., teacher competencies, teaching materials, technology, money). Transformative learning for people and the environment is critical to our survival and that of future generations.

Implementing Education for Sustainable Development : Teachers' Perceptions and Teaching Practices

- Even though teachers emphasised that students had difficulty in conceptualising sustainable development and its sub-components, they also emphasised that there were topic and subject-specific teaching strategies that aided students' learning. Ecological footprint activities, for example, help to raise awareness about equal and fair consumption.
- Although these strategies were proposed in the context of ESD, they did not guarantee students' learning because they require students' active participation. As a result, teachers should encourage their students to participate actively and improve their performance in these activities.

- An individual's perception and attitude towards SD can be developed through the cognitive and affective domains of learning, with the cognitive domain determining perception and the affective domain determining attitude. Teachers should encourage their students through the cognitive and affective domains of learning.

Education for Sustainability in higher education : ESD has advanced well in higher education institutions, as students have been exposed to this topic through a variety of programmes. Sustainable development is a key component of the Higher Education Blueprint (Sivapalan, 2016), in which every higher education institution takes the initiative to create a more sustainable campus and, most importantly, introduces ESD to undergraduates. Through cross-curricular activities and special programmes, the educational sustainability approach is commonly delivered as part of specific subjects such as Geography and Science (John, 2012).

Learning outcomes in ESD and the quality of ESD programmes

1. In terms of sustainable development, education is a critical tool for achieving sustainability. For more than a half-century, the international community has recognised education as a basic human right.
2. ESD education is a learning process or teaching approach based on the principles that underpin sustainability at all levels and multidisciplinary areas of knowledge (UNESCO, 2009). ESD subject content typically focuses on complex and value-laden interrelationships between environmental, economic, and social factors, and the included terms are open to various interpretations. The first distinction is between “sustainable development” as a process and “sustainability” as a goal (Stephen & Scott, 2003).
3. ESD is divided into two types of ability: cognitive ability and affective ability, which include investigation and research, lateral, analytical, and creative thought, collaboration, communication, literacy, and observations.
4. ESD implemented in a structured programme has a positive impact on sustainability practice (Hanifah, Yazid, Mohmadisa, and Nasir, 2016).
5. Furthermore, Joshi (2009) recognizes the positive impact of ESD in terms of improved values, behavior, and ways of life, as well as increased concern for social change and a sustainable future.
6. The sustainability approach in education has also been discussed at the international level to raise public awareness of the importance of environmental stewardship in addressing current global issues such as climate change, and education is sometimes both part of the problem and the solution (Huckle & Sterling, 1996).

Sustainable Development Education Panel Report, 1998

ESD is concerned with the learning required to maintain and improve our quality of life as well as the quality of life of future generations. ESD enables people to develop the knowledge, values, and skills necessary to participate in decisions about how we do things individually and collectively, both locally and globally, to improve the quality of life now while minimizing future environmental damage.

UNESCO commits to the following within their respective mandates and areas of responsibility, taking into account their needs, capacities, available resources, and national priorities:

- a. Ensure that ESD is a foundational component of our education systems at all levels, with environmental and climate action as a core curriculum component, while maintaining a holistic perspective on ESD that recognizes the interconnectedness of all aspects of education for sustainable development.
- b. Incorporate ESD into all levels of education and training, from early childhood to tertiary and adult education, as well as non-formal education and informal learning, so that all individuals have lifelong and life-wide learning opportunities for sustainable development.
- c. Implement ESD with a joint emphasis on cognitive skills, social and emotional learning, and action competencies in Education for Sustainable Development of individual and societal transformation, promoting individual behavioral change for sustainable development, equality, and respect for human rights, as well as fundamentally structural and cultural changes at the systemic level of economies and societies, and also promoting the required political act.
- d. Recognize climate change as a priority area of ESD, especially for Small Island Developing States (SIDS), which require special attention in terms of ESD implementation due to their increasing vulnerability to climate change and natural hazards.
- e. Recognize teachers' critical role in promoting ESD and invest in the capacity development of teachers and other education personnel at all levels to ensure a whole-of-sector approach to the necessary educational transformation.
- f. To achieve a more profound and holistic understanding of sustainability challenges and potential solutions, emphasize gender equality and non-discrimination in access to knowledge and skills, and ensure gender mainstreaming in ESD.
- g. Monitor ESD progress in the context of overall SDG monitoring and, to ensure that implementation is constantly improved and that no one is left behind, put in place ESD assessment systems, and improve research on how to evaluate ESD progress.

SUGGESTIONS

- National curriculum frameworks have substantially more references to environment-related topics than education sector plans.
- Implementing learning for the Sustainable Development Goals through Education for Sustainable Development.
- There is considerable regional variation regarding the relative extent of inclusion of environment-related content in policy and curriculum documents.
- There is a continued focus on learning about climate and other environmental issues, as opposed to also developing the socio-emotional and action competencies central to environmental and climate action.
- Delivering Education for Sustainable Development in the classroom and other learning settings.
- Integrating Education for Sustainable Development in policies, strategies, and programmes.
- Continued support from authorities, responsible action by individuals and community, and above all a deep compassion for our planet will together serve to reduce the global environmental crises.

CONCLUSION

Education for sustainable development is a lifelong process that extends far beyond the boundaries of formal education and creates conditions for the development of environmental consciousness and the formation of ecological culture. One of the primary goals of ESD is to foster an ecological worldview. The system of education for sustainable development must perform new functions, such as anticipating and forecasting the sustainable future and developing a personality type capable of implementing the concept of sustainable development. Let us work together to ensure that learners everywhere are change-makers who learn and act for our planet. Education for Sustainable Development has the potential to alter our future. Continued government support, appropriate policies and laws, and responsible behaviour by individuals & communities and above all a deep compassion for our planet will together serve to alleviate the global environmental crises we face today. Education for sustainable development is essential for achieving a sustainable future. It provides individuals with the knowledge, skills, values, and attitudes needed to create a more sustainable world. Through ESD, individuals can develop critical thinking and problem-solving skills, promote sustainable lifestyles, build sustainable communities, and empower themselves and their communities to participate in decision-making processes that affect their lives.

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