

LIFE LONG LEARNING SUPPORT SUSTAINABLE DEVELOPMENT

Renu Gupta

Assistant Professor, Department of Education

Dasmesh Girls College, Chak Alla Baksh, Mukerian-144211

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Abstract—Sustainable development focuses on ongoing growth without overusing natural resources. It teaches humanity to use these resources wisely and responsibly for long-term sustainability. In this context, lifelong learning becomes an important tool for tackling the challenges of sustainable development. It helps build awareness, adaptability and responsible behavior. The National Education Policy (NEP) 2020 connects lifelong learning with sustainable development. It provides a new framework that influences students' attitudes, values and paths. This encourages them to live in harmony with nature and avoid causing environmental harm. This combined approach develops key skills, including responsible citizenship, ethical decision-making and empathy toward the environment. This paper aims to show how lifelong learning is crucial for reaching the Sustainable Development Goals by making sustainability a lifelong practice instead of a short-term educational goal.

Index Terms—Life-Long Learning, Sustainable Development, Empathy for Environment, Sustainable Development Goals

I. INTRODUCTION

Sustainable development is crucial for global prosperity. Other terms for sustainable development include consistent growth, long-term development, renewable, supportable, climate-friendly, zero-waste, organic, and more. It focuses on improving living conditions for people without harming the planet's ability to adjust and thrive (Makhrout and Aithbibi, 2023). Education for Sustainable Development (ESD) addresses the economy, society and the environment to help achieve a sustainable future. This includes fostering global citizenship, protecting ecosystems, and ensuring responsibility for future generations (Sulaiman, 2019). In the era of Sustainable Development Goals (SDGs), ESD is gaining

popularity; however, its effectiveness in addressing global issues is under review, particularly how it fits with SDG goal 4.7 (Webb et al., 2025). International networks in higher education, along with new methods in transformative learning, enhance ESD by encouraging teamwork and shared knowledge (Sugimura, 2025; Agbedehin, 2025). Innovation that involves youth engagement, supported by policy frameworks and mentorship programs, speeds up positive sustainable actions (Purcell et al., 2025). Higher education institutions and studies on school performance shows a variety of adaptable learning approaches that align with effective green policies and innovative teaching methods. This significantly boosts ESD performance and increases student engagement (Araneo, 2023; Bucea-Manea-Tonis et al., 2024). Global bibliometric studies reveal a critical gap in broader social inclusion in environmental conservation and economic growth, despite plentiful scientific research in those areas (Tafese and Kopp, 2025). Participatory learning styles and collaborative methods strengthen scientific research and academic performance, encouraging individuals to actively participate in achieving SDG targets (Fernando and Tajan, 2024). To involve the upcoming generation in ensuring the implementation of sustainable development, the role of lifelong learning cannot be overemphasized. This is because it plays the role of a crucial key to make the seemingly impossible objectives of sustainable development possible. Moreover, lifelong learning plays the role of a bridge that connects theoretical knowledge to the implementation of sustainable knowledge. This is the major reason why the goal of sustainable development through the concept of lifelong learning seems possible. The concept of lifelong learning emphasizes the idea of students living sustainable lifestyles,

developing improved personal and social behaviors, and acquiring a sense of responsibility for their societal commitments. Through this learning process, students become increasingly aware of the conservation of the environment, equity and economic responsibility. Against this background, there is a great challenge to make the concept of lifelong learning for sustainable development possible. This is the key to enabling learners to make decisions and act ethically. It has the ability to inspire creativity and resilience to face global challenges like climate change and resource depletion. Additionally, the concept has the ability to enable the community to participate and work together through the principle of inclusive growth and shared responsibility. Furthermore, the concept has the ability to overcome the gaps that exist among generations through the principle of passing sustainable values. Hence, the concept of lifelong learning has the ability to act as the key to making the seemingly impossible possible for the construction of a sustainable and just society.

II. REVIEWS OF THE RELATED LITERATURE

Lifelong learning is a key element for promoting sustainable development, especially in higher education (Mladenovic, 2023). By building knowledge, skills, and critical thinking, it helps students thoughtfully tackle complex sustainability issues. Integrating lifelong learning into education for sustainable development improves learning results and prepares individuals to adopt environmentally and socially responsible habits. Despite its acknowledgment in the SDGs, adult education is still downplayed, which hinders the effective execution of sustainable development goals (Orlovic and Popovic, 2017). Ensuring inclusive and fair access to lifelong learning is vital for encouraging social, economic and environmental growth. Continuous education allows individuals to take part actively in sustainable societies, closely aligning with SDG 4 on quality education (Earlall, 2023). Lifelong learning also encourages environmental awareness, social inclusion and the development of green skills, supporting shifts to strong and sustainable economies (Telli, 2024). Incorporating sustainability into curricula, professional training and community learning initiatives enables students to apply their knowledge in real-life settings. Cooperative partnerships among

educational institutions, governments and communities further extend the effects of lifelong learning on sustainable development. In the end, lifelong learning and sustainable development support each other. They create a strategic path for building a fair, resilient and sustainable future for both current and future generations.

III. NEED OF LIFE LONG LEARNING FOR PROMOTING SUSTAINABLE DEVELOPMENT

Lifelong learning is a crucial driver of sustainable development in India, addressing knowledge gaps, resource management and socio-economic growth. Initiatives such as eco-villages and community-supported agriculture provide practical platforms for learning, fostering collaborative skills, collective agency, ecological empathy, and engagement with societal challenges (Schmeiduch and Thevenot, 2025). Across studies, lifelong learning is consistently linked to the UN SDGs-particularly SDG 4 on inclusive education-while also supporting gender equality, health, economic growth, responsible consumption and climate action, positioning it as both a personal empowerment tool and a strategic approach to achieving inclusive, equitable and sustainable development in the 21st century (Singh and Singh, 2021; Chaturvedi and Monika, 2025). Overall, lifelong learning is portrayed as a key tool for individual empowerment and a strategic approach to achieving inclusive and sustainable development in the 21st century (Chaturvedi and Monika, 2025).

IV. LIFELONG LEARNING FOR SUSTAINABLE DEVELOPMENT: ALIGNMENT WITH NEP 2020

NEP 2020 promotes learning across the lifespan by moving beyond age-specific and degree-oriented education toward continuous and flexible learning pathways. It highlights the integration of formal, non-formal, and informal modes of education, including vocational training, digital learning platforms, and adult education programs, to ensure inclusive access to learning opportunities. The article also emphasizes skill-based and multidisciplinary education as essential components of lifelong learning, enabling individuals to adapt to changing social, economic, and environmental demands. Overall, lifelong learning is presented as a strategic tool for equity, employability,

and sustainable development within the NEP 2020 framework (Schmeiduch and Thevenot, 2025).

1. BUILDING A LEARNING SOCIETY WHICH IS INCLUSIVE, RESILIENT AND SUSTAINABILITY-FOCUSED:

To realize NEP 2020's vision for holistic and inclusive education, learning about sustainability should be integrated into formal, non-formal, and informal learning. NEP 2020 has given thrust to equity, flexibility and interdisciplinary learning to bring about awareness and resilience in learners to meet challenges for sustainable development. The focus is on equity and inclusiveness. The learning should be for making learners responsible.

2. STUDENT PARTICIPATION IN ECO-VILLAGE AND COMMUNITY SUSTAINABILITY MODELS:

In line with the emphasis on experiential and community-centric learning under NEP 2020, it becomes a requirement for students to work on the construction of models for eco-villages. These activities lead to experiential learning for students related to renewable energy, water conservation, waste management, biodiversity conservation and organic farming.

3. ECOLOGICAL EMPATHY AS A CORE LEARNING COMPETENCY:

NEP 2020 stresses value-based education and development. Ecological empathy, a respect for nature and living in harmony with nature, must be inculcated along with employability skills, thereby retutorializing that nature awareness and economic independence both are equally important.

4. PROMOTION OF MULTIDISCIPLINARY AND SKILL-BASED GREEN EDUCATION:

Following the multidisciplinary strategy outlined in the NEP 2020, green education can benefit by considering science, social sciences, humanities and skill development. This helps develop green skills, innovation and sustainable entrepreneurship based on new environmental occupations.

5. INTEGRATION WITH INDIGENOUS KNOWLEDGE SYSTEMS:

NEP 2020 has underlined the significance and need for the incorporation of the Indian Knowledge Systems.

The integration with the local sustainable systems helps to improve the management of the natural environment by focusing on appropriate solutions for the challenge of sustainability.

6. DIGITAL/FLEXIBLE LEARNING FOR SUSTAINABILITY:

Emphasizing the use of technology in education, as promoted under the NEP 2020, online learning platforms, courses, or sustainability labs can facilitate life-long learning as well as address possible inequities in education, especially in the remote or deprived sections of society.

7. INTERGENERATIONAL AND COMMUNITY ENGAGEMENT:

The NEP 2020 also aims at intergenerational engagement. This is beneficial in that it enhances the transmission of sustainable values and practices. This is because intergenerational learning is an effective method through which sustainable development goals are achieved.

8. GLOBAL CITIZENSHIP WITH LOCAL RESPONSIBILITY:

Also realizing NEP 2020's vision of cultivating global citizens imbued with Indian values, learning outcomes would need to empower individuals to respond to global issues of sustainability while taking local social responsibilities into account. Aligning lifelong learning programs with NEP 2020 would bring the transformative power of learning into play, and learning would become a force that sustains and promotes factors like sustainability, resilience, ethical values, and inclusive growth, thus playing its due role in achieving global goals related to development and sustainability.

V. CONCLUSION

In summary, the current situation requires more than just new curricula, policies, or idealistic approaches. We need a real, context-based approach that promotes sustainable development. Sustainability should not be an abstract idea; it must be a part of daily life. The Sustainable Development Goals (SDGs), adopted by the United Nations in 2015, consist of 17 interconnected goals aimed at ending poverty, protecting the planet, and ensuring peace and

prosperity for everyone by 2030. Education should help people adopt these goals in their everyday choices, behaviors, and responsibilities instead of viewing them as distant policy requirements. Sustainable development should be as integral to life as oxygen is for survival. When sustainability becomes part of our thinking, learning, and actions, people will naturally help achieve the SDGs without consciously ignoring or delaying them. This approach fosters ecological awareness, social responsibility, and ethical duty. In the end, a lifelong learning and hands-on framework is crucial to turning sustainable development from policy intentions into real actions that create lasting change in society.

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