Integrating Education for Sustainable Development within the Framework of the National Education Policy 2020

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Abstract: Education for Sustainable Development has become a revolutionary approach to education, empowering learners with the knowledge, skills, abilities, values, and attitudes needed to address today's environmental, social, and economic issues. The National Education Policy (NEP) 2020 proposes a comprehensive framework linked to the principles of the Sustainable Development Goals. This work discusses the conceptual integration of Sustainable Development in Education within the policy framework and analyses its implications for curriculum, pedagogy, teacher education, and students' holistic development. The NEP 2020 focuses on experiential learning, multidisciplinary learning, rational thinking, fundamental constitutional rights, environmental awareness, and global citizenship.   These are all the necessary goals of Education for Sustainable Development. This approach intends to encourage sustainable lifestyles and responsible citizenship among students through competency-based education, creative thinking, vocational experiences, and indigenous knowledge systems. Also, its focus on fairness, inclusivity, and lifelong learning aligns with the United Nations Sustainable Development Goals, specifically Goal 4, which focuses on "inclusive equtable and quality education for all" (United Nations, 2015). This study used a descriptive document analysis method to determine that NEP 2020 integrates the vision of sustainability and transformational education. This study highlights that NEP 2020 provides strong, effective conceptual and structural foundations for Sustainable Development; its implementation requires curriculum reconstruction, teacher capacity building, and institutional support. The study concludes that Sustainable Development under NEP 2020 represents a paradigm shift, moving away from rote, content-based learning toward a values-based, student-centric, and future-oriented approach. By integrating sustainability into educational reforms, the strategy can contribute to the national development and students' holistic development.

Key Words: **Education; Sustainable Development; National Education Policy (NEP) 2020.**

1. INTRODUCTION

In today's society, people often think only about fulfilling their own needs; they often waste far more resources than necessary. People often do unnecessary things that disrupt the balance of the environment. Unplanned industrial plants cause extensive environmental damage. There are many reasons for this, such as unplanned work, lack of awareness, and lack of education. From this situation, the need for sustainable development emerges. Sustainable development has become a defining global concern of the twenty-first century. Rapid industrialization, environmental degradation, social inequality and economic instability require an education system capable of preparing responsible and informed citizens. Education for Sustainable Development (ESD) is an educational response to global challenges, promoting critical thinking, ethical reflection, environmental awareness, and social responsibility. In this context, India realizes the need for sustainable development, and education can play an important role in achieving this. The National Education Policy 2020 presents a transformative vision to align Indian education with global sustainability priorities. By promoting holistic, experiential, and multidisciplinary education, the policy lays a foundation for mainstreaming Education for Sustainable Development at all levels of education. This paper explores the conceptual underpinnings of ESD and critically analyses how the National Education Policy 2020 supports and operationalizes sustainable development within the Indian education framework.

2. RATIONALE OF THE STUDY

This study discussed the concept of Sustainable Development, analysed whether the National Educational Policy 2020 can promote Education for Sustainable Development, and examined the need for sustainable development in the 21st century and beyond. The study is crucial because the 21st century has seen rapid climate change, technological advancements, and socioeconomic issues. Education systems need to equip learners to deal with these challenges and contribute to sustainable development. Also, the National Education Policy 2020 prioritizes sustainability; scientific discussion and analysis are needed to determine the extent to which the

policy promotes sustainable and long-term development. This study was conducted through a descriptive document analysis method. Data were collected from UNESCO reports on sustainable development, the official document of India's National Education Policy 2020, and published research papers and articles related to Education and sustainable development. Data analysis through the content analysis technique.

3. REVIEW RELATED LITERATURE

Monika and Singh (2025) published a research article, 'Education for a Sustainable Future: National Education Policy 2020 and the Role of Schools in Promoting Environmental Awareness'. This study found NEP 2020 plays a crucial role in promoting environmental awareness by integrating sustainability into the curriculum, teacher training, and promoting experiential learning to foster a comprehensive understanding and active participation. Biswas (2024) writes a book chapter on 'Sustainable Development Goals Through the Lenses of NEP 2020'. This book chapter found that NEP 2020 promote SDGs in all aspects of education. Filho et al. (2023) researched 'Integrating the Sustainable Development Goals into the strategy of higher education institutions'. This study found that various higher education institutions focused on integrating SDGs into their academic activities. Radha and Arumugam (2023) conducted a study on 'Integrating the Sustainable Development Goals (SDGs) in the Curriculum and Strengthening Teacher Training Programs to Align with NEP 2020'. They found that NEP 2020 and the SDGs share a common goal towards sustainable development. Imara and Altinay (2021) published work on 'Integrating Education for Sustainable Development Competencies in Teacher Education'. They focus on developing teachers' competence to deliver learner sustainable development activities. Ferrer-Estevez and Chalmeta (2021) conducted a study on 'Integrating Sustainable Development Goals in Educational Institutions'. A framework was proposed to guide educational institutions to integrate SDGs into their activity.

4. OBJECTIVES OF THE STUDY

1. To discuss the concept of Sustainable Development.
2. To analyses the integration of sustainable development goals in the principles of the National Education Policy 2020.
3. To find out the need for sustainable development in the 21st century and the future.

5. METHODOLOGY

This study was conducted through a descriptive document analysis method. Data were collected from non-human sources, including UNESCO reports on sustainable development, the official document of India's new National Education Policy 2020, and published research papers and articles related to Education and sustainable development. Data analysis through the content analysis technique.

6. ANALYSIS

6.1. OBJECTIVE 1: To discuss the concept of Sustainable Development.

6.1.1. Concept of Sustainable Development

Sustainable development is meeting the needs of the present generation while keeping in mind the needs of future generations. Among these are proper and efficient use, recycling, and reuse of resources. Students' ability to make informed decisions, environmental integrity, economic stability, and an equitable society play important roles in sustainable development, made possible by education for sustainable development. "Sustainable development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs" (WCED1987, p. 43). In 1980, the concept of sustainable development was first publicized by the World Conservation Strategy (Pezzey, 1992). ESD can be discovered into 1987, when the World Commission on Environment and Development introduced the concept of sustainable development. "In June 1992, at the Earth Summit in Rio de Janeiro, Brazil, more than 178 countries adopted Agenda 21, a comprehensive plan of action to build a global partnership for sustainable development to improve human lives and protect the environment"(United Nations, 2025). Thereafter, the United Nations Educational, Scientific and Cultural Organisation led worldwide efforts, such as the Decade of Education for Sustainable Development (2005–2014).

The United Nations' agreement of the 2030 Agenda boosted Education for Sustainable Development (ESD), in SDG 4: " Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"(United Nations, 2015) and SDG 4.7, which asks for the integration of sustainable development, global citizenship, human rights, and multiculturalism across education systems.

6.1.2. Pillars of sustainable development:
There are three pillars of sustainability: (a) Environmental Sustainability, (b) Social Sustainability, and (c) Economic Sustainability. These pillars promote Education for Sustainable Development.

6.1.2.1. Environmental Sustainability:
Environmental sustainability plays an important role in protecting natural resources such as forests, water, soil and biodiversity. It encourages people to use them responsibly, reduce pollution and preserve ecosystems to maintain ecological balance.

6.1.2.2. Social Sustainability:
Social sustainability emphasizes equality, social justice, human rights, and improving the quality of life, including access to education, healthcare, employment, and opportunities to reduce poverty and inequality.

6.1.2.3. Economic Sustainability:
Economic sustainability refers to development that focuses on long-term economic prosperity while protecting natural resources. It encourages efficient production, sustainable industries, and responsible use of resources to ensure economic stability for future generations.

6.1.3. Core Competencies of Education for Sustainable Development

"Education for Sustainable Development (ESD) aims to develop competencies that enable and empower individuals to reflect on their own actions by taking into account their current and future social, cultural, economic and environmental impacts from both a local and a global perspective"(Rieckman, 2018). ESD helps develop students' systematic, critical, reflective thinking, Collaborative problem-solving, Ethical reasoning, and interdisciplinary understanding.

6.1.4 Role of Education in Sustainable Development

Education plays a major role in promoting sustainable development. It plays a crucial role in Creating Environmental Awareness, Promoting Sustainable Values and Attitudes, Developing Critical Thinking and Problem-Solving Skills, Encouraging Responsible Citizenship, Supporting Social Equity and Justice, enhancing economic development, Promoting Sustainable Lifestyles, Encouraging Community Participation, integrating sustainability into the curriculum, and achieving global sustainability goals.

6.2. OBJECTIVE 2: To analyse the integration of sustainable development goals in the principles of the National Education Policy 2020.

6.2.1. NEP 2020 promote Sustainable development

India's new National Education Policy 2020 aims to promote sustainable development across all aspects of education, ensuring the country's overall development continues. The utmost emphasis has been placed on making education the main tool for sustainable development. "The NEP 2020 and the SDGs share common objectives related to promoting access to quality education, improving learning outcomes, and fostering innovation and research. By integrating the SDGs into their curricula and operations, higher education institutions in India can help their students develop the knowledge, skills, and attitudes required to contribute to sustainable development in India and globally"(Radha & Arumugam, 2023). "NEP 2020 to truly foster inclusive and sustainable development, it must navigate the complexities of federalism, ensure equitable resource distribution, and resist the commodification of education"(Kundu & Roy, 2026). The aspects that have been emphasised are:

1. Restructuring Education according to SDGs: NEP 2020 emphasises restructuring the entire education system in such a way that India plays a significant role in meeting all the SDGs by 2030. "The entire education system to be reconfigured to support and foster learning, so that all of the critical targets and goals (SDGs) of the 2030 Agenda for Sustainable Development can be achieved"(Ministry of Education, 2020,p.3).

2. Develop all aspects of students: The goal of NEP 2020 is to develop in students the thinking, consciousness, intelligence, performance skills and values that reflect human rights, responsibility towards global welfare and sustainable development. "The vision of the Policy is to instill among the learners a deep-rooted pride in being Indian, not only in thought, but also in spirit, intellect, and deeds, as well as to develop knowledge, skills, values, and dispositions that support responsible commitment to human rights, sustainable development and living, and global well-being, thereby reflecting a truly global citizen"(Ministry of Education, 2020,p.6).

3. Integration of Environmental Education into School Curriculum: NEP 2020 has emphasised creating environmental awareness and conservation among students. The importance of including environmental awareness in the school curriculum has been emphasised. "It will also appropriately integrate environmental awareness and sensitivity towards its conservation and sustainable development, so that environment education becomes an integral part of school curricula"(Ministry of Education, 2020,p.23).

4. Free, equitable, and quality Education for all: NEP 2020 mentions quality, equitable, inclusive education for all children, which is directly mentioned in SDG 4. "This will further improve India's progress towards achieving Sustainable Development Goal 4 (SDG4) of ensuring free, equitable, and quality primary and secondary education for all children"(Ministry of Education, 2020,p.32).

5. All areas of Environmental education will include: All environmental issues, from the causes of environmental pollution to its remediation, conservation, and reuse of resources. "Environment education will include areas such as climate change, pollution, waste management, sanitation, conservation of biological diversity, management of biological resources and biodiversity, forest and wildlife conservation, and sustainable development and living" (Ministry of Education, 2020,p.37).

6. Promotion of Vocational Education and Skill Development in School Education and Higher Education: NEP 2020, with the aim of SDG and eradicating unemployment, has given special emphasis on vocational education so that India's actual potential can be utilized. "By 2025, at least 50% of learners through the school and higher education system shall have exposure to vocational education, for which a clear action plan with targets and timelines will be developed. This aligns with Sustainable Development Goal 4.4 and will help realise the full potential of India's demographic dividend. The number of students in vocational education will be considered while arriving at the GER targets"(Ministry of Education, 2020, p. 44).

7. Promote Environmental Awareness and Social Responsibility: NEP 2020 focuses on developing knowledge and information on all the latest important issues at the local, state, national and global levels, from water and resource conservation to sanitation and hygiene, which are complementary to the SDGs. "Environmental awareness including water and resource conservation, sanitation and hygiene; and current affairs and knowledge of critical issues facing local communities, States, the country, and the world"(Ministry of Education, 2020,p.15).

8. Higher Education in Sustainable Living and Economic Development for the country: Higher education plays an important role in accelerating sustainable development, and NEP 2020 has made the most reforms in higher education, so that sustainable living and the economic condition of the country are strengthened. "Higher education significantly contributes towards sustainable livelihoods and economic development of the nation(Ministry of Education, 2020, p. 33).

9. Promotion of Global Citizenship Education (GCED) for Inclusive, Sustainable and Peaceful Societies: The communication technology system in the world today is very advanced, and to eliminate various problems in this regard, it has been said in NEP 2020 to provide Global Citizenship Education (GCED). As a result, people will quickly become aware, and a peaceful, tolerant, inclusive, safe, and stable society can be formed. "As the world is becoming increasingly interconnected, Global Citizenship Education (GCED), a response to contemporary global challenges, will be provided to empower learners to become aware of and understand global issues and to become active promoters of more peaceful, tolerant, inclusive, secure, and sustainable societies"(Ministry of Education, 2020, p. 37).

10. Sustainable Agricultural Education and Community Development: NEP 2020 has given priority to agricultural educational institutions, which will aim to conduct adequate research in the agricultural sector, use advanced methods, innovate cutting-edge technologies, and establish agricultural technology laboratories. That is, the emphasis has been on using sustainable technologies and methods in agriculture to strengthen the country's economy by exporting crops abroad while meeting the needs of Indian citizens. "Institutions offering agricultural education must benefit the local community directly; one approach could be to set up Agricultural Technology Parks to promote technology incubation and dissemination and promote sustainable methodologies"(Ministry of Education, 2020, p. 50).

11. Integration of Emerging Technologies and Sustainable Innovation in Higher Education: The National Education Policy 2020 gives importance to the fact that India must prepare students in advance technological fields such as Artificial Intelligence, biotechnology, nanotechnology, and big data by integrating them into education to enhance innovation, sustainable development, and youth employability. "India must also take the lead in preparing professionals in cutting-edge areas that are fast gaining prominence, such as Artificial Intelligence (AI), 3-D machining, big data analysis, and machine learning, in addition to genomic studies, biotechnology, nanotechnology, neuroscience, with important applications to health, environment, and sustainable living that will be woven into undergraduate education for enhancing the employability of the youth(Ministry of Education, 2020, p. 51).

12. Promotion of Green Technologies: The National Education Policy 2020 emphasizes eco-friendly technologies like renewable energy, water conservation, sustainable agriculture and environmental protection that will transform the way we live and learn. Therefore, education must prioritize these areas to prepare students for sustainable development and environmental responsibility. "technologies that are expected to change the way we live, and, therefore, change the way we educate students, include those relating to clean and renewable energy, water conservation, sustainable farming, environmental preservation, and other green initiatives; these will also receive prioritized attention in education(Ministry of Education, 2020, p. 58).

The Indian National Education Policy-2020 covered all aspects of the Sustainable Development Agenda 2030 by promoting holistic, multidisciplinary, and value-based education; skill development; quality education; teacher training; vocational education; inclusive education; community development; economic education; environmental education; emerging technologies; and artificial intelligence. In this way, NEP-2020 provides a strong foundation for Sustainable Development.

6.3. OBJECTIVE 3: To find out the need for sustainable development in the 21st century and the future.

6.3.1. Need of sustainable development in 21th century and the future

Rapid industrialisation, climate change, global warming, biodiversity loss, increasing social inequities, and regional instability all underscore the need for sustainable development in the modern era and into the future. The Sustainable Development Goals (SDGs) indicate a global commitment to balancing economic growth, environmental conservation, and social justice for all. "The Sustainable Development Goals (SDGs) are a global appeal to protect the environment, combat climate change, eradicate poverty, and ensure access to a high quality of life and prosperity for all"(Mishra et al., 2023). The World Commission on Environment and Development initially proposed the concept of sustainable development, which ensures that the present-day needs are addressed without compromising future generations' capacity to fulfil their own needs. To sustain permanent human well-being in today's globalized and technologically advanced world, it is necessary to promote sustainable resource use, equitable growth, climate resilience, and democratic governance. Therefore, sustainable development is a complete structure to maintain environmental sustainability, social equity, and economic growth for current and future generations. Sustainable development helps to (a) address Environmental Challenges, (b) reduce Social Inequality, (c) promote Economic Stability, and (d) ensure the needs of future generations. "…developing countries demonstrate a growing interest in the SDGs, indicating a collective global commitment to sustainable development and addressing issues affecting vulnerable populations" (Yumnam et al., 2024). "There is a strong correlation between climate change and sustainable development, and the results of this experiment can provide a scientific reference for the sustainable development of similar regions in order to minimize the negative impacts of climate change in the future"(Wang et al., 2023)

7. DISCUSSION

According to the National Education Policy 2020, its objectives of comprehensive and multidisciplinary education encompass Education for Sustainable Development (ESD) as a cross-cutting goal. In addition to considering sustainability as a standalone subject, NEP 2020 includes social responsibility, moral values, and environmental awareness in the curriculum and pedagogical adaptations. NEP 2020 focuses on Quality Education (SDG 4), Gender Equality (SDG 5), Reduced Inequalities (SDG 10), Quality of Life and Well-being (SDG 3), Partnerships for the Goals (SDG 17), Climate action (SDG 13), Vocational education (SDG 8), etc. (Biswas, 2024). This indicates that competency-based and experiential learning, which align with sustainable development principles, have displaced rote learning. Abdal et al. (2022) conclude that NEP 2020 offers important Guidelines for revamping the educational system in India toward inclusive, equitable and sustainable development. In comparison, its successful implementation requires involvement from all stakeholders and transparent planning. A major strength of the policy lies in its emphasis on multidisciplinary learning, critical thinking, and experiential learning. The issue of sustainability has multiple aspects and is interrelated; hence, the policy's support of collaborative learning, community engagement, and broader subject choices provides an opportunity for effective education on sustainability. The emphasis on constitutional values, empathy, and scientific temper further supports the moral foundation essential for sustainable citizenship.

However, the policy primarily offers an ethical framework without specific, useful ways. Clear, sustainable education objectives, systematic assessment processes, and measurable indicators of ESD abilities have not been properly defined. Without those, successful and effective implementation can differ institution to institution. Teacher preparedness has become a major challenge. Kundu and Roy (2026) noted that although NEP 2020 envisions cutting-edge and overall modifications focused on inclusion and sustainable development, significant challenges arose in implementation, funding, language diversity, and bridging gaps, including the digital divide. While NEP 2020 promotes professional development, sustainability-specific training programs are not clearly outlined. Overall, the National Education Policy 2020 provides a progressive approach to embedding ESD across the Indian education system. Radha and Arumugam (2023) noted that the Indian NEP 2020 and the SDGs share a common goal of promoting sustainability across all aspects of education. Their effectiveness, however, will be determined by comprehensive teacher training, institutional support, resource allocation, and monitoring procedures that translate policy purpose into long-term educational practice.

CONCLUSION

The analysis of the National Education Policy 2020 illustrates how Education for Sustainable Development (ESD) is effectively integrated into its broad, holistic and multidisciplinary approach to education. The policy promotes competency-based and experiential learning through incorporating sustainability across the curriculum, pedagogy, values, and skill development. Its

emphasis on critical thinking, logical reasoning, environmental awareness, and constitutional values aligns with the core principles of sustainable development.

Although the policy provides a strong philosophical and normative basis, implementing it will require clear operational outlines, sustainable-focused teacher training, improved assessments, and institutional support. Without setting up monitoring and financial support, ESD's transformational capability may not be fully understood. Overall, NEP 2020 is an essential stage in developing responsible, environmentally and socially aware individuals who can contribute to a sustainable future.

REFERENCES

Ahmed, A., Vij, S., & Qureshi, S. (2022). Indian Education Policy 2020: A Road Map Towards Sustainable Development of India. *International Journal of Culture and Modernity*, *4*, 33–44.

Biswas, S. (2024). Sustainable Development Goals Through the Lenses of NEP 2020. In *Integrating Environmental Sustainability into Education Insights from NEP 2020* (pp. 53–64). INFINITY PUBLICATION. https://doi.org/10.25215/9392917465.06

Ferrer-Estévez, M., & Chalmeta, R. (2021). Integrating Sustainable Development Goals in educational institutions. *The International Journal of Management Education*, *19*(2). https://doi.org/10.1016/j.ijme.2021.100494

Filho, W. L., Simaens, A., Paço, A., Hernandez-Diaz, P. M., Vasconcelos, C. R. P., Fritzen, B., & Mac-Lean, C. (2023). Integrating the Sustainable Development Goals into the strategy of higher education institutions. *International Journal of Sustainable Development & World Ecology*, *30*(5), 564–575. https://doi.org/10.1080/13504509.2023.2167884

Imara, K., & Altinay, F. (2021). Integrating Education for Sustainable Development Competencies in Teacher Education. *Sustainability*, *13*(22), 12555. https://doi.org/10.3390/su132212555

Kundu, D., & Roy, S. (2026). Evaluation of the National Education Policy 2020 in India in the light of inclusive and sustainable development. *International Journal of Advanced Research and Development*, *11*(1), 76–82.

Ministry of Education. (2020). *National Education Policy 2020*. Government of India. https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

Mishra, M., Desul, S., Santos, C. A. G., Mishra, S. K., Kamal, A. H. M., Goswami, S., Kalumba, A. M., Biswal, R., da Silva, R. M., Dos Santos, C. A. C., & Baral, K. (2023). A bibliometric analysis of sustainable development goals (SDGs): A review of progress, challenges, and opportunities. *Environment, Development and Sustainability*, 1–43. https://doi.org/10.1007/s10668-023-03225-w

Pezzey, J. (1992). *Sustainable Development Concepts* (Vol. 1). The International Bank for Reconstruction and Development. https://www.researchgate.net/publication/5077864_Sustainable_Development_Concepts_An_Economic_Analysis

Radha, L., & Arumugam, J. (2023). Integrating the Sustainable Development Goals (SDGs) in the Curriculum and Strengthening Teacher Training Programs to Align with NEP 2020. *Shanlax International Journal of Education*, *11*(4), 63–68. https://doi.org/10.34293/education.v11i4.6302

Rieckman, M. (2018). Learning to transform the world: Key competencies in Education for Sustainable Development. In *Issues and trends in education for sustainable development*. UNESCO Publishing. https://books.google.co.in/books?hl=en&lr=&id=V7lQDwAAQBAJ&oi=fnd&pg=PA39&dq=

United Nations. (2025). *THE 17 GOALS*. Sustainable Development Goal. https://sdgs.un.org/goals

Wang, R., Zhao, J., Lin, Y., Qin, B., Chen, G., Bao, L., & Long, X. (2023). Study on the response and prediction of SDGs based on different climate change scenarios: The case of the urban agglomeration in central Yunnan. *Ecological Indicators*, *156*, 111076. https://doi.org/10.1016/j.ecolind.2023.111076

Yadav, M., & Singh, P. (2025). Education for a Sustainable Future: National Education Policy 2020 and the Role of Schools in Promoting Environmental Awareness. *CHETANA International Journal of Education*, *10*(1), 140–144. https://doi.org/2455-8279

Yumnam, G., Gyanendra, Y., & Singh, C. I. (2024). A systematic bibliometric review of the global research dynamics of United Nations Sustainable Development Goals 2030. *Sustainable Futures*, *7*, 100192. https://doi.org/10.1016/j.sftr.2024.100192