


Chapter 3


Digital Tools and Resources for Teaching Sustainability

Dhanashri S. Havale

 <https://orcid.org/0000-0002-6182-8026>


International Institute of Management Studies, SaiBalaji Education Society, Pune, India

Dattatraya Pandurang Rane

 <https://orcid.org/0009-0005-9625-8018>


Maharshi Karve Model College for Women, SNDT Women's University, Shriwardhan, India

Jayashree Patole

 <https://orcid.org/0000-0001-9251-0654>

Ramachandran International Institute of Management, India

Aditee Huparikar Shah

 <https://orcid.org/0009-0009-0757-8597>

Indira College of Engineering and Management, India

Nilesh Anute

 <https://orcid.org/0000-0001-6599-813X>

Sri Balaji University, India

P. Selvakumar

 <https://orcid.org/0000-0002-3650-4548>

Department of Science and Humanities, Nehru Institute of Technology, Coimbatore, India

ABSTRACT

In the face of escalating environmental crises, the imperative for education systems to embrace sustainability has never been more pressing. Teaching sustainability involves integrating ecological, social, and economic dimensions into the learning process, aiming to equip students with the knowledge, skills, and values needed to foster a sustainable future. This educational approach transcends traditional disciplinary boundaries, promoting an interdisciplinary perspective that emphasizes critical thinking, collaboration, and problem-solving. The principles of sustainability education focus on fostering a holistic understanding of interconnected systems,

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encouraging learners to recognize their role within these systems, and inspiring them to act responsibly and ethically in their communities. One of the core principles of teaching sustainability is the emphasis on systems thinking. This approach allows students to grasp the complexity of ecological and social interdependencies.

INTRODUCTION TO TEACHING SUSTAINABILITY: PRINCIPLES, CHALLENGES, AND OPPORTUNITIES

In the face of escalating environmental crises, the imperative for education systems to embrace sustainability has never been more pressing. Teaching sustainability involves integrating ecological, social, and economic dimensions into the learning process, aiming to equip students with the knowledge, skills, and values needed to foster a sustainable future. This educational approach transcends traditional disciplinary boundaries, promoting an interdisciplinary perspective that emphasizes critical thinking, collaboration, and problem-solving. The principles of sustainability education focus on fostering a holistic understanding of interconnected systems, encouraging learners to recognize their role within these systems, and inspiring them to act responsibly and ethically in their communities. One of the core principles of teaching sustainability is the emphasis on systems thinking. This approach allows students to grasp the complexity of ecological and social interdependencies. By understanding how various components of ecosystems and societies interact, learners can better appreciate the implications of human actions on the environment. For instance, exploring the water-energy-food nexus can illuminate how water usage impacts energy production and food security, prompting students to consider their consumption patterns and the broader implications of their choices. Moreover, systems thinking encourages learners to adopt a long-term perspective, fostering an awareness of how current actions can shape future outcomes. Despite the importance of these principles, educators face significant challenges in implementing sustainability education. One major barrier is the lack of comprehensive training and resources for teachers. Many educators are not adequately prepared to teach sustainability concepts, often feeling overwhelmed by the complexity of the subject matter. Additionally, existing curricula may not prioritize sustainability, leaving educators to navigate how to integrate these critical topics into their teaching effectively. Furthermore, there is often resistance from stakeholders who may not recognize the urgency of sustainability issues or who prioritize standardized testing and traditional educational outcomes over innovative pedagogical approaches.

Another challenge lies in addressing the diverse perspectives and values that students bring to the classroom. Sustainability is often viewed through different cultural, economic, and social lenses, which can lead to misunderstandings or con-

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