


Chapter 21

Transformative Educational Strategies for Global Sustainability Literacy

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ABSTRACT

In an era of unprecedented global sustainability challenges, education emerges as a critical lever for systemic transformation. This chapter presents a comprehensive examination of innovative educational strategies designed to cultivate sustainability literacy across diverse learning contexts. By integrating cutting-edge research, global case studies, and interdisciplinary perspectives, the study offers a robust framework for reimagining educational approaches that can effectively address complex environmental, social, and economic sustainability challenges. The research systematically explores three pivotal domains: curriculum integration, digital education technologies, and lifelong learning models. Employing a mixed-methods approach that combines systematic literature review, comparative case studies, policy analysis, and expert consultations, the chapter develops a nuanced understanding of how educational reforms can foster sustainability awareness and competencies.

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INTRODUCTION

The 21st century has ushered in an era of unprecedented global sustainability challenges, ranging from climate change and resource depletion to biodiversity loss and social inequality. These challenges threaten not only the stability of natural ecosystems but also the socio-economic structures that societies depend upon for their continued prosperity and well-being. Climate change, characterized by rising global temperatures, increasingly frequent extreme weather events, and accelerating sea-level rise, impacts both natural environments and human systems in profound and often unpredictable ways. Resource depletion, driven by patterns of overconsumption and inefficient resource utilization, endangers the future availability of essential resources like water, arable land, and fossil fuels. Biodiversity loss, exacerbated by habitat destruction, pollution, and climate change, poses an existential risk to ecosystem services vital for human survival and flourishing. Meanwhile, pollution in air, water, and soil continues to degrade ecosystems and harm human health across the globe. Social inequality further compounds these issues by creating disparities in resource access and amplifying vulnerabilities among marginalized communities, thus undermining the collective capacity to address environmental challenges effectively (Dunlop & Rushton, 2022; Li et al., 2022).

Education plays a crucial role in fostering sustainability awareness and addressing these multifaceted challenges. It serves as a vehicle for disseminating knowledge about sustainability issues, equipping individuals with the critical thinking skills necessary to assess human impacts on the environment and influencing behavioral change towards sustainable practices. Moreover, education empowers communities to advocate for sustainable policies and engage actively in decision-making processes that shape environmental futures (Ziegler & Porto-de-Oliveira, 2022; Saleem et al., 2022). Kelly (2020) aptly describes education as potentially the “silver bullet” for sustainability challenges, noting that educational interventions represent our most promising avenue for cultivating the values, knowledge, and skills necessary for sustainable development across generations.

The transition to sustainable societies relies heavily on educational reforms that integrate sustainability into curricula at all levels. By adopting an interdisciplinary approach, education can highlight the interconnectedness of environmental, social, and economic systems, thus providing students with a holistic understanding of sustainability challenges. Skills development for green jobs is another essential component, preparing students to contribute to sustainable practices across various industries. Community engagement in educational initiatives fosters collective efforts towards sustainability, while educated individuals are more likely to participate in policymaking, advocating for regulations that support sustainable development (Moghadam et al., 2022; Sánchez-Carracedo et al., 2021).

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