Chapter 16
Digital Innovation in Green Learning:
Ensuring Safety While Fostering Environmental Stewardship

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ABSTRACT

Digital innovation in education empowers educators to create a dynamic and inclusive learning environment, enriched with engaging content. E-learning tools enable real-time data analysis and a deeper understanding of ecological issues. These tools include learning management systems, interactive content creation, augmented and virtual reality, online collaboration tools, video conferencing, and e-books, facilitating collaborative environmental initiatives. Embracing an e-conscious curriculum, focusing on renewable energy, sustainable practices, and climate change, represents a trend in digital green learning. However, data privacy concerns like breaches, insecure communication channels, unauthorized access, third-party data sharing, and identity threats pose challenges. This chapter highlights the importance of cybersecurity in digital green learning to protect personal and sensitive data and ensure safe online learning spaces for students

INTRODUCTION

Overview of digital innovation in education

It has been stated by Lee and Sylvén, (2021) that digital innovation in the context of education influences the technology in order to improve the experience of learning, collaboration and accessibility. It also involves interactive content, adaptive systems of learning, virtual classrooms and e-learning platforms. The transformation of the education field through digital innovation helps in real-time assessment, global connectivity and also in personalised learning.

It has been critically argued by Maki, (2023) that digital innovation in the field of education leads to lack of attention and distractions. Digital innovation in education also inspires and empowers educators to foster a dynamic and develop engaging content as well as an inclusive environment of education. Through digital innovation, students are able to get access to educational resources anywhere they want, which results in fostering a more tailored and flexible approach related to learning.

The importance of green learning

The role of green learning is considered significant in the field of education. As per the view of Singh, Tang and Ogunseitan, (2020) the role of green learning is regarded as important because it fosters sustainability and environmental awareness. It also helps the student gain knowledge related to climate change, the significance of conservation and ecological issues. Implementation of green practices in the field of education results in encouraging waste reduction, eco-friendly choices and inspiring responsible behaviour.

It has been critically opposed by Brundiers *et al.* (2021) that by focusing on environmental stewardship, green learning encourages wisdom of accountability towards the planet. The role of green learning is also considered important because it prepares the upcoming generations to mitigate the global barriers as well as focuses on endorsing a mindset which values sustainability that leads to contributing towards developing a society which is more environmentally conscious.

The chapter's focus on safety in digital and green learning environments

The focus of the chapter is on safety in digital and green learning environments because it prioritises cybersecurity, which helps in safeguarding personal and sensitive data and also facilitates making sure that there are secure online platforms or spaces for students. Chen *et al.* (2020) stated that the environment of green learning

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