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Emerging Technologies: Achieving SDGs within Indian Universities and Colleges

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Abstract: Technological innovations like artificial intelligence, machine learning, and digital learning platforms are making education more accessible, efficient, and sustainable. These advancements enhance learning experiences, facilitate research, improve administrative efficiency, and contribute to environmental sustainability through smart campus initiatives. Integrating emerging technologies into Indian higher education is crucial for advancing the Sustainable Development Goals (SDGs), particularly SDG 4, which emphasises inclusive and equitable quality education. This paper explores the implementation of these technologies in Indian universities and colleges, highlighting AI-driven personalised learning systems, open educational resources, and online learning platforms like SWAYAM and NPTEL.

However, challenges persist in the implementation of these technologies, such as the digital divide, cybersecurity threats, faculty preparedness, and financial constraints. This paper proposes measures to overcome these challenges, including expanding digital infrastructure, enhancing faculty training programs, fostering university-industry collaborations, and implementing ethical and sustainable technology policies. Through the strategic use of digital innovations and the resolution of current obstacles, institutions of higher education in India can establish an inclusive, forward-looking, and sustainable academic environment.

Keywords: Technology, Education, Sustainability, Innovation, Inclusion, Digitalization, AI, Cybersecurity, Smart Campuses, E-Learning



