IJARSCT



International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Impact Factor: 7.67

Volume 5, Issue 8, June 2025

Smart Classrooms and Bridging the Digital Divide: Addressing Challenges and Unlocking Opportunities for Sustainable Development Goals in Education

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Abstract: The integration of smart classrooms into educational institutions marks a significant advancement in the pursuit of high-quality education, particularly concerning the Sustainable Development Goals (SDGs). Focusing on SDG 4, which emphasizes the importance of inclusive and equitable quality education, this paper critically examines how smart classroom technologies can effectively bridge the digital divide. By addressing the persistent disparities in access to educational resources, these technologies have the potential to foster inclusive learning environments for diverse student populations. However, the journey toward implementing smart classroom technologies is fraught with challenges. This study identifies key barriers such as infrastructural weaknesses, deficiencies in digital literacy, and the socioeconomic factors that hinder equitable access to technology. While these obstacles are significant, they are not insurmountable. The research further explores the opportunities presented by smart classrooms, including enhanced pedagogical strategies that increase learner engagement and promote a culture of lifelong learning. Through a thorough investigation of existing policies, case studies, and best practices, the paper emphasizes the necessity of collaboration among stakeholders such as educators, policymakers, and technology providers. Such partnerships are crucial in overcoming the challenges faced in integrating technology into educational practices. Ultimately, the findings aim to enrich the discourse surrounding the utilization of educational technologies, illustrating their potent role in establishing equitable and sustainable education systems. By paving the way for transformative impacts on global education, this research highlights the critical need to leverage the potential of smart classrooms to ensure that all learners have access to the quality education they deserve.

Keywords: Smart Classrooms, Digital Divide, Sustainable Development Goals, SDG 4, Inclusive Education, Educational Technology, Equity in Education, Digital Literacy, Educational Policy, Pedagogical Innovation



