

TECHNOLOGY INTEGRATION IN LEARNING IN THE DIGITAL AGE: A LITERATURE REVIEW OF MODELS, CHALLENGES, AND OPPORTUNITIES

Ayu Wulandari

Pendidikan Bahasa Indonesia, Universitas Muhammadiyah Palembang
ayu_wulandari@um-palembang.ac.id

Eka Haryati Yuliany

Pendidikan Biologi, Universitas Muhammadiyah Palembang
adinnda.ekka@gmail.com

Sri Parwanti

Pendidikan Bahasa Indonesia, Universitas Muhammadiyah Palembang
parwantisri12@gmail.com

Abstract

This research aims to comprehensively examine the integration of technology in learning in the digital era through a literature review of emerging models, challenges and opportunities. Various integration models such as SAMR, TPACK, LoTI, blended learning, as well as the utilisation of digital platforms have been implemented to improve the effectiveness, flexibility, and relevance of learning. However, the implementation of technology in education still faces significant challenges, including limited infrastructure, access gaps, uneven digital competence, resistance to change and data security issues. On the other hand, technology integration opens up great opportunities for improving accessibility, personalising learning, global collaboration and strengthening 21st century skills. This review highlights the importance of well-planned implementation strategies, policy support and cross-stakeholder collaboration for technology integration to drive adaptive, inclusive and sustainable education transformation.

Keywords: technology integration, learning, digital era, integration model, challenges, opportunities, education

Introduction

The digital era has brought major changes in almost all aspects of human life, including education. This transformation can be seen from the massive use of digital devices, online platforms, and multimedia resources in the learning process (Haleem et al., 2022). Education is no longer limited to the physical classroom, but has expanded to the virtual realm that allows interaction and access to information without the limits of time and space.

The integration of technology in learning creates a dynamic learning environment and enriches learners' experience. Through the utilisation of technology, students can access various learning resources flexibly, collaborate online, and obtain