

**INNOVATIVE TECHNOLOGY-BASED LEARNING MODELS (BLENDED LEARNING,
FLIPPED CLASSROOM, AND PROJECT-BASED LEARNING) FOR DEVELOPING CRITICAL,
CREATIVE, AND COLLABORATIVE SKILLS: A LITERATURE REVIEW**

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Abstract

This study aims to examine the effectiveness of innovative technology-based learning models, including blended learning, flipped classrooms, and project-based learning, in developing critical, creative, and collaborative skills. Through a literature review method, this study analyses various studies discussing the implementation and role of technology in supporting adaptive and participatory learning. The results of the study indicate that the integration of technology in these learning models can significantly increase student engagement, facilitate active learning, and strengthen the development of higher-order thinking skills and cooperation among students. These findings emphasise the importance of the planned and systematic use of technology in education as an effort to equip students with essential 21st-century competencies.

Keywords: Innovative Learning Models, Technology-Based Learning, Blended Learning, Flipped Classroom, Project-Based Learning, Critical Skills, Creative, Collaborative.

Introduction

Learning in the current digital era is undergoing a significant transformation influenced by rapid and massive technological developments. Information and Communication Technology (ICT) provides unlimited access to various learning resources and facilitates interaction between teachers and students in various learning formats (& Aslan, 2025); (Purike & Aslan, 2025); (Firmansyah & Aslan, 2025a); (Firmansyah & Aslan, 2025b). The use of technology in education is not merely the use of electronic devices, but rather an innovation in learning that requires a deep understanding of the effective integration of technology to support active and interactive teaching and learning processes (Aslan & Sidabutar, 2025); (Cahyono & Aslan, 2025); (Saputra et al., 2024). This development is inevitable so that education can respond to the challenges of the 21st century, which demand critical, creative, and collaborative skills from students as preparation for facing an increasingly complex and dynamic world of work and social life (Suprihatin, 2024).