

## EXAMINING MULTIMODAL LEARNING AND PROJECT-BASED PEDAGOGIES: IMPACT ON ACADEMIC ATTAINMENT AND 21ST CENTURY SKILLS IN SECONDARY EDUCATION

**Loso Judijanto** \*<sup>1</sup>

IPOSS Jakarta, Indonesia  
[losojudijantobumn@gmail.com](mailto:losojudijantobumn@gmail.com)

**Rerin Maulinda**

Universitas Pamulang, Indonesia  
[dosen00445@unpam.ac.id](mailto:dosen00445@unpam.ac.id)

**Muhammad Ichsan Abda**

Universitas Negeri Yogyakarta, Indonesia  
[muhammado400fmipa.2022@student.uny.ac.id](mailto:muhammado400fmipa.2022@student.uny.ac.id)

**Muhammadong**

Universitas Negeri Makassar, Indonesia  
[muhammadong@unm.ac.id](mailto:muhammadong@unm.ac.id)

**Suhana Sarkawi**

Institute of Teacher Education Tun Abdul Razak Campus, Kota Samarahan Malaysia  
[suhana.sarkawi@ipgm.edu.my](mailto:suhana.sarkawi@ipgm.edu.my)

### Abstract

This comprehensive investigation delved into the intricate relationship between multimodal learning environments and cognitive development, focusing on the impact of project-based pedagogies on academic attainment and the cultivation of 21st-century skills in secondary school learners. The study employed a systematic approach, analyzing diverse literature to synthesize empirical findings. The exploration revealed a positive nexus between project-based pedagogies and enhanced academic achievement, showcasing improved comprehension and practical application of subject matter. Additionally, integrating multimodal learning environments consistently correlated with developing essential 21st-century skills, including critical thinking, collaboration, communication, and adaptability. These insights contribute to a nuanced understanding of practical pedagogical approaches, emphasizing the significance of dynamic, project-based learning environments in shaping well-rounded learners in secondary education.

**Keywords:** Multimodal Learning Environments, Cognitive Development, Project-Based Pedagogies, Academic Attainment, 21st Century Skills, Secondary School Learners.

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<sup>1</sup> Correspondence author