

A Systemic Literature Review: Microlearning and Machine Learning for A1 French Reading to Prepare Indonesia's Golden Generation 2045*

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Abstract

The Indonesian government envisions the development of a Golden Generation by 2045, focusing on building human capital with essential skills, including foreign language proficiency. This study systematically reviews the integration of microlearning and machine learning (ML) techniques to enhance French reading comprehension among A1-level learners in Indonesia. Utilizing a systematic literature review (SLR) of 30 peer-reviewed articles published between 2015 and 2024, this research identifies effective strategies, challenges, and technological frameworks that support personalized, adaptive learning environments. The review reveals that microlearning's short, focused instructional units, combined with ML-powered personalization and real-time feedback mechanisms, significantly improve reading comprehension outcomes. Such innovations align well with Indonesia's educational goals for 2045 by fostering autonomous, motivated, and globally competitive learners. Recommendations for implementing scalable, culturally relevant microlearning solutions augmented by ML in Indonesian contexts are discussed.

Keywords: Microlearning, Adaptive learning; A1 learners; Educational technology; French reading comprehension;