

INTEGRATING OUTCOME-BASED EDUCATION AND DIGITAL LITERACY IN INDONESIAN LANGUAGE LEARNING UNDER THE MERDEKA CURRICULUM: A NARRATIVE REVIEW

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PUBLICATION

DETAILS

Received : 2025-11-22

Revised : 2025-11-25

Accepted : 2025-11-28

KEYWORDS

Outcome-Based Education

(OBE)

Digital Literacy

Indonesian Language Learning

KATA KUNCI

Pendidikan Berbasis Hasil (OBE)

Literasi Digital

Pembelajaran Bahasa Indonesia

ABSTRACT

This study addresses the growing need to integrate digital literacy within the Outcome-Based Education (OBE) framework in Indonesian language learning under the Merdeka Curriculum. The research aims to synthesize empirical evidence on the implementation of digital literacy, its impact on learning outcomes, and the challenges encountered in practice. A narrative review approach was employed by analyzing 11 empirical studies published between 2022 and 2025. The findings reveal three dominant integration patterns: authentic assessment, project-based learning (PBL), and competency-aligned curriculum tools. These approaches contribute to improved student engagement, higher-quality learning outputs, and the development of critical thinking, collaboration, and communication skills. However, the effectiveness of integration is strongly influenced by teacher digital competence, alignment between learning outcomes and assessment practices, and the availability of digital infrastructure. Key challenges include limited teacher readiness, assessment misalignment, and unequal access to technology. This study concludes that successful integration requires coherent outcome-based instructional design supported by pedagogical capacity and institutional readiness, rather than mere technological adoption.

ABSTRAK

Penelitian ini dilatarbelakangi oleh kebutuhan untuk mengintegrasikan literasi digital dalam kerangka Outcome-Based Education (OBE) pada pembelajaran Bahasa Indonesia di bawah Kurikulum Merdeka. Penelitian ini bertujuan untuk mensintesis bukti empiris mengenai implementasi literasi digital, dampaknya terhadap hasil belajar, serta tantangan yang dihadapi dalam praktik. Metode yang digunakan adalah narrative review dengan menganalisis 11 studi empiris yang dipublikasikan pada tahun 2022 hingga 2025. Hasil penelitian menunjukkan tiga pola integrasi utama, yaitu penilaian autentik, pembelajaran berbasis proyek (Project-Based Learning/PBL), dan perangkat kurikulum yang selaras dengan kompetensi. Pendekatan ini berkontribusi terhadap peningkatan keterlibatan siswa, kualitas hasil belajar, serta pengembangan keterampilan berpikir kritis, kolaborasi, dan komunikasi. Namun, efektivitas integrasi sangat dipengaruhi oleh kompetensi digital guru, keselarasan antara capaian pembelajaran dan penilaian,

serta ketersediaan infrastruktur digital. Tantangan utama meliputi kesiapan guru yang terbatas, ketidaksesuaian penilaian, dan kesenjangan akses teknologi. Penelitian ini menyimpulkan bahwa integrasi yang efektif memerlukan desain pembelajaran berbasis luaran yang koheren serta didukung oleh kapasitas pedagogis dan kesiapan institusional, bukan sekadar adopsi teknologi.

1. Introduction

The transformation of Indonesian education has entered a new era with the launch of the *Merdeka Belajar* (Freedom of Learning) policy and the implementation of the *Merdeka Curriculum*, which emphasizes student-centered learning, teacher flexibility, and the development of 21st-century competencies (Kusumasari et al., 2024; Kuntarto, 2022). This policy responds to global demands for graduates who not only master academic knowledge but also possess critical thinking, creativity, collaboration, communication, and digital literacy skills, which are essential competencies to compete in the era of Society 5.0 and the digital economy (Mangesti & Kismartini, 2024). The *Merdeka Curriculum* streamlines learning content, encourages project-based learning, and gives teachers the autonomy to adapt learning to the local context and student needs, creating more space for pedagogical innovation (Kuntarto, 2022; Ummah & Nadlir, 2023).

Within the framework of the *Merdeka Curriculum* implementation, the Outcome-Based Education (OBE) approach serves as the philosophical and operational foundation that guides the entire learning process toward the achievement of explicit and measurable Learning Outcomes (LO) (Saa, 2024). OBE shifts the focus from inputs and processes alone to concrete learning outcomes, where LOs serve as targets that guide learning design, instructional strategy selection, and assessment instrument development (Saa, 2024; Safitri et al., 2023). The relevance of OBE to the *Merdeka Curriculum* lies in the principles of accountability and transparency: learning is systematically designed so that every activity in the classroom contributes directly to the achievement of predetermined competencies (Saa, 2024). Thus, LOs are not merely administrative documents, but a compass that guides the entire learning ecosystem toward meaningful results that can be demonstrated by students.

In this context, digital literacy occupies a strategic dual position: it is both a medium and a competency that must be mastered (Wahyuni et al., 2023; Jasri et al., 2024). As a medium, digital technology provides a platform for flexible,

interactive, and contextual learning, facilitating project-based learning, online collaboration, and access to global learning resources that support the principles of *Merdeka Belajar* (Wahyuni et al., 2023; Suci et al., 2025). As a competency, digital literacy encompasses the ability to critically and ethically access, evaluate, integrate, and communicate information using technology skills that support learning in all subject areas and serve as prerequisites for active participation in the 21st-century digital society (Jasri et al., 2024; Silvester et al., 2024). Intervention studies show that structured integration of digital literacy can improve students' critical thinking, creative problem-solving, and collaboration skills, while also increasing teachers' competence and confidence in implementing the *Merdeka Curriculum* (Wahyuni et al., 2023; Wahyuni & Iqbal, 2024).

Although the conceptual framework of the integration of *Merdeka Belajar*, OBE, and digital literacy has been widely discussed in policy and theoretical literature, there is a significant gap in terms of synthesizing empirical findings on how this integration is realized in classroom practice and impacts student achievement (Saa, 2024; Sa'id et al., 2024). Qualitative field studies reveal non-linearity between the established LO, learning design, classroom implementation, and assessment, indicating that OBE principles are often not manifested in actual practice (Saa, 2024). Implementation research also identifies structural barriers such as technological infrastructure limitations, teacher digital competency gaps, regional disparities, and data privacy issues that hinder the realization of digital literacy potential (Sa'id et al., 2024). Furthermore, most of the available empirical evidence comes from single case studies, small-scale pilot programs, or descriptive reports that are difficult to generalize, while systematic syntheses or meta-analyses that integrate cross-context findings are still very limited (Wahyuni & Iqbal, 2024).

Thus, research is needed that documents implementation practices and systematically synthesizes how the integration of digital literacy within the OBE and *Merdeka Curriculum* frameworks results in measurable changes in student

LO in various learning contexts. This article does not collect primary data but presents a synthesis of empirical findings from previous studies through a narrative review approach to identify patterns of integration, reported impacts, and implementation challenges. This study aims to answer the following questions:

1. How is digital literacy integrated into the OBE framework in Indonesian language learning under the Merdeka Curriculum?
2. What implementation challenges do teachers and students face, and what strategies facilitate successful integration?

2. Theoretical Framework

2.1 Outcome-Based Education

Outcome-Based Education (OBE) is an approach that organizes curriculum and instruction around clearly defined learning outcomes. These outcomes represent measurable competencies that students are expected to demonstrate at the end of instruction. A key principle of OBE is constructive alignment, ensuring coherence between intended learning outcomes, instructional activities, and assessment practices (Saa, 2024).

Within this framework, assessment emphasizes observable performance rather than content recall. Learning activities are therefore designed to generate evidence of competence aligned with predetermined outcomes.

2.2 Digital Literacy in Learning Contexts

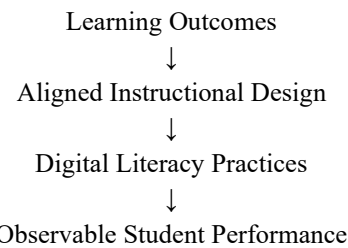
Digital literacy refers to the capacity to access, evaluate, create, and communicate information through digital technologies in critical and ethical ways. It encompasses information evaluation, multimodal communication, collaboration, and responsible digital participation (Wahyuni et al., 2023).

In educational practice, digital literacy functions not only as technological support but also as a competency that shapes how knowledge is constructed and demonstrated.

2.3 Conceptual Alignment between OBE and Digital Literacy

The integration of digital literacy within an OBE framework is grounded in alignment between competencies and demonstrable performance. OBE requires measurable evidence of learning outcomes, while digital literacy provides the medium through which such evidence can be generated (Saa, 2024; Wahyuni et al., 2023).

Conceptually, the integration can be illustrated as:



Through this alignment, digital literacy supports the realization of outcome-based learning by transforming language tasks into measurable and performance-oriented activities.

3. Method

This article uses a narrative review approach to synthesize empirical findings on the integration of digital literacy and Outcome-Based Education (OBE) in Indonesian language learning in the context of the *Merdeka Curriculum*. This approach was chosen because it provides flexibility to combine various types of empirical evidence and draw conceptual patterns across studies without the strict procedural requirements of a systematic review. Narrative reviews are particularly suitable for topics that are still developing and have diverse contexts, as emphasized by Snyder (2019), that this method allows researchers to build a comprehensive understanding through the synthesis of diverse and not always homogeneous findings.

Literature searches were conducted through *Google Scholar*, DOAJ, Garuda, and the SINTA portal, using keywords such as ‘Outcome-Based Education (OBE)’, ‘Literasi Digital’, ‘Bahasa Indonesia’, and ‘Kurikulum Merdeka’. Articles were selected based on their relevance to the integration of OBE and digital literacy, their connection to Indonesian language learning, and the availability of empirical data to support the synthesis. Articles that were only conceptual or did not provide extractable empirical information were excluded from the analysis.

4. Results and Discussion

1. Integration Patterns of Digital Literacy in the OBE Framework

Empirical findings indicate that digital literacy is integrated into OBE-based Indonesian language learning through three dominant modalities: authentic assessments, project-based learning (PjBL), and competency-aligned curriculum tools.

Authentic assessments function as a bridge between digital literacy skills and competency-based outcomes. Studies such as (Fadilla et al., 2023) show

that tasks like digital portfolios, multimedia presentations, and industry-oriented documents simultaneously measure language proficiency and digital skills, aligning with OBE's emphasis on demonstrable learning outcomes.

PjBL emerges as the most common pedagogical model for integrating digital literacy. (Izhar et al., 2025) and (Fuadin & Fauziya, 2022) document how digital storytelling, video production, and collaborative writing tasks foster multiliteracy, problem-solving, and the production of tangible learning artifacts. These approaches align well with *Merdeka Curriculum* principles and OBE's outcome-driven design.

At the structural level, competency-aligned curriculum tools (PP-PK) support systematic integration by translating learning outcomes into specific teachable competencies. (Mohone et al., 2024) note that such tools maintain alignment with OBE principles, while studies like (Kusumasari et al., 2024) show how digital-based activities in elementary-level Indonesian language classes strengthen 21st-century skills through online research, multimedia work, and collaborative digital tasks.

To summarize the dominant integration patterns identified across the reviewed studies, Table 1 presents a synthesis of digital literacy practices, reported learning impacts, and representative supporting studies.

Table 1. Synthesis of Digital Literacy Integration Patterns in OBE-Based Indonesian Language Learning

Integration Pattern	Digital Learning Practice	Reported Impact on Learning Outcomes
Authentic Assessment	Digital portfolios, multimedia presentations, and industry-oriented documents	Improved quality of student products, contextual language use, and demonstration of integrated linguistic and digital competencies
Project-Based Learning (PBL)	Digital storytelling, collaborative writing, video production, and multimedia projects	Increased student engagement, development of critical thinking, collaboration, and creative expression
Competency-Aligned Curriculum Tools	Outcome-based modules, digital learning resources, and	Stronger alignment between learning outcomes, teaching activities, and

	competency-mapping tools	assessment; improved development of 21 st -century competencies
Integration Pattern	Digital Learning Practice	Reported Impact on Learning Outcomes

As shown in Table 1, project-based learning and authentic assessment emerge as the most frequently reported approaches for integrating digital literacy into OBE-based Indonesian language learning.

2. Documented Impacts on Student Learning Outcomes

Across studies, digital literacy integration within OBE frameworks demonstrates improvements in performance quality, engagement, and higher-order competencies, although the evidence remains largely qualitative.

Authentic assessments have been shown to enhance the quality of student products and contextual language application. Fadilla et al. (Fadilla et al., 2023) report that students can produce professional-quality digital artifacts that meet both linguistic and digital competency standards. Prasetia et al. (Prasetia et al., 2025) also found increases in engagement and artifact quality in PjBL settings, although the integration of HOTS in assessment remains inconsistent.

Several studies highlight improvements in critical thinking, collaboration, and communication. Kusumasari et al. (Kusumasari et al., 2024) observed gains in students' ability to evaluate online sources and produce evidence-based arguments. Intiana et al. (Intiana et al., 2023) found similar trends, although they emphasize the need for more rigorous empirical measures.

Teacher competence mediates these outcomes. Mentoring programs documented in (Suyitno et al., 2023) demonstrate substantial increases in teacher digital readiness, which is essential for effective OBE implementation. This suggests that digital literacy benefits students most when teachers have adequate technical and pedagogical preparation.

3. Implementation Challenges

Despite positive outcomes, three key challenges hinder effective integration: teacher readiness, assessment misalignment, and infrastructure constraints.

Teacher readiness remains the most persistent obstacle. Several studies, including Kemal et al. (Kemal et al., 2024) and Intiana et al. (Intiana et al., 2023), show that teachers often lack confidence,

digital skills, and the pedagogical knowledge required to blend digital tools with language instruction effectively. These gaps are more pronounced in rural areas with limited access to training.

Assessment misalignment is another significant issue. Studies highlight inconsistency between intended OBE outcomes and actual assessment practices. Non-linearity between learning outcomes, planning, implementation, and assessment is noted in Damanik et al. (Mohone et al., 2024) and Prasetya et al. (Prasetya et al., 2025). Traditional assessments are often retained, limiting the measurement of digital literacy or HOTS.

Infrastructure constraints, including uneven device availability, unstable internet access, and technical issues, are widely reported (Damanik et al., 2025). Ishmah et al. (Ishmah et al., 2025) further note digital citizenship concerns, such as inappropriate content exposure and challenges in teaching online language etiquette, indicating that integration requires both technical and ethical frameworks.

4. Facilitating Strategies and Best Practices

Successful integration depends on synergy between pedagogy, assessment, teacher development, and infrastructure.

PjBL and authentic performance tasks remain the most effective pedagogical approaches, as demonstrated in (Izhar et al., 2025), (Fuadin & Fauziya, 2022), and Fadilla et al. (Fadilla et al., 2023). These models generate assessable digital artifacts aligned with OBE outcomes. Integrated digital activities, such as e-book use, multimedia projects, and structured online research, enhance multimodal expression and support 21st-century competencies (Kusumasari et al., 2024).

In assessment, rubrics that include both linguistic and digital indicators have proven effective (Fadilla et al., 2023). Competency toolkits help ensure outcome alignment in instructional design (Mohone et al., 2024), and high-quality formative assessment is needed to ensure progression toward outcome mastery (Prasetya et al., 2025).

Teacher support is central. Structured mentoring improves digital literacy and pedagogical confidence (Suyitno et al., 2023), while professional learning communities enhance collaboration and resource sharing (Kemal et al., 2024). Infrastructure support remains foundational: stable connectivity, shared devices, and accessible digital resources are crucial, even if minimal (Damanik et al., 2025). Institutional leadership and policy support further strengthen

implementation consistency across schools (Intiana et al., 2023).

5. Synthesis and Implications

Synthesized evidence suggests that digital literacy integration into OBE-based Indonesian language learning is most successful when pedagogical practices, assessment systems, teacher capacity, and infrastructure are aligned. Technology alone does not drive meaningful outcomes; rather, improvements emerge when digital tools are embedded within strong pedagogical frameworks supported by teacher competence and institutional commitment (Izhar et al., 2025; Mohone et al., 2024; Intiana et al., 2023).

The findings reinforce the socio-technical view that OBE must be backward-designed, with digital literacy serving the achievement of explicit competencies. Persistent challenges, particularly teacher readiness and assessment misalignment, indicate the need for systemic reforms rather than isolated interventions.

5. Conclusions

This narrative review shows that integrating digital literacy into the OBE framework for Indonesian language learning under the *Merdeka Curriculum* is feasible and beneficial when supported by coherent pedagogy, aligned assessment, and adequate teacher capacity. The synthesis highlights that project-based learning, authentic assessment, and competency-aligned curriculum tools are the most effective mechanisms for ensuring that digital literacy contributes meaningfully to measurable learning outcomes.

This work advances current knowledge by consolidating dispersed empirical findings and demonstrating that technology alone is insufficient; successful integration depends on teachers' digital competence, outcome-aligned instructional design, and institutional support. These insights provide a clear justification for strengthening teacher professional development, redesigning assessment systems to capture integrated competencies, and ensuring minimum infrastructure readiness.

Future research should involve larger and more diverse contexts, compare different integration models, and investigate long-term impacts on both language and digital competencies. Such studies are essential for developing scalable and sustainable practices that support OBE implementation in the evolving digital era.

6. References

- Damanik, P. C. I. C., Husaeni, R. A., Jayanti, F. D., Uli, A. A., & Chaled, M. I. (2025). Integrating digital citizenship in primary schools to advance sustainable development goals in Indonesia. *JIMU: Jurnal Ilmiah Multidisipliner*, 3(4). <https://doi.org/10.70294/jimu.v3i04.1302>
- Fadilla, A. R., Suhardi, S., & Sudiati, S. (2023). Implementasi penilaian autentik bahasa Indonesia bermuatan literasi digital-industri di SMK dalam paradigma kebijakan edukasi 5.0. *Nuansa Akademik: Jurnal Pembangunan Masyarakat*, 8(2), 277–298. <https://doi.org/10.47200/jnajpm.v8i2.1681>
- Fuadin, A., & Fauziya, D. S. (2022). Implementasi model project based learning dalam mata kuliah wajib umum bahasa Indonesia. *Semantik*, 11(1), 101–110. <https://doi.org/10.22460/semantik.v11i1.p101-110>
- Intiana, S. R. H., Prihartini, A. A., Handayani, F., Mar'i, M., & Faridi, K. (2023). Independent curriculum and Indonesian language education throughout the era of Society 5.0: A literature review. *Al-Ishlah: Jurnal Pendidikan*, 15(1), 911–921. <https://doi.org/10.35445/alishlah.v15i1.3140>
- Ishmah, L. M. N., Sutama, S., & Muhibbin, A. (2025). Build politeness speak digital literacy oriented in Indonesian language learning at Al Abidin Surakarta elementary school. *Eduvest - Journal of Universal Studies*, 5(3), 3347–3360. <https://doi.org/10.59188/eduvest.v5i3.44727>
- Izhar, I., Yuniarti, F., & Nurjannah, A. (2025). EcoLingua: Optimizing Indonesian learning through Lumen5 in the digital era. *EBONY: Journal of English Language Teaching, Linguistics, and Literature*, 5(1), 53–68. <https://doi.org/10.37304/ebony.v5i1.18467>
- Jasri, M., Holis, M. N., Anabillah, D. H., & Al Fitroh, M. F. (2024). Urgensi program literasi digital untuk santri di asrama mahasiswa dengan pendekatan OBE. *Trilogi: Jurnal Ilmu Teknologi, Kesehatan, dan Humaniora*, 5(4), 574–583. <https://doi.org/10.33650/trilogi.v5i4.9680>
- Kemal, F., Haidar, H., Arifin, I., & Agustine, E. Y. (2024). Urgensi pembelajaran multiliterasi bagi mahasiswa pendidikan bahasa Indonesia dalam menghadapi kurikulum merdeka. *Juwara: Jurnal Wawasan dan Aksara*, 4(2), 474–486. <https://doi.org/10.58740/juwara.v4i2.290>
- Kuntarto, E. (2022). Pengembangan model pembelajaran literasi digital berbasis merdeka belajar untuk masyarakat pedesaan. *SAP (Susunan Artikel Pendidikan)*, 7(1). <https://doi.org/10.30998/sap.v7i1.12288>
- Kusumasari, E. D., Sumarno, S., & Dwijayanti, I. (2024). Meningkatkan kemampuan berpikir kritis siswa sekolah dasar pada pembelajaran bahasa Indonesia berbasis literasi digital pada kurikulum merdeka. *Tematik: Jurnal Penelitian Pendidikan Dasar*, 3(1), 22–29. <https://doi.org/10.57251/tem.v3i1.1399>
- Mangesti, W., & Kismartini, K. (2024). Kurikulum merdeka untuk mewujudkan generasi Z berdaya saing Society 5.0. *Revitalisasi*, 13(2), 402. <https://doi.org/10.32503/revitalisasi.v13i2.6524>
- Mohone, A. R., Budiono, S., & Pateda, L. (2024). Bridging curriculum and competency: OBE-based teaching material development for 21st-century Islamic teacher education. *Tadbir: Jurnal Manajemen Pendidikan Islam*, 12(2), 383–404. <https://doi.org/10.30603/tjmpi.v12i2.7028>
- Prasetya, U., Malabar, S., & Ntalu, A. (2025). Evaluation of the implementation of the operational curriculum of the education unit (KOSP) of the school mover of Indonesian language subject in grade 7 SMP Negeri 2 Wanggarasi Pohuwato District, Indonesia. *World Journal of Advanced Research and Reviews*, 25(1), 1117–1123. <https://doi.org/10.30574/wjarr.2025.25.1.0145>
- Saa, S. (2024). Merdeka curriculum: Adaptation of Indonesian education policy in the digital era and global challenges. *Revista de Gestão Social e Ambiental*, 18(3). <https://doi.org/10.24857/rgsa.v18n3-168>
- Safitri, N. T., Ananda, A. T., & Masbirorotni, M. (2023). Merdeka belajar curriculum: EFL teachers' preparations and practices at sekolah penggerak Kota Jambi. *Scope: Journal of English Language Teaching*, 8(1), 147. <https://doi.org/10.30998/scope.v8i1.18499>
- Sa'id, S., Hidayati, D., Suyatno, S., & Sukirman, S. (2024). Manajemen digitalisasi kurikulum merdeka di SMP. *Manajemen Pendidikan*, 37–50. <https://doi.org/10.23917/jmp.v19i1.4051>
- Silvester, S., Saputro, T. V. D., & Manggu, B. (2024). Pendampingan literasi digital bagi guru sekolah dasar dalam mengimplementasikan kurikulum merdeka. *Lambung Inovasi: Jurnal Pengabdian kepada Masyarakat*, 9(4), 918–929. <https://doi.org/10.36312/linov.v9i4.2276>

- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Suci, D., Hajar, S., & Hesti, H. (2025). Implementasi merdeka belajar dalam pembelajaran bahasa Indonesia. *Primary Journal of Multidisciplinary Research*, 1(1), 16–20. <https://doi.org/10.70716/pjmr.v1i1.96>
- Suyitno, S. D., Abdullah, A. H., & Mala, A. R. (2023). Development of teaching materials based on outcomes-based education curriculum to improve teacher skills. *Tadbir: Jurnal Manajemen Pendidikan Islam*, 11(2).
- Ummah, D. N., & Nadlir, N. (2023). Konsep kurikulum merdeka dan integrasi media pembelajaran berbasis digital pada jenjang sekolah dasar. *Elementeris: Jurnal Ilmiah Pendidikan Dasar Islam*, 5(1), 26–38. <https://doi.org/10.33474/elementeris.v5i1.18907>
- Wahyuni, S., Darmayunata, Y., Zudeta, E., Sajid, M. D. F., & Syahdan, S. (2023). Merdeka curriculum innovation: Grand design for digital literacy learning in special school. *Educative: Jurnal Ilmiah Pendidikan*, 1(3), 95–102. <https://doi.org/10.37985/educative.v1i3.202>
- Wahyuni, S., & Iqbal, M. (2024). Evaluasi efektivitas penerapan kurikulum merdeka dalam meningkatkan hasil belajar dan keterampilan literasi siswa sekolah dasar. *Journal of Management in Islamic Education*, 5(3), 360–368. <https://doi.org/10.32832/idarah.v5i3.16736>



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