

# Enhancing Students Writing Skill Through Project-Based Learning With Digital Media Integration: A Literature Review

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## Abstract

Articles This study is a systematic literature review that aims to evaluate the effectiveness of Project-Based Learning (PJBL) integrated with digital media in enhancing students' writing skills in the context of English as a Foreign Language (EFL) instruction. PJBL is recognized as a pedagogical approach that emphasizes contextual learning through real-world projects, involving students' cognitive, collaborative, and creative engagement. This review analyzed 24 studies published between 2016 and 2025, focusing on the implementation of digitally supported PJBL in writing instruction. The findings indicate that the integration of PJBL and digital media significantly improves students' writing quality, particularly in terms of paragraph structure, grammar, cohesion, and coherence. In addition, this approach fosters students' motivation, active engagement, and collaborative skills in completing writing tasks. However, several challenges were identified, including limited infrastructure, teacher readiness, and gaps in students' digital literacy. This study highlights the importance of institutional support and continuous professional development to ensure the effective and sustainable implementation of PJBL with digital media in writing instruction within the digital era.

**Keywords:** Digital Media; English Foreign Language; Project-Based Learning; Writing Skills; Sistematic Literature Review

## INTRODUCTION

Project-Based Learning (PJBL) is a pedagogical approach that emphasizes student engagement in completing real and meaningful projects as the core of the learning process (Saad & Zainudin, 2022; Zen et al., 2022). This strategy is not only focused on the final outcome but also emphasizes collaborative processes, problem-solving, and deep reflection, which directly foster the development of 21st-century skills such as creativity, critical thinking, and collaboration (Martinez, 2022). In the context of English language learning, PJBL provides students with the opportunity to construct meaning, take ownership of their learning, and apply knowledge authentically in contextual writing tasks (Andargie et al., 2025). In other words, PJBL promotes the integration of cognitive and social processes that form the foundation for the development of writing skills. Digital media refers to technology-based devices and applications that support the learning process through access to multimodal, interactive, and collaborative content (Reyna et al., 2018). In the context of language education, digital media such as Google Docs, Padlet, Canva, blogs, instructional videos, and Learning Management Systems (LMS) play an important role in facilitating writing activities (Lestiyani & Riansi, 2024). These tools enable students to write collaboratively, receive real-time feedback, express ideas visually, and access diverse information sources (Jeong & Hmelo-Silver, 2016). The integration of digital media in learning not only supports mastery of linguistic aspects such as grammar, vocabulary, coherence, and cohesion but also enhances students' motivation, engagement, and independence in the writing process (Allami et al., 2025; Alobaid, 2020)

Several studies have shown that PJBL is an effective strategy for improving students' writing skills, particularly in the context of learning English as a foreign language (EFL). Hidayati & Widiati (2019) and Paris et al. (2024) noted that PJBL contributes to the improvement of academic writing skills, such as proposal writing and descriptive texts. Furthermore, this approach encourages students to think critically and creatively, thereby fostering motivation and engagement in writing tasks (Azman et al., 2024; Ilham, 2022, 2024; Ilham et al., 2025). Additionally, PJBL also cultivates interpersonal skills such as collaboration and responsibility through structured and reflective teamwork (Saputri et al., 2023). The integration of digital media in project-based learning significantly strengthens students' writing processes. Research shows that tools such as Google Docs, Padlet, and Canva can enhance collaborative writing and creative expression (Dewi et al., 2023; Irwandi et al., 2024; Sinta et al., 2024). Platforms like Storyboard That, instructional videos, and e-books also provide opportunities for students to develop organizational skills and creativity in writing (Sakti, 2023; Suryani et al., 2024). Students' perceptions of digital media use are also generally positive, with increased enthusiasm and engagement during the learning process (Dewi et al., 2023). These findings suggest that digital media are not merely technical tools but also important catalysts in creating an active and meaningful learning environment. Recent studies also highlight the effectiveness of the synergy between PJBL and digital media in improving the writing quality of EFL students. Mali (2016) emphasizes that PJBL increases participation and encourages innovative teaching practices. Sa'diyah & Cahyono (2019) found that the use of blogging in PJBL is significantly more effective than conventional methods in improving writing skills. In addition, Mujiono et al. (2024) state that this combined approach supports the development of creative, collaborative, and critical writing skills. Further support comes from Budi et al. (2022), who affirm that the use of multimedia presentations in PJBL improves the quality of students' writing. Thus, this integrated approach provides a solution to the challenges of EFL writing instruction and facilitates the development of competencies aligned with 21<sup>st</sup>-century demands. Although a number of studies have shown the benefits of PJBL and digital media separately in improving writing skills, systematic reviews that integrate the two in the context of EFL are still limited. Most studies tend to focus on the effectiveness of specific tools or technical aspects of PJBL, without examining the synergistic relationship between methods and technology. Additionally, there has been little in-depth discussion of the types of digital media used, the aspects of writing skills that are improved, and the challenges of implementing them in practice. This highlights the need for a comprehensive review to address these gaps. This study aims to systematically review the literature discussing the integration of PJBL and digital media in EFL writing instruction. The main focus of this study includes: identifying the types of digital media used, analyzing their impact on writing skills, and the challenges faced in their implementation. Through a systematic literature review approach, this study is expected to contribute to the development of innovative and relevant writing instruction strategies for the 21<sup>st</sup> century.

## METHOD

This study uses a qualitative approach through the Systematic Literature Review (SLR) method, referring to the PRISMA 2020 guidelines developed by Page et al. (2021) to ensure a structured, transparent, and replicable review process. The use of PRISMA guidelines is widely recognized in literature synthesis for its ability to increase validity and reduce potential bias in review studies (Moher et al., 2009). This review aims to synthesize empirical evidence on the effectiveness of integrating Project-Based Learning (PJBL) and digital media in improving students' writing skills in the context of learning English as a foreign language (EFL), synthesize empirical evidence on the effectiveness of integrating Project-Based Learning (PJBL) and digital media in improving students' writing skills in the context of English as a

foreign language (EFL) learning, and map research gaps that have not been extensively explored, as recommended by Keele (2007) in the methodology of systematic reviews for educational research. Literature sources were collected from major academic databases such as Google Scholar, ERIC, and ScienceDirect, focusing on publications published between 2016 and 2025. This timeframe was chosen to capture recent developments in language pedagogy and the integration of digital technology in the context of project-based learning (PJBL). The selection of these databases follows best practices in systematic research to ensure a broad and relevant literature coverage (Papaioannou et al., 2016). The keywords used in the search process include: “Project-Based Learning,” “Digital Media,” “Writing Skills,” and “EFL,” combined with Boolean operators to obtain relevant and interconnected results in accordance with the recommendations of (Higgins & Green, 2011). The inclusion criteria for this study include articles published in academic journals that explicitly discuss the application of PJBL and digital media in improving the writing skills of EFL students. Exclusion criteria include publications that do not focus on writing skills, do not integrate digital media or PJBL, and non-empirical article types such as editorials, opinions, or letters to the editor, to maintain the credibility of the analyzed data (Pope et al., 2007). The article selection process was conducted in several stages, starting with the removal of duplicates to prevent redundancy Page et al. (2021), followed by screening based on titles and abstracts, and a full review of the article text to ensure compliance with the inclusion criteria. Data extraction was conducted by recording key elements from each study, such as author names, publication year, research design, main findings, and implications for PJBL-based writing instruction and digital media, in accordance with the framework developed by (Tranfield et al., 2003). The collected data were analyzed thematically to identify the impact of PJBL and digital media integration on students' writing skills in EFL learning, focusing on grammar, vocabulary, coherence, and paragraph structure. Thematic analysis was used to find patterns and main themes that emerged from the qualitative data, resulting in a deep understanding of instructional effectiveness (Braun & Clarke, 2006). Additionally, this study also evaluates indicators of success in digital-based PJBL, such as student engagement, collaborative work, and the quality of academic writing outcomes, which align with the assessment criteria in the project-based approach examined in previous research (Thomas, 2000).

## RESULTS AND DISCUSSION

### Results

This study aims to examine the integration of Project-Based Learning (PJBL) with digital media in improving students' writing skills in the context of English language learning. The literature review findings indicate that the use of digital tools such as Google Docs, Padlet, blogs, videos, Canva, and LMS is effective in supporting the writing process through collaboration, creativity, and real-time feedback. These media also help improve aspects of grammar, vocabulary, coherence, and student engagement. Despite challenges such as infrastructure limitations and teacher readiness, these findings support digital-based PJBL as a relevant and effective strategy for teaching writing in EFL learning, aligning with the study's objective to provide evidence-based recommendations for educators and policymakers. Table 1 below summarizes the main focus of various studies related to the integration of Project-Based Learning (PJBL) and digital media in improving English writing skills.

**Table 1.** Research Focus on the Integration of Project-Based Learning (PJBL) and Digital Media in Enhancing English Writing Skills

No	Focus Area	Authors	Research Variables
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1	Use of Google Docs and Padlet in collaborative writing	Nurfidah & Fandir (2024); Novianto et al. (2024)	Collaborative writing, idea organization, real-time feedback
2	Integration of video, blogs, and digital tools to support creativity and access to information	Belmahdi et al. (2022); Yulandari (2024) (Rachmawati & Asmara, 2017)	Creativity, digital literacy, access to writing resources, early use of flipbook in integrated writing-reading tasks
3	Utilization of Canva and LMS to support multimodal writing	Gunawan & Pambayun (2025); Rambe & Basikin (2024); Royani et al. (2024); Karnedi (2025)	Visual-narrative writing, structured writing space, peer review
4	Impact of PJBL and digital media on grammar, vocabulary, coherence, and cohesion	Irwandi et al. (2024); Silvestre Miralles (2023); Xie et al. (2021); (Natalia, 2016)	Writing quality, grammar accuracy, cohesion and coherence, descriptive writing development through early PjBL integration
5	Effect of PJBL and multimedia on engagement and motivation	Ramadhan et al. (2024); Nurfidah & Fandir (2024b); Halim et al. (2023); Nur Indah Sari et al. (2024)	Student engagement, writing motivation, use of local culture-based multimedia
6	Challenges in applying PJBL with digital media	Alamri (2021); Uthman & Maat (2023); Howell (2018); Indriani et al. (2021); Hulu (2023); Paturrahman et al. (2024); Zebua (2023)	Technical, pedagogical, and cultural challenges in digital writing implementation

Table 1 shows that the main focus of this study is the integration of Project-Based Learning (PJBL) and digital media in improving English writing skills. The use of digital media such as Google Docs, Padlet, Canva, blogs, digital videos, and Learning Management Systems (LMS) has proven effective in improving important aspects of writing, such as grammar, vocabulary, coherence, and cohesion. This approach also encourages active student engagement through collaborative work, peer feedback, and creative expression through multimodal formats. Additionally, the study highlights the importance of the teacher's role as a facilitator, adaptive curriculum design, and technological support in the successful implementation of digital-based PJBL. Although this approach strengthens students' writing skills and motivation, challenges still arise in terms of technological readiness, teacher training, and students' attitudes and cultural readiness toward digital learning. Therefore, the success of PJBL with digital media integration requires well-planned implementation strategies, ongoing training for educators, and adequate infrastructure support.

#### **A. Types of digital media commonly used in PJBL implementation to improve students' writing skills**

In PJBL, digital media is used to improve students' writing skills. google docs supports collaboration and real-time feedback, thereby improving the quality of writing and student engagement (Nurfidah & Fandir, 2024a). Padlet aids in organizing ideas and revising writing openly (Novianto et al., 2024), while flipbooks are effective in integrating reading and writing (Rachmawati & Asmara, 2017). Digital videos and blogs also encourage creativity and accelerate access to information (Belmahdi et al., 2022; Yulandari, 2024). Overall, these media create an interactive and flexible learning environment that supports the development of students' writing skills (Belmahdi et al., 2022; Nurfidah & Fandir, 2024a).

In addition, Canva and Learning Management Systems (LMS) such as Moodle and Google Classroom are also utilized in PJBL to develop students' writing skills (Gunawan & Pambayun, 2025). Canva enables students to express ideas visually through posters, infographics, or e-books, which can enhance their ability to write narrative and visual content (Rambe & Basikin, 2024; Royani et al., 2024). Meanwhile, LMS provides a structured workspace for writing assignments, peer feedback, and tracking writing progress. These platforms also facilitate assessment transparency through the use of digital rubrics and quizzes (Karnedi, 2025; Poompavai et al., 2025). Thus, the integration of Canva and LMS enriches the writing process through reflection, collaboration, and the effective use of multimodal formats. The integration of various digital media in PBL demonstrates a positive impact on improving students' writing skills. Tools such as Google Docs and Padlet support collaboration and real-time feedback, while Canva and LMS strengthen visual aspects, writing structure, and learning process management. Findings from various studies confirm that this technology not only increases student engagement but also facilitates a more reflective, interactive, and multimodal writing process. However, the effectiveness of this integration is greatly influenced by teacher readiness, students' digital literacy, and the availability of adequate supporting infrastructure in the learning environment.

#### **B. The impact of digital media integration in PjBL on aspects of students' writing skills**

The integration of digital media in PJBL has been proven to improve various aspects of students' writing skills, such as grammar, vocabulary, cohesion, and coherence. Irwandi et al. (2024) showed a 10.305 increase in post-test scores compared to traditional methods. Additionally, this approach encourages descriptive writing skills and creative idea development (Belmahdi et al., 2022; Soffiany & Purbani, 2020). The use of digital flipbooks also strengthens text cohesion through the integration of visual and narrative elements (Rachmawati & Asmara, 2017), while multimodal writing enhances readability and language complexity (Miralles, 2023; Xie et al., 2021). Digital technology also helps students write more structured and minimize grammatical errors through tools such as grammar checkers and collaborative platforms (Ramadhan et al., 2024). Additionally, student motivation and engagement increase through the use of interactive and multimodal media (Nurfidah & Fandir, 2024). The integration of local cultural content in digital media also strengthens students' writing skills at the secondary school level (Halim et al., 2023; Sari et al., 2024). The integration of digital media in PBL demonstrates that this approach is effective in strengthening students' writing skills, but its effectiveness depends heavily on several supporting factors. Success is not only determined by the availability of digital tools but also by teachers' readiness to design meaningful project-based learning and students' ability to utilize technology productively. Several studies emphasize that writing skills improve significantly when digital media are used not merely as tools, but as an integral part of critical thinking, collaboration, and multimodal expression. This indicates that digital media in PBL not only improve writing outcomes, but also change the way students experience and understand the writing process itself.

#### **C. Challenges or obstacles faced by teachers and students in implementing PjBL with digital media for teaching writing**

The implementation of Project-Based Learning (PjBL) integrated with digital media in writing instruction faces various technical, pedagogical, and cultural challenges. From

a technical perspective, limitations in devices, unstable internet connectivity, and insufficient infrastructure support are the primary obstacles, particularly in educational institutions with limited access (Alamri, 2021; Uthman & Maat, 2023). Pedagogically, many educators lack adequate preparation in designing and implementing digital or blended learning due to insufficient training and experience (Howell, 2018; Indriani et al., 2021). The absence of systematic support and limited institutional resources further exacerbate the situation (Hulu, 2023; Paturrahman et al., 2024). From a cultural perspective, students' attitudes and readiness to utilize learning technology vary greatly. Some students show enthusiasm for digital learning, but others feel hesitant, lack confidence, or are unfamiliar with the use of digital media in the writing process (Alamri, 2021; Belmahdi et al., 2022). Concerns about data privacy and the pressure to continuously adapt to technological advancements also contribute to low active participation in PJBL activities (Paturrahman et al., 2024; Zebua, 2023). Meanwhile, teachers also face challenges in keeping up with rapid technological developments and adapting them to the current writing curriculum (Hulu, 2023; Zebua, 2023). Based on the identified challenges, the effectiveness of implementing digital media-based PJBL in writing instruction depends not only on the availability of technology but also on the readiness of infrastructure, students' digital competencies, and teachers' pedagogical capacity. While digital media has the potential to enhance writing skills, digital literacy gaps and institutional capacity to manage technical and cultural challenges are key determinants of success. Therefore, the integration of digital media must be understood as part of a pedagogical transformation that requires systemic support, continuous training, and attention to the social and cultural context of students. Without a comprehensive and adaptive approach, the implementation of digital PBL risks failing to achieve optimal results.

Research on the application of Project-Based Learning (PJBL) integrated with digital media in teaching English as a foreign language (EFL) writing has shown significant progress over time. This approach has proven effective in enhancing students' writing skills through activities that emphasize collaboration, creativity, and active engagement in the learning process. Over the past decade, research focus has shifted from strengthening foundational skills such as paragraph structure and cohesion to more complex areas, including multimodal writing, the use of digital platforms, and online learning management. Additionally, issues such as teacher readiness, cultural challenges, and technology-based assessment have also become important concerns in this study. Figure 1 below presents the main developments of research variables related to the integration of PBL and digital media in EFL writing instruction during the period from 2016 to 2025.



**Figure 1.** Development studies on PjBL and digital media for writing skills

Figure 1 illustrates that the development of research variables related to the integration of project-based learning (PjBL) and digital media in English as a foreign language (EFL) writing instruction has progressed systematically over time. During the 2016–2018 period, studies primarily focused on improving basic writing skills, such as textual cohesion, idea development, and the use of simple media like digital flipbooks. In the 2019–2021 period, the focus shifted toward enhancing digital literacy, implementing multimodal writing, and utilizing blogs and teacher training within the PjBL context. Between 2022 and 2023, research attention turned to digital collaboration, the use of interactive media, and cultural challenges encountered during implementation. Most recently, in the 2024–2025 period, studies have emphasized the improvement of language-related skills (grammar, vocabulary, coherence, and cohesion), student motivation and engagement, as well as digital management and assessment practices using LMS platforms. This progression indicates that the integration of PjBL and digital media in writing instruction increasingly considers a balanced approach to technical, pedagogical, affective, and contextual dimensions in order to promote more relevant and effective learning in the digital era.

## Discussion

Additionally, the study highlights the importance of the teacher's role as a facilitator, adaptive curriculum design, and technological support in the successful implementation of digital-based PjBL. Although this approach strengthens students' writing skills and motivation, challenges still arise in terms of technological readiness, teacher training, and students' attitudes and cultural readiness toward digital learning. Therefore, the success of PjBL with digital media integration requires well-planned implementation strategies, ongoing training for educators, and adequate infrastructure support. These findings suggest that the effectiveness observed across the reviewed studies is not accidental, but rather the result of well-orchestrated pedagogical and technological integration. The integration of various digital media in PjBL demonstrates a positive impact on improving students' writing skills, as digital tools such as Google Docs and Padlet facilitate collaboration and real-time feedback, while Canva and Learning Management Systems (LMS) enhance visual representation, writing organization, and learning management. The alignment between project-based pedagogy and the affordances of digital media enables students to engage in iterative writing processes, collaborative meaning-making, and multimodal expression. Consequently, technology in PjBL functions not merely as a delivery tool, but as a pedagogical mediator that supports deeper engagement and reflective writing practices. Furthermore, the integration of digital media in PjBL has proven effective in strengthening students' writing skills; however, its success depends heavily on several supporting factors. Writing improvement is not determined solely by the availability of digital tools, but also by teachers' readiness to design meaningful project-based tasks and students' ability to utilize technology productively. Several studies emphasize that writing skills improve significantly when digital media are embedded as an integral component of critical thinking, collaboration, and multimodal composition. This indicates that digital media in PjBL not only enhance writing outcomes, but also transform how students experience and understand the writing process itself. Based on the identified challenges, the effectiveness of implementing digital media-based PjBL in writing instruction depends on the readiness of infrastructure, students' digital competencies, and teachers' pedagogical capacity. While digital media offer substantial potential to enhance writing skills, gaps in digital literacy and limited institutional capacity to address technical and cultural challenges remain key determinants of success. Therefore, the integration of digital media should be understood as part of a broader pedagogical transformation that requires systemic support, continuous training, and sensitivity

to students' social and cultural contexts. Without a comprehensive and adaptive approach, the implementation of digital PJBL risks failing to achieve optimal learning outcomes.

## CONCLUSION

Based on the systematic analysis of relevant studies, it can be concluded that the integration of Project-Based Learning (PJBL) with digital media significantly contributes to the improvement of students' writing skills in the context of English as a Foreign Language (EFL) instruction. Commonly utilized digital tools such as Google Docs, Padlet, Canva, blogs, and Learning Management Systems (LMS) have been shown to support collaboration, creativity, and transparent assessment. The positive impact of this integration is evident in the enhancement of key linguistic aspects, including grammar, vocabulary, cohesion, and coherence, as well as in fostering greater student motivation and engagement in writing tasks. However, the implementation of digitally integrated PJBL also presents several challenges, particularly in terms of infrastructure readiness, digital literacy among teachers and students, and cultural adaptability. Therefore, the integration of PJBL and digital media must be strategically designed and supported by ongoing professional development to ensure its optimal effectiveness in advancing students' writing proficiency.

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## REFERENCES

- Alamri, B. (2021). Challenges of Implementing Technology in ESL Writing Classrooms: A Case Study. *English Language Teaching*, 14(12), 36. <https://doi.org/https://doi.org/10.5539/ELT.V14N12P36>
- Allami, H., Najari, B., & Tajeddin, Z. (2025). The impact of sociocultural theory-informed instruction on learners' IELTS writing: task response, grammar, vocabulary, coherence and cohesion. *Asian-Pacific Journal of Second and Foreign Language Education*, 10(1), 1–15. <https://doi.org/https://doi.org/10.1186/s40862-024-00310-z>
- Alobaid, A. (2020). Smart multimedia learning of ICT: role and impact on language learners' writing fluency— YouTube online English learning resources as an example. *Smart Learning Environments*, 7(1), 1–30. <https://doi.org/10.1186/S40561-020-00134-7/TABLES/10>
- Andargie, A., Amogne, D., & Tefera, E. (2025). *Effects of project-based learning on EFL learners' writing performance*. 20(1), 1–16. <https://doi.org/10.1371/journal.pone.0317518>
- Azman, N. N., Ajleaa, N., Rahman, A., & Soon, G. Y. (2024). *The Implementation Of Project-Based Learning ( PjBL ) In Writing Skills : An Analysis*. 8(2), 93–102.

- <https://doi.org/10.33306/mjssh/278>
- Belmahdi, A., Li, J., & Muirhead, B. (2022). Youth English Language Learners' Learning Outcomes and Experiences of Digital Technology-Based Writing Instruction: A Literature Review of Key Empirical Evidence. *Journal of Digital Life and Learning*, 2(1), 1–51. <https://doi.org/https://doi.org/10.51357/jdll.v2i1.166>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706QP063OA>
- Budi, D., Taofik, I., Ahmad, A., Susila, R., & Koswara Adiredja, R. (2022). Penggunaan Multimedia Presentasi Pada Model Pembelajaran Project Based Learning (PJBL) Untuk Meningkatkan Kemampuan Menulis Peserta Didik. *Jurnal Pendidikan Sekolah Dasar*, 02(01), 1–8. <https://doi.org/https://doi.org/10.31980/caxra.v2i1.807>
- Dewi, K. I. R., Padmadewi, N. N., & Artini, L. P. (2023). Students' Perception: The Technology Integration into Project-Based Learning in Writing Class. *Jurnal Penelitian dan Pengembangan Sains & Humaniora*, 6(3), 335–342. <https://doi.org/https://doi.org/10.23887/JPPSH.V6I3.52539>
- Gunawan, I., & Pambayun, R. N. (2025). Junior high school students' perceptions of digital task-based learning for enhancing descriptive writing skills. *Esteem*, 8(1), 453–462. <https://doi.org/https://doi.org/10.31851/ESTEEM.V8I1.17898>
- Halim, N., Boys, M., Fahmi, F., Nozaki, K., & Wuttipong, M. (2023). Implementation of Project-Based Learning in Indonesian EFL Class Between 2017 to 2022. *journal.ypidathu.or.id*, 1(2), 2023–2094. <https://doi.org/https://doi.org/10.55849/jnhl.v1i2.94>
- Hidayati, E. N. A., & Widiati, U. (2019). Fostering Students' Writing Ability through Project Based Learning Approach. *Jurnal Pendidikan Humaniora*, 7(4), 140–149. <http://journal.um.ac.id/index.php/jphISSN:2338-8110>
- Higgins, J., & Green, S. (2011). *Cochrane Handbook for Systematic Reviews of Interventions*.
- Howell, E. (2018). Obstacles to digital, multimodal pedagogy in rural high schools. *Writing & Pedagogy*, 10(1–2), 297–321. <https://doi.org/https://doi.org/10.1558/WAP.33761>
- Hulu, Y. (2023). Problematika Guru Dalam Pengembangan Teknologi dan Media Pembelajaran. *ANTHOR: Education and Learning Journal*. <https://doi.org/10.31004/anthor.v2i6.285>
- Ilham, I. (2022). *Implementing Project-Based Learning For EFL Students ' Writing Achievement at The Tertiary Level*. 10(3), 1003–1012. <http://doi.org/10.25134/erjee.v10i3.6470.%0D>
- Ilham, I. (2024). Needs Analysis of Project-Based Learning Model in Writing Paragraphs from EFL Students' Perspectives. *Journal of Languages and Language Teaching*, 12(1), 282–295. <https://doi.org/10.33394/JOLLT.V12I1.9215>
- Ilham, I., Irwandi, I., Ayun, Z. Q., & Wida, S. (2025). Project-Based Learning Model with Blended Learning in Academic Writing: A Need Analysis. *Journal of Languages and Language Teaching*, 13(1), 306–317. <https://doi.org/10.33394/JOLLT.V13I1.12552>
- Indriani, L., Kusumaningrum, W. R., & Yosintha, R. (2021). Challenges in English Writing within Blended Learning Environment. *ELT Echo : The Journal of English Language Teaching in Foreign Language Context*, 6(1), 1–12. <https://doi.org/https://doi.org/10.24235/ELTECHO.V6I1.7480>
- Irwandi, I., Bafadal, M. F., & Ismail, H. (2024). *Enhancing Students ' Writing Skills through Project-Based Learning with Digital Media Integration : An Experimental Study*. 06(06), 211–221. <https://doi.org/10.30564/fls.v6i6.7803%0D>
- Jeong, H., & Hmelo-Silver, C. E. (2016). Seven Affordances of Computer-Supported Collaborative Learning: How to Support Collaborative Learning? How Can Technologies

- Help? *Educational Psychologist*, 51(2), 247–265.  
<https://doi.org/https://doi.org/10.1080/00461520.2016.1158654>
- Karnedi, K. (2025). Effectiveness of Developing A STAD Model Integrated into Group Work Projects to Enhance Students' Writing Skills. *Deleted Journal*, 2(2), 225–241.  
<https://doi.org/https://doi.org/10.30598/BAILEOFISIPVOL2ISS2PP225-241>
- Keele, S. (2007). *Guidelines for performing Systematic Literature Reviews in Software Engineering*.
- Lestiyani, A. P., & Riansi, E. S. (2024). Innovation in Learning Indonesian Language and Literature in the Digital Era: A Technological and Skills-Based Approach. *International Proceedings of Nusantara Raya*, 3(1), 538–545.  
<https://doi.org/https://proceedings.uinsaizu.ac.id/index.php/nuraicon/article/view/1205>
- Mali, Y. C. G. (2016). Project-based learning in Indonesian EFL classrooms: From theory to practice. *IJEE (Indonesian Journal of English Education)*, 3(1), 2016.  
<https://doi.org/https://doi.org/10.15408/ijee.v3i1.2651>
- Martinez, C. (2022). Developing 21st century teaching skills: A case study of teaching and learning through project-based curriculum. *Cogent Education*, 9(1).  
<https://doi.org/https://doi.org/10.1080/2331186X.2021.2024936>
- Miralles, A. S. (2023). Aprendizaje cooperativo digital de la destreza escrita. Writing competence through digital cooperative learning. *El Guiniguada*, 32, 108–123.  
<https://doi.org/https://doi.org/10.20420/elguiniguada.2023.634>
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & Group, P. (2009). *& reporting Preferred reporting items for systematic reviews and meta-analyses : the PRISMA statement*. 339(august). <https://doi.org/10.1136/bmj.b2535>
- Mujiono, Weganofa, R., Herawati, S., & Lutviana, R. (2024). Integrating Design Thinking (DT) and Project-Based Learning (PjBL) with Writing Literacy for Advancing Creative, Collaborative, and Critical Writing Skills among EFL Learners. *Language teaching research quarterly*, 45, 157–175.  
<https://doi.org/https://doi.org/10.32038/LTRQ.2024.45.09>
- Natalia, I. (2016). The Effect of Project Based Learning to the Students' writing Ability in Descriptive Text. *English Education: Journal of English Teaching and Research*, 1(1), 60–63. <https://doi.org/https://doi.org/10.29407/jetar.v1i1.278>
- Novianto, A., Rohayati, D., & Faridah, D. (2024). Padlet as Learning Media to Improve Students' Writing Skills: EFL Teacher's and Students' Perspective. *Journal of English Education Program (JEEP)*, 11(1), 73.  
[https://doi.org/https://doi.org/10.25157/\(JEEP\).V11I1.13563](https://doi.org/https://doi.org/10.25157/(JEEP).V11I1.13563)
- Nurfidah, N., & Fandir, A. (2024a). Effectiveness of Digital Platforms in Improving Students' Writing Skills in Higher Education: Literature Review. *JISIP (Jurnal Ilmu Sosial dan Pendidikan)*, 8(3), 1939–1939. <https://doi.org/https://doi.org/10.58258/JISIP.V8I3.7184>
- Nurfidah, N., & Fandir, A. (2024b). Effectiveness of Digital Platforms in Improving Students' Writing Skills in Higher Education: Literature Review. *JISIP (Jurnal Ilmu Sosial dan Pendidikan)*, 8(3), 1939–1939. <https://doi.org/https://doi.org/10.58258/JISIP.V8I3.7184>
- Page, M. J., Moher, D., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-wilson, E., Mcdonald, S., ... Prisma, M. (2021). *explanation and elaboration : updated guidance and exemplars for reporting systematic reviews review findings . The Preferred*.  
<https://doi.org/10.1136/bmj.n160>
- Papaioannou, D., Sutton, A., & Booth, A. (2016). *Systematic approaches to a successful literature review*.
- Paris, A. S., Hadi, M. W., & Rosyidi, A. Z. (2024). Implementing Project-Based Learning

- Model (PjBL) to Develop Students' Writing Skills in Composing Academic Texts. *Jambura Journal of English Teaching and Literature*, 5(2), 102–113. <https://doi.org/10.37905/JETL.V5I2.28297>
- Paturrehman, A., Febrianti, Y., Dongoran, A., & Sastrawati, E. (2024). Hambatan dan Tantangan Pembelajaran Berbasis TIK Pada Mata Kuliah Pengembangan Literasi Digital Kependidikan Mahasiswa PGSD Universitas Jambi. *Innovative: Journal Of Social Science Research*, 4(3), 1347–1358. <https://doi.org/https://doi.org/10.31004/innovative.v4i3.10620>
- Poompavai, A., Poongothai, A., & Divya, R. (2025). Examining the Impact of Project-based Learning on Student Performance Across Demographic Factors. *International Journal For Multidisciplinary Research*, 7(1). <https://doi.org/https://doi.org/10.36948/IJFMR.2025.V07I01.35491>
- Pope, C., Mays, N., & Popay, J. (2007). Synthesizing qualitative and quantitative research findings. In *Routledge International Handbook of Qualitative Nursing Research* (hal. 377–386). <https://doi.org/10.4324/9780203409527-38>
- Rachmawati, D., & Asmara, C. H. (2017). Reading and Writing: Development of Project-Based Learning (PBL) Approach. *Proceedings of the International Conference on English Language Teaching*, 1(2), 48–53. <https://doi.org/https://doi.org/10.2991/ICONELT-17.2018.11>
- Ramadhan, R. A., Abdul Rahim, Darmanto, & Paris, A. S. (2024). Enhancing Academic Writing through Digital Tools: A Systematic Review. *Journal of Language and Literature Studies*, 4(4), 707–770. <https://doi.org/https://doi.org/10.36312/jolls.v4i4.2342>
- Rambe, F. R. B., & Basikin, B. (2024). Project Based Learning to Improve the Learning of English Writing Skill Among Students of XI TKJ 1 Class at SMK Politeknik YP3i Banyumas (A Classroom Action Research at XI Graders of SMK Politeknik YP3i Banyumas in Academic Year 2024/2025). *International Journal of Multicultural and Multireligious Understanding*, 11(10), 486–486. <https://doi.org/https://doi.org/10.18415/IJMMU.V11I10.6276>
- Reyna, J., Hanham, J., & Meier, P. C. (2018). A framework for digital media literacies for teaching and learning in higher education. *E-Learning and Digital Media*, 15(4), 176–190. <https://doi.org/https://doi.org/10.1177/2042753018784952>
- Royani, K., Sukirlan, M., & Nurweni, A. (2024). Canva-Aided Project-Based Learning to Improve Students' Writing Achievement. *International Journal of Current Science Research and Review*, 07(05). <https://doi.org/https://doi.org/10.47191/IJCSRR/V7-I5-52>
- Sa'diyah, I. H., & Cahyono, B. Y. (2019). Effect of Project-Based Learning through blogging on EFL students' writing ability. *Journal on English as a Foreign Language*, 9(2), 199–216. <https://doi.org/https://doi.org/10.23971/JEFL.V9I2.1341>
- Saad, A., & Zainudin, S. (2022). A review of Project-Based Learning (PBL) and Computational Thinking (CT) in teaching and learning. *Learning and Motivation*, 78(3), 101802. <https://doi.org/https://doi.org/10.1016/J.LMOT.2022.101802>
- Sakti, A. (2023). Meningkatkan Pembelajaran Melalui Teknologi Digital. *Jurnal Penelitian Rumpun Ilmu Teknik*, 2(2), 212–219. <https://doi.org/https://doi.org/10.55606/JUPRIT.V2I2.2025>
- Saputri, L. E. C., Suprpto, E., Dwi Sri Mulyanti, E., & Profesi Guru Universitas PGRI Madiun, P. (2023). Penerapan Model Project Based Learning Untuk Meningkatkan Kreativitas Peserta Didik Kelas IV Pada Pembelajaran IPAS Materi Indonesiaku Kaya Budaya. *Pendas : Jurnal Ilmiah Pendidikan Dasar*, 8(1). <https://doi.org/https://doi.org/10.23969/jp.v8i1.8318>

- Sari, V. N. I., Suwandi, S., & Sumarwati. (2024). The impact of interactive multimedia incorporating local cultural content and project-based learning on Junior High School Student writing skills. *Research Journal in Advanced Humanities*, 5(3), 156–176. <https://doi.org/https://doi.org/10.58256/910YME05>
- Sinta, D., Faqihuddin, A., Nurhuda, A., & Ab Rahman, E. S. B. E. (2024). The Role of Digital Media in Optimizing Project-Based Learning to Practice 21st Century Skills. *Educative*, 2(3), 129–138. <https://doi.org/https://doi.org/10.70437/EDUCATIVE.V2I3.477>
- Soffiany, N. K., & Purbani, W. (2020). The effectiveness of project-based learning to teach writing in relation to students' creativity. *LingTera*, 7(2), 205–214. <https://doi.org/https://doi.org/10.21831/LT.V7I2.14967>
- Suryani, N. Y., Rizal, S., Rohani, T., & Ratnaningsih, H. (2024). Improving learners' english writing skills through digital technology and project-based learning. *Jurnal Ilmiah Ilmu Terapan Universitas Jambi*, 8(1), 21–34. <https://doi.org/https://doi.org/10.22437/JIITUJ.V8I1.32506>
- Thomas, J. W. (2000). *A Review of Research on Project-Based Learning*. <http://www.autodesk.com/foundation>
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *British Journal of Management*, 14(3), 207–222. <https://doi.org/10.1111/1467-8551.00375>
- Uthman, N. K., & Maat, S. M. (2023). Sorotan Literatur Bersistematik: Cabaran Penggunaan Teknologi untuk Pengajaran dan Pembelajaran Matematik dalam Kalangan Pelajar dan Guru. *Jurnal Dunia Pendidikan*, 4(4), 190–203. <https://doi.org/https://doi.org/10.55057/JDPD.2022.4.4.16>
- Xie, Q., Liu, X., Zhang, N., Zhang, Q., Jiang, X., & Wen, L. (2021). Vlog-Based Multimodal Composing: Enhancing EFL Learners' Writing Performance. *Applied Sciences*, 11(20), 9655. <https://doi.org/https://doi.org/10.3390/APP11209655>
- Yulandari, E. S. (2024). The Use Of Digital Media To Improve Students' Writing Articles In Writing Iii Courses. *JUPE: Jurnal Pendidikan Mandala*, 9(4), 957–957. <https://doi.org/https://doi.org/10.58258/JUPE.V9I4.7736>
- Zebua, F. R. S. (2023). Analisis tantangan dan peluang guru di era digital. *jurnalitp.web.idFRS ZebuaJurnal Informatika Dan Teknologi Pendidikan, 2023•jurnalitp.web.id*, 3(1), 21–28. <https://doi.org/https://doi.org/10.25008/jitp.v3i1.55>
- Zen, Z., Reflianto, Syamsuar, & Ariani, F. (2022). Academic achievement: the effect of project-based online learning method and student engagement. *Heliyon*, 8(11), e11509. <https://doi.org/https://doi.org/10.1016/j.heliyon.2022.e11509>