

Enhancing EFL Undergraduates' Academic Writing through Project-Based Learning: A Systematic Review (2019–2025) within an Outcome-Based Education Framework

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Abstract: This systematic review, adhering to the PRISMA framework, examined the use of Project-Based Learning (PjBL) to improve English as a Foreign Language (EFL) undergraduates' academic writing in higher-education contexts. Based on 15 peer-reviewed journal articles published between 2019 and 2025, the review synthesizes evidence on PjBL's effects, highlighting strengths, challenges, and practice-oriented recommendations within an Outcome-Based Education (OBE) lens. Overall, the included studies indicate that PjBL can support instructors through outcome- and milestone-aligned course design, transparent rubric-based assessment, and structured feedback cycles, while enhancing student learning via authentic projects that foster engagement, macro-organization, multi-source integration, iterative revision, and accurate citation practices. However, several barriers constrain the consistency and comparability of outcomes, including uneven digital literacy, variable implementation fidelity, teamwork equity issues, instructor workload, and short intervention windows. The evidence base is also geographically concentrated, with many studies conducted in Indonesia and a smaller number from other contexts, which limits generalizability across regions and institutional conditions. Practical implications include co-designed milestone sequences, rubric-referenced peer review, explicit feedback-literacy routines, lightweight digital tool support, and workload pacing to sustain implementation. Taken together, these findings suggest that PjBL operationalizes core OBE principles by strengthening constructive alignment between learning outcomes, authentic assessment evidence, and iterative feedback processes, while future research should prioritize more rigorous and longitudinal designs, standardized measures, delayed post-tests, and cross-institutional replication to clarify effectiveness across disciplines and settings.

Keywords: EFL Undergraduate Academic Writing, Outcome-Based Education, PRISMA Systematic Review, Project-Based Learning, Writing Assessment Rubrics and Feedback Cycles

A. Introduction

In recent years, academic writing has become a critical focus in EFL higher education as universities are increasingly held accountable for demonstrable learning outcomes. Within an Outcome-Based Education (OBE) framework, undergraduates are expected not only to produce grammatically accurate texts but also to craft research-style papers that show coherent argumentation, multi-source integration, and adherence to ethical citation practices. In OBE terms, these writing capabilities are expressed as measurable course learning outcomes and evaluated through explicit performance criteria (e.g., argument quality, organization, source use, and referencing accuracy). Yet in many EFL programs, students still struggle with planning and structuring extended texts, synthesizing sources, and revising drafts in response to feedback, which raises questions about how writing courses are designed and assessed.

To address these challenges, many higher-education institutions have turned to Project-Based Learning (PjBL) as a pedagogical approach that can operationalize OBE principles in writing instruction. When designed through an OBE lens, PjBL makes outcomes “visible” by translating them into project milestones and deliverables (e.g., topic proposal, annotated bibliography, outline, draft cycles, and final paper), and it supports competency-based assessment through analytic rubrics aligned to those outcomes. In this way, projects function not only as learning activities but also as structured evidence of outcome attainment, while ongoing feedback and revision cycles serve as formative assessment that helps students close the gap between current performance and expected standards.

Several empirical studies in EFL contexts report that PjBL can heighten engagement and sustain effort because learners write for authentic purposes and tangible products (e.g., research reports, mini-theses, or conference-style presentations). More importantly for academic writing, studies indicate that milestone-based project sequences, transparent rubrics, and iterative feedback cycles can strengthen macro-organization, multi-source integration, argument development, and citation accuracy. At the same time, the literature also highlights constraints that can weaken outcome achievement in practice: uneven digital literacy, variation in implementation fidelity, inequitable participation in group work, heavy instructor workload, and short intervention windows that limit the consolidation of research-style writing habits.

However, despite growing interest in PjBL, consolidated evidence remains limited for one specific and increasingly important intersection: PjBL as an OBE-aligned approach to enhancing EFL undergraduates’ academic writing in higher education. Existing reviews often (a) examine PjBL across subjects broadly, (b) focus on other language skills more than research-oriented academic writing, or (c) discuss academic writing without explicitly analyzing how project design and assessment practices enact OBE principles (alignment, criteria-referenced assessment, and evidence of

learning). Consequently, curriculum designers and lecturers still lack a synthesis that explains *how* PjBL is structured and assessed to meet OBE-aligned writing outcomes, *what* effects are reported for academic writing performance, and *under what conditions* those effects are more consistently achieved. Therefore, this PRISMA-guided systematic review maps and critically synthesizes peer-reviewed studies (2019–2025) on the use of PjBL to enhance EFL undergraduates' academic writing in higher-education contexts within an explicit OBE framing. By consolidating evidence on project structures, assessment alignment, and feedback mechanisms, this review clarifies when and how PjBL most effectively supports research-style academic writing and provides a stronger foundation for subsequent comparisons between PjBL and PBL within OBE-oriented EFL curricula. Research questions in this paper are: RQ1: How has PjBL been designed and implemented in EFL higher-education academic writing courses (project structure, milestones, assessment, and feedback mechanisms)? RQ2: What effects of PjBL on EFL undergraduates' academic writing performance and related OBE-aligned outcomes are reported across studies? RQ3: What challenges, enabling conditions, and practice-oriented recommendations recur across studies for implementing OBE-aligned PjBL in EFL academic writing?

B. Methods

A systematic literature review was employed to synthesize empirical evidence on the use of Project Based Learning to enhance EFL undergraduates' academic writing in higher education contexts. The procedures were structured, transparent, and replicable, and reporting followed the PRISMA 2020 statement for systematic reviews.

1. Search strategy

Electronic searches were conducted across multiple sources to improve coverage and reduce selection bias. The core bibliographic databases were Scopus and ERIC. These were complemented by targeted searches in publisher platforms, namely Wiley Online Library, Taylor and Francis Online, and SAGE Journals, to increase sensitivity for education and applied linguistics outlets that may not be consistently retrieved through a single database interface.

The search covered publications from January 2019 to October 2025 to capture recent research on Project Based Learning in EFL academic writing and its alignment with outcomes oriented curriculum reforms in higher education. Searches combined three concept blocks: Project Based Learning, academic writing, and undergraduate or higher education populations. Truncation and spelling variants were adapted to each platform.

The keyword blocks were as follows:

- a. Project Based Learning: project-based learning OR PjBL OR hybrid project-based learning
- b. Academic writing: academic writing OR EFL writing OR research proposal writing OR writing course
- c. Population: undergraduate OR university students OR higher education

Reference lists of included studies were also hand searched to identify additional eligible articles. Only peer reviewed journal articles were considered. The complete database and platform specific search strings exactly as executed, including searched fields, applied filters, and the date each search was run, are reported in Appendix A.

2. Eligibility criteria

Studies were included if they met all of the following criteria:

- a. Empirical peer reviewed journal articles using quantitative, qualitative, or mixed methods designs.
- b. Written in English.
- c. Published between 2019 and 2025.
- d. Conducted in EFL higher education settings with a primary focus on undergraduate cohorts.
- e. The intervention or course design was explicitly labelled as Project Based Learning, including hybrid or online formats, and implemented as an organizing pedagogy rather than a single project assignment.
- f. Academic writing was a central learning goal and assessed outcome, including research proposal writing, argumentative or essay writing, research report writing, or thesis-oriented writing courses.
- g. Reported at least one writing related outcome, such as writing performance, writing processes including planning, revising, and integrating sources, or students' perceptions of Project Based Learning in writing.

Studies were excluded if they were:

- a. Conference proceedings, theses or dissertations, book chapters, editorials, or non-peer reviewed reports.
- b. Not centered on writing outcomes.
- c. Described projects as assessment tasks without an identifiable Project Based Learning cycle.
- d. Purely conceptual or curriculum discussion papers without empirical data.
- e. Not accessible in full text or lacked sufficient methodological detail to judge the nature of the intervention and its relationship to writing outcomes.

3. Study selection and PRISMA flow

All records retrieved from the databases and publisher platforms were exported and de duplicated prior to screening. Screening was conducted in two stages: title and abstract screening followed by full text assessment against the eligibility criteria. The PRISMA 2020 guided search yielded 268 records. After removing 68 duplicates, 200 records were screened by title and abstract, and 118 were excluded. Full texts were retrieved for 82 articles and assessed for eligibility. Sixty-seven full text articles were excluded for predefined reasons, resulting in 15 studies included in the review. The PRISMA 2020 guided search and screening procedures resulted in 15 peer reviewed journal articles that met the inclusion criteria and were included in the review, as shown in Figure 1. Study characteristics and extracted fields are summarized in Table 1.

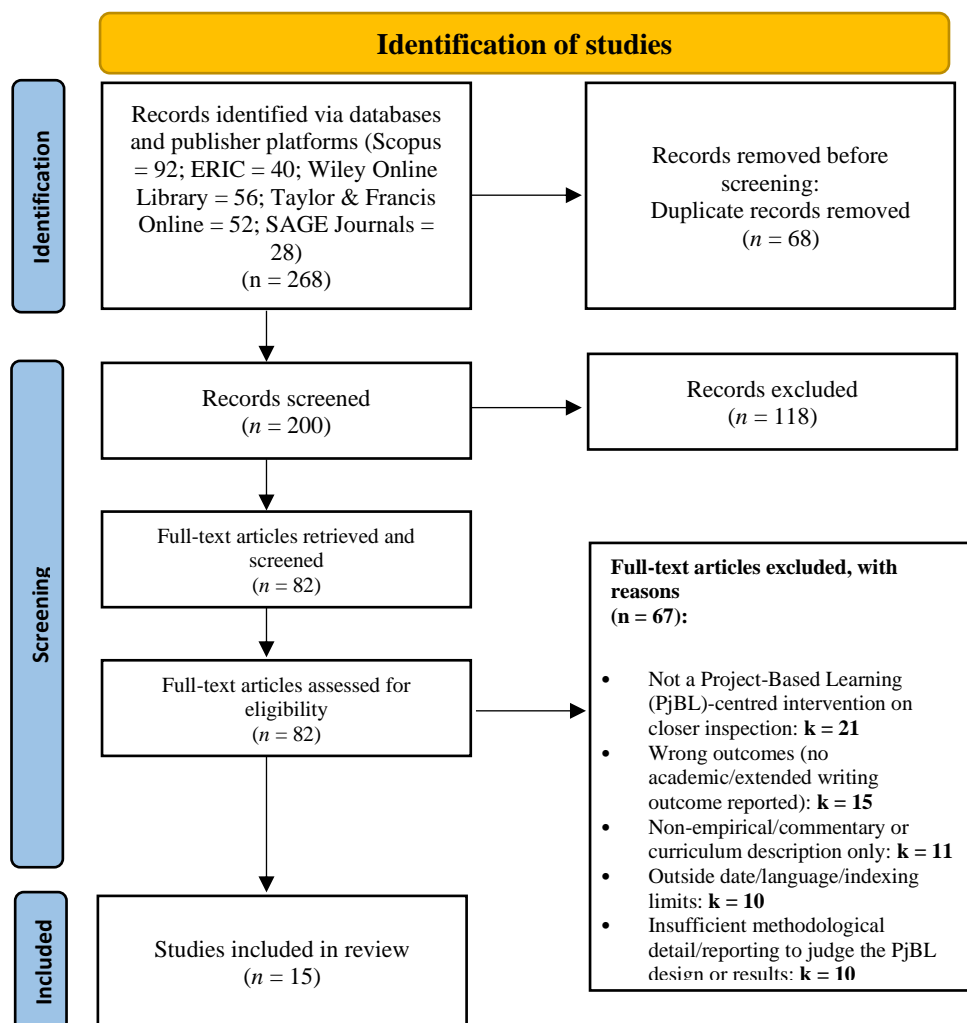


Figure 1. PRISMA 2020 flow diagram of study identification and selection

4. Data extraction

A structured extraction form was developed to ensure consistent capture of study information. For each included study, the following fields were extracted: author and year, country or setting, participant characteristics and sample size, course type and academic writing genre, Project Based Learning design features including project duration and milestones, group or individual structure, assessment and feedback mechanisms, technology supports, outcome measures, key findings, and stated limitations. Data extraction was undertaken by two reviewers, and discrepancies were resolved through discussion until consensus was reached.

5. Data synthesis

A narrative synthesis approach was used because the included studies were heterogeneous in research design, intervention duration, outcome measures, and reporting practices. For this reason, a meta-analysis was not undertaken, as statistical pooling would have been inappropriate and potentially misleading given the lack of comparable effect estimates across studies. The synthesis followed three sequential steps. First, studies were organized according to key Project-Based Learning design features and assessment arrangements, such as project structure, milestone sequencing, and feedback cycles. Second, findings were synthesized by outcome domain, including writing performance, writing process indicators (for example planning, drafting, revision, and source integration), and learner perceptions. Third, cross-study patterns were examined to identify enabling conditions and recurring implementation challenges, with particular attention to constructive alignment within an outcomes-oriented assessment framework where this was explicitly reported.

C. Results and Discussion

1. General Findings and Background of the Studies

The PRISMA-guided search and screening procedures resulted in 20 peer-reviewed journal articles that directly investigated Project-Based Learning (PjBL) – including hybrid and technology-enhanced variants – in relation to EFL students' writing. Most studies were carried out in Indonesian contexts (e.g., Irawati, 2015; Affandi & Sukyadi, 2016; Sa'diyah & Cahyono, 2019; Syarifah & Emiliasari, 2019; Suwandi, 2021; Hakimah, 2023; Garim et al., 2023; Batubara et al., 2023; Mahayoni et al., 2024; Maheswari, 2024), with additional work reported from Iran (Aghayani & Hajmohammadi, 2019) and Saudi Arabia (Alotaibi, 2020).

In terms of research design, quasi-experimental and pre-experimental designs dominated the corpus (e.g., Arochman et al., 2024; Paris, 2024; Affandi & Sukyadi, 2016; Aghayani & Hajmohammadi, 2019; Hakimah, 2023; Sari et al., 2024; Alotaibi,

2020), often comparing PjBL with more traditional instruction. Several studies employed mixed-methods or qualitative case-study approaches to explore classroom processes, perceptions, and implementation issues (Padmadewi et al., 2023; Rochmahwati et al., 2024; Atmojo & Hanifah, 2024; Sultan et al., 2023; Batubara et al., 2023).

The studies collectively covered a range of educational levels and writing genres. At the tertiary level, PjBL was used for academic essay writing, research-proposal writing, and analytical exposition (e.g., Irawati, 2015; Padmadewi et al., 2023; Rochmahwati et al., 2024; Atmojo & Hanifah, 2024; Garim et al., 2023). At the secondary level, projects focused on narrative, descriptive, and persuasive texts (Syarifah & Emiliasari, 2019; Hakimah, 2023; Sari et al., 2024; Maheswari, 2024; Alotaibi, 2020). Several studies intentionally integrated local culture and creative products (shape poems, cultural projects, linguistic landscape tasks) into the project design to increase relevance and engagement (Irawati, 2015; Garim et al., 2023; Sari et al., 2024; Mahayoni et al., 2024; Maheswari, 2024). Taken together, this evidence base allows a nuanced synthesis of how PjBL is designed, what kinds of writing outcomes are reported, and which contextual factors constrain or support its use in EFL writing courses.

2. Effects of PjBL on EFL Students' Academic and Extended Writing

Across the corpus, PjBL shows a consistently positive impact on students' writing performance. Quasi-experimental and pre-experimental studies report significant improvements in overall writing scores and in sub-components such as content, organization, vocabulary, grammar, and mechanics (Arochman et al., 2024; Paris, 2024; Affandi & Sukyadi, 2016; Aghayani & Hajmohammadi, 2019; Hakimah, 2023; Sari et al., 2024; Alotaibi, 2020). These gains are typically attributed to extended engagement with meaningful projects, repeated drafting and revision, and the requirement to produce tangible products for authentic or semi-authentic audiences.

A number of studies focus on academic and research-oriented writing. Padmadewi et al. (2023) designed a PjBL cycle for research-proposal writing, reporting improvement in students' ability to formulate topics, structure proposals, and integrate sources. Rochmahwati et al. (2024) and Atmojo and Hanifah (2024) show that hybrid PjBL in academic writing courses enhances coherence, argumentation, and higher-order thinking, while also increasing students' sense of ownership over their texts. Irawati (2015) and Garim et al. (2023) demonstrate that culturally grounded projects can develop students' academic writing alongside critical reflection on local issues.

At the school level, PjBL also proves effective for genre-based writing. Syarifah and Emiliasari (2019) report that narrative-story projects helped junior-high students produce longer and more coherent texts. Hakimah (2023) finds that PjBL activities

improved procedural and narrative writing, while Sari et al. (2024) show that interactive multimedia combined with PjBL significantly enhanced junior-high students' writing skills compared with conventional teaching. In a different context, Alotaibi (2020) demonstrates that PjBL can substantially improve Saudi secondary students' persuasive writing.

Several studies also emphasise affective and process-related outcomes. Sa'diyah and Cahyono (2019) and Suwandi (2021) show that blog-based and WhatsApp-supported projects foster autonomy, collaboration, and willingness to revise. Mahayoni et al. (2024) and Maheswari (2024) report that creative projects such as shape poems and linguistic-landscape tasks increase motivation and creativity, which in turn support more confident writing. Sultan et al. (2023) note that teachers view PjBL in creative writing as an effective way to showcase students' work and nurture imagination, despite the additional planning it requires.

Overall, the studies indicate that PjBL can enhance both the quality of students' written products and their engagement with the writing process, especially when projects are carefully sequenced and linked to clear learning outcomes and assessment criteria.

3. Design Features, Challenges, and Enabling Conditions

Beyond measurable outcomes, the corpus provides rich insights into how PjBL is designed and what challenges emerge in practice. Batubara et al. (2023) outline key stages in implementing PjBL for writing—orientation, topic selection, planning, drafting, revising, and public presentation—and argue that each stage should be accompanied by explicit instructions and criteria. Similarly, Padmadewi et al. (2023) and Rochmahwati et al. (2024) stress the importance of clearly defined milestones, scaffolded tasks, and rubric-based feedback to keep students on track in research-proposal and academic-writing projects.

However, the studies also highlight recurrent implementation challenges. Time pressure and dense curricula are frequently mentioned as obstacles, particularly in courses that already carry heavy content loads (Atmojo & Hanifah, 2024; Batubara et al., 2023; Sultan et al., 2023). Group-work issues, such as uneven participation and coordination problems, are reported in several settings (Syarifah & Emiliasari, 2019; Garim et al., 2023; Rochmahwati et al., 2024). Teachers also note increased workload related to supervising projects and providing iterative feedback (Affandi & Sukyadi, 2016; Batubara et al., 2023).

Studies that incorporate digital or hybrid elements surface additional constraints, including access to technology, familiarity with online platforms, and the need for students to self-regulate their learning (Sa'diyah & Cahyono, 2019; Suwandi, 2021; Sari

et al., 2024; Maheswari, 2024). Despite these challenges, most authors conclude that PjBL's benefits outweigh its drawbacks when appropriate scaffolding and support structures are in place.

Across contexts, a number of enabling conditions emerge:

- a. breaking large projects into manageable phases with clear timelines and deliverables (Padmadewi et al., 2023; Batubara et al., 2023);
- b. using analytic rubrics aligned with course outcomes to guide both teaching and assessment (Affandi & Sukyadi, 2016; Arochman et al., 2024; Paris, 2024);
- c. integrating local culture or real-world issues to enhance authenticity and relevance (Irawati, 2015; Garim et al., 2023; Sari et al., 2024; Maheswari, 2024);
- d. incorporating structured peer-feedback and reflection activities to deepen learning (Sa'diyah & Cahyono, 2019; Suwandi, 2021; Mahayoni et al., 2024); and
- e. Providing ongoing teacher guidance and monitoring to prevent groups from drifting off-task and to support weaker writers (Rochmahwati et al., 2024; Atmojo & Hanifah, 2024; Sultan et al., 2023).

Taken together, these findings suggest that PjBL is most effective for EFL writing when it is deliberately aligned with course outcomes, supported by robust scaffolding and assessment practices, and adapted to the local institutional and technological context.

Table Cluster 1. PjBL Studies with a Primary Focus on Improving Writing Ability (n = 15)

No.	Author(s) & Year	Context / participants (brief)	Research Design	PjBL focus & main writing-related outcomes	Key OBE relevant Outcomes
1	Arochman et al. (2024)	Indonesian university EFL learners	Mixed methods (scores and perceptions)	PjBL projects improved overall writing scores and strengthened students' perceptions of writing as meaningful and collaborative.	Outcome attainment evidenced via rubric referenced writing scores and completion of project deliverables.
2	Padmadewi et al. (2023)	Indonesian EFL students in research proposal writing course	Design and evaluation study	Designed a PjBL cycle for proposal writing; gains in proposal structure, source use, and awareness of research conventions.	Alignment of outcomes to milestones and criteria referenced assessment of proposal components.
3	Rochmahwati, Fatimah, and Al	Academic writing	Qualitative reflection	Hybrid PjBL increased	Implementation feasibility affecting

	Haadi (2024)	course using hybrid PjBL	study	engagement but highlighted workload and group coordination issues.	evidence quality for outcome assessment and completion.
4	Rochmahwati et al. (2024)	Indonesian university academic writing classes	Classroom based evaluation study	Hybrid PjBL promoted higher order thinking; students improved analytical writing and critical reasoning.	Competency development assessed through analytic rubric indicators linked to higher order outcomes.
5	Atmojo and Hanifah (2024)	English academic writing course	Qualitative perception study	Students and lecturer viewed PjBL as beneficial for extended writing; constrained by time and unequal participation.	Constructive alignment supported by rubrics, with equity risks affecting fairness of evidence.
6	Aghayani and Hajmohammadi (2019)	Iranian EFL learners	Quasi experimental	PjBL significantly improved paragraph writing skills including content, organisation, and vocabulary compared to traditional methods.	Demonstrated performance improvement using measurable criteria aligned to learning outcomes.
7	Sa'diyah and Cahyono (2019)	Indonesian university EFL students	Quasi experimental or mixed methods	Blogging based PjBL improved essay writing and supported autonomy and peer feedback.	Continuous assessment through drafts, peer review, and product based evidence of outcomes.
8	Syarifah and Emiliasari (2019)	Indonesian junior high students	Classroom based intervention study	Narrative story projects developed writing ability and creativity; group management required guidance.	Product evidence aligned to task criteria; scaffolding needed for equitable outcome attainment.
9	Hakimah (2023)	Indonesian secondary students	Pre experimental	PjBL with digital media enhanced procedural or	Outcome evidence through product scores and

				narrative writing accuracy and increased learner interest.	engagement indicators, with limited control for inference.
10	Suwandi (2021)	Indonesian students using WhatsApp	Classroom based or mixed methods	PjBL combined with WhatsApp supported collaborative drafting and revision, leading to better writing products.	Process evidence through milestone tracking and revision cycles supporting outcome documentation.
11	Sari, Suwandi, and Sumarwati (2024)	Indonesian junior high students	Quasi experimental	Digital supported project model improved writing skills versus comparison condition.	Criteria referenced performance evidence with attention to implementation fidelity.
12	Garim et al. (2023)	Indonesian senior high students	Quasi experimental or mixed methods	Local culture based PjBL boosted analytical exposition text quality and cultural insight.	Authentic product performance assessed against genre specific criteria aligned to outcomes.
13	Sultan, Qalbi, and Nappu (2023)	Teachers of creative writing	Qualitative descriptive	Reported teacher strategies and obstacles in creative writing PjBL; benefits for product showcasing; time and resource constraints.	Implementation conditions influencing the feasibility of outcomes-based assessment in practice.
14	Batubara, Musthafa, and Gunawan (2023)	Indonesian, HE writing classes	Case study	Mapped key PjBL stages; stressed clear phases, assessment rubrics, and teacher facilitation.	Alignment of outcomes, tasks, rubrics, and evidence across project milestones.
15	Mahayoni, Padmadewi, and Artini (2024)	Indonesian EFL learners	Classroom based evaluation study	Shape poem projects within PjBL improved imagery and layout control and increased motivation.	Product based evidence and reflective evaluation supporting outcome attainment and persistence.

D. Conclusions

This systematic review synthesized empirical evidence on how Project-Based Learning (PjBL) has been used to enhance EFL students' academic and extended writing in secondary and, especially, higher-education contexts. Across the 20 studies reviewed, PjBL was consistently associated with improvement in key aspects of writing quality such as content development, macro-organization, language use, and mechanics alongside gains in motivation, engagement, and confidence. Academic-oriented projects (e.g., research proposals, analytical essays, persuasive writing) and culturally grounded projects (e.g., local-culture tasks, linguistic-landscape documentation, shape poems) proved particularly powerful in helping students see writing as meaningful work rather than as decontextualized classroom exercises.

Viewed through an Outcome-Based Education (OBE) lens, the corpus underscores that PjBL contributes most effectively to EFL writing development when projects are tightly aligned with intended learning outcomes, broken into clear milestones, and supported by analytic rubrics and iterative feedback. Carefully scaffolded project cycles, opportunities for collaboration and peer review, and the judicious use of digital tools all function as enabling conditions. At the same time, the studies highlight persistent challenges: limited instructional time, heavy teacher workload for supervising and assessing projects, uneven student participation in group work, and variability in students' initial writing proficiency and autonomy. These constraints suggest that PjBL is not a "plug-and-play" solution but a demanding pedagogy that requires thoughtful design, institutional support, and sustained teacher professional development.

Several limitations of this review should be acknowledged. The dataset is restricted to English-language, peer-reviewed journal articles published between 2019 and 2025 and indexed at least in Scopus 2 or major international databases, which may exclude relevant work disseminated in other languages or local outlets. The evidence base is also dominated by Indonesian contexts, with relatively few studies from other EFL regions, and the diversity of research designs and outcome measures precluded formal meta-analysis. Moreover, most interventions were short- to medium-term, so the long-term impact of PjBL on writing proficiency and broader OBE-related competences remains under-examined.

Future research should therefore pursue longitudinal and cross-institutional studies that track students' writing development across multiple semesters or courses; employ more standardized measures of writing performance and related outcomes (e.g., critical thinking, collaboration, assessment literacy); and compare PjBL directly with other pedagogical models such as Problem-Based Learning (PBL), genre-based approaches, or AI-mediated feedback systems. There is also a need for work that foregrounds equity and inclusion—examining how PjBL can be adapted for students

with lower proficiency, limited access to resources, or different disciplinary backgrounds and that explores teacher professional-learning trajectories in adopting PjBL within OBE-aligned curricula. By addressing these gaps, future studies can refine when and how PjBL is most effective for cultivating research-style EFL academic writing and inform the design of integrated PjBL–PBL models for higher education.

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Appendix A. Search strings and filters

This appendix reports the database and platform specific search strings exactly as executed, including searched fields, applied filters, optional terms, and the date each search was run.

A1. Scopus

Date searched: 20 October 2025

Search mode: Advanced search

Fields searched: TITLE-ABS-KEY

Filters applied: publication years 2019 to 2025; document type article; source type journal; language English

Exact search string:

TITLE-ABS-KEY ("project based learning" OR "project-based learning" OR PjBL OR "hybrid project-based learning" OR "online project-based learning")

AND TITLE-ABS-KEY ("academic writing" OR "EFL writing" OR "research proposal writing" OR "research report writing" OR "writing course" OR "argumentative writing")

AND TITLE-ABS-KEY (undergraduate* OR "university student*" OR "higher education" OR tertiary)

A2. ERIC

Date searched: 20 October 2025

Search mode: Advanced search

Fields searched: All fields

Filters applied: peer reviewed only; publication date 2019 to 2025; higher education level where available; language English

Exact search string:

("project based learning" OR "project-based learning" OR PjBL OR "hybrid project-based learning" OR "online project-based learning")

AND ("academic writing" OR "EFL writing" OR "research proposal writing" OR "research report writing" OR "writing course" OR "argumentative writing")

AND (undergraduate* OR "university student*" OR "higher education" OR tertiary)

A3. Web of Science Core Collection

Date searched: 20 October 2025

Search mode: Advanced search

Fields searched: TS (Topic)

Filters applied: publication years 2019 to 2025; document type article; language English

Exact search string:

TS = ("project based learning" OR "project-based learning" OR PjBL OR "hybrid project-based learning" OR "online project-based learning")
AND TS = ("academic writing" OR "EFL writing" OR "research proposal writing" OR "research report writing" OR "writing course" OR "argumentative writing")
AND TS = (undergraduate* OR "university student*" OR "higher education" OR tertiary)

A4. DOAJ

Date searched: 20 October 2025

Search mode: Advanced search

Fields searched: All fields

Filters applied: years 2019 to 2025; journal articles; language English where available

Exact search string:

("project based learning" OR "project-based learning" OR PjBL OR "hybrid project-based learning" OR "online project-based learning")
AND ("academic writing" OR "EFL writing" OR "research proposal writing" OR "research report writing" OR "writing course" OR "argumentative writing")
AND (undergraduate* OR "university student*" OR "higher education" OR tertiary)

A5. Wiley Online Library

Date searched: 20 October 2025

Search mode: Advanced search

Fields searched: Title and Abstract

Filters applied: publication years 2019 to 2025; content type journal article

Exact search string:

("project based learning" OR "project-based learning" OR PjBL OR "online project-based learning")
AND ("academic writing" OR "EFL writing" OR "research proposal writing" OR "writing course")

A6. Taylor and Francis Online

Date searched: 20 October 2025

Search mode: Advanced search

Fields searched: Title and Abstract

Filters applied: publication years 2019 to 2025; content type article

Exact search string:

("project based learning" OR "project-based learning" OR PjBL OR "online project-based learning")

AND ("academic writing" OR "EFL writing" OR "research proposal writing" OR "writing course")

A7. SAGE Journals

Date searched: 20 October 2025

Search mode: Advanced search

Fields searched: Title and Abstract

Filters applied: publication years 2019 to 2025; content type research article where available

Exact search string:

("project based learning" OR "project-based learning" OR PjBL OR "online project-based learning")

AND ("academic writing" OR "EFL writing" OR "research proposal writing" OR "writing course")

A8. Indonesian national index (SINTA and Garuda)

Date searched: 20 October 2025

Search mode: Advanced search where available

Fields searched: Title and Keywords where available

Filters applied: years 2019 to 2025; journal articles; language English

Exact search string:

("project based learning" OR "project-based learning" OR PjBL)

AND ("academic writing" OR "EFL writing" OR "writing course" OR "research proposal writing")

AND (undergraduate* OR mahasiswa OR "higher education" OR universitas)

A9. Supplementary contextual searches

Date searched: 20 October 2025

Optional contextual terms used: EFL, ESL, Outcome Based Education, OBE, Indonesia

Exact supplementary string applied:

(core search string)

AND (EFL OR ESL OR "Outcome-Based Education" OR OBE OR Indonesia)