

**STUDENTS' PERCEPTION ON THE USE OF PJBL WITH
ICT INTEGRATION IN ACADEMIC WRITING
AT UNIVERSITY LEVEL**

A THESIS

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ABSTRACT

Divthry Silalahi, 2026: Students' Perception on the Use of PJBL with ICT Integration in Academic Writing at University Level

This study addresses the problem that academic writing is often difficult for EFL university students due to linguistic, cognitive, and motivational challenges, while traditional teacher-centered instruction frequently fails to promote active engagement and meaningful learning. The purpose of this study was to investigate students' perceptions of the use of Project-Based Learning (PJBL) with ICT integration in academic writing at university level. This research employed a quantitative descriptive design using a structured questionnaire adapted from (Deveci, 2018) and distributed to 117 students of the English Language Education Program at Universitas Lancang Kuning through population sampling. The data were analyzed using descriptive statistics, including mean scores and standard deviations to determine overall perception levels. The results showed that students had positive perceptions across all five indicators: Active Learning (M = 3.08), Innovation (M = 3.15), General Skills (M = 3.19), English Language Skills (M = 3.18), and Team Skills (M = 3.18), with a grand mean of 3.16 categorized as positive. These findings indicate that PJBL integrated with ICT enhances engagement, creativity, higher-order thinking skills, language proficiency, and collaborative competence. In addition, students reported that technology-supported projects helped them organize ideas, revise writing, and communicate effectively. In conclusion, PJBL with ICT integration creates a supportive student-centered learning environment and is recommended as an effective instructional approach for improving academic writing quality, learner autonomy, and essential 21st-century skills in higher education contexts.

Keywords: Academic Writing, Project-Based Learning, ICT Integration, Students' Perception, EFL Context.

ABSTRAK

Divthry Silalahi, 2026: Persepsi Mahasiswa terhadap Penggunaan Project-Based Learning dengan Integrasi ICT dalam Pembelajaran Menulis Akademik di Tingkat Perguruan Tinggi

Penelitian ini dilatarbelakangi oleh permasalahan bahwa penulisan akademik sering menjadi keterampilan yang sulit bagi mahasiswa EFL karena tuntutan linguistik, kognitif, dan motivasional, sementara pembelajaran tradisional yang berpusat pada dosen sering kurang mampu meningkatkan keterlibatan belajar dan partisipasi aktif mahasiswa. Tujuan penelitian ini adalah untuk menganalisis persepsi mahasiswa terhadap penggunaan Project-Based Learning (PJBL) dengan integrasi ICT dalam pembelajaran penulisan akademik di tingkat perguruan tinggi. Penelitian ini menggunakan desain deskriptif kuantitatif dengan instrumen kuesioner terstruktur yang diadaptasi dari Deveci (2018) dan disebarkan kepada 117 mahasiswa Program Studi Pendidikan Bahasa Inggris Universitas Lancang Kuning dengan teknik population sampling. Data dianalisis menggunakan statistik deskriptif berupa nilai mean dan standar deviasi untuk menentukan tingkat persepsi secara keseluruhan. Hasil penelitian menunjukkan bahwa persepsi mahasiswa positif pada seluruh indikator, yaitu Active Learning ($M = 3.08$), Innovation ($M = 3.15$), General Skills ($M = 3.19$), English Language Skills ($M = 3.18$), dan Team Skills ($M = 3.18$), dengan grand mean sebesar 3.16 yang termasuk kategori positif. Temuan ini menunjukkan bahwa integrasi PJBL dan ICT meningkatkan keterlibatan belajar, kreativitas, keterampilan berpikir tingkat tinggi, kemampuan bahasa, serta kolaborasi. Selain itu, mahasiswa menyatakan bahwa proyek berbasis teknologi membantu mereka mengembangkan ide, merevisi tulisan, dan menyampaikan gagasan secara lebih efektif. Kesimpulannya, PJBL berbasis ICT menciptakan lingkungan pembelajaran yang berpusat pada mahasiswa dan direkomendasikan sebagai pendekatan efektif untuk meningkatkan kualitas penulisan akademik, kemandirian belajar, serta keterampilan abad ke-21 di pendidikan tinggi.

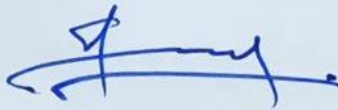
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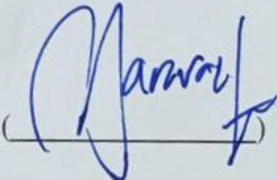
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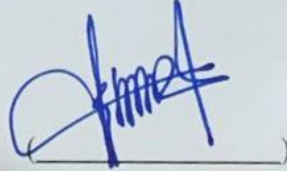
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Saya yang menyatakan



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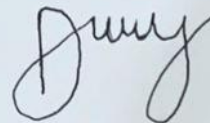
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CHAPTER I

INTRODUCTION

A. Background of the Problem

Academic writing is considered to be one of the most challenging skills for EFL learners to acquire due to the linguistic precision, logical structuring of ideas, critical thinking, accurate integration of academic sources, and digital literacy required in academic writing (Bafadal & Ismail, 2024). Despite the efforts to enhance EFL students' ability to produce academic texts in the Indonesian university context, they still face persistent challenges in creating logical arguments, paraphrasing sources, and synthesizing information coherently (Williams & Beam, 2019). When students first enter higher education, they are often not accustomed to academic genres, which leads to low confidence and a lack of preparation for writing-intensive courses. As a result, academic writing presents a significant instructional challenge at the university level.

Traditional writing instruction, which tends to be teacher-centered, product-oriented, and lacks formative feedback, has been criticized for not supporting students in their writing development, as they can be passive, unmotivated, and anxious because of the rigid rules that do not align with authentic language use (Yingbao, 2025). This has led to the use of more student-centered instructional models that promote active learning and meaningful engagement.

A popular instructional method that is rooted in constructivism is Project-Based Learning (PJBL), which is a constructivist-based model where learning is centered around extended projects that involve inquiry, collaboration, and the creation of meaningful products (Thomas & Ph, 2000). When implemented in academic writing courses, PJBL treats writing as a recursive and authentic process that involves brainstorming, researching, drafting, revising, presenting, and reflecting, all of which closely mirror actual academic writing practices (Suryani et al., 2024).

Parallel to pedagogical innovation, Information and Communication Technology (ICT) has revolutionized the way we teach academic writing, from collaborative writing platforms and digital reference managers, to online corpora and automated writing evaluation systems that assist students with accessing academic resources, collaborating, revising drafts, and practicing writing outside the classroom (Fami et al., 2023), and encouraging learner autonomy, engagement, and digital literacy (Putri et al., 2021).

When combined with ICT, PJBL provides a complementary instructional design that merges experiential learning with technology, allowing students to work on project-based writing while using digital tools to search for information, collect ideas, collaborate, and revise drafts (Xing & Saeed, 2025). Writing platforms like Google Docs, Canva, and cloud-based storage systems help with real-time collaboration and multimodal composition, which matches academic writing practices with current academic and professional communication needs. The evidence also suggests that the integration of PJBL with ICT strengthens collaborative writing practices, digital drafting processes, and critical peer feedback (Marwan, 2015).

While PJBL with ICT integration can be beneficial, challenges exist, including longer project timelines, unequal group participation, coordination, and different levels of technological proficiency, limited access to reliable internet connections and unfamiliarity with digital platforms, and perceptions of PJBL-ICT-based instruction (Thi Van Pham & Huu Tran, 2021). Perception is critical in learning engagement, persistence, and instructional effectiveness, and students' perceptions of PJBL-ICT-based instruction is an area that should be investigated (Colclasure et al., 2025).

Students may perceive instructional models positively or negatively, and those perceptions may influence motivation, active participation, and resilience in challenging academic tasks, or lead to resistance, anxiety, or

disengagement (Rotar, 2025). While a number of studies have investigated PJBL and ICT, empirical studies that specifically explore the combined use of PJBL with ICT integration, especially in academic writing courses, are still rare. Most empirical studies focus on writing outcomes or final products rather than on the experiences, perceptions, and cognitive-affective dimensions of writing development (Yingbao, 2025). Additionally, much of the existing literature was conducted in technologically advanced or culturally different contexts, reducing its applicability.

With these gaps, this study aims to investigate how students perceive the integration of Project-Based Learning with ICT in university academic writing courses in the English Language Education Program at Universitas Lancang Kuning, and to provide empirical evidence to inform instructional design, curriculum development, and policy decisions, as well as contribute to the literature on technology-enhanced project-based learning in EFL academic writing contexts.

B. Identification of The Problems

Based on the explanation in the background of research above, this research is identified as: To find out “Students’ Perception on the Use of PJBL with ICT Integration in Academic Writing at university level”.

C. Limitation of The Problem

Based on the identification of the problem above, the researcher limits the problem to Students’ Perception on the Use of PJBL with ICT Integration in Academic Writing at University Level.

D. Formulation of The Problem Research

Based on the research background, the researcher formulated the problem in the following question: how is the Students’ Perception on the Use of PJBL with ICT Integration in Academic Writing at university

level?

E. Purpose of The Research

The purpose of this research is to analyze how the Students' Perception on the Use of PJBL with ICT Integration in Academic Writing at University Level.

F. Significance of the Study

a. Theoretical Significance

In theory, by providing empirical data on students' views on the use of project-based learning with ICT integration at university level, the study advances the teaching of academic writing in English as a foreign language (EFL). This study fills a critical gap in the literature by focusing on the point of view of learners. The literature mainly looked at project-based learning and information and communication technologies as different teaching approaches rather than as an integrated model for academic writing instruction. The findings of this study are expected to contribute to the body of knowledge on affective and cognitive factors - such as motivation, commitment, writing confidence, autonomy and digital literacy - that influence students' perception of innovative learning practices in projects. In addition, the study provides theoretical insights.

b. Practical Significance

In practice, the findings of this study are expected to have valuable implications for EFL instructors at university level, curriculum developers and educational institutions. For teachers, understanding students' perception of PJBL-ICT integration can support evidence-based decisions in refining course design for academic writing, improving pedagogical strategies and addressing implementation and technology challenges. For curriculum developers and programme

administrators, the findings can be used to strengthen ICT policies, improve digital infrastructure and develop training programmes to facilitate the efficient and sustainable implementation of innovative pedagogical practices in the field of academic writing.

c. Pedagogical Significance

From a pedagogical point of view, the study provides a meaningful insight into how the integration of PJBL and ICT affects the learning experience of students in university level courses on academic writing. By addressing the student's perception, the research will help educators to understand how PJBL-ICT affects learners' engagement, collaboration, motivation, writing literacy and digital literacy. The study can also inform teachers on effective strategies for digital platform selection, academic writing project structuring and scaffolding learning processes to enable students to be actively involved in project activities, develop greater autonomy and become more self-assured and confident academic writers.

G. Definition of Key Terms

a. Students' Perception

In the context of education, student perception refers to the beliefs, attitudes, feelings, interpretations and subjective assessments of teaching practices and learning experiences of students (Thi Van Pham & Huu Tran, 2021). Perception of students reflects both cognitive and affective reactions to the way in which learning methods are implemented and experienced in the classroom. The study looked at how students cognitively and affectively perceived, experienced and responded to the use of project-based learning with ICT integration (PJBL-ICT) in academic writing courses in the English language programme at Universitas Lancang Kuning. Students' perceptions are measured by means of a structured questionnaire, adopted by the (Deveci, 2018)

group, which explores students' views on engagement, collaboration, motivation, learning efficiency and the use of technology in project-based learning.

b. Project-Based Learning (PJBL)

Project-Based Learning (PJBL) is a student-centered instructional approach in which learners engage in extended, meaningful projects that involve inquiry, collaboration, problem-solving, and the creation of tangible products (Thomas & Ph, 2000). PJBL emphasizes learning through active participation and the construction of knowledge rather than passive reception of information. In this study, PJBL refers to the instructional approach used in academic writing courses where students work on structured writing projects that include planning, researching, drafting, revising, and presenting academic texts. These projects are designed to promote active learning, critical thinking, and authentic academic writing practices at university level.

c. Information and Communication Technology (ICT)

Information and Communication Technology (ICT) refers to the use of digital tools, platforms, and technological resources to support and enhance teaching and learning processes, including language learning (Marwan, 2015). ICT facilitates access to information, communication, collaboration, and the production of digital content. In the context of academic writing, ICT includes online research tools, collaborative writing platforms (such as Google Docs or Microsoft 365), grammar and citation software, digital feedback systems, and learning management systems. In this study, ICT refers to the digital tools integrated into academic writing instruction to support students' writing processes, collaboration, feedback exchange, and project completion.

d. PJBL With ICT Integration

PJBL with ICT integration refers to an instructional model that

combines Project-Based Learning with digital technologies to support inquiry, collaboration, drafting, revising, and presentation of learning projects (Bafadal & Ismail, 2024). This integration allows students to engage in project-based tasks while utilizing technology to enhance learning efficiency and interaction. In this study, PJBL with ICT integration refers to the instructional approach implemented in academic writing courses where project-based writing activities are systematically supported by ICT tools to facilitate collaborative writing, idea development, revision, and the production of academic texts at the university level.

e. Academic Writing

Academic writing refers to formal, structured writing produced for academic purposes that emphasizes clarity, coherence, critical thinking, and adherence to academic conventions, such as citation, synthesis of sources, and logical argument development (Suryani et al., 2024). Academic writing follows specific disciplinary norms and is supported by evidence from credible sources. In this study, academic writing refers to university-level English writing tasks that require students to produce well-organized academic texts, such as essays or research-based assignments, as part of project-based learning activities supported by ICT.

CHAPTER V

CONCLUSION AND SUGGESTION

A. Conclusion

Based on the findings and discussion of this study, it can be concluded that students of the English Language Education Program at Universitas Lancang Kuning have a positive perception toward the use of Project-Based Learning with ICT integration in academic writing, as reflected in the mean scores of each indicator: Active Learning ($M = 3.08$), Innovation ($M = 3.15$), General Skills ($M = 3.19$), English Language Skills ($M = 3.18$), and Team Skills ($M = 3.18$), with an overall grand mean of 3.16 categorized as positive, indicating that this instructional approach effectively supports engagement, creativity, academic competence, language development, and collaborative skills in university-level writing.

B. Suggestion

Based on the conclusion above, several suggestions are proposed. Lecturers are encouraged to consistently implement PJBL–ICT in academic writing courses by designing well-structured projects and selecting appropriate digital tools to support collaboration and the writing process. Students are advised to participate actively in project-based activities and make optimal use of ICT tools to enhance their academic writing skills and teamwork abilities. Furthermore, future researchers are recommended to conduct qualitative or experimental studies in broader educational contexts, involving larger samples or longitudinal designs, in order to obtain deeper insights into the effectiveness and challenges of PJBL–ICT in EFL academic writing.

REFERENCES

- Al-Abdullatif, A. M., & Gameil, A. A. (2021). The Effect of Digital Technology Integration on Students' Academic Performance through Project-Based Learning in an E-Learning Environment. *International Journal of Emerging Technologies in Learning*, 16(11), 189–210.
<https://doi.org/10.3991/ijet.v16i11.19421>
- Al-Balushi, S. M., & Al-Aamri, S. S. (2014). The effect of environmental science projects on students environmental knowledge and science attitudes. *International Research in Geographical and Environmental Education*, 23(3), 213–227. <https://doi.org/10.1080/10382046.2014.927167>
- Andargie, A., Amogne, D., & Tefera, E. (2025). Effects of project-based learning on EFL learners' writing performance. *PLoS ONE*, 20(1 January), 1–16.
<https://doi.org/10.1371/journal.pone.0317518>
- Angraini, D., & Abrar, M. (2024). *Integrating Project-Based Collaborative Learning into English Classroom : A Systematic Review*. 3(October), 124–139.
- Bafadal, M. F., & Ismail, H. (2024). Enhancing Students' Writing Skills through Project-Based Learning with Digital Media Integration: An Experimental Study. *Forum for Linguistic Studies*, 6(6), 211–221.
<https://doi.org/10.30564/fls.v6i6.7803>
- Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M., & Palincsar, A. (1991). Motivating Project-Based Learning: Sustaining the Doing, Supporting the Learning. *Educational Psychologist*, 26(3–4), 369–398. <https://doi.org/10.1080/00461520.1991.9653139>
- Colclasure, B. C., Ruth, T. K., Beasley, V., & Granberry, T. (2025). *Examining Student Perceptions of AI-Driven Learning : User Experience and Instructor Credibility in Higher Education*. 2019.
- Deveci, T. (2018). *Student Perceptions on Collaborative Writing in a Project-*

- based Course. 6(4), 721–732. <https://doi.org/10.13189/ujer.2018.060415>
- Doğantan, E. (2025). Project Based Learning and Technology Integration on Vocational Students' Learning Experience. *Journal of Hospitality and Tourism Education*. <https://doi.org/10.1080/10963758.2025.2491136>
- Efendi, T. A. (2017). The Students' Perceptions of The Implementation of ICT-Supported Project Based Learning in English Teaching. *IJET (Indonesian Journal of English Teaching)*, 6(2), 167–183. <https://doi.org/10.15642/ijet2.2017.6.2.167-183>
- Fami, A., Rasita Gloria Barus, I., & Wahyoedi, B. (2023). Project-Based Learning as a Catalyst for Promoting Digital Literacy: A Case Study of Software Engineering Technology Students. *E3S Web of Conferences*, 454. <https://doi.org/10.1051/e3sconf/202345403012>
- Guo, P., Saab, N., Post, L. S., & Admiraal, W. (2020). A review of project-based learning in higher education: Student outcomes and measures. *International Journal of Educational Research*, 102. <https://doi.org/10.1016/j.ijer.2020.101586>
- Hyland, K. (n.d.). *Second Language Writing* ©.
- Jamil, A. (2025). *A Thematic Review of the Influences of Classroom Environment on Students ' Learning Outcomes in the EFL Context*. 10(3), 331–345.
- Kokotsaki, D., Menzies, V., & Wiggins, A. (2016). Project-based learning: A review of the literature. *Improving Schools*, 19(3), 267–277. <https://doi.org/10.1177/1365480216659733>
- Marwan, A. (2015). Empowering English through project-based learning with ICT. *Turkish Online Journal of Educational Technology*, 14(4), 28–37.
- Petchamé, J., Iriondo, I., Torné, O., & Solanellas, F. (2024). Student Perceptions of Project-Based Learning When Studying 'Information Systems' in an ICT Engineering Program: Taking Advantage of Active Learning. *Education Sciences*, 14(11). <https://doi.org/10.3390/educsci14111148>

- Putri, B. K., Gunawan, W., Emilia, E., & Kurniawan, E. (2021). *A Sociocultural Perspective on EFL In-Service Teachers' SFL / Genre Knowledge Development*. 595(Icollite), 157–162.
- Rotar, O. (2025). *Beyond Technology Tools : Supporting Student Engagement in Technology Enhanced Learning*.
- Suryani, N. Y., Nugroho, H., Syahbani, M. H., Husein, I. G., & Rifaat, A. A. (2025). Integration Technology of Project-Based Learning on Digital Story-Writing to Help Students Writing Skills. *Asian Journal of Human Services*, 29, 318–337. <https://doi.org/10.14391/ajhs.29.318>
- 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/10.22437/jiituj.v8i1.32506>
- Thi Van Pham, A., & Huu Tran, T. (2021). The Implementation of Project-based Learning Approach in Technical Courses: An Investigation into Students' Perceptions. *ACM International Conference Proceeding Series*, 124–129. <https://doi.org/10.1145/3505711.3505728>
- Thomas, J. W., & Ph, D. (2000). *A REVIEW OF RESEARCH ON PROJECT-BASED LEARNING*. 94903(415).
- Trilling, B., & Fadel, C. (n.d.). *century skills*.
- Williams, C., & Beam, S. (2019). Technology and writing: Review of research. *Computers and Education*, 128, 227–242. <https://doi.org/10.1016/j.compedu.2018.09.024>
- Xing, C., & Saeed, M. A. (2025). *A Systematic Review on Artificial Intelligence (AI) Technologies in ESL / EFL Speaking Skills Online First View*. 1–31.
- Yingbao, L. (2025). *Needs Analysis for Enhancing Academic English Writing Instruction among Chinese EFL University Instructors*. 24(7), 278–300.