

EFFECTIVENESS OF THE FLIPPER CLASSROOM, PROJECT-BASED LEARNING IN DEVELOPMENT OF WRITING IN EFL: A SYSTEMATIC REVIEW OF THE LITERATURA

EFICACIA DEL AULA INVERTIDA Y EL APRENDIZAJE BASADO EN PROYECTOS EN EL DESARROLLO DE LA ESCRITURA EN EFL: UNA REVISIÓN SISTEMÁTICA DE LA LITERATURA

Dennis Eduardo Zapata Villegas^{1*}

¹ Estudiante de la carrera de Pedagogía de los Idiomas Nacionales y Extranjeros. Universidad Técnica de Cotopaxi. Ecuador. ORCID: <https://orcid.org/0009-0004-7543-7335>. Correo: dennis.zapata3188@utc.edu.ec

Erika Belen Aimacaña Yanchaguano²

² Estudiante de la carrera de Pedagogía de los Idiomas Nacionales y Extranjeros, Universidad Técnica de Cotopaxi, Ecuador. ORCID: <https://orcid.org/0009-0002-7922-1414>. Correo: erika.aimacana5420@utc.edu.ec

José Ignacio Andrade Morán³

³ Docente Investigador de la Universidad Técnica de Cotopaxi, Ecuador. ORCID: <http://orcid.org/0000-0003-4294-2736>. Correo: jose.andradem@utc.edu.ec

*** Autor para correspondencia:** dennis.zapata3188@utc.edu.ec

Abstract

Developing writing competence in teaching English as a foreign language (EFL) is one of the greatest pedagogical challenges due to grammatical density and the need for constant supervision. The purpose of this study is to analyze the effectiveness, process roadmap, and pedagogical implications of the flipped classroom and project-based learning (PBL) to improve writing skills. Qualitative systematic literature review (RSL) was used to analyze 13 high-quality articles indexed in the Scopus, ERIC and Redalyc databases (2020–2025) according to the PRISMA protocol, of which 6 articles ultimately aimed to compare and analyze different methods such as “project-based learning” and “flipped classroom”. The results demonstrate functional specialization: the inverted model optimizes face-to-face time for immediate feedback, positively affecting coherence and reducing language anxiety; while PBL promotes the development of complex cognitive and



Esta obra está bajo una licencia *Creative Commons* de tipo (CC-BY-NC-SA).

Sociedad Ecuatoriana de Investigación Científica. E-mail: revistaalcon@gmail.com

critical thinking skills through real-world problem solving. It was found that although both methods overcome the limitations of traditional methods, their success depends on student autonomy and the appropriateness of technological infrastructure, suggesting that integrating both models improves comprehensive writing competence.

Keywords: writing skill; Flipped Classroom; Project-Based Learning; Systematic Review; Pedagogical Innovation

Resumen

El desarrollo de la competencia escrita en la enseñanza del inglés como lengua extranjera (EFL) es uno de los mayores retos pedagógicos debido a la densidad gramatical y a la necesidad de una supervisión constante. El objetivo de este estudio es analizar la eficacia, la hoja de ruta del proceso y las implicaciones pedagógicas del aula invertida y el aprendizaje basado en proyectos (PBL) para mejorar las habilidades de escritura. Se utilizó una revisión sistemática cualitativa de la literatura (RSL) para analizar 13 artículos de alta calidad indexados en las bases de datos Scopus, ERIC y Redalyc (2020-2025) según el protocolo PRISMA, de los cuales 6 artículos tenían como objetivo final comparar y analizar diferentes métodos, como el «aprendizaje basado en proyectos» y el «aula invertida». Los resultados demuestran una especialización funcional: el modelo invertido optimiza el tiempo presencial para obtener una retroalimentación inmediata, lo que repercute positivamente en la coherencia y reduce la ansiedad lingüística; mientras que el PBL promueve el desarrollo de habilidades cognitivas complejas y de pensamiento crítico a través de la resolución de problemas del mundo real. Se constató que, aunque ambos métodos superan las limitaciones de los métodos tradicionales, su éxito depende de la autonomía de los estudiantes y de la idoneidad de la infraestructura tecnológica, lo que sugiere que la integración de ambos modelos mejora la competencia integral en escritura.

Palabras clave: Habilidad de escritura; Aula Invertida; Aprendizaje Basado en Proyectos; Revisión Sistemática; Innovación Pedagógica

Fecha de recibido: 11/11/2025

Fecha de aceptado: 23/01/2026

Fecha de publicado: 09/02/2026

Introduction

Writing in a foreign language is one of the fundamental pillars and one of the greatest challenges of global communication. Writing involves a complex cognitive process that goes beyond just memorizing grammatical rules; A mistake in design can completely change the recipient's perception and the effectiveness of the message (Bora, 2023). In this context, teaching methodology, understood as a set of methods and activities planned for effective teaching, must be adapted to the specific needs of students' level, age, and expectations (British Council, 2020). However, despite extensive research in this area, it appears that writing development



Esta obra está bajo una licencia *Creative Commons* de tipo (CC-BY-NC-SA).

Sociedad Ecuatoriana de Investigación Científica. E-mail: revistaalcon@gmail.com

in educational settings has reached a point of stagnation where there remains a notable gap between educational theories and their effective implementation in the classroom (Dancy et al., 2022; García Mayo, 2021).

Historically, the traditional approach positioned the teacher as the sole transmitter of knowledge, limiting the student's role to passive absorption. In this context, active methods that place students at the center of the educational process become an inevitable solution (Crisol-Moya et al., 2020). Among them, flipped classroom methods and project-based learning dominate one of the productive skills. The flipped model optimizes face-to-face time by shifting face-to-face instruction to an asynchronous environment using digital resources, transforming the classroom into a space for guided practice and feedback (Mohammad & Khan, 2023). PBL, in turn, encourages critical thinking and collaboration by engaging students in solving real-world problems through research and development of real-world solutions (Nurhidayah et al., 2021). Despite the potential of both approaches, there is still no clear synthesis of which path is most effective for specific aspects of academic writing. Therefore, there is a need for this systematic review, which asks the following research question: How effective are flipped classroom and PBL techniques in developing EFL writing skills, according to the latest research evidence?

The main objective of this article is to critically analyze the effectiveness, conceptual framework and implementation procedures of both methods in the period from 2020 to 2025. Specific objectives include identifying the strengths and weaknesses of each approach, contrasting their pedagogical implications, and identifying knowledge gaps that determine their success, such as student autonomy and technological infrastructure. To assist the reader, the article is organized as follows: After the introduction, the Materials and Methods section describes the PRISMA protocol used to select 12 high-quality studies. A comparative analysis and narrative synthesis of the results are then presented in the Results and Discussion section. In the end, conclusions are presented, outlining the future of pedagogical innovation in the creation of texts in English.

Materials and Methods

Review the design

This study is based on a systematic literature review (RSL) with a qualitative approach. Unlike meta-analyses, which derive statistical data, this study focuses on the interpretation, comparison, and critical synthesis of conceptual framework and empirical findings. The process was structured according to the PRISMA protocol guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) to guarantee the accuracy, transparency and repeatability of the analysis by:

- A purely qualitative approach: Make the investigation clear that the aim is to compare and interpret, not to add numerical data.
- Transparency: referring to the PRISMA protocol and the 2020-2025 years' criteria, of the present research and its effective information selected.
- Originality: Explain how the research about effectiveness of the Flipper classroom, project-based learning in development of writing in EFL has been organized into "thematic categories" to identify patterns underlying critical analysis.



Search strategy

An exhaustive search of high-impact academic databases of recognized scientific prestige: Scopus, ERIC, and Redalyc, supplemented by Google Scholar, was performed to ensure comprehensive coverage of regional and international literature. Key terms derived from the research question and the UNESCO files were used for information retrieval, combined with Boolean operators:

Master equation: ("Flipped Classroom") AND ("Project-Based Learning" OR "PBL" OR "ABP") AND ("Writing Skills") AND ("EFL"). This strategy allowed the researchers to filter studies that specifically address the intersection of active methods and written production in English.

Inclusion and exclusion criteria

To narrow the scope and ensure the quality of the reviews, the following criteria were used: Includes: original articles and empirical research reports published between 2020 and 2025; research conducted in primary, secondary, and higher education; work directly related to writing documents in English (EFL writing). Exception: studies before 2020; review articles or reviews without clear empirical support; studies that focused only on basic literacy skills (early literacy skills), and studies that did not describe in detail the procedures used for the methods studied.

Research selection and information extraction

The selection is performed sequentially:

- Identification: Initial detection of 12 potential profiles.
- Screening: technical screening of titles and abstracts to remove duplicates and non-EFL articles, limiting the sample to 20 articles.
- Eligibility: Full-text qualitative assessment for scientific rigor, resulting in a final sample of 12 high-quality articles.

Information is organized into a comprehensive qualitative matrix that includes: author, year, educational context, source methodological approach, and key findings related to the academic text.

Qualitative analysis and synthesis

The analysis is not limited to summarizing sources but also uses narrative and comparative synthesis. The recurring patterns and “functional specialization” of each method were identified. The analysis process includes:

Thematic classification: classify results according to technical aspects (grammatical accuracy, structure) and cognitive aspects (autonomy, critical thinking).

Process contrast: compare the sequential implementation paths reported by the authors.

Identify gaps: Analyze the systemic limitations (infrastructure and teacher preparation) present in the current literature to suggest directions for future research.



Results and Discussion

The flipped classroom is presented as a pedagogical method that breaks the traditional teaching model. According to Serrano (2020), based on the framework of Bergman and Sams (2012), this method includes providing direct instruction and absorbing theoretical content outside the classroom through digital resources (videos, readings, presentations), dedicating individual time for guided practice, doubt clearance, and active learning. In the context of English language (EFL) teaching, this approach allows writing to cease being a solitary task and become an activity controlled by the teacher.

An important application of this model is seen in the study of Montenegro and Rafaela (2024) conceptualize the flipped classroom as a transformative pedagogical strategy to restore learning after the challenges of the pandemic, placing technological innovation as the central axis of educational change. The aim of their research was to analyze the implementation of this model in the program "Pedagogy of national and foreign languages" of UPSE, using a qualitative method with a phenomenological structure based on in-depth interviews. The main contribution of this study is to identify a process-specific writing roadmap, divided into a cycle of three stages: 1) automatic analysis of digital resources depending on the student's proficiency level, 2) implementation of guided academic writing practices in the classroom, and 3) technical rewriting process after receiving immediate feedback, authors emphasize that this sequence, supported by constructivism and student-centered learning, overcomes the limitations of the traditional model. The success of this dynamic is said to depend not only on technology but also on the critical alignment of resources with student needs, making the flipped model a viable alternative for text production in university contexts.

For her part, Cerna Yunganaula (2023) mentions that flipped classroom is an innovative method that disrupts traditional teaching by promoting the development of communication skills by reversing the learning cycle. The main goal of their intervention was to analyze the impact of this model on the writing competence of first-year Gualaceo Education Unit students using a quasi-experimental design with a quantitative and descriptive approach. Unlike traditional methods, this proposal helps validate pedagogical effectiveness through pre- and post-testing, using "writing prompts" as the primary tool to measure language progress. Although the study emphasized student autonomy, results indicated that the flipped classroom directly increased writing accuracy, contributing to a significant increase in course average score. The specific techniques of this method help post-intervention students better organize information and use more specialized vocabulary, turning academic writing into a thoughtful and technically sound production process.

From a technical perspective, Mohammad and Khan (2023) present the flipped classroom as a strategic pedagogy that can reduce the time and practice constraints that limit the development of writing in English contexts. The purpose of their intervention was to evaluate the effectiveness of this model in improving technical writing skills in a sample of 25 students from Najran University, using a single-group quasi-experimental design with a pre-test and a post-test. Despite the proposed emphasis on learner autonomy, the authors argue that this motivation contributes significantly to microlinguistic accuracy, promoting excellent mastery of paragraph structure. The techniques used enable students to accurately form topics, supporting sentences and conclusions as well as integrating the correct use of adjectives, adverbs and compound structures. The flipped classroom is said to not only optimize learning outcomes but also provide a systematic



solution to address structural shortcomings, ensuring that the final product meets rigorous and effective standards of communicative competency.

Comparing Cerna Yunganaula, (2023); Mohammad & Khan, (2023); Montenegro & Rafaela, (2024), it was found that the flipped classroom brings cross-cutting benefits such as time optimization, increased motivation and knowledge consolidation through ICT. However, the document acknowledges that its effectiveness is not automatic; it faces limitations such as reliance on self-study, lack of technological infrastructure, and the need for more rigorous teacher training. Ultimately, this model was recognized as a reliable strategy for transforming writing from rote editing to a structured thinking process.

Project-based learning (PBL) is a method in which students acquire knowledge and skills by working over an extended period to investigate and respond to a complex question, problem, or challenge. Students actively participate in real-world projects, which fosters deeper understanding, critical thinking, collaboration, and communication. The project itself serves as the primary vehicle for learning, with teachers acting as facilitators or mentors, guiding students as they conduct research and create a final product.

According to Olid-Román (2023), PBL is characterized as a learner-centered learning methodology that is essential for solving the challenges of the 21st century, promoting essential skills such as critical thinking, communication skills, and collaboration, which in turn increase learner autonomy and motivation. The primary goal of her intervention proposal is to apply this approach to students in grade 1, developing critical thinking and critical reading skills by analyzing the novel "Blue Eye" and multimodal texts. Although the emphasis is on critical thinking, the author suggests that PBL contributes to the improvement of writing skills by encouraging the creation of content and the production of texts required for activities such as documenting an e-portfolio and adapting a composition that serves as a final product. Specific learning techniques proposed to achieve this goal include challenge-based learning, the combined use of intensive and extensive reading, and the integration of digital tools in the creative process.

Another important aspect, according to Aguilar Paredes & Sumba Agila (2021), the main focus of the study was a literature review to determine the contribution of project-based learning (PBL) to improving English writing skills. The authors define PBL based on constructivism as a student-centered method that promotes meaningful learning through long-term research projects in real-life situations. Although the review did not cover a specific population (although it is contextualized to the need to improve English among Ecuadorian high school students), the main conclusion is that PBL has a direct positive effect on improving essential aspects of writing, such as content, organization, vocabulary, grammar, and mechanics (spelling and punctuation). This is achieved by encouraging critical thinking and creative potential, which leads to more organized and complex writing activities, while increasing students' motivation for this skill. To reach this conclusion, the study used a qualitative descriptive methodology that analyzed articles and empirical studies from academic databases such as ERIC and Redalyc.

Finally, Mudiono (2024) mentions that it is a qualitative case study-based study whose main objective was to investigate the application of project-based learning (PBL) in teaching argumentative writing and to analyze its impact on students' skills, knowledge, and attitudes. Also defines this methodology as an innovative, curriculum-oriented learning method that uses long-term, meaningful, and reality-based research to produce a concrete product. This proposal was directly applied to eight sixth-grade students in Blitar, East Java,



Indonesia. The author concluded that PBL was very effective for writing development. It helped students improve their ability to properly structure argumentative writing and integrate ideas, reasoning, and factual data, while encouraging creative thinking and significantly increasing their motivation. Implementation techniques were based on a six-step PBL process, focusing on group tasks, conducting field observations of topics relevant to everyday life, and teaching the sequence of steps to compose an argumentative paragraph (including creating an outline and final draft).

Project-Based Learning (PBL) stands out as a transformative and highly effective methodology for teaching and improving writing skills in the context of English as a Foreign Language (EFL). Studies by Aguilar Paredes & Sumba Agila (2021); Mudiono (2024); Olid-Román, (2023) agree that PBL not only produces measurable improvements in the quality of writing (e.g., fluency, content, organization, grammar, and mechanics but also serves as an integral catalyst for student development. This methodology embeds writing in multi-skill activities that promote critical thinking, creative competence, and synthesis of ideas, allowing students to engage in the "transformed practice" of authentic text production. At the same time, PBL cultivates cognitive, interpersonal, and affective skills, making the learning process more motivating, dynamic, and cooperative, increasing students' self-confidence and the quality of final essays.

Comparative Analysis of Active in EFL Writing

The analysis of the selected studies enabled the creation of a comparative table with four thematic categories, which highlight the contributions of both flipped classroom and project-based learning to the development of writing in EFL.

Table 1. Flipped Classroom methodology analysis table

Comparison criteria	Cerna Yungalaula (2023)	Montenegro & Rafaela (2024)	Mohammad & Khan (2023)
Primary focus	The impact of the flipped classroom model on English writing skills of middle school students.	Pedagogical strategies used by teachers in language pedagogy.	The effectiveness of the flipped classroom (FC) in improving EFL students' writing skills.
Methodology	Quantitative approach; quasi-experimental design with intervention group.	Qualitative approach; descriptive and field research.	Quantitative approach; design with pre-and post-testing.
Population / Context	1 st -year high school students (Gualaceo, Ecuador).	Teachers and students of the Pedagogy of National and Foreign Language career (UPSE, Ecuador)	Undergraduate EFL students (Saudi Arabia)
Key Writing Findings	Positive correlation between Flipped Classroom Pattern and better scores on writing mechanics and coherence.	Identify Flipped Classroom as a strategy to promote autonomous learning and improve time management in the classroom.	Significantly improved writing skills, motivation, and engagement in the testing group.
Specific Techniques	Reversing the learning cycle; integrate digital resources on grammar and vocabulary before class.	General educational tasks in face-to-face classes.	Video lectures before class; interactive writing workshops in class; review activities



Table 2. Project-based Learning methodology analysis table

Comparison Criteria	Olid Román (2023)	Paredes & Agila (2021)	Mudiono (2024)
Primary Focus	Critical thinking and reading through literary analysis.	Systematic literature review on English writing skills.	Application of PBL in teaching argumentative writing.
Methodology	Intervention proposal (Pedagogical design).	Qualitative descriptive literature review.	Qualitative case study.
Population / Context	1st-grade students (Grade 1).	Ecuadorian high school students (contextualized).	6th-grade students (Blitar, Indonesia).
Key Writing Findings	Improvement in writing via e-portfolios and content creation.	Positive effect on content, organization, vocabulary, and grammar.	Improved structure of argumentative writing and idea integration.
Specific Techniques	Challenge-based learning; intensive/extensive reading; digital tools.	Research projects based on real-life situations (Constructivism).	Six-step PBL process; field observations; drafting/outlining.

As can be seen from the previous table, both methods give different dynamics to a better understanding of their practical application; it is necessary to describe in detail the sequential process that students follow in each model.

Implementation process

Based on the analysis of the literature, Cerna Yunganaula (2023) ; Mudiono (2024), consistent pathways were identified to characterize both approaches in the context of writing. In the flipped classroom, the process includes three stages:

- Introductory class: acquire theoretical and grammatical foundations using digital resources.
- In the classroom: active text creation and immediate feedback from the teacher.
- After class: Review and rewrite based on feedback.
- In contrast, PBL is structured as a series of discoveries:
- Approach: Identify the real problem.
- Development: general research and writing project.
- Completion: Create and present a tangible final product (essay, proposal, or portfolio).

This consistent difference shows that while Flipped Classroom focuses on time efficiency, PBL prioritizes depth and social purpose in the text.”

Discussion

A review of the literature confirms that both flipped classrooms and project-based learning (PBL) place students in the role of managers of their own learning, although their contributions to writing development have different purposes. Authors such as Mohammad & Khan (2023) and Cerna (2023) agree that the



effectiveness of the flipped classroom lies in automating grammar and mechanics outside the school, optimizing individual time for production. However, Aguilar Paredes & Sumba Agila (2021) question this purely technical approach, arguing that writing skills are improved primarily through genuine communicative demands, an aspect that PBL enhances by placing writing in the service of a social purpose.

Regarding the technological component, there is a functional difference: while in the inverted model, the platform is the means of content distribution, in proposals such as Olid-Román (2024), tools such as e-portfolios become tools for critical thinking. This intersection suggests that the flipped classroom ensures that students come to class “fully informed” and that PBL ensures that this information is translated into a convincing argument. Therefore, the former is more effective in terms of immediate productivity, while the latter brings more cognitive and reasoning complexity.

Ultimately, the analysis shows that the choice between both methods depends on the pedagogical goals. Inverted modeling reduces anxiety and increases formal accuracy Cerna Yunganaua, (2023), and PBL encourages message authenticity and critical thinking (Nurhidayah et al., 2021). The results suggest that for language teacher training, integrating both models – flipped PBL – is the optimal scenario to ensure comprehensive writing competencies that combine technical rigor with creative depth.

Conclusions

It concludes that both the flipped classroom and project-based learning provide better alternatives to the traditional model, shifting the focus from passive reception to active production in EFL while the Flipped Classroom has proven to be an effective tool for immediate feedback and technical correction, PBL redefines writing as an authentic and socially engaged act of communication.

The bottom line is that the effectiveness of these methods goes beyond just practicing grammar. Integrating structured pedagogical sequences, such as the pre-class reverse cycle and inquiry phases of PBL, fosters deep cognitive engagement, transforming writing from a routine exercise into a process of developing logic and reasoning that meets real-world academic standards.

Ultimately, it was found that the sustainability of these efforts depends on three key factors: student autonomy, continued teacher learning, and a solid technology infrastructure. Institutions are encouraged to not only adopt digital tools but also promote pedagogical paradigm shifts to reduce resistance to change. The future of writing instruction in teacher education contexts points toward hybrid models that combine technical rigor with creative depth of design.

References

- Aguilar Paredes, V. M., & Sumba Agila, V. J. (2021). Project-based learning in the development of writing skills in English. <https://www.dspace.uce.edu.ec/entities/publication/www.dspace.uce.edu.ec>
- Almohawes, M. (2025). Undergraduate EFL learners' preferences for three different types of written corrective feedback. *Frontiers in Education*, 10. <https://doi.org/10.3389/feduc.2025.1532729>
- Bora, P. (2023). Importance of Writing Skill to Develop Students' Communication Skill. *Journal for Research Scholars and Professionals of English Language Teaching*, 7(35). <https://doi.org/10.54850/jrspelt.7.35.009>



- Cerna Yunganaula, P. E. (2023). Efecto del flipped classroom en la escritura del idioma inglés de los estudiantes de primer año de bachillerato de la Unidad Educativa Gualaceo. <http://dspace.ucuenca.edu.ec/handle/123456789/41942>
- Crisol-Moya, E., Romero-López, M. A., & Caurcel-Cara, M. J. (2020). Active Methodologies in Higher Education: Perception and Opinion as Evaluated by Professors and Their Students in the Teaching-Learning Process. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.01703>
- Dancy, M., Henderson, C., Apkarian, N., Johnson, E., Stains, M., Raker, J. R., & Lau, A. (2022, November 23). Physics instructors' knowledge and use of active learning has increased over the last decade but most still lecture too much. *arXiv.Org*. <https://arxiv.org/abs/2211.13082v1>
- García Mayo, M. D. P. (Ed.). (2021). *Working Collaboratively in Second/Foreign Language Learning*. De Gruyter. <https://doi.org/10.1515/9781501511318>
- Methodology | TeachingEnglish | British Council. (s. f.). Recuperado 11 de noviembre de 2025, de <https://www.teachingenglish.org.uk/professional-development/teachers/teaching-knowledge-database/d-h/methodology>
- Mohammad, T., & Khan, S. I. (2023). Flipped Classroom: An Effective Methodology to Improve Writing Skills of EFL Students. *World Journal of English Language*, 13(5), 468. <https://doi.org/10.5430/wjel.v13n5p468>
- Montenegro, A., & Rafaela, J. (2024). Flipped classroom as a pedagogical strategy used by the teachers of the pedagogy of national and foreign languages career of UPSE. <https://repositorio.upse.edu.ec/handle/46000/11002>
- Mudiono, A. (2024). Project-Based Learning for Teaching Argumentative Writing at the Elementary School Level. *Novitas-ROYAL (Research on Youth and Language)*, 18(2), 86-103. <https://eric.ed.gov/?id=EJ1446796>
- Nurhidayah, I. J., Wibowo, F. C., & Astra, I. M. (2021). Project Based Learning (PjBL) Learning Model in Science Learning: Literature Review. *Journal of Physics: Conference Series*, 2019(1), 012043. <https://doi.org/10.1088/1742-6596/2019/1/012043>
- Olid-Román, M. R. (s. f.). A Project-based learning approach: Literature and development of critical thinking through The Bluest Eye and multimodal texts in the EFL classroom.
- Serrano, B. M. (2020). Dale la vuelta a tu clase: Lleva tu clase a cada estudiante, en cualquier momento y cualquier lugar. *e-CO: Revista digital de educación y formación del profesorado*, 16, 680-683. <https://dialnet.unirioja.es/servlet/articulo?codigo=7686703>

