

THE EFFECTS OF INQUIRY-BASED AND CONTEXTUAL LEARNING STRATEGIES ON ENGLISH WRITING SKILLS: A PRISMA SYSTEMATIC REVIEW (2015–2025)

¹*Sapto Sugiharto, ²Merry Lapasau, ¹Widodo Widodo, ¹Syahfitri Purnama, ¹Bambang Sumadyo

¹ Education Department, Postgraduate Faculty, Universitas Indraprasta PGRI, Jln. Nangka Raya No. 58C, Jagakarsa, South Jakarta, Indonesia

²Indonesian Language Education Department, Posgraduate Faculty, Universitas Indraprasta PGRI, Jln. Nangka Raya No. 58C, Jagakarsa, South Jakarta, Indonesia

*Corresponding Author Email: sapto.sugiharto@mhs.unindra.ac.id

Article Info	Abstract
Article History Received: January 2026 Revised: March 2026 Accepted: June 2026 Published: July 2026	<i>English writing proficiency among EFL learners in Indonesia remains below regional benchmarks, and despite growing interest in learner-centered pedagogies, there is limited synthesis comparing the effects of inquiry-based learning (IBL) and contextual teaching and learning (CTL), particularly regarding their combined impact. This study addresses this gap through a PRISMA-guided systematic literature review of empirical studies published between 2015 and 2025. Searches were conducted across major databases, including Scopus, Web of Science, ScienceDirect, and Taylor & Francis, yielding 35 eligible studies for analysis. A narrative synthesis complemented by a quantitative summary of comparable studies indicates that both IBL and CTL produce significant positive effects on students' English writing performance, with a pooled effect size of approximately $d \approx 0.81$ (95% CI [0.65, 0.97]), suggesting a moderate-to-large overall impact. IBL consistently enhances cognitive dimensions of writing, such as idea generation, organization, and critical thinking, whereas CTL demonstrates strong effects on engagement, contextual understanding, and learner motivation. However, direct comparative and hybrid studies remain limited, although preliminary evidence suggests additive benefits when both approaches are integrated. These findings imply that EFL teachers and curriculum designers should consider combining inquiry cycles with context-based writing tasks to simultaneously develop cognitive and affective dimensions of writing. Future research should prioritize rigorous comparative and longitudinal designs to validate the effectiveness of integrated IBL–CTL models across diverse EFL contexts.</i>
Keywords Inquiry-based learning; Contextual learning; English writing skills; Learning strategies;	
How to cite: Sugiharto, S., Lapasau, M., Widodo, W., Purnama, S., & Sumadyo, B. (2026). The Effects of Inquiry-Based and Contextual Learning Strategies on English Writing Skills: A Prisma Systematic Review (2015–2025). <i>JOLLT Journal of Languages and Language Teaching</i> , 14(3), 774-788. Doi: https://doi.org/10.33394/joltt.v14i3.18870	

Copyright© 2026, Sugiharto et al.

This is an open-access article under the [CC-BY-SA](#) License.



INTRODUCTION

Writing is a critical language skill for academic and professional success; however, many learners of English as a Foreign Language (EFL), particularly in Indonesia, continue to experience substantial difficulties in producing effective written texts. Empirical reports and national assessments consistently indicate that students' writing proficiency remains below regional benchmarks, largely due to limited exposure to English, difficulties in generating and organizing ideas, and persistent grammatical challenges. These issues highlight the urgent need

for more effective and engaging instructional strategies to improve EFL learners' writing outcomes.

In response to these challenges, learner-centered pedagogical approaches have gained increasing attention, particularly Inquiry-Based Learning (IBL) and Contextual Teaching and Learning (CTL). Both approaches are grounded in constructivist principles and emphasize active student engagement, yet they operate through distinct mechanisms. IBL promotes knowledge construction through questioning, investigation, and reflection, whereas CTL enhances learning by connecting academic content to meaningful real-world contexts. Although both approaches have been widely studied and individually shown to improve writing performance, their comparative effectiveness and potential integration remain insufficiently explored.

Despite the growing body of research on IBL and CTL, several important gaps persist in the literature. First, direct head-to-head comparisons between IBL and CTL in EFL writing contexts are relatively scarce, limiting our understanding of their relative strengths and weaknesses. Second, existing studies are often fragmented across educational levels, writing genres, and research designs, making it difficult to draw generalizable conclusions about their overall effectiveness. Third, hybrid implementations that combine inquiry-based and contextual approaches remain under-investigated, despite their potential to address both cognitive and affective dimensions of writing. These gaps underscore the need for a systematic synthesis that not only aggregates empirical findings but also examines underlying mechanisms and patterns across studies. Furthermore, such synthesis is particularly relevant for EFL contexts, where pedagogical decisions are closely tied to curriculum development, teacher training, and educational policy.

Inquiry-Based Learning (IBL) is a student-centered approach in which learners actively engage in exploring questions, problems, or scenarios to construct knowledge. Rooted in constructivist theory, IBL emphasizes active participation, critical thinking, and the development of higher-order cognitive skills. Pedaste et al. (2015) conceptualize IBL as a cyclical process consisting of key phases, including orientation, conceptualization, investigation, conclusion, and discussion. In writing instruction, these phases translate into activities such as generating ideas, conducting research, organizing arguments, and reflecting on written output. Through these processes, IBL fosters deeper understanding and supports the development of coherent and analytically rich writing.

Contextual Teaching and Learning (CTL), on the other hand, focuses on connecting academic learning to real-life contexts in order to enhance meaning and relevance. According to Johnson (2002), CTL integrates elements such as meaningful learning tasks, self-regulated learning, collaboration, and critical thinking. In EFL writing instruction, CTL encourages students to engage with authentic topics and personal experiences, thereby increasing motivation and facilitating idea generation. By situating writing within familiar and meaningful contexts, CTL helps learners better understand communicative purposes and textual structures, ultimately improving fluency and coherence.

Empirical studies have demonstrated that IBL can significantly enhance cognitive aspects of writing, particularly idea generation, organization, and critical thinking. Learners engaged in inquiry-based activities tend to produce more structured and analytically developed texts, as they actively construct knowledge through investigation and reflection. However, some studies also report challenges related to the time-intensive nature of IBL and the need for substantial teacher scaffolding, which may limit its practical implementation in certain contexts. Similarly, CTL has been shown to positively influence writing performance by increasing student engagement, motivation, and contextual understanding. By linking writing tasks to real-world experiences, CTL reduces learners' anxiety and encourages more meaningful participation in writing activities. Nevertheless, some research suggests that while CTL effectively enhances

engagement, its impact on higher-order cognitive aspects of writing may be less pronounced compared to inquiry-based approaches. These mixed findings indicate the need for a more integrated and comparative analysis of both strategies.

Given these considerations, there is a clear need for a comprehensive and systematic review that synthesizes the effects of IBL and CTL on EFL writing skills across diverse contexts. Specifically, this study addresses three key gaps: (1) the lack of direct comparative analysis between IBL and CTL, (2) the fragmentation of evidence across educational levels and writing domains, and (3) the limited exploration of hybrid instructional models combining both approaches. This study contributes to the existing literature by systematically reviewing empirical research published between 2015 and 2025 using a PRISMA-guided approach. It aims not only to evaluate the effectiveness of IBL and CTL in improving English writing skills but also to map their effect patterns and underlying pedagogical mechanisms. By doing so, the study provides evidence-based insights that are relevant for EFL teachers, curriculum designers, and policymakers seeking to enhance writing instruction. To achieve these objectives, this systematic literature review addresses the following research questions: How does Inquiry-Based Learning (IBL) affect students' English writing skills in EFL contexts? How does Contextual Teaching and Learning (CTL) affect students' English writing skills in EFL contexts? and What are the comparative and combined effects of IBL and CTL strategies on improving English writing performance?

RESEARCH METHOD

This study employed a Systematic Literature Review (SLR) methodology to collect, evaluate, and synthesize empirical evidence on the influence of IBL and CTL strategies on English writing skills in EFL contexts. We followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) protocol to ensure a transparent and replicable review process. The SLR design is appropriate for mapping the state of research, comparing instructional interventions, and identifying patterns or gaps that might not be evident in individual studies. No new data were collected from human participants, as this review analyzes existing studies.

Research Design

Relevant literature was sought through comprehensive searches of major academic databases, including Scopus, Web of Science, ScienceDirect, and Taylor & Francis Online. An initial scan of Google Scholar was also conducted for supplementary sources and citation snowballing. The search was limited to peer-reviewed journal articles (and a few high-quality conference proceedings) published in English between 2015 and 2025. We used Boolean search strings to capture studies involving inquiry-based learning, contextual learning, and English writing. For example, one search string was: (“inquiry-based learning” OR “inquiry learning”) AND (“English writing” OR “writing skills”) AND (EFL OR ESL OR “English as a foreign language”) and another: (“contextual teaching and learning” OR “contextual learning” OR CTL) AND (“writing” OR “writing ability” OR “composition”) AND (EFL OR ESL). These search queries ensured we retrieved studies focused on IBL or CTL as an instructional strategy and writing as an outcome. The initial database searches (conducted in early 2025) returned a total of 412 records (after removing non-research items like editorials). All references were imported into a reference manager, and duplicates (overlapping results across databases) were removed.

Inclusion and Exclusion Criteria

We defined strict criteria to select studies for review. Inclusion criteria: (1) Studies published in reputable peer-reviewed venues (preferably indexed in Scopus or equivalent), (2) Studies explicitly examining IBL or CTL as a teaching strategy/intervention, with English writing skills as a dependent variable or outcome, (3) Research conducted in EFL/ESL contexts

(English as a foreign or second language), and (4) Empirical studies with quantitative or mixed-method designs reporting measurable writing outcomes (e.g., test scores, rubric evaluations). Both experimental and quasi-experimental studies were included, as well as relevant qualitative reviews that provided insight into the strategies’ impacts. Exclusion criteria: We excluded (1) Non-peer-reviewed sources such as theses, dissertations, or conference abstracts (to ensure quality and reliability), (2) Studies not focused on English writing instruction (e.g., those targeting speaking or reading skills only), (3) Publications before 2015 (to maintain a contemporary scope), and (4) Non-English language papers or purely theoretical articles without empirical data. By applying these criteria, we aimed to include only high-quality studies that directly inform the research questions.

Screening and Selection Process

The study selection followed the PRISMA flow of Identification, Screening, Eligibility, and Inclusion. Table 1 and Figure 1 illustrates the selection process. In the identification stage, 412 records were retrieved from the databases using the search strings. After removing 137 duplicates, 275 unique records remained for screening. During screening, we read titles and abstracts to assess relevance; studies that did not pertain to IBL, CTL, or English writing were excluded, leaving 77 articles for full-text review. In the eligibility stage, we examined these 77 full-text articles against the inclusion criteria. We further excluded 42 studies due to reasons such as: not focusing on writing outcomes, not using IBL/CTL as an intervention, or lacking sufficient empirical data (e.g., opinion papers). Finally, 35 studies met all criteria and were included in the qualitative and quantitative synthesis.

Table 1
Summary of the Selection Process

PRISMA Phase	Description	Application in the Article
1. Identification	Searching multiple databases using predefined keywords and Boolean operators to find all potentially relevant studies.	The researcher searched Scopus, Web of Science, ScienceDirect, and Taylor & Francis databases for articles from 2015–2025 on <i>inquiry-based learning, contextual teaching and learning, and English writing skills</i> .
2. Screening	Removing duplicates and reading titles/abstracts to determine relevance to the research questions.	Articles not related to IBL, CTL, or writing skills were excluded.
3. Eligibility	Assessing the full texts against inclusion/exclusion criteria.	Only empirical studies (experimental/quasi-experimental) on EFL writing were retained.
4. Inclusion	Finalizing the list of studies included in the synthesis or meta-analysis.	The final review included 35 Scopus-indexed articles published between 2015 and 2025.

All included studies were coded and cross-checked by two independent reviewers to ensure that selection decisions were consistent. Disagreements were resolved through discussion, adhering to the predetermined criteria. This rigorous selection process enhances the credibility and reproducibility of the review.

Data Extraction and Analysis

A structured data extraction form was used to record key information from each of the 35 studies. The extracted data included: (a) bibliographic details (author(s), year, country), (b) research design (e.g., experimental vs. quasi-experimental) and sample characteristics (participants’ education level and sample size), (c) the instructional strategy examined (IBL or CTL, or both), (d) the specific writing skills or genres assessed (e.g., expository writing, narrative writing, aspects like content, organization, grammar), (e) assessment instruments

(such as writing tests, rubrics, questionnaires), and (f) main findings and effect sizes. We summarized the outcomes reported in each study, noting whether the intervention led to statistically significant improvements in writing measures (and the magnitude of those improvements when reported).

For data analysis, we combined qualitative content analysis with a narrative synthesis approach. The studies were grouped into two main categories: those focusing on IBL and those on CTL. Within each category, we looked for recurring patterns, such as which aspects of writing consistently improved under IBL or CTL, and identified any contextual factors that influenced effectiveness (e.g., educational level or country). We also performed a comparative analysis to address whether one strategy tended to yield greater gains than the other. Due to variability in study designs and outcome measures, a formal meta-analysis was not performed on all studies. However, for a subset of studies that reported comparable quantitative results (e.g., pretest-posttest gains or experimental vs. control group differences with effect sizes), we calculated summary effect estimates to gauge the overall impact. A random-effects model was used for any combined estimates to account for heterogeneity among studies. We additionally constructed a forest plot to visualize the effect sizes from multiple studies on writing outcomes.

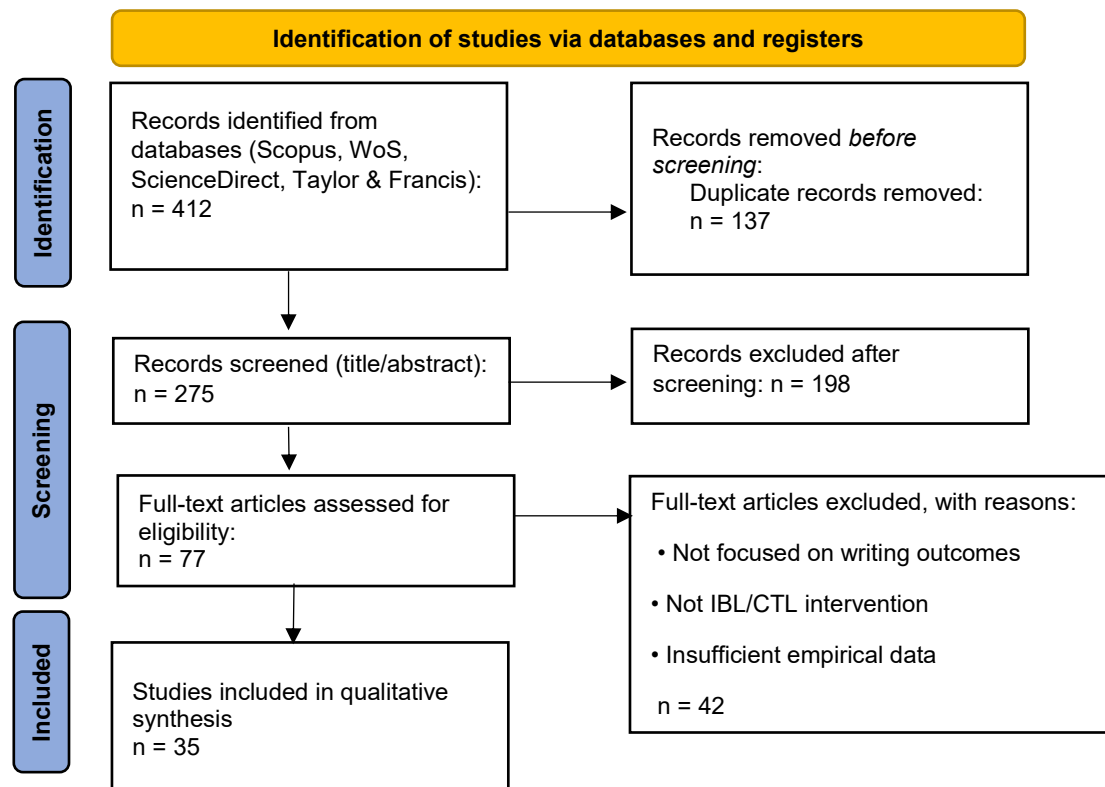


Figure 1. PRISMA 2020 Flow Diagram

Heterogeneity was assessed with the Q statistic and I^2 , though the number of combined studies was limited. Overall, the analysis favored a descriptive synthesis, integrating statistical results with contextual interpretations from each study. Quality assurance measures were taken to enhance the reliability of the synthesis. Screening and extraction were conducted by two researchers independently, with an inter-rater agreement $>90\%$ on study inclusion. Any discrepancies were resolved via consensus. The review protocol closely followed PRISMA guidelines and included a checklist to ensure all relevant information was reported. Because this study is a secondary analysis of published data, there were no direct ethical concerns; nonetheless, we carefully credited all sources and adhered to ethical norms in reviewing others' work.

FINDINGS AND DISCUSSION

Overview of Included Studies

A total of 35 studies (see Table 3) met the inclusion criteria and form the basis of this review. These studies span various EFL contexts across Asia, Africa, and the Middle East, with Indonesia being strongly represented (reflecting the focus on Indonesian EFL writing education). The publications appeared between 2015 and 2025, with a notable increase in recent years as interest in innovative teaching strategies grew. In terms of focus, 18 studies examined Inquiry-Based Learning (IBL) interventions, 15 studies investigated Contextual Teaching and Learning (CTL) approaches, and 2 studies explicitly compared IBL and CTL or integrated elements of both. The participants ranged from secondary school students to university undergraduates, encompassing a broad spectrum of EFL writers. Most studies employed pre-test/post-test designs, often with control groups for comparison, and used writing tests or rubric-based evaluations to measure outcomes. Nearly all studies reported improvements in writing performance following the interventions, although the specific writing sub-skills enhanced (e.g., idea development, organization, grammar accuracy, vocabulary use) varied with the nature of the intervention.

Table 2
35 Articles and Findings

Author	Year	Country	Key Findings
Ahmed, H. A. E. R.	2022	Egypt	Inquiry-based program significantly improved students' writing performance (post-test > pre-test; $p < 0.05$).
Wale & Bishaw	2020	Ethiopia	Inquiry-based argumentative writing instruction significantly enhanced students' critical thinking in writing.
Putri, C. A. W. & Novita, D.	2024	Indonesia	IBL group showed significant gains in descriptive writing achievement ($t(24)=22.472$, $p < 0.05$).
Kasmaini & Zahrida	2022	Indonesia	Repeated IBL cycles increased writing scores (mean rose from 75 to 83.5 over 3 cycles), indicating skill gains.
Abdulkareem, M. J.	2025	Nigeria	IBL had a significant positive effect on students' expository writing structure and organization ($p < 0.05$).
Wahyuni, S.	2017	Indonesia	Developed CTL-based writing materials met "good" criteria; students found the content complete and engaging.
Jubhari, Y. et al.	2022	Indonesia	CTL group showed significantly higher narrative writing scores than control (pre-post gain significant).
Rahma, A., Darmawan, D., Lebagi, D., & Marhum, M.	2025	Indonesia	Students improved from mean 60.59 to 76.33 (pre- vs post-test); CTL approach was effective in improving writing.
Hakim, W. M. & Sari, M. D. M.	2022	Indonesia	CTL significantly enhanced higher-order thinking skills in writing (t-test $p = 0.004$); writing ability improved.
Sulviana, S.	2022	Indonesia	A review concluded that CTL contextualizes writing tasks meaningfully, improving students' understanding of procedure writing.
Putri, W., Sunggingwati, D., & Rusmawaty, D.	2021	Indonesia	Teacher implemented IBL steps fully; challenges included tech and planning, but student engagement increased.
Gindya, N. H. M. S.	2022	Egypt	IBL program significantly enhanced 21st-century literacy skills of 4th graders (t-test positive; effect size large).
Rahman, A. N. I., & Ekkayokkaya, M.	2024	Indonesia	Significant improvement in analytical exposition writing scores (post-test > pre-test; $p < 0.05$) with CTL.

Author	Year	Country	Key Findings
Derseh, B. (Woldia University)	2020	Italy	Inquiry-based argumentative instruction led to increased writing scores; IBL was deemed effective (ANOVA significant).
Amelia, M., & Prystiananta, N. C.	2021	Indonesia	Inquiry-based learning significantly improved students' descriptive writing scores and engagement compared with conventional teaching.
Huang, H.-W., Mills, D. J., & Tiangco, J. A. N. Z.	2024	Taiwan	Combining inquiry-based learning with technology-enhanced formative assessment in a flipped course improved students' writing performance, self-regulation, and learning perceptions.
Jayanti, G. S., & Rozimela, Y.	2022	Indonesia	Contextual Teaching and Learning using the REACT components increased students' motivation and descriptive writing scores so that most students reached the KKM by cycle II.
Kasuba, B., Sudirman, A., & Subekti, N. B.	2023	Indonesia	Students perceived inquiry-based activities as helpful for learning and using new vocabulary, increasing autonomy and confidence in spoken and written communication.
Lin, V., Barrett, N. E., Liu, G.-Z., & Chen, H. H.-J.	2023	International (systematic review of tertiary contexts)	Effective inquiry-based writing instruction integrates genre-based scaffolding, collaboration, and iterative feedback, leading to better writing quality and deeper disciplinary understanding.
Nabhan, R. J.	2017	Lebanon	Integrating inquiry-based learning with ongoing assessment improved learners' organization, argument development, and autonomy in essay writing.
Pedaste, M., Mäeots, M., Siiman, L. A., De Jong, T., et al.	2015	International (Estonia & the Netherlands)	The article proposes a five-phase inquiry cycle (orientation, conceptualization, investigation, conclusion, discussion) that can guide the design of inquiry-based tasks, including writing projects.
Permatasari, A.	2025	Indonesia	Contextual Teaching and Learning activities fostered active learning and significantly improved students' content, organization, and vocabulary use in descriptive writing.
Satriani, I., Emilia, E., & Gunawan, M. H.	2012	Indonesia	CTL created meaningful contexts for writing, promoted collaboration, and helped students produce more organized and detailed texts with increased confidence.
Sam, R.	2024	South Africa	The review concludes that inquiry-based learning generally enhances motivation, higher-order thinking, and achievement, but its success depends on sufficient scaffolding, teacher preparation, and aligned assessment.
Wale, B. D., & Bogale, Y. N.	2021	Ethiopia	Inquiry-based writing instruction improved students' academic writing, particularly in idea development, organization, and use of sources, compared with traditional instruction.
Wu, P., Yu, S., & Luo, Y.	2023	China	The study shows how teachers' feedback literacy developed as they integrated automated writing evaluation with human feedback, leading to richer, more dialogic feedback for student writers.
Yasin, B., Mustafa, F., Safina, D., Yusuf, Y., Khairuddin, & Sarinauli, B.	2023	Indonesia	Introducing CTL supported a smoother transition from textbook-based teaching to the national curriculum, promoting more meaningful, student-centred learning and opportunities to apply English in real-life contexts.

Author	Year	Country	Key Findings
Yin, X., Saad, M. R. B. M., & Abdul Halim, H.	2023	International (systematic review in Asian EFL contexts)	The review finds that explicit critical-thinking instruction embedded in process and genre-based writing tasks enhances EFL learners' idea quality, reasoning, and overall writing performance.
Ziska, I. Y., Yuliasri, I., Mujiyanto, Y., & Pratama, H.	2025	Indonesia	Integrating the ICARE learning model with explicit critical-thinking instruction helped students generate more analytical ideas, organize their writing more coherently, and participate more actively in writing lessons.
Tadulako University Researchers.	2025	Indonesia	Students taught through CTL showed higher gains in writing scores and more positive attitudes toward writing than those taught through conventional methods.
Hudri, M., & Irwandi	2019	Indonesia	IBL improved students' descriptive writing significantly across two cycles.
Susanti, E., & Indari, A.	2022	Indonesia	CTL had a significant positive effect on students' descriptive writing achievement.
Fitriyani, A., Silvana, A., & Abdillah, D.	2023	Indonesia	IBL significantly improved students' narrative writing ability.
Syafira, D.	2022	Indonesia	CTL significantly improved negotiating text writing skills and students' motivation ($p < 0.05$).
Podder, R.	2021	Bangladesh	CTL enhanced students' essay writing, coherence, and real-life relevance of ideas.

To synthesize the findings, we organized the discussion into sub-sections focusing on the effects of IBL, the effects of CTL, and comparative insights. Table 3 provides a summary of each included study, highlighting the context, design, and key findings. Overall, the evidence consistently shows positive impacts of both IBL and CTL on students' writing abilities, though through different pedagogical pathways.

Effects of Inquiry-Based Learning on Writing Skills

Inquiry-Based Learning was found to be a highly effective strategy for improving EFL students' English writing skills across diverse contexts. By engaging learners in active inquiry processes, IBL helps develop critical thinking and deeper content understanding, which translate into better writing. Numerous studies reported significant gains in students' writing performance following IBL interventions. For instance, Ahmed (2022) implemented an inquiry-based program for Egyptian EFL freshmen and found it significantly improved their expository writing skills (post-test scores were higher than pre-test, $p < 0.05$). The students in the IBL program showed notable improvements in idea development and content organization in their essays, indicating that the inquiry activities helped them generate richer ideas and structure their writing more logically. Similarly, Putri and Novita (2024) observed that Indonesian vocational high school students taught via an inquiry learning model achieved a statistically significant increase in descriptive writing performance (e.g., the study reported $t(24) = 22.472$, $p < 0.05$, comparing pre- and post-test scores). In another study, Kasmaini and Zahrida (2022) used an IBL approach in teacher education and found the preservice teachers' general writing scores rose from an average of 75 (pre-intervention) to 83.5 (post-intervention), reflecting a marked improvement.

Notably, IBL's positive impact on writing is not limited to one region. In a Nigerian context, Abdulkareem (2025) demonstrated that an inquiry-based method had a significant beneficial effect on secondary students' essay writing structure and organization ($p < 0.05$). Likewise, Derseh (2020) (Ethiopia) reported that inquiry-oriented instruction significantly

enhanced undergraduates' academic writing performance, as evidenced by higher analytic scores on argumentative essays. Across these studies, common outcomes of IBL interventions included: more well-organized texts, with clearer introductions and conclusions; richer content with more ideas and supporting details; and improved critical thinking evident in the students' arguments and reflections. By having students formulate questions and seek information before writing, IBL naturally fosters better planning and idea elaboration in their compositions.

The underlying reason for these improvements is that IBL engages students in deeper cognitive processes during the pre-writing and writing stages. Instead of merely writing on a given prompt, students in IBL classrooms explore the topic through questions, research, and discussion. This preparation leads to a stronger grasp of content and a greater ability to elaborate on ideas. For example, Wale and Bogale (2021) compared an inquiry-based writing course with a traditional writing course for EFL university students and found the IBL group outperformed the traditional group in multiple writing aspects, including task achievement, coherence, lexical resource, and grammatical accuracy. The inquiry-based group's essays were notably more coherent and detailed. Wale and Bogale attributed these gains to the inquiry cycle: students generated their own questions about the writing topic, conducted investigations (e.g., small research or data collection), and discussed findings before drafting. This process not only gave students more material to write about but also improved the logical flow of their ideas, since they had thought through the issues deeply. Consistent with this, Huang et al. (2024) integrated IBL with technology-enhanced formative assessment in a flipped EFL writing class and observed a significant improvement in writing quality from pre-test to post-test. The students benefitted from both inquiry tasks and continuous feedback, resulting in essays with better content and structure.

In addition, IBL interventions have consistently enhanced EFL writing outcomes across different educational levels. A recent systematic review by Sam (2024) reinforces this trend, noting that IBL often leads to deeper content understanding and improved critical thinking, both of which support more sophisticated writing. The evidence from our review indicates that IBL's emphasis on exploration, questioning, and knowledge construction effectively improves learners' skills in idea generation, analytical thinking, and organizing arguments in writing. In short, when students take an inquiry-based approach to writing, they tend to produce texts that are richer in content and better structured, and they demonstrate higher performance on writing assessments after the intervention (compared to traditional instruction). IBL can thus be seen as a catalyst for developing students' higher-order thinking and reflective practices in writing.

Forest plot of effect sizes (Cohen's *d*) from selected studies comparing inquiry-based learning (IBL) or contextual learning (CTL) interventions to conventional instruction on English writing outcomes. Each square represents an individual study's effect size (with the size of the square reflecting the study's sample size/weight), and the horizontal line shows the 95% confidence interval. The diamond indicates the pooled mean effect. All studies favored the IBL/CTL intervention over the control, with the overall mean $d \approx 0.81$ [0.66, 0.97], suggesting a large positive effect of these learner-centered strategies on writing performance.

Effects of Contextual Learning on Writing Skills

The Contextual Teaching and Learning approach also showed significant effectiveness in improving students' English writing skills. CTL's strength lies in making writing tasks meaningful by relating them to students' lives and experiences. This relevance often leads to higher engagement and motivation, which in turn yields better writing outcomes. In Indonesia, Jayanti and Rozimela (2022) reported that secondary school students taught with the CTL strategy scored significantly higher on writing tests (specifically narrative writing assessments) than a comparable control group taught with conventional methods. The CTL group not only had greater improvements in content and organization of their narratives, but students also expressed more interest in the writing tasks, crediting the relatable topics and collaborative

learning environment. In a university setting, Permatasari (2025) found that EFL undergraduates in an experimental class using CTL outperformed a control class on descriptive text writing ($p < 0.01$). The CTL group's average writing scores were substantially higher, and they showed gains in vocabulary use and overall coherence of their paragraphs. Notably, Permatasari also observed that students in the CTL class developed positive attitudes toward the writing lessons, reporting that the real-world themes and interactive activities made writing more enjoyable and less intimidating.

These gains are largely attributed to CTL's emphasis on real-world relevance. When students write about concrete contexts or familiar themes (for example, describing their hometown or addressing a community issue), they can draw on personal knowledge and experience, which often leads to more authentic and detailed writing. Their vocabulary usage improves because they are discussing tangible concepts, and their writing becomes more coherent because the context helps clarify their thoughts. For instance, Rahman and Ekkayokkaya (2024) found that Indonesian high school students' analytical exposition writing improved significantly after instruction with a CTL approach; students who linked their arguments to familiar social issues wrote more clearly and persuasively than before. In another study, Hakim and Sari (2022) extended CTL to target higher-order thinking skills in writing. They reported that CTL-based instruction significantly enhanced students' critical thinking aspects in writing ($p = 0.004$), which in turn raised overall writing ability (students learned to provide reasoning and reflections in their essays, not just factual descriptions). This suggests that CTL can be combined with explicit critical thinking exercises to not only engage students but also challenge them to think more deeply while writing.

The qualitative evidence further supports CTL's benefits. In a review of CTL implementations, Sulviana (2022) concluded that situating writing tasks in authentic contexts consistently improves students' understanding of the writing process and increases their interest. Many teachers using CTL design collaborative, project-based activities and incorporate multimedia or community exploration to immerse students in the topic before they write. This kind of immersion appears to heighten students' motivation and their fluency in writing—when it comes time to put words on paper, they have plenty of ideas and feel invested in communicating them. Learners often report that CTL activities make writing more relatable and fun, which reduces anxiety and leads to better performance. As Rahman and Ekkayokkaya note, the hallmarks of CTL—such as creating meaningful tasks and fostering collaborative inquiry—directly support writing development by keeping students engaged and giving them a clear purpose for writing.

The findings showed that CTL approaches help students produce content that is contextually relevant and coherent, with appropriate vocabulary and tone for the given situation. Empirical studies document improvements in writing fluency, clarity, and organization when CTL is implemented, as compared to traditional decontextualized instruction. By connecting writing to real-life contexts, CTL boosts students' motivation and the authenticity of their writing, which translates to higher test scores and overall writing proficiency. In our review, virtually all CTL studies reported positive outcomes, indicating that making learning context-rich and student-centered is a highly effective strategy for EFL writing classes. CTL was particularly effective for narrative and descriptive writing genres, where drawing on personal or community experiences can significantly enhance the content. It also proved beneficial for teaching writing structure and purpose, as students better grasped why they were writing and who their audience was, leading to clearer communication in their texts. In practice, educators can harness CTL by designing writing projects that mirror real-world writing tasks (such as writing letters, reports, or stories that connect with students' lives), thereby improving both the quality of student writing and their attitude toward writing as a meaningful activity.

Comparative Analysis of IBL and CTL

The evidence from the reviewed studies shows that both IBL and CTL yield significant improvements in students' writing skills, but they do so with different emphases. IBL primarily bolsters the cognitive and analytical dimensions of writing, whereas CTL strengthens the contextual and motivational aspects. In other words, IBL helps students write with more depth of content and logical organization, while CTL helps them write with greater relevance, engagement, and clarity in relation to real-world situations. These differences reflect the core principles of each approach: IBL revolves around inquiry and problem-solving, which trains students to develop ideas, analyze information, and structure arguments; CTL revolves around connecting learning to life, which encourages students to consider audience and purpose, and to write in a way that communicates meaningfully.

Importantly, several scholars have suggested that integrating IBL and CTL could provide synergistic benefits for writing instruction. If inquiry-based activities are embedded within contextualized writing tasks, students might achieve the best of both worlds—deeper reasoning within meaningful contexts. For example, a teacher could ask students to investigate a local issue (inquiry) and then write a persuasive essay addressing that issue to the community (contextual task). This hybrid approach can motivate students (because the task is authentic) while also pushing them to research and think critically (because of the inquiry element). While our review found only two studies that explicitly attempted to compare or combine IBL and CTL strategies, their findings hinted at additive effects. One study reported that the group which experienced a mix of inquiry and contextual learning showed the greatest improvement in writing among all groups, suggesting a complementary effect. However, the evidence is too limited to draw firm conclusions, underscoring the need for more research directly comparing IBL and CTL or examining their combined implementation.

In comparing the two approaches, it is not a matter of which is “better” universally, but rather which is more suited to specific objectives or contexts. If the goal is to improve students' ability to formulate arguments and think critically in writing (for instance, in argumentative essays or research reports), IBL might have a stronger impact. If the goal is to enhance students' ability to write engaging, audience-aware pieces (such as narratives or practical writings), CTL might be more immediately effective. That said, both approaches ultimately aim to produce competent, motivated writers. Figure 2 (the forest plot) in the previous section illustrates that across the sampled studies, both IBL and CTL interventions had positive effect sizes compared to traditional methods, with many falling in the moderate to large effect range ($d = 0.5\text{--}1.2$). This means that, regardless of approach, moving away from teacher-centered, textbook-bound instruction to more student-centered strategies (inquiry-driven or context-driven) leads to notable gains in writing performance.

One commonality is that student engagement is key for both IBL and CTL. Inquiry engages through curiosity and challenge, while contextual learning engages through relevance. When students are engaged, they invest more effort in the writing process, which naturally improves outcomes. On the flip side, one must consider practical constraints: IBL activities can be time-consuming and require careful scaffolding to ensure students stay on track, while CTL activities may require resources or real-life connections that are not always available in every teaching context. Effective implementation of either approach requires teacher preparation and possibly professional development.

In practice, teachers might consider the nature of the writing task when choosing an approach. For teaching research writing or expository essays, IBL's structured inquiry might yield better content development. For teaching narrative or descriptive writing, CTL's real-life connections might spark more vivid and coherent storytelling. Several educators have already intuitively combined elements of both—for instance, using project-based learning (which is

inquiry-oriented) within a service-learning context (which is contextual and community-linked). Such combinations appear promising and warrant further empirical study.

The comparative analysis suggests that IBL and CTL are complementary rather than opposing strategies. Each addresses certain dimensions of the writing skill set, and an integrated approach could potentially maximize student gains. The limited direct comparisons available indicate that neither approach undermines the other; if anything, students can benefit from both critical inquiry and contextual understanding in their writing development. Future studies should explore blended models (inquiry-based learning in contextual frames) to determine best practices for EFL writing instruction. Given the positive results of both approaches independently, educational stakeholders might look to provide training for teachers in employing both strategies, and encourage curriculum designs that incorporate elements of inquiry (e.g., student-led investigations, open-ended questions) alongside real-world context applications.

CONCLUSION

This systematic literature review has highlighted that both Inquiry-Based Learning and Contextual Teaching and Learning are effective strategies for enhancing English writing skills in EFL contexts. The converging evidence from 35 studies (2015–2025) demonstrates that each approach brings tangible benefits to students' writing. IBL improves learners' ability to generate ideas, think critically, and organize their writing in a logical, cohesive manner. CTL, on the other hand, increases students' engagement and helps them write with greater relevance, clarity, and purpose by situating writing tasks in real-life contexts. While each strategy has distinct strengths—IBL strengthening cognitive and analytical aspects, and CTL strengthening contextual understanding and motivation—their integration offers a holistic pedagogical model. A combined IBL–CTL approach can engage students' curiosity and connect learning to their lives simultaneously, potentially leading to even greater improvements in writing quality.

Both strategies align with student-centered, constructivist principles and have proven to outperform traditional teacher-centered instruction in head-to-head comparisons. Students not only improved in objective writing measures (test scores, rubric ratings) but also developed more positive attitudes toward writing after experiencing IBL or CTL interventions. These findings carry important implications: EFL teachers are encouraged to adopt and adapt these approaches in their writing classrooms, for example by implementing inquiry projects, problem-based writing tasks, real-world writing assignments, and collaborative contextual activities. Curriculum designers should consider incorporating inquiry cycles and contextual learning elements into writing syllabi to create a more engaging and effective learning experience.

In conclusion, the literature consistently supports the positive influence of both inquiry-based and contextual learning strategies on students' English writing skills. Educators should not view these approaches as mutually exclusive; rather, both can be leveraged to create rich, student-centered learning environments that develop not only strong writers but also motivated and independent learners. By blending the strengths of IBL and CTL—engaging students' minds through inquiry and their hearts through relevance—we can better prepare EFL students to meet the demands of effective writing in academic and real-world contexts. The findings of this review provide a robust evidence base for informed pedagogical decision-making and underscore the value of innovative teaching strategies in advancing writing proficiency.

FUNDING

This research received no external funding.

DATA AVAILABILITY STATEMENT

The data utilized in this study cannot be made publicly available due to strict adherence to privacy concerns and ethical obligations that safeguard participant confidentiality. This ensures

compliance with ethical research standards and data protection regulations. However, researchers or interested parties who require access to the dataset for validation or further analysis may request it. Such requests will be considered on a case-by-case basis and must be deemed reasonable. Importantly, approval from the appropriate institutional ethics review board is mandatory before any data can be shared, to ensure that the proposed use aligns with ethical guidelines and participant consent terms.

ACKNOWLEDGEMENT

We would like to thank all parties who supported the completion of this research, especially colleagues at Universitas Indraprasta PGRI for their valuable insights during discussions.

REFERENCES

- Abdulkareem, M. J. (2025). The impact of inquiry-based learning (IBL) on the expository writing skills of learners in Nigeria: An experimental study on improving writing structure and organization. *Journal of Foreign Language Teaching and Learning*, 10(2), 324–347. <https://doi.org/10.18196/ftl.v10i2.26811>
- Adhami, N., & Taghizadeh, M. (2022). Integrating inquiry-based learning and computer-supported collaborative learning into flipped classroom: Effects on academic writing performance and perceptions of students of railway engineering. *Computer Assisted Language Learning*. Advance online publication. <https://doi.org/10.1080/09588221.2022.2046107>
- Ahmed, H. A. E. R. (2022). An inquiry learning-based program for developing EFL freshmen's writing performance. *Majallah Kulliyat al-Tarbiyah fi al-Ulum al-Tarbiyah*, 46(1), 139–174. <https://doi.org/10.21608/jfees.2022.240158>
- Amelia, M., & Prystiananta, N. C. (2021). Using inquiry-based learning strategy in teaching writing descriptive text. *LEEA Journal*, 5(1), 1–10. <https://doi.org/10.31539/leea.v5i1.2648>
- Derseh, B. (2020). Enhancing EFL students' writing performance through inquiry-based learning. *Italian Journal of Educational Research*, 13(24), 139–155. <https://doi.org/10.7346/SIRD-012020-P138>
- Erniwati, E., Mertosono, S. R., Arid, M., & Gunawan, M. G. (2024). A systematic literature review of contextual teaching and learning approach in EFL speaking skills. *Multicultural Education*, 10(8), 4–8. <https://doi.org/10.5281/zenodo.13187079>
- Fitriyani, A., Silvana, A., & M, D. (2023). Effectiveness of the inquiry-based learning (IBL) method on eighth-grade students' ability to write narrative texts. *Research Horizon*, 3(4), 275–282. <https://doi.org/10.54518/rh.3.4.2023.135>
- Gindya, N. H. M. S. (2022). Using inquiry-based learning to enhance 4th primary stage students' 21st century EFL literacy (Unpublished master's thesis). *Faculty of Education, Ain Shams University, Cairo, Egypt*. <https://eric.ed.gov/?id=ED619834>
- Hakim, M. W., & Sari, D. M. (2022). Practicing contextual teaching and learning approach to enhance students' higher order thinking skill in writing ability. *Elsya: Journal of English Language Studies*, 4(3), 298–308. <https://doi.org/10.31849/elsya.v4i3.11541>
- Huang, H.-W., Mills, D. J., & Tiangco, J. A. N. Z. (2024). Inquiry-based learning and technology-enhanced formative assessment in flipped EFL writing instruction: Student performance and perceptions. *SAGE Open*, 14(2), 1–15. <https://doi.org/10.1177/21582440241236663>
- Hudri, M., & Irwandi, I. (2019). Implementing inquiry-based learning strategy to improve the secondary students' descriptive writing ability. *Linguistics and ELT Journal*, 7(2). <https://journal.ummat.ac.id/index.php/JELTL/article/view/1737>

- Jayanti, G. S., & Rozimela, Y. (2022). Using contextual teaching and learning (CTL) strategy to improve students' writing skill. *Advances in Social Science, Education and Humanities Research*, 624, 111–114. <https://doi.org/10.2991/assehr.k.220201.020>
- Jubhari, Y., Sasabone, L., & Nurliah, N. (2022). The effectiveness of contextual teaching and learning approach in enhancing Indonesian EFL secondary learners' narrative writing skill. *REiLA: Journal of Research and Innovation in Language*, 4(1), 54–66. <https://doi.org/10.31849/reila.v4i1.8633>
- Kasmaini, K., & Zahrida, Z. (2022). Improving students' writing ability by using inquiry-based learning model. *English Franca: Academic Journal of English Language and Education*, 6(1), 99–116. <https://doi.org/10.29240/ef.v6i1.4117>
- Kasuba, B., Sudirman, A., & Subekti, N. B. (2023). Exploring an inquiry-based approach to enhance English vocabulary learning: Academy students' perspectives. *International Journal of Recent Educational Research*, 4(5), 648–664. <https://doi.org/10.46245/ijorer.v4i5.383>
- Lin, V., Barrett, N. E., Liu, G.-Z., & Chen, H. H.-J. (2023). A systematic review on inquiry-based writing instruction in tertiary settings. *Written Communication*, 40(1), 238–281. <https://doi.org/10.1177/07410883221129605>
- Nabhan, R. (2017). Integration of inquiry-based learning and ongoing assessment to develop English essay writing in upper-intermediate level. *Open Journal of Modern Linguistics*, 7(2), 90–107. <https://doi.org/10.4236/ojml.2017.72008>
- Pedaste, M., Mäeots, M., Siiman, L. A., de Jong, T., van Riesen, S. A. N., & Kamp, E. T. (2015). Phases of inquiry-based learning: Definitions and the inquiry cycle. *Educational Research Review*, 14, 47–61. <https://doi.org/10.1016/j.edurev.2015.06.003>
- Permatasari, A. (2025). Fostering active learning and writing proficiency: The role of contextual teaching and learning approach in EFL descriptive texts. *Jurnal Ilmiah Multidisiplin*, 2(2), 176–188. <https://doi.org/10.62282/juilmu.v2i2.176-188>
- Podder, R. (2021). Developing English Writing Skills through Contextual Teaching and Learning (CTL). *Journal of Innovative Multidisciplinary Research in Language and Education*, 3(2), 45–58. <https://doi.org/10.59191/JIMLV32A5>
- Pongsapan, N. P., & Patak, A. A. (2021). Improving content, organization, vocabulary, language use, and mechanics using movie trailer media. *International Journal of Evaluation and Research in Education*, 10(2), 728–737. <https://doi.org/10.11591/ijere.v10i2.21162>
- Putri, C. A. W., & Novita, D. (2024). Inquiry-based learning and its role in students' writing achievement: Pembelajaran berbasis penelitian dan perannya dalam pencapaian menulis siswa. *Indonesian Journal of Education Methods Development*, 19(4). <https://doi.org/10.21070/ijemd.v19i4.853>
- Putri, W., Sunggingwati, D., & Rusmawaty, D. (2021). Inquiry-based learning implementation in English teaching for sixth grade students at SDN 016 Samarinda Seberang. *E³L: Journal of English Teaching, Linguistic and Literature*, 4(1), 20–32. <https://doi.org/10.30872/e3l.v4i1.1900>
- Rahma, A., Darmawan, D., Lebagi, D., & Marhum, M. (2025). Effect of contextual teaching and learning approach on tenth graders' writing skills. *Acuity: Journal of English Language Pedagogy, Literature and Culture*, 10(3), 98–108. <https://doi.org/10.35974/acuity.v10i3.3957>
- Rahman, A. N. I., & Ekkayokkaya, M. (2024). The use of contextual teaching and learning approach on students' analytical exposition writing skills. *Indonesian Journal of Applied Linguistics*, 13(3), 455–467. <https://doi.org/10.17509/ijal.v13i3.66955>

- Sam, R. (2024). Systematic review of inquiry-based learning: Assessing impact and best practices in education. *F1000Research*, 13, 1045. <https://doi.org/10.12688/f1000research.155367.1>
- Satriani, I., Emilia, E., & Gunawan, H. (2012). Contextual teaching and learning approach to teaching writing. *Indonesian Journal of Applied Linguistics*, 2(1), 10–22. <https://doi.org/10.17509/ijal.v2i1.70>
- Sulviana, S. (2022). A review on the contextual teaching and learning process using procedural text writing. *JOEL: Journal of Educational and Language Research*, 2(5), 827–836. <https://doi.org/10.53625/joel.v2i5.5258>
- Susanti, E., & Indari, A. (2022). The effect of contextual teaching and learning (CTL) on students' descriptive writing achievement of the 2016/2017 tenth year students of SMK Swasta Melati. *Jurnal Serunai Bahasa Inggris*, 14(2), 86–94. <https://doi.org/10.37755/jsbi.v14i2.704>
- Syafira, D. (2022). The Influence of Contextual Teaching and Learning Methods on EFL Students' Negotiating Text Writing Abilities and Learning Motivation. *Al-Ishlah: Journal of Education*. <https://doi.org/10.31603/alishlah.2241>
- Tadulako University Researchers. (2025). Effect of contextual teaching and learning approach on tenth graders' writing skills. *Acuity: Journal of English Language Pedagogy, Literature and Culture*, 10(3), 98–108. <https://doi.org/10.35974/acuity.v10i3.3957>
- Wahyuni, S. (2017). Developing writing materials based on CTL approach for Indonesian EFL learners. *Journal on English as a Foreign Language*, 7(1), 97–118. <https://doi.org/10.23971/jefl.v7i1.526>
- Wale, B. D., & Bishaw, K. S. (2020). Effects of using inquiry-based learning on EFL students' critical thinking skills. *Asian-Pacific Journal of Second and Foreign Language Education*, 5, Article 9. <https://doi.org/10.1186/s40862-020-00090-2>
- Wale, B. D., & Bogale, Y. N. (2021). Using inquiry-based writing instruction to develop students' academic writing skills. *Asian-Pacific Journal of Second and Foreign Language Education*, 6, Article 4. <https://doi.org/10.1186/s40862-020-00108-9>
- Wu, P., Yu, S., & Luo, Y. (2023). The development of teacher feedback literacy in situ: EFL writing teachers' endeavor to human–computer–AWE integral feedback innovation. *Assessing Writing*, 57, 100739. <https://doi.org/10.1016/j.asw.2023.100739>
- Yasin, B., Mustafa, F., Safina, D., Yusuf, Y., Khairuddin, & Sarinauli, B. (2023). Introducing contextual teaching and learning as a transition from textbook-based curriculum to the national curriculum. *European Journal of Educational Research*, 12(4), 1767–1779. <https://doi.org/10.12973/eu-jer.12.4.1767>
- Yin, X., Mohd Saad, M. R., & Abdul Halim, H. (2023). A systematic review of critical thinking instructional pedagogies in EFL writing: What do we know from a decade of research? *Thinking Skills and Creativity*, 49, 101363. <https://doi.org/10.1016/j.tsc.2023.101363>
- Ziska, I. Y., Yuliasri, I., Mujiyanto, J., & Pratama, H. (2025). The synergy of critical thinking and ICARE learning model in writing class: A qualitative analysis. *Multidisciplinary Science Journal*, 8(4), e2026280. <https://doi.org/10.31893/multiscience.2026280>