

Critical Thinking in Academic Writing: A Systematic Literature Review of Roles, Challenges, and Pedagogical Approaches in EFL/EAP Contexts

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ABSTRACT

This systematic literature review examined the relationship between critical thinking and academic writing in EFL/EAP contexts by focusing on three major themes: the role of critical thinking in academic writing, the challenges faced by academic writers, and the pedagogical approaches used to develop critical thinking skills. Using the PRISMA framework, 38 journal articles published between 2017 and 2026 were systematically selected and analyzed from Scopus and Web of Science databases. The findings revealed that critical thinking serves as a fundamental cognitive and metacognitive component of academic writing, enabling learners to analyze information, evaluate arguments, synthesize evidence, and construct coherent academic discourse. However, many EFL/EAP learners continue to face challenges related to academic literacy, argumentative writing, paraphrasing, source integration, organization of ideas, and sociocultural adaptation, particularly when engaging with Western academic conventions. The review also highlighted that sociocultural and educational backgrounds significantly influence students' ability to demonstrate critical thinking effectively in writing. To address these issues, various pedagogical approaches such as problem-based learning, collaborative writing, genre-based instruction, authentic assessment, corpus-based learning, reflective learning, and technology-enhanced instruction were found to positively contribute to students' critical thinking development and academic writing performance. Overall, the review demonstrates that critical thinking, academic literacy, sociocultural factors, and pedagogy are closely interconnected in academic writing development. The study contributes to the existing literature by providing a comprehensive synthesis of current research trends and offers important implications for educators, curriculum developers, and researchers seeking to enhance critical thinking and academic writing instruction in EFL/EAP settings.

Keywords: critical thinking, academic writing, EFL/EAP learners, academic literacy, pedagogical approaches

INTRODUCTION

Critical thinking has become an essential component of academic writing, particularly in EFL and EAP contexts where students are expected to construct logical arguments, evaluate evidence, and communicate ideas effectively. Recent studies have shown that critical thinking contributes significantly to the development of argumentative writing, metacognitive awareness, and academic literacy. For example, Kusumo et al. (2025) emphasized that interpretation, analysis, inference, and evaluation are central cognitive strategies in argumentative writing, while Li et al. (2026) and Teng and Yue (2023) demonstrated that metacognition and critical thinking mediate the relationship between reading, reflection, and academic writing performance. Similarly, Pessoa et al. (2017) found that analysis and evaluation are strong predictors of argumentative writing ability, highlighting the interconnectedness between critical thinking and writing competence. These findings indicate that academic writing is not merely a linguistic activity but also a cognitive and reflective process that requires higher-order thinking skills.

Despite the recognized importance of critical thinking in academic writing, many students continue to face substantial challenges in applying critical thinking effectively in their writing practices. Studies by Aunurrahman et al. (2017), Islamiyah and Al Fajri (2020), and Zalewski (2020) revealed that EFL students often struggle with argument structure, synthesis of ideas, organization, and academic discourse conventions. Sociocultural and educational differences further complicate students' ability to demonstrate critical thought in academic texts, especially among learners from non-Western educational backgrounds. At the same time, existing studies have proposed various pedagogical approaches such as problem-based learning, genre-based instruction, collaborative writing, corpus-based instruction, and authentic assessment to address these issues (Bilgin & Yildiz, 2024; Susilo et al., 2021; Birhan, 2023; Oroh et al., 2025). However, previous research remains fragmented, with limited systematic synthesis integrating the role of critical thinking, the challenges faced by academic writers, and the pedagogical approaches used to develop critical thinking in academic writing. Therefore, this systematic literature review aims to analyze the current state of research on critical thinking and academic writing by synthesizing findings across these interconnected themes.

LITERATURE REVIEW

Past Studies

Past studies consistently highlight the important role of critical thinking in strengthening academic writing performance across EFL/EAP contexts. Research by Kusumo et al. (2025), Pessoa et al. (2017), and Li et al. (2026) demonstrated that critical thinking supports interpretation, analysis, evaluation, inference, and logical argumentation in academic texts. Similarly, Teng and Yue (2023) and Bennett (2018) emphasized that metacognitive awareness and critical thinking significantly improve academic writing achievement. Studies by Moon et al. (2019) and Holdinga et al. (2021) further revealed that discipline-specific reasoning and analytical thinking contribute to higher-quality argumentative and academic writing.

Despite its importance, many academic writers face considerable challenges in demonstrating critical thinking in writing. Aunurrahman et al. (2017) found that EFL students struggled with argumentative structures, academic language, and critical reasoning. Similarly, Islamiyah and Al Fajri (2020) and Zalewski (2020) reported that students from non-Western educational backgrounds experienced difficulties adapting to Western academic discourse and argumentative conventions. Other challenges included paraphrasing, textual ownership, source integration, organization of ideas, and maintaining authorial voice, as discussed by Mori (2018) and Tahmasbi et al. (2022). Basu et al. (2025) additionally noted that sociocultural and institutional factors limited students' access to academic discourse and critical engagement.

To address these challenges, previous studies proposed various pedagogical approaches for developing critical thinking in academic writing. Problem-based learning, collaborative writing, authentic assessment, corpus-based instruction, and genre-based pedagogy were frequently identified as effective instructional strategies. Bilgin and Yildiz (2024), Afshar et al. (2017), and Yamin et al. (2023) highlighted the effectiveness of problem-based learning in improving analytical reasoning and writing competence. Likewise, Susilo et al. (2021), Sara (2025), and Bangun et al. (2026) demonstrated that collaborative and telecollaborative learning fostered critical engagement and academic literacy. Other studies emphasized reflective learning, genre scaffolding, and technology-enhanced instruction as important mechanisms for supporting critical thinking development in academic writing contexts.

THEORETICAL AND CONCEPTUAL FRAMEWORK

Figure 1 illustrates the conceptual framework underpinning this Systematic Literature Review (SLR), which explains the interconnected relationship between critical thinking, the challenges faced by academic writers, and the pedagogical approaches employed to strengthen academic writing in EFL/EAP contexts.

Critical Thinking Theory (Facione, 1990) & Metacognitive Theory

The framework begins with the premise that critical thinking plays a fundamental role in academic writing

because effective academic discourse requires writers to analyze, interpret, evaluate, and synthesize information logically. This perspective is supported by Facione's (1990) Critical Thinking Theory, which conceptualizes critical thinking as a set of higher-order cognitive skills including interpretation, analysis, inference, explanation, and evaluation. These cognitive processes are essential for constructing coherent arguments and evidence-based academic texts. In addition, Flavell's (1979) Metacognitive Theory further explains that successful academic writers actively monitor and regulate their thinking processes through planning, reflection, and self-evaluation. Therefore, critical thinking and metacognitive awareness collectively function as the cognitive foundation of effective academic writing.

Sociocultural Theory (Vygotsky, 1978) & Contrastive Rhetoric Theory

The framework further acknowledges that academic writers, particularly in EFL/EAP settings, face multiple academic literacy and sociocultural challenges that may hinder the development of critical thinking in writing. Vygotsky's (1978) Sociocultural Theory explains that learning and cognitive development are socially mediated and shaped by cultural background, interaction, and educational experiences. This theory helps explain why students from different educational systems may experience difficulties adapting to academic discourse practices. Similarly, Kaplan's (1966) Contrastive Rhetoric Theory suggests that learners from non-Western rhetorical traditions may struggle with Western argumentative writing conventions, organization patterns, and critical expression. As a result, academic writers often face challenges related to argumentation, source integration, organization of ideas, and authorial voice in academic writing.

Constructivist Learning Theory & Bruner, 1966) & Genre-based theory & Problem-based Learning Theory

To address these challenges, the framework incorporates pedagogical approaches grounded in Constructivist Learning Theory proposed by Piaget (1970) and Bruner (1966), which emphasize active learning, knowledge construction, and learner-centered instruction. In addition, Hyland's (2003) Genre-Based Theory supports explicit teaching of disciplinary discourse, rhetorical structures, and academic conventions to help students develop critical academic literacy skills. Furthermore, Barrows' (1986) Problem-Based Learning Theory explains that engaging learners in authentic problem-solving activities promotes analytical reasoning, collaboration, and reflective thinking. Together, these pedagogical approaches provide instructional support that scaffolds students' critical thinking development and enhances their academic writing performance in EFL/EAP contexts.

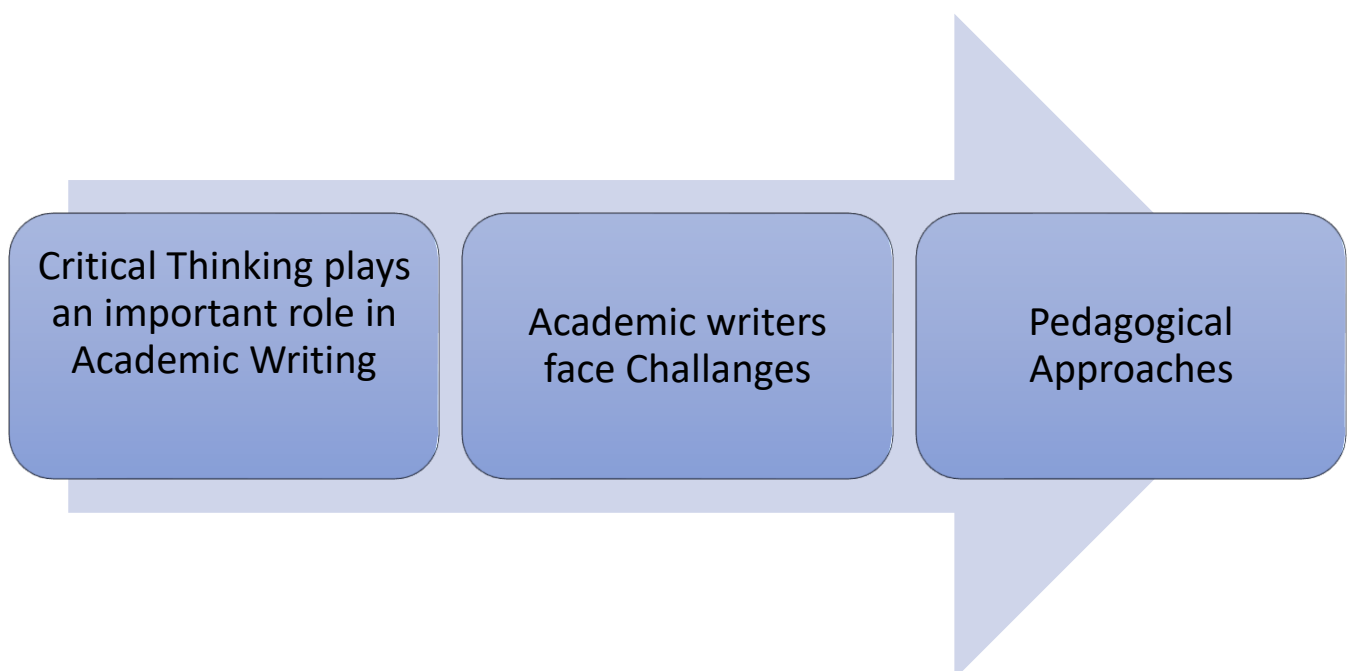


Figure 1- Conceptual Framework

Research Question

Specifying the Research Questions (RQs) is one of the most important activities during the planning stage of a Systematic Literature Review (SLR), as it determines the direction of the entire review process and guides the selection, analysis, and synthesis of the literature (Kitchenham & Charters, 2007). The research questions below are designed to justify the PICo framework proposed by (Lockwood et al., 2015). PICo is commonly used in qualitative research and consists of three main components: Population (P), Interest (I), and Context (Co). In this study, the *Population* refers to EFL/EAP learners, university students, and academic writers involved in academic writing practices. The *Interest* focuses on three major areas identified from the reviewed literature: In this study, the *Population* refers to EFL/EAP learners, university students, academic writers, and educators involved in academic writing practices. The *Interest* focuses on three key themes identified from the literature: (1) the role of critical thinking in academic writing, (2) the challenges academic writers face, and (3) pedagogical approaches for developing critical thinking in academic writing. The *Context* refers to higher education institutions, academic writing classrooms, and EFL/EAP learning environments where academic literacy and writing development occur. Based on the PICo framework, the SLR seeks to answer the following research questions:

- RQ1: What is the role of critical thinking in academic writing within EFL/EAP contexts?
- RQ2: What challenges do academic writers face in demonstrating critical thinking in academic writing?
- RQ3: What pedagogical approaches are used to develop critical thinking in academic writing among EFL/EAP learners?

MATERIAL AND METHODS

The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach is a widely used framework for conducting systematic literature reviews (Page et al., 2021). It improves transparency and consistency by outlining a structured process for selecting and evaluating studies. This review employed PRISMA to examine the relationship between housing affordability and social isolation among older adults. Databases such as Web of Science and Scopus were used because of their broad interdisciplinary coverage. The process involved four stages: (i) identification, (ii) screening, (iii) eligibility, (iv) data abstraction and analysis, and (v) quality of approval.

Identification

According to the PRISMA framework, the identification stage serves as the foundation of a systematic literature review, ensuring that only relevant and credible studies are selected for further analysis. In this review, two major academic databases, Scopus and Web of Science (WoS), were systematically searched using keywords related to academic writing and critical thinking. These databases were selected because of their broad coverage, rigorous indexing standards, and inclusion of high-impact, peer-reviewed journals. With reference to Table 1 below, the search process initially identified 553 records from Scopus and 100 records from WoS, resulting in a total of 653 studies before duplicate removal. The higher number of studies retrieved from Scopus reflects its wider disciplinary coverage across education, applied linguistics, and social sciences, while WoS contributed more selective and methodologically robust publications. The identification process highlights both the increasing scholarly interest in critical thinking and academic writing and the methodological rigor of the review itself. By utilizing multiple databases, the review minimized database-specific bias and improved the reliability and comprehensiveness of the findings. Furthermore, the large volume of retrieved studies demonstrates the relevance and growing importance of integrating critical thinking into academic writing instruction and pedagogical research. Overall, this systematic identification stage establishes a strong and transparent foundation for subsequent screening, eligibility assessment, and synthesis, while ensuring alignment with PRISMA standards and supporting the validity and reliability of the review process.

TABLE 1 The search string.

Scopus	TITLE-ABS-KEY (("academic writing" OR "scholarly writing" OR "research writing" OR "academic composition") AND ("critical thinking" OR "analytical thinking" OR "reflective thinking" OR "reasoning")) AND (LIMIT-TO (PUBYEAR , "2017") OR LIMIT-TO (PUBYEAR , "2018") OR LIMIT-TO (PUBYEAR , "2019") OR LIMIT-TO (PUBYEAR , "2020") OR LIMIT-TO (PUBYEAR , "2021") OR LIMIT-TO (PUBYEAR , "2022") OR LIMIT-TO (PUBYEAR , "2023") OR LIMIT-TO (PUBYEAR , "2024") OR LIMIT-TO (PUBYEAR , "2025") OR LIMIT-TO (PUBYEAR , "2026")) AND (LIMIT-TO (SUBJAREA , "SOC")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (EXACTKEYWORD , "Academic Writing") OR LIMIT-TO (EXACTKEYWORD , "Critical Thinking")) Date of Access: May 2026
WoS	(“ Refine results for TITLE-ABS-KEY (("academic writing" OR "scholarly writing" OR "research writing" OR "academic composition") AND ("critical thinking" OR "analytical thinking" OR "reflective thinking" OR "reasoning")) and 2024 or 2025 or 2023 or 2021 or 2022 or 2020 or 2019 or 2018 or 2017 (Publication Years) Date of Access: May 2026

Screening

Potentially relevant research records were screened in the next stage to ensure that only studies directly related to the research objectives were retained, while duplicate and irrelevant documents were removed. After the initial identification process, 156 papers were excluded based on predefined eligibility criteria and duplication checks. The screening stage applied strict inclusion criteria to maintain the quality and relevance of the selected literature. Specifically, only journal articles published between 2017 and 2026 were included in the review, as these were considered the primary and most reliable sources of scholarly information. Other types of publications, such as books, book reviews, conference proceedings, and chapters not directly related to the research focus, were excluded from the analysis. Additionally, one duplicated record was identified and removed. This process ensured that the final dataset consisted of recent, credible, and highly relevant studies suitable for systematic review and further analysis.

TABLE 2 The selection criterion is searching

Criterion	Inclusion	Exclusion
Language	English	Non-English
Subject area	Social Sciences Arts and Humanities	Apart from Social Sciences & Arts and Humanities
Timeline	2026 – 2017	< 2017
Literature type	Journal (Article)	Conference, Book, Review

Eligibility

In the third stage, known as the eligibility phase, 155 articles were carefully assessed to determine their suitability for inclusion in the review. During this process, the titles, abstracts, and full texts of the studies were thoroughly examined to ensure they aligned with the objectives and scope of the research. As a result, 117 articles were excluded because they did not meet the established eligibility criteria. Some studies lacked complete information, while others were not sufficiently relevant to the focus of the study or failed to provide accessible full-text versions. This rigorous evaluation process was essential to maintain the quality, credibility, and relevance of the systematic review. After applying all inclusion and exclusion criteria, a final total of 38 studies remained and were considered appropriate for the subsequent stages of analysis and synthesis in the review.

Data Abstraction and Analysis

An integrative analysis was employed in this study as a key assessment strategy to examine and synthesize a wide range of research designs, including both quantitative and qualitative studies. The primary objective of this stage was to identify significant developments and emerging themes related to critical thinking and academic writing. A total of 38 selected publications were analyzed to identify common patterns, relationships, and relevant concepts connected to the research topic. The authors carefully evaluated the methodologies, findings, and overall contributions of the studies before grouping the data into meaningful themes based on the evidence collected. During the analysis process, similarities and differences among the studies were compared to ensure consistency and accuracy in theme development. In cases where differing interpretations or concepts emerged, the authors discussed them collaboratively to reach agreement. This systematic approach strengthened the credibility and reliability of the review findings and provided a clearer understanding of the current state of research in the field.

Quality of Appraisal

According to the guidelines proposed by Kitchenham (2007), once we have selected primary studies, we have to assess the quality of the research they present and quantitatively compare them. In this study, we apply quality assessment from (Abouzahra et al., 2020), which consists of six QAs for our SLR. The scoring procedure for evaluating each criterion involves three possible ratings: "Yes" (Y) with a score of 1 if the criterion is fully met, "Partly" (P) with a score of 0.5 if the criterion is somewhat met but contains some gaps or shortcomings, and "No" (N) with a score of 0 if the criterion is not met at all.

- QA1. Is the purpose of the study clearly stated?
- QA2. Is the interest and the usefulness of the work clearly presented?
- QA3. Is the study methodology clearly established?
- QA4. Are the concepts of the approach clearly defined?
- QA5. Is the work compared and measured with other similar work?
- QA6. Are the limitations of the work clearly mentioned?

Table 3 below shows the quality assessment (QA) process used to evaluate a study based on specific criteria. Three experts assess the study using the criteria listed, and each criterion is scored as "Yes" (Y), "Partly" (P), or "No" (N). Here's a detailed explanation:

In the context of this study, the authors represent the experts to assess the quality of the 38 articles. The authors are experts in the topic of this paper. Each expert independently assesses the study according to the criteria above (Q1-Q), and the scores are then totaled across all experts to determine the overall mark. For a study to be accepted for the next process, the total mark, derived from summing the scores from all three experts, must exceed 3.0 as

suggested by Kitchenham (2007). This threshold ensures that only studies meeting a certain quality standard proceed further.

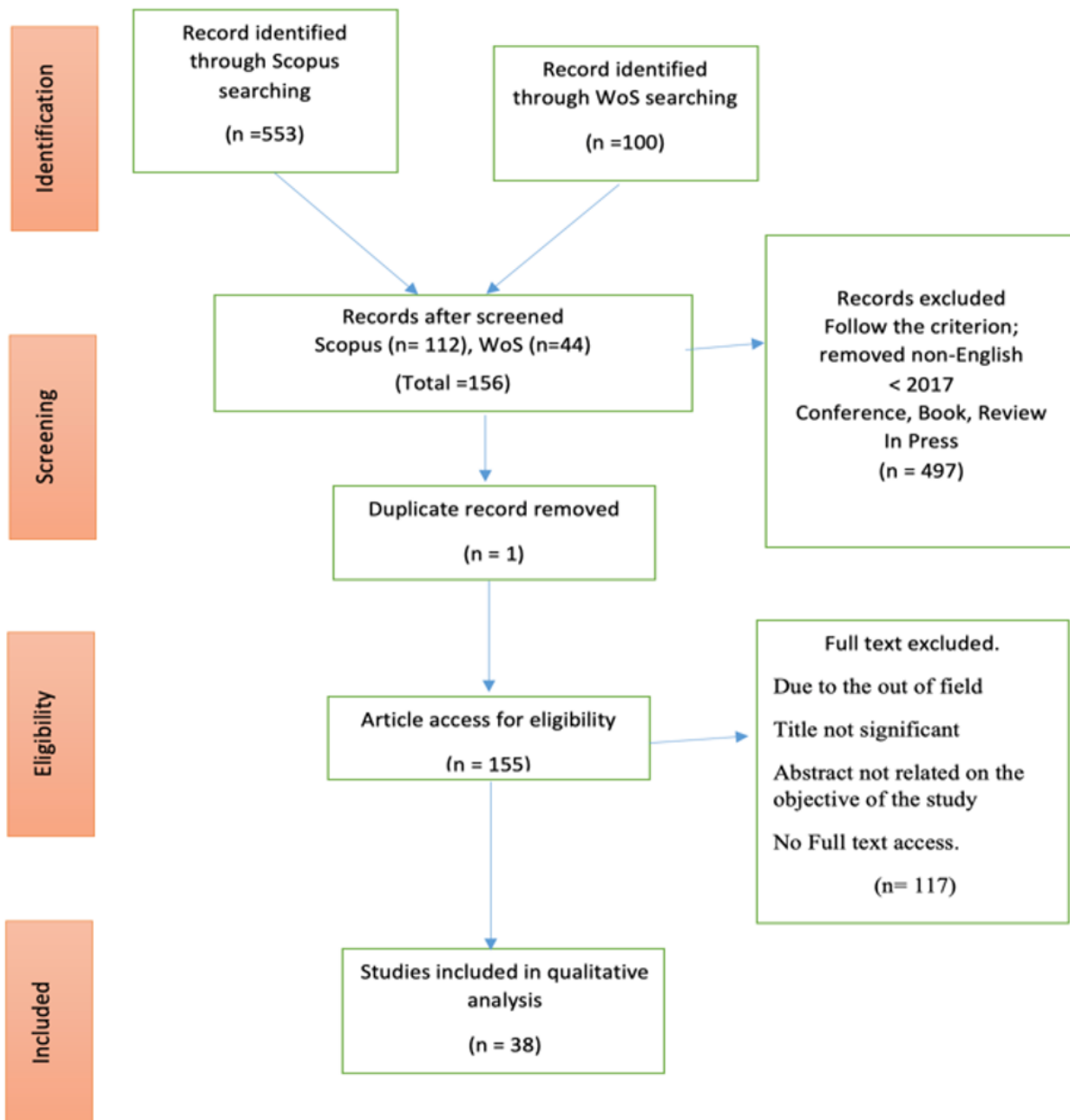


FIGURE 2. Flow diagram of the proposed searching study (Moher et.al. 2009)

RESULT AND FINDING

This section presents the results of the analysis done. Presentation is done based on (i) the quality of the assessment and (ii) the themes that emerged from the compilation.

Quality Assessment

Table 3 shows the result of the assessment performance for selected primary studies. The overall quality of the articles is as follows;

- High quality ($\geq 80\%$): Majority of studies
- Moderate quality (60–79%): Conceptual or descriptive studies
- Lower quality ($< 60\%$): Primarily survey-only or exploratory abstracts

Table 3- Quality Assessment for the selected 38 papers

Paper ID	Author(s) & Year	Title of Article	QA1	QA2	QA3	QA4	QA5	QA6	Total Mark	Percentage (%)
PS1	(O'Flaherty & Costabile, 2020)	Using a science simulation-based learning tool to develop students' active learning, self-confidence and critical thinking in academic writing	Y	Y	Y	P	P	N	4.0	66.7
PS2	(Islamiyah & Al Fajri, 2020)	Investigating Indonesian master's students' perception of critical thinking in academic writing in a British university	Y	Y	P	Y	N	P	4.0	66.7
PS3	(Bilgin & Yildiz, 2024)	Fostering EFL Learners' Writing Competence through Problem-Based Learning	Y	Y	Y	Y	Y	P	5.5	91.7
PS4	(Wu, 2022)	Chinese Studies on Informal Logic and Critical Thinking—An Overview	Y	P	P	Y	N	P	3.5	58.3
PS5	(Susilo et al., 2021)	Promoting EFL students' critical thinking and self-voicing through CIRC technique in academic writing courses	Y	Y	Y	Y	P	P	5.0	83.3
PS6	(Sara, 2025)	Exploring Students' Attitudes Towards The Implementation of Collaborative Writing	Y	Y	Y	Y	P	Y	5.5	91.7
PS7	(Bilki & Irgin, 2022)	Towards Becoming Critical Readers and Writers	Y	Y	P	Y	P	N	4.0	66.7
PS8	(Oroh et al., 2025)	Authentic Assessment in	Y	Y	Y	Y	P	P	5.0	83.3

		Higher Education to Increase Critical Thinking and Develop Metacognitive Awareness								
PS9	(Hutasuhut et al., 2023)	Engaged at the First Sight! Anticipating Your Audience as a Way to Think Critically in Writing an Argument	Y	Y	Y	Y	P	P	5.0	83.3
PS10	(Aunurrahman et al., 2017)	Exploring the tertiary EFL students' academic writing competencies	Y	Y	P	P	N	P	3.5	58.3
PS11	(Suroso et al., 2026)	From Critical Thinking to Politeness	Y	Y	Y	Y	Y	P	5.5	91.7
PS12	(Taye Teshome, 2025) &	The impact of extensive reading on academic writing proficiency in EFL undergraduate students	Y	Y	Y	Y	Y	Y	6.0	100
PS13	(Insuwan Thongrin, 2025) &	Empowering Thai EFL Learners as Critical Thinkers and Skilled Writers	Y	Y	Y	Y	P	Y	5.5	91.7
PS14	(Bangun et al., 2026)	Telecollaborative E-Feedback in EAP Writing	Y	Y	Y	Y	P	P	5.0	83.3
PS15	(Kusumo et al., 2025))	Cognitive Strategies for Critical Thinking in High School Students' Argumentative Writing	Y	Y	Y	Y	P	P	5.0	83.3
PS16	(Basu et al., 2025)	Socially Situated Critical Thinking in EFL Academic Writing	Y	Y	Y	Y	Y	P	5.5	91.7
PS17	(Yamin et al., 2023)	Enhancing critical thinking	Y	Y	Y	Y	P	P	5.0	83.3

		to foster students' analytical capacity in academic writing								
PS18	(Birhan, 2023)	Effects of using corpus-based instruction on students' critical thinking skills and perceptions in academic writing classes	Y	Y	Y	Y	P	P	5.0	83.3
PS19	(Mori, 2018)	Our speech is filled with others' words	Y	Y	P	Y	N	P	4.0	66.7
PS20	(Zhang, 2026)	Cultivating Critical Thinking in College English Teaching	Y	Y	Y	Y	P	P	5.0	83.3
PS21	(Li et al., 2026)	Critical Thinking as a Bridge Between Reading, Reflection, and Academic Writing	Y	Y	Y	Y	Y	P	5.5	91.7
PS22	(Teng & Yue, 2023)	Metacognitive writing strategies, critical thinking skills, and academic writing performance	Y	Y	Y	Y	P	P	5.0	83.3
PS23	(Baroudi et al., 2023)	Using feedforward to improve pre-service teachers' academic writing and critical thinking skills	Y	Y	Y	Y	P	P	5.0	83.3
PS24	(Abdi Tabari & Lee, 2025)	The effects of task complexity on linguistic complexity and perception	Y	Y	Y	Y	Y	P	5.5	91.7
PS25	(Normore et al., 2024)	Investigating the impact of critical thinking instruction on writing performance	Y	Y	Y	Y	P	P	5.0	83.3

PS26	(Zhang, 2018)	Developing College EFL Writers' Critical Thinking Skills Through Online Resources	Y	Y	Y	Y	P	P	5.0	83.3
PS27	(Bennett, 2018)	An Exploration of Japanese Students' Concept and Application of Critical Thinking in Academic Writing	Y	Y	Y	Y	Y	P	5.5	91.7
PS28	(Zalewski, 2020)	Developing Academic Thinking in the EFL Writing Classroom	Y	Y	Y	Y	P	P	5.0	83.3
PS29	(Negretti, 2021)	Scaffolding genre knowledge and metacognition	Y	Y	P	Y	P	N	4.0	66.7
PS30	(Mitchell & Pessoa, 2017)	Scaffolding the writing development of the Argument genre in history	Y	Y	Y	Y	P	P	5.0	83.3
PS31	(Kumar & Refaei, 2017)	Problem-Based Learning Pedagogy Fosters Students' Critical Thinking About Writing	Y	Y	Y	Y	P	P	5.0	83.3
PS32	(Afshar et al., 2017)	The interrelationship among critical thinking, writing an argumentative essay in an L2 and their subskills	Y	Y	Y	Y	Y	P	5.5	91.7
PS33	(Pessoa et al., 2017)	Emergent arguments: A functional approach to analysing student challenges with the argument genre	Y	Y	Y	Y	P	P	5.0	83.3
PS34	(Tahmasbi et al., 2022)	A Combination of Action	Y	Y	Y	Y	Y	P	5.5	91.7

		Research and Reflective Journal Writing in an EFL Class								
PS35	(VanDerHeide, 2018)	Classroom Talk as Writing Instruction for Learning to Make Writing Moves in Literary Arguments	Y	Y	Y	Y	P	P	5.0	83.3
PS36	(Huang & Archer, 2017)	Academic literacies as moving beyond writing: Investigating multimodal approaches to academic argument	Y	Y	P	Y	P	P	4.5	75.0
PS37	(Moon et al., 2019)	Application and testing of a framework for characterizing the quality of scientific reasoning in chemistry students' writing on ocean acidification	Y	Y	Y	Y	Y	P	5.5	91.7
PS38	(Holdinga et al., 2021)	The Relationship Between Students' Writing Process, Text Quality, and Thought Process Quality in 11th-Grade History and Philosophy Assignments	Y	Y	Y	Y	P	P	5.0	83.3

The table presents a quality assessment of 38 research studies focusing on critical thinking, academic writing, and EFL (English as a Foreign Language) learning contexts. Each study was evaluated using six quality assessment criteria (QA1–QA6), where “Y” indicates the criterion was fully met, “P” indicates partial fulfillment, and “N” indicates it was not met. The studies were then assigned a total mark and percentage score based on their overall quality. Most papers achieved relatively high scores, demonstrating strong methodological quality and relevance to the topic. Several studies, such as those by Taye and Teshome (2025), Bilgin and Yildiz (2024), Sara (2025), and Afshar et al. (2017), received outstanding ratings above 90%, with Taye and Teshome (2025) achieving a perfect score of 100%. A large proportion of the studies scored between 83.3% and 91.7%, indicating that the majority fulfilled most quality criteria successfully. However, a few studies, including Wu (2022) and Aunurrahman et al. (2017), received lower scores of 58.3%, suggesting limitations in some assessment areas. Overall, the table demonstrates that the selected literature is generally reliable and of

acceptable to high quality, making it suitable for supporting research on the development of critical thinking and academic writing practices in educational settings.

Themes

The process of categorization into themes and sub-themes underwent several stages. Firstly, the analysis found that the list of studies showed dominance of the EFL/EAP context. Secondly, the compiled articles reveal a strong emphasis on critical thinking as a leading role in academic writing. Thirdly, the articles dwell on the importance of metacognitive strategies as a pivotal role for critical thinking. Lastly, most studies were situated in English as a foreign language or even English for Academic Purposes settings.

Lastly, some of the 38 articles reveal the growth of technology-enhanced pedagogy to encourage critical thinking in academic writing.

Role of Critical Thinking in Academic Writing

Table 4-Theme 1-Role of Critical Thinking (CT) in Academic Writing (AW)

Theme	Focus of Theme	Paper ID	Author(s) & Year
Theme 1: Role of CT in AW	This theme includes studies examining metacognitive awareness, cognitive strategies, reflection, reasoning, and self-regulation in relation to academic writing performance and critical thinking development.	PS15	Kusumo et al. (2025)
		PS21	Li et al. (2026)
		PS22	Teng & Yue (2023)
		PS24	Abdi Tabari & Lee (2025)
		PS27	Bennett (2018)
		PS29	Negretti (2021)
		PS30	Mitchell & Pessoa (2017)
		PS33	Pessoa et al. (2017)
		PS37	Moon et al. (2019)
		PS38	Holdinga et al. (2021)

Critical thinking plays a fundamental role in academic writing by enabling learners to analyze information, evaluate arguments, organize ideas logically, and construct coherent evidence-based texts. The reviewed studies indicate that academic writing is closely linked to cognitive and metacognitive processes that support higher-order reasoning. Kusumo et al. (2025) identified interpretation, analysis, inference, and evaluation as essential critical thinking strategies in argumentative writing, while Li et al. (2026) emphasized that critical thinking mediates the relationship between reading, reflection, and academic writing performance among doctoral students. Similarly, Teng and Yue (2023) found significant relationships between metacognitive writing strategies, critical thinking skills, and academic writing achievement, suggesting that planning, monitoring, and evaluating writing processes enhance analytical reasoning.

Other studies highlighted the importance of genre awareness and reflective thinking in developing critical academic writers. Mitchell and Pessoa (2017) demonstrated that scaffolding genre knowledge and metacognition helped learners engage strategically with disciplinary discourse and audience expectations. Pessoa et al. (2017) further revealed that analysis and evaluation were strong predictors of argumentative writing quality among EFL learners. In addition, Moon et al. (2019) showed that scientific reasoning could be effectively assessed through students' argumentative writing, while Holdinga et al. (2021) emphasized that discipline-specific thinking processes significantly influence writing quality. Overall, the findings suggest that critical thinking serves as the intellectual foundation of academic writing by strengthening reasoning, argumentation, reflection, and academic literacy development across disciplines.

Challenges faced by Academic Writers

Table 5-Theme 2- Challenges faced by Academic Writers

Theme	Focus of Theme	Paper ID	Author(s) & Year
Theme 2: Challenges	This theme addresses (a) Challenges in Academic Literacy Argumentation (b) Sociocultural Challenges	PS2	Islamiyah & Al Fajri (2020)
		PS4	Wu (2022)
		PS7	Bilki & Irgin (2022)
		PS9	Hutasuhut et al. (2023)
		PS10	Aunurrahman et al. (2017)
		PS16	Basu et al. (2025)
		PS19	Mori (2018)
		PS28	Zalewski (2020)
		PS34	Tahmasbi et al. (2022)
		PS36	Huang & Archer (2017)

Academic writers in EFL/EAP contexts face multiple challenges related to academic literacy, argumentation, and sociocultural adaptation. Several studies revealed that students often struggle to construct logical arguments, synthesize evidence, and demonstrate critical thinking effectively in academic writing. Aunurrahman et al. (2017) found that tertiary EFL students had limited control over argumentative structures, linguistic features, and critical thinking skills, while Tahmasbi et al. (2022) showed that many university students experienced difficulties meeting genre expectations in argumentative writing. Similarly, Hutasuhut et al. (2023) emphasized that anticipating audience expectations and organizing arguments coherently remain challenging for many learners. Challenges also extend to paraphrasing, source integration, and maintaining authorial voice, as highlighted by Mori (2018), who noted that students frequently struggle with textual ownership and plagiarism concerns.

Sociocultural factors further complicate academic writing development. Islamiyah and Al Fajri (2020) reported that Indonesian postgraduate students in the UK faced difficulties in evaluation, synthesis, idea organization, and grammar due to differences in educational and cultural backgrounds. Likewise, Zalewski (2020) found that Japanese students initially experienced confusion regarding Western critical thinking and argumentative conventions. Basu et al. (2025) additionally observed that students from disadvantaged educational backgrounds encountered greater barriers in accessing academic discourse and demonstrating critical thinking. Overall, these studies indicate that academic writing challenges are shaped not only by linguistic and cognitive limitations but also by sociocultural expectations and differing academic traditions.

Pedagogical Approaches

Table 5-Theme 3- Pedagogical Approaches

Theme	Focus of Theme	Paper ID	Author(s) & Year
Theme 3: Pedagogical Approaches for Developing Critical Thinking in Academic Writing	This theme focuses on instructional strategies, teaching interventions, collaborative learning, assessment practices, and technology-enhanced approaches that support the development of critical thinking and academic writing skills in EFL/EAP	PS1	O'Flaherty & Costabile (2020)
		PS3	Bilgin & Yildiz (2024)
		PS5	Susilo et al. (2021)
		PS6	Sara (2025)
		PS8	Oroh et al. (2025)

	contexts.	PS11	Suroso et al. (2026)
		PS12	Taye & Teshome (2025)
		PS13	Insuwan & Thongrin (2025)
		PS14	Bangun et al. (2026)
		PS17	Yamin et al. (2023)
		PS18	Birhan (2023)
		PS20	Zhang (2026)
		PS23	Baroudi et al. (2023)
		PS25	Normore et al. (2024)
		PS26	Zhang (2018)
		PS31	Kumar & Refaei (2017)
		PS32	Afshar et al. (2017)
		PS35	VanDerHeide (2018)

Pedagogical approaches for developing critical thinking in academic writing emphasize student-centered, collaborative, and cognitively engaging learning strategies. The reviewed studies demonstrate that instructional methods such as problem-based learning (PBL), collaborative writing, authentic assessment, genre-based pedagogy, corpus-based instruction, and technology-enhanced learning significantly contribute to students' analytical and argumentative writing abilities. For example, Bilgin and Yildiz (2024) and Afshar et al. (2017) found that PBL enhanced students' writing performance, motivation, and critical thinking by encouraging learners to solve problems collaboratively and engage in reflective reasoning. Similarly, Susilo et al. (2021) and Sara (2025) highlighted the effectiveness of collaborative writing approaches in fostering self-voicing, peer interaction, and critical engagement throughout the writing process.

Other studies emphasized the role of explicit instructional support and reflective learning. Kumar and Refaei (2017) and VanDerHeide (2019) showed that scaffolding, reflective journal writing, and metacognitive activities improved students' ability to evaluate arguments and regulate their writing processes. Technology-supported approaches, including online SFL-based resources (Zhang, 2018), telecollaborative e-feedback (Bangun et al., 2026), and simulation-based learning (O'Flaherty & Costabile, 2020), also promoted critical analysis and academic literacy. Furthermore, authentic assessment and corpus-based instruction encouraged students to engage with real-world writing tasks and disciplinary discourse. Overall, these findings suggest that effective pedagogical approaches integrate interaction, reflection, metacognitive awareness, and authentic academic practices to strengthen critical thinking in academic writing.

CONCLUSION

Summary of Findings

Figure 3 summarizes the key findings of this review by illustrating the interconnected relationship between critical thinking, challenges in academic writing, and pedagogical approaches in EFL/EAP contexts. The reviewed studies consistently showed that critical thinking plays a significant role in academic writing by supporting analysis, inference, evaluation, argumentation, and metacognitive regulation. Kusumo et al. (2025), Li et al. (2026), Teng and Yue (2023), and Pessoa et al. (2017) highlighted that critical thinking and metacognitive awareness contribute substantially to argumentative writing quality, academic literacy development, and coherent scholarly communication. However, the studies also revealed that many academic writers face challenges related to academic literacy, genre expectations, paraphrasing, source integration, organization of ideas, and sociocultural adaptation. Research by Islamiyah and Al Fajri (2020), Aunurrahman et al. (2017), Mori (2018), Tahmasbi et al. (2022), and Zalewski (2020) demonstrated that students from diverse

linguistic and educational backgrounds often struggle to meet the expectations of Western academic discourse and argumentative writing conventions. To address these challenges, numerous pedagogical approaches were proposed, including problem-based learning, genre-based instruction, collaborative writing, authentic assessment, corpus-based instruction, telecollaborative e-feedback, and reflective learning. Studies by Bilgin and Yildiz (2024), Susilo et al. (2021), Sara (2025), Birhan (2023), Bangun et al. (2026), and Yamin et al. (2023) showed that these approaches effectively foster critical thinking, engagement, metacognitive awareness, and academic writing competence among EFL/EAP learners.

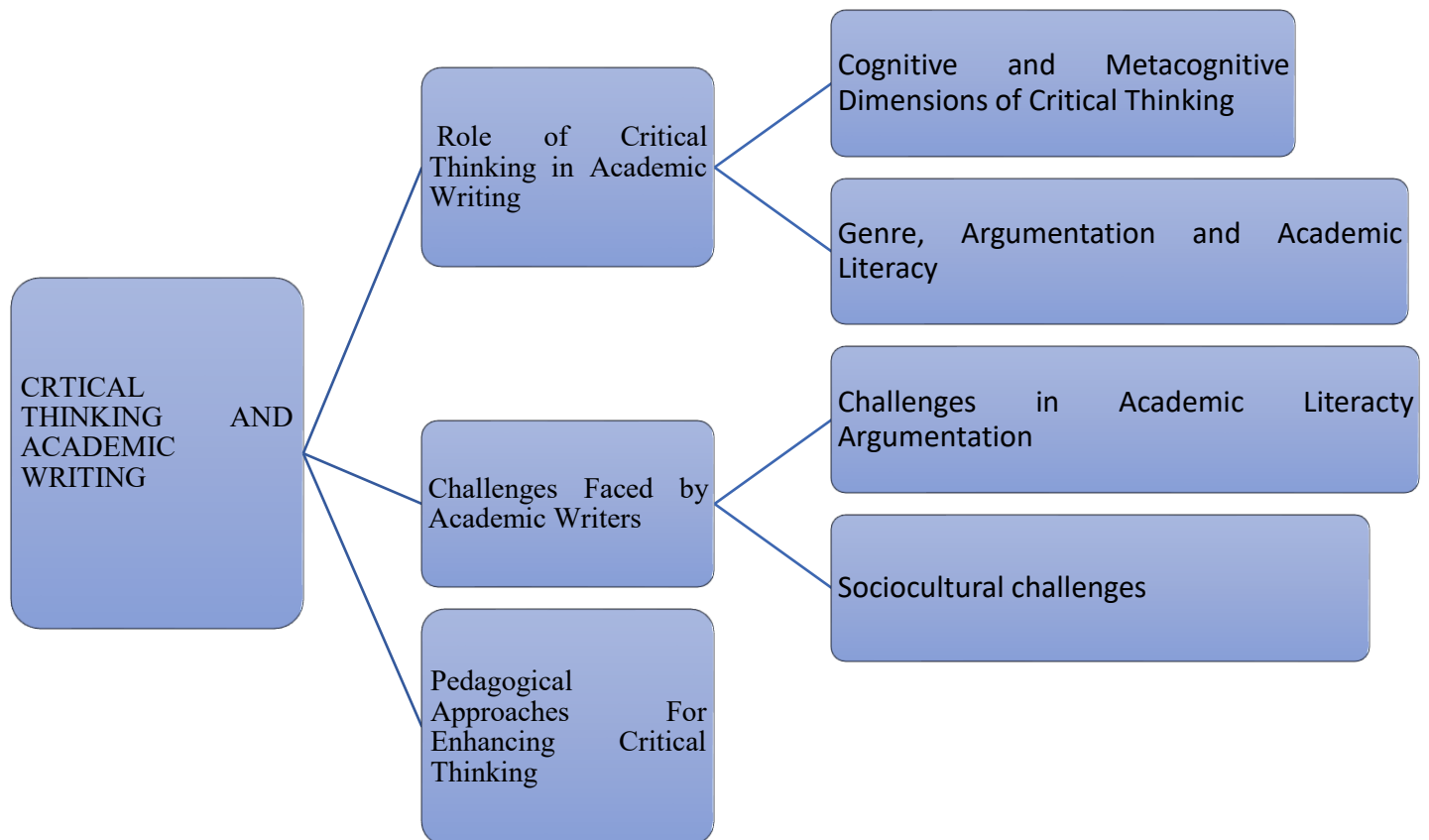


Figure 3- Summary of Emerging Themes

Implications & Suggestions for Future Research

Perhaps one of the reasons why many dislike academic writing is the fact that it requires the writer to use their critical thinking skills. Tracing back to the theory of the Cognitive Process theory (refer to Figure 4) of writing by Flower & Hayes (1981), writing is indeed a thinking process. The theory is supported by three main interactive components: the task environment, the Writers' Long-Term Memory, and the Writing Process. Task environment involves the writer depending on the rhetorical problems and the text. The writer depends on his/her long-term memory to write. This memory involves the writer's knowledge of the topic, audience, and the writing plan. Throughout the writing process (planning, translating, and reviewing), the writer needs to make decisions involving adjustments to the task environment and his/her long-term memory. The double arrows at the stages represent the thinking process of the writer throughout the writing process. This thinking process is needed at all three stages of the writing process as the writer goes back and forth in the process to complete the writing task.

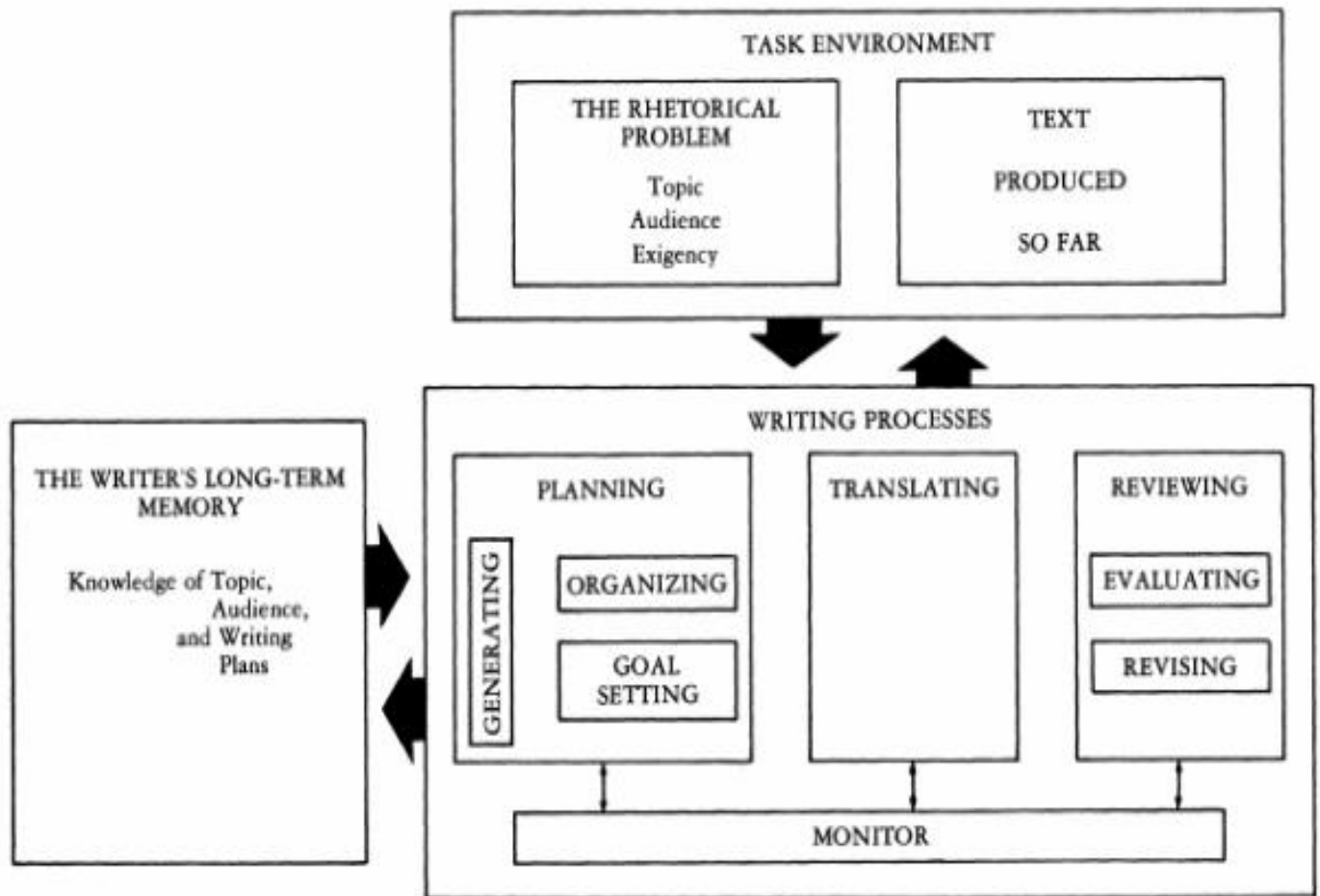


Figure 4- Model of the Composing Process

The findings of this review provide several important implications for theory, pedagogy, and practice. Theoretically, the review reinforces the interconnected relationship between critical thinking, metacognition, sociocultural influences, and academic literacy development in EFL/EAP writing contexts. Pedagogically, the findings suggest that educators should move beyond traditional product-oriented writing instruction and adopt more learner-centered, reflective, collaborative, and problem-solving approaches that explicitly integrate critical thinking into academic writing instruction. Institutions and curriculum designers should also provide greater support for genre awareness, academic literacy practices, and culturally responsive teaching strategies to help learners overcome sociocultural and rhetorical barriers in academic writing. In addition, technology-enhanced learning platforms and authentic assessment practices should be integrated into academic writing classrooms to foster analytical reasoning and student engagement.

Despite the valuable contributions of the reviewed studies, several gaps remain for future research. First, more longitudinal studies are needed to examine the long-term development of critical thinking and academic writing skills across different educational levels and disciplines. Second, future research should investigate how sociocultural backgrounds influence critical thinking practices in multilingual and multicultural academic writing environments. Third, additional empirical studies are required to compare the effectiveness of different pedagogical interventions, particularly technology-enhanced and AI-assisted writing approaches, in developing critical thinking among EFL/EAP learners. Finally, future systematic reviews may explore the relationship between critical thinking and other dimensions of academic literacy, such as digital literacy, multimodal writing, and interdisciplinary communication, to provide a broader understanding of academic writing development in contemporary educational contexts.

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Conflicts of Interest

The authors declare that they have no conflicts of interest to report regarding the present study

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