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Psychosocial Factors Contributing to Critical Thinking in Writing Skills: A Systematic Review of EFL Learners

Samsul Amri[1,2], Urip Sulistiyo[1], Delita Sartika[1]
[1]Universitas Jambi, Jambi, Indonesia, [2]Universitas Islam Indragiri, Riau, Indonesia

Corresponding author e-mail: samsulamri@unisi.ac.id

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Abstract: Critical thinking (CT) in EFL writing is not solely a linguistic ability but a psychosocial process involving regulation, motivation, and social support. This study conducted a PRISMA-guided systematic review (2015–2024) across major databases, screening 364 records and including 20 empirical studies using quantitative, qualitative, and mixed-method designs. Given the heterogeneity of measures, narrative synthesis and vote counting were applied. The findings reveal that key psychosocial contributors to CT in writing include self-regulated learning (SRL) and metacognition, writing self-efficacy, resilience, motivation and grit, teacher autonomy support, feedback, classroom climate, peer collaboration, emotion regulation, and technology-mediated feedback. A cascade model is proposed in which Teacher Autonomy Support and Classroom Climate influence Engagement, which then promotes SRL and Metacognition, leading to Writing Self-Efficacy, Resilience, and Motivation, and ultimately enhancing Critical Thinking in Writing. These relationships are shaped by learners' anxiety and emotion-regulation capacities, and further strengthened by technology-supported learning environments. The review recommends integrating SRL cycles, autonomy-supportive feedback, peer reasoning routines, and emotion-regulation strategies into EFL writing instruction. Overall, this work offers an evidence-informed framework that connects psychosocial dynamics with reasoning quality in EFL writing and provides a broader conceptual foundation for advancing research in language learning and learner development.

Keywords: Critical Thinking, EFL Writing, Psychosocial Factors

A. Introduction

Critical thinking (CT) in writing is a core academic competence for EFL learners. Its development does not arise from language exposure or mechanical drills alone; rather, it is shaped by psychosocial factors that guide how learners focus attention, regulate effort, and persist through the demands of planning, drafting, and revising. Research shows that

self-regulated learning (SRL) and metacognition help students make deeper, meaning-level revisions that strengthen their arguments. Writing self-efficacy encourages them to engage with difficult feedback and to take intellectual risks when shaping their claims. Resilience and motivation keep them working steadily through the repeated cycles of drafting and revising. When teachers provide autonomy support and create a positive classroom climate, students are better able to stay engaged with the writing process. Peer support also plays a role by helping students learn how to regulate themselves during collaborative work. At the same time, anxiety and emotion regulation affect how well students can translate SRL into more sophisticated decisions during revision. (Tsao, 2021; Rasool et al., 2023); Mallahi, 2023; X. Wang et al., 2023; Yin et al., 2023).

To clarify the psychosocial basis of this review, two established theories help explain why autonomy support, motivation, and self-regulation matter for critical thinking in writing. Self-Determination Theory (Ryan & Deci, 2000) suggests that learners engage more deeply when their needs for autonomy, competence, and relatedness are supported. In writing classes, such support makes students more willing to persist, try out ideas, and revise their arguments. Social Cognitive Theory (Bandura, 1986) adds that self-efficacy, self-regulation, and performance influence one another. Students who believe they can write well tend to monitor their reasoning more carefully and stay committed during feedback and revision. Together, these theories help explain why factors like autonomy support, SRL, metacognition, peer interaction, and emotion regulation shape the development of critical thinking in EFL writing. Although research on EFL writing has expanded, we still do not have a clear and systematic explanation of how psychosocial factors actually support the development of critical thinking in writing. Much of the existing work focuses on writing tasks or feedback approaches. Far fewer studies examine how elements such as autonomy support, student engagement, SRL, self-efficacy, and emotional factors interact as mediating or moderating influences on CT outcomes in writing. Another challenge comes from the way CT in writing is defined and measured. Different studies rely on different rubrics—such as claim–evidence–warrant or counterargument frameworks—and they are conducted in varied educational contexts. These inconsistencies make it difficult to integrate findings across studies and draw broader conclusions (Yin et al., 2023). In line with this point, Kleemola et al., (2023) clarify that a learner's achievement in the first language and the academic orientation of the home environment during childhood emerged as the strongest predictors of advanced critical thinking and writing.

Over the past ten years, researchers have increasingly combined established SRL and self-efficacy instruments with rubric-based measures of critical thinking, analyzing the relationships through path analysis or SEM. Many studies also draw on process data such as revision logs and learning platform or AI activity traces to understand how students

work through writing tasks. A clear pattern emerges: when teachers provide autonomy support, students become more engaged, and this engagement helps them use SRL and metacognitive strategies in complex writing activities. Writing self-efficacy consistently predicts how actively students participate in formative feedback, while anxiety often limits their ability to make higher-order revisions. Then technology-based feedback is now widely used, but its benefits depend on how it is integrated into instruction. When combined with reflective practices and SRL-oriented guidance, technology can encourage deeper reasoning and more substantive revisions. Without this kind of pedagogical framing, however, technological tools often lead only to minor surface-level editing rather than meaningful improvement in students' writing (Tsao, 2021; Rasool et al., 2023; Sun et al., 2024; Wang & Wang, 2023; Kasneci et al., 2023; Zawacki-Richter et al., 2019; Sajidin, 2025). Prior reviews in EFL writing have focused on instructional designs for CT (e.g., genre-based tasks, dialogic feedback, and ICT integration) and on teacher conceptions of CT, but they have not systematically parsed the psychosocial mechanisms through which such designs work. Addressing this gap, the present review maps and evaluates evidence (2015–2024) on psychosocial factors that predict or mediate CT in EFL writing. Building on recent syntheses of CT pedagogy and ICT in EFL classrooms, This review centers the learner's self-regulation, beliefs, and social context to explain when and why interventions succeed (Yin et al., 2023).

In this review, critical thinking in writing is understood as the overall quality of a student's argumentative output. It refers to the ability to present a clear and debatable claim, choose credible and relevant evidence, and explain explicitly how that evidence supports the claim. It also involves acknowledging counterarguments, offering reasonable rebuttals, and ending with a well-justified conclusion. This definition is consistent with the CT Value Rubric, which highlights the use of evidence, awareness of assumptions and context, and the strength of conclusions. It also aligns with Toulmin-based models of argumentation—commonly used in L2/EFL writing studies—that focus on the relationship among claims, data, and warrants, including qualifiers and backing (Tian et al., 2024; Liu & Stapleton, 2020). This review offers a different contribution from earlier work because it brings together key psychosocial elements within a clear, evidence-based cascade model. The model shows how self-regulation, motivation, and social factors work together to shape students' critical thinking in EFL writing. On the conceptual side, it connects ideas from educational psychology with insights from applied linguistics. Methodologically, it draws on a PRISMA-guided synthesis of empirical studies published over the past decade and involving a range of research methods. Based on these gaps, this review aims to systematically map and evaluate psychosocial mechanisms that predict or mediate critical thinking in EFL writing. Specifically, it addresses two research questions: (1) What psychosocial factors contribute

to CT in EFL writing? and (2) Through what mediational or moderational pathways do these factors operate?

B. Methods

The review followed PRISMA 2020 guidance for transparent reporting (checklist available via the EQUATOR Network). The researchers pre-specified inclusion criteria, sources, search strings, screening steps, and data items. Because the target phenomenon intersects applied linguistics and educational psychology, they adopted broad search strategies and dual screening to mitigate selection bias (Page et al., 2021). This review focused on studies involving EFL learners in secondary schools, universities, and adult-education settings. Pre-service EFL teachers were also included as long as their performance was assessed through L2 writing. The studies examined any reliable indicator of critical thinking shown in writing—such as rubric-based CT scores, the quality of arguments, or higher-order thinking measures applied to writing tasks. The psychosocial factors considered covered a wide range, including self-regulated learning, metacognition, self-efficacy, resilience, motivation or grit, autonomy-supportive teaching and feedback, peer support, classroom climate, and anxiety or emotion regulation. The research designs varied widely. They included quantitative, qualitative, and mixed-methods approaches; quasi-experiments, randomized controlled trials, cross-sectional survey–performance studies, longitudinal designs, and design-based investigations. Systematic reviews and bibliometric analyses were used only as background sources and were not treated as primary evidence. The review covered studies published in English between January 2015 and September 2024. Excluded from the review were studies that focused solely on cognitive or linguistic skills without any psychosocial variables, research on L1 writing, and non-empirical papers such as commentaries or opinion pieces.

Between from July to September 2025, the researchers searched Scopus, Web of Science, ERIC, and publisher portals (Elsevier/ScienceDirect, Springer, Wiley, Taylor & Francis, Frontiers), supplemented by Google Scholar alerts. Sample strings combined (EFL OR "English as a foreign language") AND (writing) AND ("critical thinking" OR "higher-order thinking") AND (self-regulation OR self-efficacy OR metacognitive OR resilience OR anxiety OR "teacher support" OR autonomy OR motivation OR grit OR "classroom climate" OR feedback) with date filters (2015–2025). They also hand-searched reference lists of recent systematic reviews on CT in EFL writing and ICT-supported CT development (Yin et al., 2023).

The researchers extracted participant characteristics; educational level and context; writing task and CT operationalization; psychosocial measures and instruments; design;

intervention (if any); effect sizes or qualitative themes; and mediation/ moderation tests. According to Chong et al., (2022), methodological quality was appraised using adapted criteria for educational intervention and correlational studies (clear construct operationalization, validated measures, control/contrast conditions, treatment fidelity). For quantitative studies, they recorded reliability indices and analytic strategies (SEM, regression, mixed models). For mixed qualitative studies, they coded thematic claims about mechanisms (e.g., reflective dialogue fostering metacognitive monitoring), and for qualitative designs (credibility/transferability through triangulation and thick description), they cross-checked methodological standards and reporting practices with recent methodological guidance in applied linguistics.

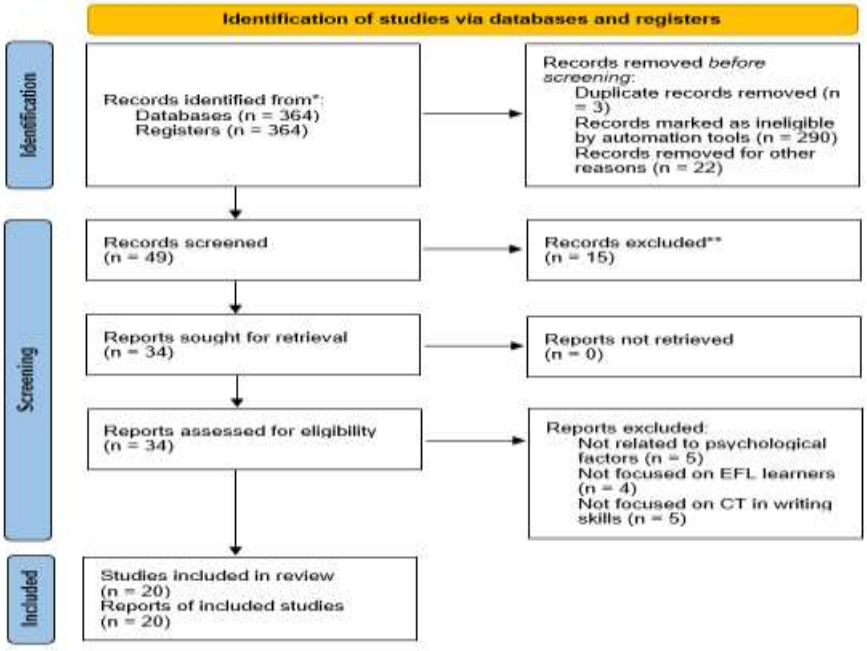

Figure 1. Prisma Diagram

Given heterogeneity in measures and designs, the researchers employed a narrative synthesis with vote counting by direction and (where reported) magnitude of effect. Where at least three studies reported comparable standardized links (e.g., SRL → CT-in-writing), The researcher summarized typical ranges (small/medium/large) rather than meta-analyzing. The researcher also mapped mechanistic pathways (e.g., autonomy support → engagement → SRL → CT) using evidence from mediation models and aligned qualitative explanations. These procedures ensured transparency, replicability, and minimized selection bias throughout the synthesis process.

C. Results and Discussion

Corpus Overview

From 364 records screened, 20 studies met inclusion criteria (9 quantitative, 3 mixed-method, 8 qualitative). Most came from East and Southeast Asia and the Middle East/North Africa. Undergraduate samples dominated, with argumentative writing as the modal genre. CT outcomes were operationalized via essay rubrics, argument-structure analyses, or standardized HOTS scales adapted to writing tasks. Psychosocial constructs were typically measured via established scales (e.g., SRL strategy questionnaires, writing self-efficacy scales, resilience/grit indices), increasingly complemented by process data (learning diaries, think-aloud) and technology traces (LMS logs; AI-feedback interaction logs) in post-2022 studies (Sun et al., 2024).

RQ1. What are the psychosocial factors contributing to CT in writing?

1) Self-Regulated Learning (SRL) and Metacognition

It found that SRL which covers planning, monitoring, strategy use, and self-reflection shows the most consistent positive association with CT in writing. Studies that embedded SRL-based instruction (goal-setting, strategic drafting, reflective journals) reported medium to large improvements in argument quality and CT rubric scores, often across self-efficacy strata. Longitudinal evidence indicates that metacognitive experiences in writing (awareness of difficulty, monitoring, control decisions) track development in both writing performance and higher-order reasoning (Anggraeni et al., 2025). In line this with point, Halim & Hadiyanti (2021) support that although the proposed SEM showed an acceptable fit to the relationships among self-regulated learning, metacognitive awareness, and argumentative writing, the hypothesized significant effects of metacognitive awareness and self-regulated learning on students' argumentative-writing performance were not supported. In line with the mechanisms, SRL appears to facilitate epistemic vigilance (questioning sources/claims), argument planning (claim–evidence–warrant alignment), and revision for reasoning (not merely grammar). In quasi-experiments, SRL instruction paired with guided self-assessment led learners to interrogate evidence and make counterargument moves more frequently behaviors tightly linked to CT. Bibliometric analyses show SRL has become a central theme in EFL education over the last decade, reinforcing its salience as a lever for complex writing (Anggraeni et al., 2025). Then SRL scaffolds (checklists for claim-evidence linkage, reflective prompts targeting logic, and think-aloud modeling) should be embedded into writing cycles, not treated as add-ons. Instructors can use learning-oriented assessment to make SRL visible: criteria for reasoning moves, self-evaluation of argument strength,

and action plans for revision (Imsa-ard, 2025). While SRL and metacognition focus on learners' cognitive regulation, the motivational dimension represented by writing self-efficacy further determines how persistently they apply these strategies.

2) Writing Self-Efficacy

According to the synthesized studies, writing self-efficacy (WSE) correlates positively with engagement in feedback/revision and with the use of metacognitive strategies, which in turn relate to higher CT scores. Large-sample studies report that WSE predicts depth of processing (integrative reading–writing strategies) and persistence during complex tasks, while experimental work suggests interactive, collaborative writing can raise WSE. Emerging studies also probe links between WSE and CT directly in higher education, proposing that confidence enables risk-taking in argumentation and counterargument (Tsao, 2021; Alsowat, 2022). The way of efficacy beliefs is to mediate the effects of autonomy support and SRL on reasoning quality: supported, structured practice enhances WSE; higher WSE then increases the likelihood that students will attempt higher-order revisions (rebuttals, warrants) rather than surface edits. Some work also finds partial mediation by CT between self-directed learning and writing skill, suggesting reciprocal links among WSE, SRL, and CT (Maryam et al., 2025). Therefore, instruction should deliberately imply early wins (micro-tasks showing progress on reasoning moves), transparent rubrics for CT, and peer review protocols that emphasize idea quality to avoid WSE erosion by overemphasizing language accuracy. Beyond confidence and effort, learners' ability to monitor and evaluate their own reasoning reflects a deeper layer of metacognitive awareness

3) Metacognitive Awareness

Across EFL contexts, higher metacognitive awareness aligns with better CT performance and more strategic writing. Large-scale semester-long studies document that growth in metacognitive experiences co-occurs with development in writing; earlier work with pre-service teachers also found robust positive correlations between metacognition and CT (Sun et al., 2024). Also, Teng & Yue, (2023) reveal the analysis demonstrated that students with elevated metacognitive awareness tended to achieve superior critical-thinking outcomes in writing. In addition, metacognitive awareness supports evaluative judgment the ability to appraise source credibility and argument strength. Learners who report monitoring comprehension and controlling strategies are more likely to restructure drafts based on the logic of claims rather than the form of sentences. In implications, the instructors can integrate metacognitive talk into writing conferences; use prompts that ask students to justify why revisions improve claims; design reflective logs that track reasoning-specific decisions (e.g., "What counter-evidence did I search for?"). However,

sustaining these cognitive and metacognitive efforts requires emotional strength and persistence dimensions captured by academic resilience and motivation.

4) Academic Resilience, Motivation, and Grit

Academic resilience and motivational intensity consistently co-vary with CT in writing. Studies linking resilience, grit, and critical thinking show that more resilient learners produce higher-quality argumentative writing and persevere through feedback cycles; related work situates resilience within broader positive-psychology constellations (autonomy, motivation, emotion regulation) that uplift performance. In assessment-driven interventions, gains in argumentation often coincide with increased resilience possibly because transparent criteria and iterative practice normalize struggle (Mallahi, 2023; Trigueros et al., 2020). Consequently, resilience buffers the affective cost of deep revision and supports adaptive help-seeking. Motivation amplifies time-on-task for source evaluation and rebuttal crafting. As a result, classroom routines implication that normalize productive failure, highlight growth, and stage demanding tasks (scaffolded complexity) help sustain effort for CT-rich writing. Individual motivation alone may not suffice without supportive instructional contexts. Hence, teacher autonomy support and classroom climate emerge as crucial environmental enablers.

5) Teacher Autonomy Support, Feedback, and Classroom Climate

Perceived teacher autonomy support, providing rationale, choice within structure, and scaffolded challenge, relates to greater engagement and downstream performance in EFL classes. Although many studies measures speaking outcomes, mechanisms generalize: autonomy support → need satisfaction and engagement → strategic effort in complex tasks. Additional evidence indicates school/classroom climate (fairness, belonging) contributes to engagement patterns that enable SRL and CT. In writing classrooms, learning-oriented assessment and dialogic feedback are repeatedly associated with improved reasoning in essays (Y. Wang et al., 2024). Specifically, Abouyassine, (2023) emphasize that teachers' feedbacks can affect to learners' critical thinking in writing skills by guiding and developing their capabilities. In applying in the classroom, the teachers can use dialogic feedback (teacher ↔ student ↔ peer) which positions learners as authors making choices among claims and evidence. It reframes revision as reasoning rather than error-correction. Autonomy support reduces defensive avoidance, making students more willing to revise arguments. By concerning the findings and mechanisms, it can be implied that train teachers to provide rationale-rich prompts, feedforward on reasoning moves (e.g., warrants, counterargument), and structured choice in topics/sources to foster ownership. Besides the teacher's role, peer interaction provides an equally important social mechanism for developing reasoning and reflective engagement.

6) Peer Support

Peer dialogue especially when structured around argument maps or claim evidence reasoning protocols helps externalize thinking and socially regulates attention to logic. Studies of collaborative drafting show gains in WSE and SRL, which translate into stronger CT in writing; peer environments that are psychologically safe reduce the cost of trying complex ideas. Compared with teacher feedback, peer and self-feedback more effectively cultivate CT disposition and raise behavioral and emotional engagement (Zou et al., 2023). Then implementation rotating roles in peer review (logic checker, evidence curator) and calibrate with anchor texts is to stabilize standards. Despite these supports, emotional barriers such as writing anxiety can still impede engagement and reasoning, highlighting the role of emotion regulation.

7) Anxiety and Emotion Regulation

Writing anxiety correlates with avoidance behaviors (procrastination, minimal revision), undermining CT because argument-building is effortful and iterative. Broader foreign-language anxiety has mixed effects, but recent syntheses suggest that dysregulated anxiety suppresses motivation and performance; some studies explore whether moderate arousal can be facilitative if paired with strong SRL. In EFL writing, high anxiety typically reduces engagement with feedback and narrows cognitive focus to correctness over reasoning (Rasool et al., 2023). Also, Cheng, (2022) supports these finding who claims that emotion regulation encompassing emotional intelligence, intuition, resilience, and professional expertise significantly shapes translation performance, implying an association between affective regulation and critical-thinking processes in writing. Anxiety consumes working memory, leaving fewer resources for evaluating evidence and structuring arguments. Emotion regulation (reappraisal, mindfulness) may restore capacity for reasoning. As a consequence, pair process-oriented assessment with emotion-regulation strategies (brief reappraisal prompts before drafting), and ensure early, low-stakes practice on argument moves to prevent threat spirals. In recent years, digital tools and AI-based feedback have introduced new dimensions to this psychosocial network, amplifying or moderating these processes depending on pedagogical design.

8) Technology-Mediated Feedback and AI-Supported Writing

It reveals that ICT and AI can enhance CT in EFL writing when they are embedded in SRL-rich designs (goal-setting, reflective cycles) and when AI feedback is framed as supplementary to human judgment. Conversely, overreliance on AI for text generation may dampen active reasoning and original argumentation, highlighting the importance of pedagogical governance. Studies show that students' metacognitive awareness in AI-

supported feedback contexts shapes whether they use suggestions to improve reasoning or merely polish language (Xu & Jumaat, 2025). Use AI primarily for diagnostic prompting for example "*List unstated assumptions in your draft*", require source verification logs, and embed reflection questions such as "*Which AI suggestion improved my claim? Which did I reject and why?*" to preserve learner agency and CT. Unlike previous systematic reviews that primarily emphasized instructional design or pedagogical interventions for developing critical thinking in EFL writing (e.g., Yin et al., 2023; Sajidin, 2025), the present study advances the field by integrating psychosocial and contextual mechanisms into a unified explanatory model. While Yin et al. (2023) focused on classroom pedagogies such as genre-based tasks, feedback, and ICT integration, and Sajidin (2025) synthesized general strategies for fostering CT, neither review systematically analyzed the mediational or moderational pathways linking self-regulated learning, motivation, self-efficacy, and social supports to CT outcomes. This review therefore extends the current understanding by mapping those psychosocial interconnections and proposing a cascade model that explains how autonomy support, engagement, SRL, and emotion regulation collectively shape critical thinking in writing. This comparative synthesis clarifies the theoretical and practical advances offered by this review.

RQ2: Through what mechanisms (mediation/moderation) do these factors operate?

Figure 2 presents the proposed cascade model illustrating and integrating across findings, the researchers propose a cascade model:

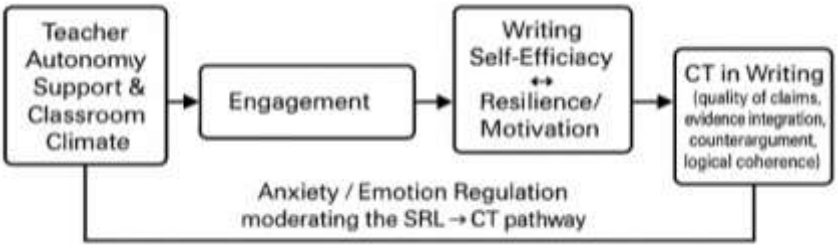

Figure. 2. A Working Model

Figure 2 shows the proposed cascade model, which outlines how the mediating and moderating processes work together. Findings from quantitative mediation analyses, supported by the qualitative data, point to a clear sequence: teacher autonomy support and a positive classroom climate lead to stronger engagement; this engagement helps students activate SRL and metacognitive strategies; these, in turn, interact with writing self-efficacy, resilience, and motivation, which then shape students' critical thinking in writing. Anxiety and emotion regulation play a moderating role, particularly in the link

between SRL and critical thinking. Put simply, when teachers create an autonomy-supportive environment, students become more behaviorally and cognitively involved in their writing tasks. This involvement allows them to plan, draft, and revise with better self-regulation and metacognitive control. As students gain mastery and feel supported, their confidence and resilience increase, making them more willing to take intellectual risks such as providing stronger justifications or addressing counterarguments and to revise their work with deeper reasoning.

Anxiety, especially when poorly managed, pulls students' attention toward correctness rather than meaning, reduces their openness to feedback, and weakens the effect of SRL on critical thinking. In contrast, simple emotion-regulation practices (such as cognitive reappraisal or short mindfulness pauses) help students recover the mental resources needed for evaluating arguments. Peer support offers social guidance throughout the writing process—for instance, through argument mapping or claim–evidence–reasoning routines. Technology-mediated feedback can strengthen or weaken this entire chain: within SRL-rich and autonomy-supportive settings, it enhances reasoning-oriented revision; when used merely as a shortcut, it replaces reasoning with superficial editing. This model aligns with mediation findings (e.g., self-directed learning → CT → writing skill; autonomy support → engagement → performance) and with process evidence from metacognitive writing studies. It also explains why interventions that only add tools or prompts without reshaping classroom climate and SRL routines have inconsistent effects (Maryam et al., 2025). In more explanation, it aligns closely with several established psychological theories that explain why these pathways operate as they do. The role of teacher autonomy support and classroom climate reflects core principles of Self-Determination Theory (Ryan & Deci, 2000), which argues that autonomy, competence, and relatedness promote high-quality motivation and sustained engagement. In the model, autonomy-supportive teaching strengthens students' engagement, which then enables deeper self-regulation and metacognitive monitoring during writing tasks exactly as predicted by SDT's emphasis on internalized motivation.

The interaction between self-regulated learning, metacognition, and writing self-efficacy is consistent with Social Cognitive Theory (Bandura, 1986). SCT highlights the reciprocal relationship between self-efficacy and self-regulation, where mastery experiences, feedback, and social persuasion reinforce students' belief in their writing capability. This dynamic appears in the model as the mutually reinforcing link between WSE, resilience, and motivation, all of which support risk-taking and reasoning-focused revision. The moderating role of anxiety and emotion regulation echoes principles from Affective-Cognitive Processing models, which explain how dysregulated emotions consume cognitive resources and narrow attention. In contrast, emotion-regulation routines help restore working memory and flexibility needed for evaluating arguments hence their

influence on the SRL → CT-in-writing pathway. Finally, the model's emphasis on peer collaboration and technology-mediated feedback fits within social-constructivist perspectives, where reasoning develops through shared dialogue, scaffolding, and reflective interaction. These theoretical foundations collectively support the logic of the cascade model and clarify why psychosocial and metacognitive mechanisms jointly shape critical thinking in writing.

Limitations and Future Research

Operationalizing CT in writing. Many studies infer CT from rubric subscales (argument quality, reasoning), but construct validity varies. Future work should triangulate rubric scores with argument mining or structured reasoning tasks embedded in writing. 2) Causal identification. Few RCTs isolate psychosocial mechanisms; more mediation analyses with longitudinal or experimental designs are needed. 3) Context diversity. Samples are concentrated in a few regions; under-represented contexts (Africa, Latin America) warrant attention. 4) AI literacy. Research should differentiate assistive vs generative AI use and measure epistemic outcomes (source scrutiny, originality). 5) Teacher variables. Work on teacher conceptions/assessment literacy suggests a hidden lever for classroom-level CT; scaling PD for dialogic feedback and autonomy support remains a priority (Li, 2023).

D. Conclusion

Across studies conducted between 2015 and 2024, self-regulated learning and metacognition consistently appear as the strongest psychosocial influences on students' critical thinking in EFL writing. These two processes shape how learners plan, monitor, and justify their ideas, and their impact is strengthened by factors such as writing self-efficacy, academic resilience, motivation, and supportive classroom relationships. At the same time, unmanaged anxiety and uncritical dependence on generative AI can weaken students' reasoning unless balanced with emotional regulation and reflective teaching. These insights point to the importance of embedding SRL routines, dialogic feedback, and collaborative reasoning activities in writing instruction, while positioning technology as a tool that enhances reflection rather than replaces effort. The review also offers a clearer conceptual understanding of how psychosocial, cognitive, and social processes work together to influence the quality of students' reasoning in writing. The proposed cascade model provides a foundation for future work to test these relationships more rigorously. Moving forward, experimental and longitudinal studies are needed to examine the causal links in the model, especially the indirect pathways through metacognition. Comparative research across cultural settings and investigations into AI-assisted writing environments would further deepen our understanding. Together, these

directions open new opportunities for both researchers and practitioners seeking to strengthen critical thinking in EFL writing.

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