



INSTRUCTIONAL STRATEGIES TO BRIDGE STRUCTURAL LITERACY AND HIGHER-ORDER REASONING IN EFL ACADEMIC WRITING

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Abstract

Academic writing requires EFL undergraduate students to master both formal text organization and higher-order cognitive processing. While instructional supports such as writing templates, sentence frames, and digital tools like Grammarly and generative AI effectively enhance structural literacy and surface correctness, novice writers frequently struggle to generate deep academic discourse. Building upon empirical baseline findings from Suciati et al. (2024) and Suciati and Palupi (2026), this qualitative conceptual study investigates the persistent gap between surface formal compliance and higher-order academic reasoning. Through a secondary qualitative analysis of 11 undergraduate research articles authored by fourth-semester EFL students, this paper examines four recurring cognitive writing bottlenecks: (1) stating broad problems rather than articulating explicit epistemic research gaps, (2) presenting serial citations instead of synthesized literature reviews, (3) reporting descriptive data without probing underlying causes, and (4) following formulaic discussion sequences that lack conceptual depth. The findings indicate that structural and linguistic scaffolding alone is insufficient to cultivate critical academic voice or complex reasoning. To address these challenges, this study proposes a targeted Cognitive Scaffolding (CS) framework that complements structural support with pedagogical strategies such as synthesis matrices, counter-argument mapping, and critical questioning routines. By shifting instructional focus from surface correctness to cognitive empowerment, this study offers practical insights for EFL writing instructors seeking to foster meaningful academic argumentation and analytical depth in student writing.

Keywords: EFL Academic Writing; Higher-Order Reasoning; Cognitive Scaffolding

INTRODUCTION

Academic writing remains a complex cognitive and rhetorical process for English as a Foreign Language (EFL) undergraduate students. While traditional writing pedagogy often prioritizes surface-level mechanics and formal text organization, recent study highlights that mastery over structural and linguistic features does not automatically result to deep conceptual reasoning or academic voice. In university writing courses, students are increasingly supported through scaffolding mechanisms such as digital writing assistants, sentence frames, structural templates, and explicit organization models. However, despite achieving formal acceptability, students frequently struggle to develop critical academic discourse.

Previous empirical research conducted at English Study Program of UPK established a foundational profile of student capabilities, revealing distinct patterns in how EFL writers navigate academic assignments (Suciati et al., 2024). While students demonstrate baseline competence in adhering to prescribed structural outlines, their papers often display significant limitations in synthesis, evidence interpretation, and



argument formulation (Suciati & Palupi, 2026; Suciati et al., 2024). This continuous struggle demonstrates a persistent gap between *structural literacy* (the ability to format and construct acceptable sentences) and *higher-order academic reasoning* (the ability to synthesize, problematize, and extrapolate findings).

To address this ongoing challenge, this article conceptually derives and expands upon the empirical findings of Suciati and Palupi (2026) and Suciati et al. (2024). It aims to synthesize the identified writing congestion—specifically in gap development, source synthesis, data contextualization, and argument depth—into an actionable pedagogical framework. By investigating how scaffolding can shift from structural reliance to cognitive empowerment, this study offers theoretical and practical insights for EFL writing instructors.

REVIEW OF LITERATURE

Scaffolding, rooted in Vygotsky's Zone of Proximal Development (ZPD), serves as an essential instructional strategy in EFL writing pedagogy (Hyland, 2019; Swales & Feak, 2012). Structural templates, phrase banks, and automated writing evaluation (AWE) tools—such as Grammarly and generative AI platforms—effectively lower cognitive load regarding mechanical accuracy and paragraph organization. However, hyper-reliance on structural scaffolding risks generating "formulaic writing," where texts meet superficial criteria but lack depth of critical inquiry (MacArthur et al., 2016).

Academic literacy requires writers to manage both micro-level linguistic choices and macro-level rhetorical functions (Suciati et al. 2024) observed in their analysis of student essays in TEFLA Journal, students frequently exhibit strong adherence to basic structural expectations while simultaneously demonstrating weaknesses in critical analytical engagement. Moving from summary to synthesis requires advanced cognitive operations, such as identifying conceptual overlaps, evaluating methodological boundaries, and articulating a novel research gap.

In novice EFL writing, source integration often manifests as "patchwriting" or isolated citation reporting (Howard et al., 2010; Pecorari, 2013). Writers list previous findings sequentially (e.g., "Author A found X; Author B found Y") without establishing comparative or integrative dialogue. Furthermore, empirical evaluations highlight that EFL writers tend to present empirical findings as static facts rather than interpreting *why* or *how* those phenomena occurred.

METHODOLOGY

This paper employs a descriptive qualitative design, deriving conceptual frameworks from the primary dataset established from analysing students' essays. The underlying corpus comprised 11 research articles authored by fourth-semester EFL students enrolled in the *Writing for Academic Assignment* course at Universitas PGRI Kalimantan. The primary data were gathered after students received extensive pedagogical scaffolding, including article templates, sentence pattern catalogs, data story guides, and permission to utilize AI tools such as Grammarly and Generative AI. The qualitative thematic analysis followed a three-tier inductive-deductive coding process:

1. Initial Categorization: Grouping student writing excerpts based on formal vs. conceptual performance.



2. Cross-Study Synthesis: Corroborating identified writing bottlenecks with earlier diagnostic findings from Suciati et al. (2024).
3. Pedagogical Abstraction: Mapping recurring thematic breakdowns (Gap Construction, Source Synthesis, Finding Interpretation, Discussion Depth) into targeted instructional interventions.

FINDING AND DISCUSSION

1. Re-evaluating Students' Strengths and Weaknesses

The derived analysis confirms that explicit scaffolding successfully equips EFL students with macro-structural competence. Students consistently utilize standard academic sub-headings (Introduction, Method, Findings, Discussion, Conclusion) and generate grammatically viable sentences. This aligns directly with the strength profile identified by Suciati et al. (2024).

However, a critical divergence occurs when tasks demand cognitive synthesis. The findings show four main breakdown points:

- a. Students present broad problem statements or research focus areas without articulating an explicit epistemic research gap.
- a. Previous literature is presented as isolated, sequential summaries rather than being integrated into a synthesized academic dialogue.
- b. Empirical findings are presented descriptively (e.g., reporting frequencies or percentages) without adequate explanation of *why* or *how* those results occurred.
- c. Discussions rigidly follow structural sequences (finding → citation → recommendation) while remaining tied to surface data rather than exploring complex conceptual relationships.

2. From Formulaic Structure to Conceptual Argumentation

- a. Gap Construction:
Students state real-world problems (e.g., procrastination or social media distractions) but fail to articulate the *epistemic gap* in existing literature. Pedagogical intervention must transition from asking "*What is the problem?*" to "*What remains unknown or under-analyzed in current research?*"
- b. Synthesized Literature Reviews:
Novice writers frequently present sources in isolation. Instruction should move beyond teaching citation formats toward teaching conceptual grouping, contrasting frameworks, and establishing relationships between studies.
- c. Deep Data Interpretation:
When presenting results, students successfully present descriptive statistics or frequencies. However, their explanations remain overly descriptive. As noted by Suciati and Palupi (2026), student discussions tend to repeat the result statements rather than probing underlying causes.

3. Proposed Pedagogical Framework: Cognitive Scaffolding (CS)



To bridge the gap identified in the TEFLA study (Suciati et al., 2024) and extended by Suciati and Palupi (2026), academic writing instruction must adopt Cognitive Scaffolding (CS) alongside Linguistic Scaffolding:

Scaffold Type	Focus Domain	Instructional Tool / Strategy	Expected Cognitive Outcome
Linguistic Scaffold	Grammar, Sentence Templates, Vocabulary	Phrase banks, Grammarly, GenAI tools	Accurate sentence-level output
Structural Scaffold	Text Layout, Section Headers	IMRaD Templates, Outline Guides	Formally organized article
Cognitive Scaffold (Proposed)	Critical Synthesis, Reasoning, Argumentation	Synthesis matrices, "Why/How" probing prompts, Counter-argument mapping	Deep academic discourse and novel gap development

CONCLUSION

Linguistic and structural scaffolding are valuable entry-level mechanisms for EFL writers, reducing mechanical anxiety and ensuring formal text compliance. However, as demonstrated by the series of studies at University of PGRI Kalimantan (Suciati et al., 2024; Suciati & Palupi, 2026), formal correctness does not guarantee critical academic depth. EFL writing instruction must evolve beyond teaching templates and grammar rules. Future writing design should explicitly integrate cognitive scaffolding focused on synthesis matrices, critical questioning routines, and analytical interpretation of empirical data to empower EFL students to construct meaningful academic argument.

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