

Socially Situated Critical Thinking in EFL Academic Writing: Pedagogical Challenges in Omani Higher Education

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Abstract—The researchers investigate critical thinking (CT) approaches from the perspective of English as a Foreign Language (EFL) academic writing education at an Omani higher education institution. This study approaches CT based on critical pedagogy and sociocultural theories, which view CT as a social practice. A longitudinal mixed-methods analysis was adopted and applied on 93 undergraduate students whose CT skills in writing were assessed at the exit level of Foundation and Post Foundation (undergraduate English courses). The research output showed that students made limited progress in demonstrating CT skills, and struggled to connect their arguments using evidence while their writing clarity drastically declined. The research results showed that students who attended government schools faced increased challenges in accessing academic discourse, which created greater difficulties for them. Additionally, minimal gender differences in students' performances were noted in the study.

Index Terms—critical thinking, academic writing, sociocultural theory, critical pedagogy, longitudinal study

I. INTRODUCTION

Critical thinking is the cornerstone for accomplishing the United Nations Sustainable Development Goal 4 (SDG 4) because it constitutes quality education, innovative learning methods, and lifelong learning opportunities. The surge of educational competition demands that students develop critical analysis abilities and scientific and business argumentation techniques. Students can present their thoughts and share their ideas effectively due to these competencies (Alawad, 2025). SDG 4 emphasizes why critical thinking needs to be embedded into educational programs by stating that it enhances both professional opportunities and creates innovative citizens and engaged community members (UNESCWA, 2023).

In Academic English, critical thinking (CT) is an important skill. Studies have confirmed that critical thinking directly relates to writing because written texts connect ideas, expressions, and strong argument construction (Halpern, 2014). Foreign language learners in EFL settings navigate two demanding obstacles: language difficulties and cognitive engagement, which force them to examine data, evaluate its value, and assemble it with new concepts to build unified arguments (Facione, 1990; Vygotsky, 1986).

Oman's vision for 2040 aligns with SDG4 and emphasizes a good education to provide pupils with the necessary academic and professional skills. The General Foundation Program is built to bridge the gap between secondary school and higher education by helping students build better language skills, mathematical competency, and intellectual thought. Since most courses in higher education are taught in English, building strong CT skills in writing is necessary (Oman 2040, 2023).

This study explores how gender, language proficiency, and learning experience influence the development of critical thinking (CT) in EFL writing among students in Omani higher education. It addresses the lack of research on this topic in Oman and aims to uncover students' challenges in developing CT skills. The study also examines students' perceptions of strategies for enhancing CT in writing, with implications for improving teaching methods. Additionally, it aligns with SDG 4 by promoting effective practices for fostering intellectual growth and preparing students for academic and professional success.

II. LITERATURE REVIEW

A. *The Role of Critical Thinking in the Academic Writing Process*

Critical thinking is a valuable skill in developing academic writing because it forms the basis for creating logical arguments that build organized and persuasive content. Through critical thinking, writers develop depth of analysis, allowing them to deeply probe their subject matter, which leads to more rigorous and original work. This study inspects the role of critical thinking, its key constituents, and its effect on the quality of scholarly output.

Academic writing can be defined as more than just recounting facts and data; it requires the creation of powerful arguments that integrate evidence alongside logical reasoning. Critical thinking is the essential factor motivating writers to examine fundamental beliefs while assessing available data and examining different viewpoints. Critical thinking transforms the writing process into more than just repeating facts; it enables writers to actively engage with ideas that strengthen academic discussions (Facione, 1990).

Providing information in academic writing is essential while developing argumentative support by evidence and logic remains essential. The authors need critical thinking in their writing process because it teaches them to evaluate assumptions and evidence while viewing alternate viewpoints. Through this transformation, writing transitions from fact reporting into an active thought process, adding meaningful value to scholarly dialogues (Simonovic et al., 2023).

B. *Use of SDG in Teaching EFL*

The implementation of Sustainable Development Goals (SDGs) within English as a Foreign Language (EFL) learning environments has gained enhanced interest during the past couple of years. SDG-based subjects serve as relevant educational material for language education and strengthen the critical analysis capabilities of students. One of the issues that many EFL teachers face is the problem of providing the tools important for students to deal with global issues in their English language classes (Mambu, 2022). This process of EFL students working with genuine international problems leads to essential cognitive skills which support their academic progress as well as protective behaviour as citizens. According to Al Kindi (2017), the implementation of critical thinking learning activities within EFL curricula enhanced student capabilities of analysis and their interest in global matters. People learning English as a foreign language showed higher performance in their argumentative writing after participating in critical thinking practice (Nejad, 2022).

Incorporating SDGs into English as a Foreign Language (EFL) classrooms has become popular in the last decade. SDG-related educational content serves as relevant subject matter for language classes to build critical thinking capabilities in students. EFL tutors face a challenge in providing appropriate resources to English language students from minority language countries for addressing worldwide issues (Mambu, 2022). It has been found that the involvement of EFL students in discussing and solving real-world problems has contributed to the development of their academic skills and made them global citizens. Al Kindi (2017) found that the implementation of critical thinking tasks within EFL curricula enhanced students' analytical abilities and their interest in worldwide subjects. EFL students achieved better results in argumentative writing tasks when they received instruction in critical thinking (Prayogi et al., 2022).

Astawa et al. (2024) explain how teaching the SDGs in EFL instruction helps students acquire methods to handle worldwide problems and stress that SDG implementation helps students develop cultural awareness together with universal awareness and critical thinking. Students learning English as their foreign language develop deeper understanding of global issues than simple language proficiency when their lessons include topics on Sustainable Development Goals and sustainability. The use of SDG-related topics enables the development of critical thinking abilities as well as global awareness skills that foster active citizenship development (Monzó-Martínez, 2024).

C. *Gender Differences in the Critical Thinking Process*

Gender-based differences influence the development of students' critical thinking and writing processes, shaped by a combination of genetic, environmental, and sociocultural factors (Mayan & Mishra, 2022). Educational systems and social norms significantly contribute to how males and females cultivate critical thinking skills. Research indicates that females often adopt collaborative and reflective learning strategies, enhancing metacognitive awareness and self-regulation (Bagheri & Ghanizadeh, 2016), while males prefer independent and analytical tasks, fostering assertive reasoning. These patterns can impact performance in argumentative writing, especially in societies that value assertiveness, where male students often excel (Noroozi et al., 2022). However, in more egalitarian societies, gender differences are minimal. Classroom environments that encourage open discussion benefit all students, but gender dynamics can still influence participation and outcomes (Albarracín-Vivo et al., 2024). Studies have shown that females often use discourse synthesis and flexible thinking more than males (Zhao et al., 2024). Salahshoor and Rafiee (2016) found no significant difference in critical thinking ability between male and female Iranian EFL learners, suggesting equal potential. Preferences in assignment types also differ, with females favoring teamwork and peer collaboration, which helps develop deeper critical thinking (Albarracín-Vivo, 2024). Longitudinal research is needed to explore further how these differences evolve.

III. THEORETICAL FRAMEWORK

The presented study draws ideas from sociocultural studies of language learning (Vygotsky, 1986) and critical applied linguistics (Pennycook, 2004) which regard academic writing as heavily impacted by social and ideological elements. Teachers are used to seeing critical thinking as an important skill for all EFL students and occasionally they do not notice how identity, power and beliefs impact students' approach to learning (Luke & Dooley, 2011).

According to Freire's (1970) findings, critical thinking can be defined as a dialogic process that can be developed through a collaboration between teachers and students. It can be nurtured through mutual dialogues and student-led engagements which help them develop their perspective of the real-world issues and become and active agents of change.

Omani EFL students need to manage the diverse linguistic and cultural demands currently found in postcolonial EFL educational settings. Tasks that integrate Western rhetorical norms often function as gatekeeping barriers that prevent learners without those rhetorical norms from accessing knowledge according to Canagarajah (2002). The framework indicates that writing development needs to be examined through its social inequalities combined with teaching decisions.

This research integrates the New Literacy Studies perspective (Lankshear & Knobel, 2006) because it demonstrates that academic writing along with critical thinking functions as socially situated practices instead of isolated abilities. The availability of feedback, access to digital learning resources and instructions on sustainability related topics have a major influence on students' critical thinking skills.

IV. METHODOLOGY

A. Research Questions

The study investigates the following questions:

1. How effectively do students demonstrate critical thinking skills in sustainability-related writing tasks?
2. What challenges do students face in demonstrating critical thinking in their academic writing?
3. How much do interventional academic writing courses in post-foundation influence students' ability to develop their CT skills as reflected in their thesis development, use of evidence, and argument construction?
4. Do gender and previous educational background impact students' CT skills?

B. Research Setting

The study was carried out in a higher education institution in the Sultanate of Oman, where students must complete an English, Math, and IT Foundation course for over a year before taking up their majors. The Foundation Program offers one year of comprehensive instruction, including intensive language proficiency, mathematics, and IT skills training. Post-foundation courses in English and academic writing include ENG 101 and ENG 102, which stress instruction in language and critical thinking.

The study examined writing samples from advanced-level students in the Foundation Program and post-foundation composition courses. Participants completed one full year of English instruction at the Foundation level before taking the first test and then about six months in the post-foundation course before taking the second test.

Approval was obtained from the Foundation and General Education departments, the respective HODs, and the college Ethics Committee for the study.

C. Research Design

This mixed-method longitudinal study analyzed critical thinking development in 93 students' writings before and after completing ENG 101 and ENG 102. Quantitative statistical analysis was integrated with qualitative thematic analysis to track progression. A pre-post quasi-experimental design tracked the same participant group across two assessment points:

1. Foundation-Level Writing Assessment – Students at the exit level of Foundation (Advanced) were given an essay on sustainability to complete in an hour to assess their critical thinking abilities.
2. Post-Foundation Writing Assessment (ENG 102) – The same students underwent rigorous language and critical thinking instructions in ENG 101. They were asked to write an argumentative essay by the end of ENG 102.

The level of English proficiency desirable at this point was B1 and a little above. This linguistic level is considered necessary because it reflects the participants' ability to use basic communication skills in their careers while showing their limited yet usable command of the language (Alawad, 2025).

D. Sampling

The random stratified sampling technique was used to select participants evenly across STEM, business, social sciences, and IT academic disciplines while maintaining gender balance to study performance variations. The authors obtained ethical approval and all collected data was deidentified.

E. Instruments Used in the Study

Critical thinking development in EFL academic writing was evaluated using quantitative and qualitative research instruments within the study's methodology. The key instruments included:

1. Writing Assessments – Students' CT skills were evaluated at the foundation (A2.2-A2.3 CEFR) and post-foundation (ENG 102) levels by giving pre- and post-tests. The Kansas State University Critical Thinking Scoring Rubric, a standardized rubric used in various academic institutions, was applied to mark the students' writings.

2. Rubric-Based Assessment- The seven CT criteria were used for essay evaluation by teachers through a rubric-based assessment method, providing reliable assessments ($\kappa > 0.85$) and valid scores.

3. Surveys – Using 10-item survey questions, researchers gathered feedback from students regarding their CT learning struggles, how they received teacher evaluation, and the strategies they utilized for improvement.

F. Data Collection

Both quantitative and qualitative methods were used to analyze students' critical thinking processes and challenges in writing:

Quantitative method – Used to analyze and evaluate students' performance before and after taking the General Education Writing courses.

Qualitative method – Used to analyze and evaluate perception of feedback, strategies for improvement, and challenges faced.

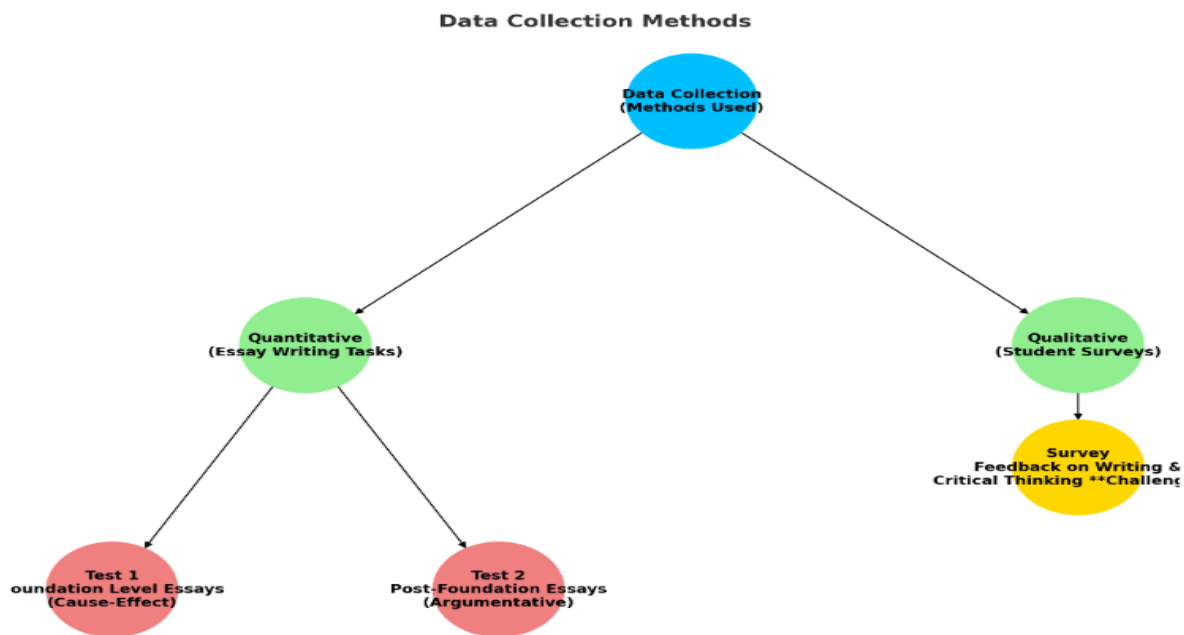


Figure 1. Structure of Data Collection

V. ANALYSIS

A. Quantitative Analysis

Dataset & Measures - The study adopted a pre-post paired sample t-test to compare critical thinking scores before and after ENG 102. A t-test was used to compare the mean score of the same students on the critical thinking scale during the foundation (pre-test) and post-foundation (post-test) courses after they took ENG 102.

The quantitative analysis measured students' writing progress through two tests.

Test 1: Foundation Period (Advanced Level)

Students at A2.2–A2.3 level wrote a 250-word cause-and-effect essay on “Pollution of lakes, rivers, and seas adds to environmental damage.”

Discuss the problems and solutions to this.

After six months of essay training, topics covered during the course included in-depth reading and discussion on sustainability-related topics, such as weather, energy, animals, environment, and economics (Unlock 2 and 3 - Units 2, 3, 4, 5 and 6) (Westbrook et al., 2021). The writing assessment was conducted in class under the supervision of four trained teachers, with participants were given one hour to complete their essays. The essay topic was approved by both the level coordinator and the department head before administration.

Test 2: Post-Foundation Period

After completing the Foundation level, students underwent a pedagogical intervention as they took ENG 101 and ENG 102, focusing on problem-solution, classification, and argumentative essays on sustainability.

Finally, a writing test consisting of a 500-word argumentative essay was administered post-ENG 102 course to the same cohort. The topic given was the following:

“Every day, millions of people go shopping and need a bag to carry their things. Some choose plastic bags because they are light and easy. Others use reusable bags to help the environment and reduce waste.”
 Should people use plastic bags or reusable bags when shopping?

A standardized question paper approved by the research committee was used, and the participants were given two hours to complete the paper under three trained proctors. Digital devices were not permitted during the test.

The Kansas State University Critical Thinking Scoring Rubric was adapted to assess the essays at both levels:

TABLE 1
 DESCRIPTION OF THE SKILLS ASSESSED

Skill Assessed	Description
Summarizing the Problem/Issue	Ability to clearly define the research question or topic.
Considering Context and Assumptions	Recognizing biases, assumptions, and contextual influences.
Communicating Own Perspective	Developing an independent, well-supported viewpoint.
Analyzing Supporting Evidence	Evaluating the credibility and relevance of cited sources.
Integrating Other Perspectives	Incorporating multiple viewpoints to strengthen arguments.
Assessing Conclusions & Implications	Drawing logical, well-reasoned conclusions.
Communication and Coherence	Clarity, organization, and logical flow of ideas

The rubric was selected to ensure validity and reliability due to its established use in CT assessment and its alignment with Facione’s (1990) critical thinking model.

Each criterion was scored on a 1–6 scale, with a total possible score of 42. Two trained raters achieved an inter-rater reliability score of 0.85.

(a). *Analysis Techniques*

Paired sample t-tests were used to assess performance changes from Foundation to ENG 102.

Effect size (Cohen’s d) measured the practical significance of score changes.

Pearson correlation analyzed relationships between gender, schooling background, and critical thinking performance.

(b). *Findings From Paired t-Tests*

No noticeable developments were seen in the critical thinking scores. (Foundation Mean = 21.34, ENG 102 Mean = 20.69; p = 0.215).

A remarkable decline in communication skills scores was observed (p = 0.002), indicating the difficulties students faced with being clear in ideas and organizing their thoughts in ENG 102.

Assessing Conclusions & Implications showed minor improvement (+0.13), though not statistically significant.

All other skills showed slight, non-significant declines.

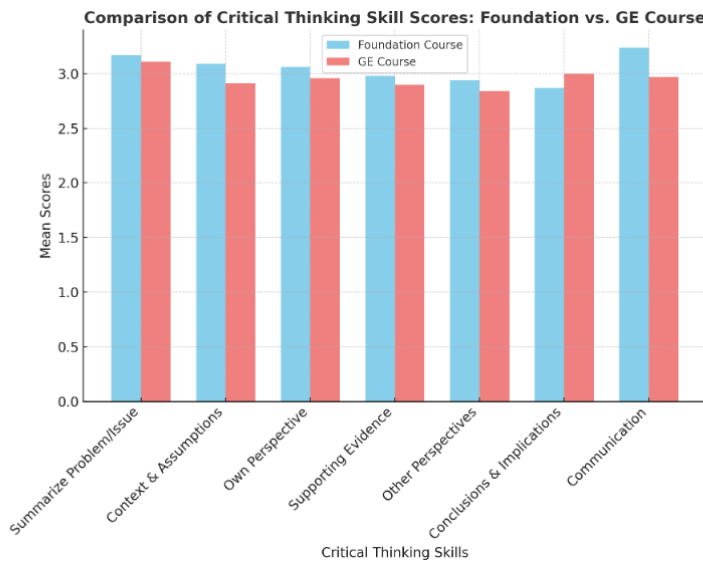


Figure 2. Bar Graph Highlighting the Scores Generated After Foundation and GE Writing Courses

B. *Correlation Analysis*

(a). *Gender-Based Findings*

There were no significant gender differences in total critical thinking scores in the Foundation or ENG 102 course ($p > 0.05$).

Male students outperformed females in Context & Assumptions in Foundation ($p = 0.007$), but this gap disappeared in ENG 102.

(b). School Background Findings

Government school students scored significantly lower in Context & Assumptions ($p = 0.01$), Assessing Conclusions ($p = 0.03$), communication ($p = 0.002$), and overall critical thinking ($p = 0.004$) in Foundation.

This disadvantage persisted in ENG 102, with government school students continuing to underperform in communication ($p < 0.001$) and total scores ($p = 0.001$).

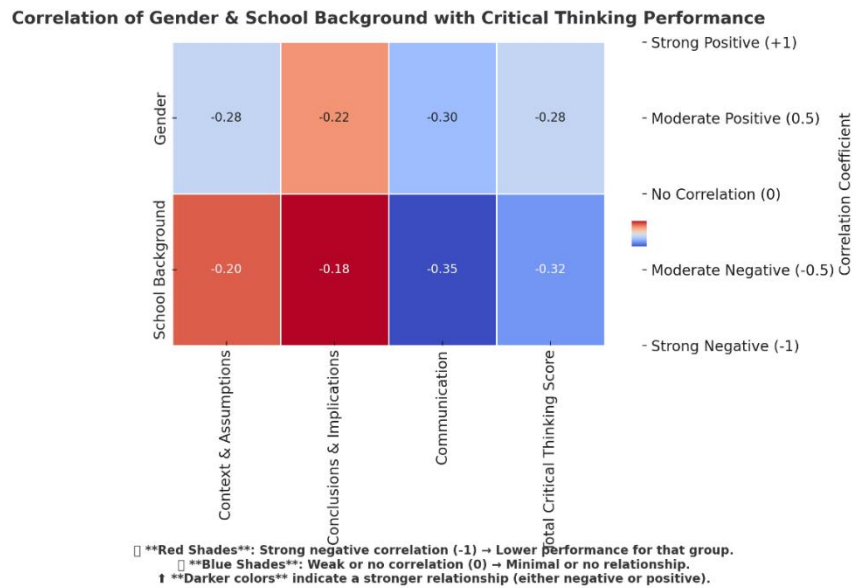


Figure 3. The Correlation Heatmap Visually Represents the Relationship Between Gender, School Background, and Critical Thinking Performance in Different Skill Categories

C. Qualitative Analysis

A survey consisting of 10 questions (open-ended questions) was completed by 89 of the same 93 students, and it examined difficulties in writing about sustainability-related topics. The questions and the answers were mainly translated into Arabic for clearer expression. The questions were divided into:

- Students’ perception of challenges faced in critical thinking.
- Their opinion on feedback received and the strategies they found helpful to generate ideas.

The questions assessed challenges faced by students in generating ideas.

(a). Analysis of the Challenges Faced as Perceived by Students

Thematic analysis by Clarke and Braun (2013) was implemented to analyze students’ survey responses, and it revealed significant challenges.

TABLE 2
ANALYSIS OF CHALLENGES FACED

Challenge	% Reporting difficulty
Forming a clear thesis	40%
Understanding complex concepts	38%
Integrating supporting ideas	46%
Time constraints	37%
Lack of confidence	15%

(b). Perception of Feedback

Most students welcomed academic feedback on their writing, with 92% reporting that feedback was helpful, indicating its role in improving writing and critical thinking.

Student Perception of Feedback in Improving Critical Thinking

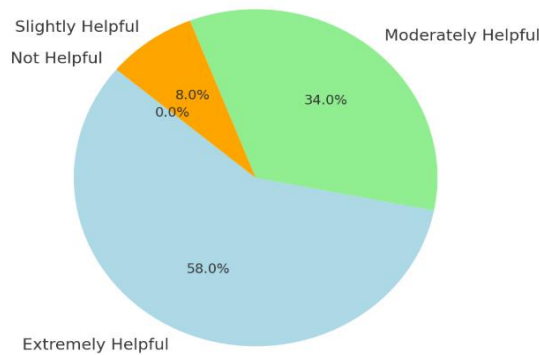


Figure 4. Evaluating the Impact of Feedback

(c). Strategies for Improvement

Students highlighted various strategies as helpful, with creating outlines for generating ideas topping the list.

TABLE 3
STRATEGIES FOUND USEFUL BY STUDENTS

Strategy	% of Students Using It
Creating outlines and discussions with peers	52%
Analytical writing exercises	37%
Asking critical questions	30%
Reading academic papers	28%

The research reveals that students struggle with processing complex ideas, supporting Paul and Elder's (2010) claim that lack of prior knowledge hampers idea simplification. However, participants valued peer discussions for idea development and needed systematic intellectual guidance. Their awareness of constructing logical arguments, adopting autonomous learning strategies, and seeking feedback indicates a positive shift in critical thinking and academic writing practices.

(d). Reliability and Validity Measures

The following measures were adopted to ensure the study's rigour:

Triangulation: To ensure consistency, data was collected from:

1. Student questionnaire
2. Writing samples
3. Quantitative assessments.

The sources were then cross-referenced.

- Inter-rater reliability: Two experienced teachers marked the writing samples, achieving $\kappa > 0.85$ for rubric consistency.
- Validity: The critical thinking rubric was piloted with a small student group to check the assessment parameters before full-scale implementation.

VI. DISCUSSION

A. Minimal Improvement in Critical Thinking Skills

The paired sample t-test executed in the study demonstrated there was no significant statistical difference between students' critical thinking (CT) scores at the foundation level and across post-foundation courses. Insights into evidence analysis, perspective evaluation, and supporting argument integration failed to show development during the study period. The study supports Paul and Elder's (2010) position regarding CT development, which states that the development of CT skills requires purposeful instruction through extended classroom teachings because the present education systems might lack sufficient instruction.

Wingate (2012) emphasizes that students require instructional scaffolding when shifting from basic writing to analytical academic writing. The results from students receiving six months of interventional academic writing support through topic discussion and essay analysis showed that these learning methods failed to enhance thesis writing capabilities and argument development skills- thus aligning with the educational research by Brookfield (2012) and Ennis (2018), which mentions that simply looking at various writing tasks does not significantly improve CT skills.

B. Decline in Communication Skills

The data shows students performed worse in writing ($p = 0.002$), indicating difficulty organizing their arguments and keeping their messages direct and easy to follow in higher-level assignments. Kuhn (1999) established that students experience difficulties when writing between structured and open-ended assignments that demand advanced argumentation. The study conducted by Mason and Atkin (2020) and Al Barwani and Osman (2011) indicates that without proper instructions in academic discourse formation, students may struggle with organization, and this was supported by the findings of the current study, where students found it more challenging to express their thoughts and structure arguments than in introductory foundation courses.

C. Challenges in Applying Critical Thinking in Writing

Qualitative findings highlighted key difficulties students face when applying critical thinking (CT) to writing:

Thesis Development (40%) – Students struggled to formulate argumentative statements, supporting Mambu's (2022) findings on the lack of structured thesis development guidance.

Idea Integration (46%) – Students exhibited weak source evaluation, aligning with Facione's (1990) model emphasizing source evaluation as a crucial yet often underdeveloped CT skill.

Understanding Complex Concepts (38%) – Students faced challenges in simplifying abstract concepts, affirming Paul and Elder's (2010) view on the need for clear instructional methods. Difficulties were especially noted with SDG-related topics requiring the synthesis of layered arguments (Halpern, 2014).

The findings support Halpern's (2014) emphasis on organized CT frameworks and instructor-led practice. While SDG-related topics are seen as effective for CT development (González-Salamanca et al., 2020), the study shows that students struggled to apply CT skills to sustainability issues, highlighting a disconnect between classroom teaching and real-world application.

D. The Role of Feedback in Critical Thinking Development

Despite the challenges, 92% of participants found valuable feedback in developing arguments, reaffirming Abrami et al.'s (2008) view that organized critique enhances CT skills. Carless and Boud (2018) highlight that feedback exposes students to multiple perspectives. However, findings indicate students struggle to effectively use constructive criticism, suggesting a need for additional training in revision and self-reflection. Moore and Teather (2013) showed that collaboration and peer feedback improve feedback utilization - an approach recommended for future educational practices.

E. Gender and School Background Differences in Critical Thinking Performance

Results from the quantitative study showed no meaningful variations in CT scores between genders. This supported prior research about cognitive approaches to argumentation being influenced more by academic subjects than student gender (Ahmed Nadaf et al., 2018). Initially, only male students performed better than females in context and assumption assessment ($p = 0.007$), yet those performance gaps became undetectable after instruction in post-foundation writing. Socialization and classroom participation patterns influence gender differences in early CT skills (Saryanto et al., 2021).

In terms of school background, students from government schools displayed consistently lower CT-related writing abilities in all assessed dimensions, namely communication ($p < 0.001$), context and assumption evaluation ($p = 0.01$), and assessing conclusions ($p = 0.03$).

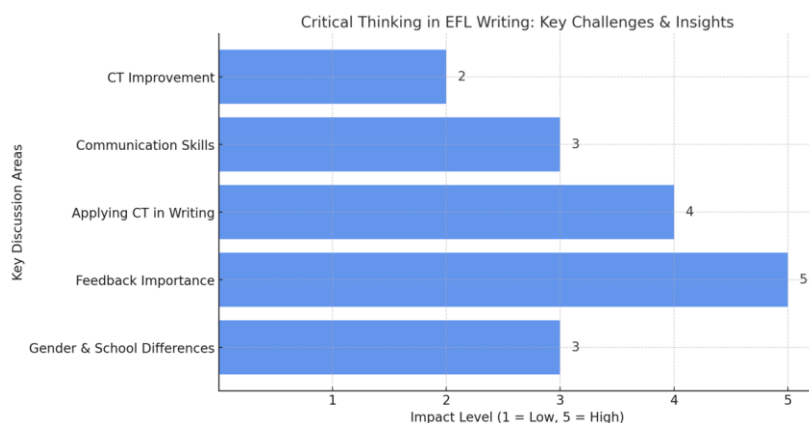


Figure 5. Key Areas of Critical Thinking Challenges in EFL Writing Measured on an Impact Scale

This research reinforces earlier findings regarding challenges in teaching critical thinking (CT) to language learners, highlighting persistent struggles between linguistic precision and conceptual understanding. Students without CT instruction often fail to develop strong arguments and evaluate evidence effectively (Pei et al., 2017), issues compounded by inconsistent pedagogical approaches and grammar-focused assessments. Scholars advocate for structured, inquiry-based learning and scaffolded writing tasks to explicitly promote CT (Halpern, 2014; Wingate, 2012). Additionally,

teacher training should prioritize reasoning-based assessments, with longitudinal studies tracking CT development over time.

F. Alignment With the Theoretical Framework

The study supports that critical thinking (CT) in EFL academic writing is a socially situated literacy practice rather than a cognitive skill (Street, 1984; Pennycook, 2004). Difficulties in thesis formulation and evidence integration stem from students' varied exposure to academic discourse shaped by prior education. The findings affirm Freire's (1970) emphasis on dialogic pedagogy for developing critical consciousness and confirm that CT is a culturally and socially constructed process influenced by teaching methods, language proficiency, and educational resources.

TABLE 4
THE CONNECTION BETWEEN THE THEORETICAL FRAMEWORK AND THE FINDINGS

Theoretical Framework	Findings
Critical Thinking as Socially Situated Literacy (Pennycook, Gee)	Students' poor exposure to academic discourse norms made establishing their thesis structure and sourcing evidence for argument presentation challenging.
Freire's Critical Pedagogy: Critical Consciousness through Dialogue	Student learning improved due to peer discussion and feedback, demonstrating the value of dialogic learning since 92% of participants found the feedback beneficial. The participants discovered value in their dialogues with their classmates.
Vygotsky: Learning as Social Mediation	Public school students failed to perform well in many skills, highlighting the influence of prior social/educational contexts.
Canagarajah: Academic Writing as Gatekeeping	Minimal writing progress despite coursework suggests that EFL writing instructions reinforced existing inequalities.
New Literacy Studies: Literacies as Social Practice	Students need scaffolding, topic familiarity, and structured argument-building support.

VII. CONCLUSION

The research shows that EFL academic writers struggle with critical thinking (CT), especially in integrating evidence, developing thesis statements, and maintaining clarity. Mere writing tasks are insufficient; detailed feedback and digital tools are needed. Longitudinal, multimodal assessments aligned with SDG 4 are recommended. The study supports the view of CT as a socially constructed practice shaped by resources, dialogic methods, and prior knowledge, aligning with Freire, Vygotsky, and New Literacy Studies.

A. Study Limitations and Future Research

This research provides beneficial knowledge about CT evolution in English as a foreign language academic writing, yet it contains important limitations that need attention:

1. Limited Scope: Conducted at a single university, limiting broader applicability.
2. Focus on Written Performance: Excluded oral and cognitive development.
3. Short-Term Analysis: Long-term studies are needed for deeper insights.
4. Instructional Variability: Differences in teaching methods were not considered.

B. Implications for Teaching and Curriculum Development

The following initiatives can be taken to mitigate these gaps:

1. Explicit Instruction in Argumentation: Structured teaching of argument development and source evaluation is necessary (Mambu, 2022; Paul & Elder, 2010).
2. Enhancing Feedback Utilization: Students benefit from feedback, and peer feedback platforms with guided revisions can further improve CT (Moore & Teather, 2013).
3. Bridging the Public and Private School Gap: Structured CT preparatory programs can help public school students match private school writing standards (Al Kaf & Al-Issa, 2023).
4. Technology and Critical Thinking: Digital platforms and AI tools can enhance students' argumentative and evidence-based writing skills in collaborative learning environments (Isaeva et al., 2025).

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