



Developing Rubric for Argumentative Writing Assessment Based on Multidimensional Approach

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ABSTRACT

This study developed a multidimensional rubric for assessing argumentative writing in English as a Foreign Language (EFL) context by integrating cognitive, metacognitive, affective, and socio-cultural dimensions. The rubric was designed in response to the limitations of traditional assessment tools that tend to focus on surface-level features, often neglecting essential aspects such as writer stance, planning, audience awareness, and contextual relevance. Employing a Research and Development (R&D) methodology, the study followed several stages: a needs analysis, literature review, initial rubric design, expert validation, and a small-scale implementation with undergraduate EFL students. The trial results demonstrated that the rubric effectively captured variations in writing performance across dimensions and supported a more nuanced understanding of students' strengths and challenges. Students showed stronger performance in cognitive aspects such as argument structure and reasoning, while affective and socio-cultural awareness remained areas for pedagogical improvement. Feedback from both learners and instructors confirmed the rubric's clarity, practicality, and potential to guide instruction and formative feedback. The study concludes that the rubric addresses critical gaps in current assessment practices and offers a comprehensive framework for supporting students' development as reflective and context-aware academic writers. Future research is encouraged to validate the rubric in broader contexts, integrate it into digital platforms, and explore its impact on long-term writing growth.

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INTRODUCTION

Argumentative writing is a cornerstone of academic communication, allowing learners to express opinions and justify them through structured reasoning and evidence. Within the context of English as a Foreign Language (EFL), this genre has become a platform for developing critical thinking, logical coherence, and language fluency. However, assessing argumentative writing in these settings remains a persistent challenge due to its complex, multidimensional nature that involves cognitive, affective, and socio-cultural processes.

A growing body of research has highlighted the limitations of traditional writing assessment, which often focuses on surface features such as grammar, vocabulary, and structural organization. For example, Siekmann (2022) observed that less proficient writers frequently struggle with coherence and structure issues that are not easily captured through conventional scoring methods. Meanwhile, Liu (2020) stressed the importance of aligning national assessment systems with holistic quality assurance standards. In terms of pedagogical practice, Huang (2020) demonstrated that the process-genre approach could enhance students' awareness of argumentative structure and content, suggesting that instruction and assessment must work in tandem.

Recent studies have begun to emphasize the need for more robust and multidimensional frameworks for assessing writing. Uludag (2022) validated a rubric designed for integrated writing in EAP contexts, pointing to the necessity of contextually grounded tools. Yaman (2018) found that engaging students with scientific reasoning processes improved the quality of their argumentative writing, while Zhang (2023) showed how chatbot-based feedback training helped EFL learners identify logical fallacies, thus improving argument clarity and critical reasoning. Other studies have emphasized the importance of writer voice (Zabihi, 2019, 2020), lexical development (Yoon, 2018), and collaborative drafting processes (Neumann, 2019) as integral to writing quality, elements often absent in traditional rubrics.

In light of these findings, it becomes evident that existing writing rubrics remain largely unidimensional, failing to accommodate the full range of competencies involved in argumentative writing. Although prior research has acknowledged the complexity of writing, there is still a lack of practical assessment models that integrate cognitive, metacognitive, affective, and socio-cultural dimensions into a single framework. The need for such a model is increasingly urgent, particularly as innovative instructional approaches, such as annotation-supported Socratic questioning in flipped classrooms have shown significant effects on improving students' argumentative writing and critical thinking skills, yet still reveal gaps in structured assessment frameworks (Chang, 2024).

This article offers a novel contribution by developing a multidimensional rubric for assessing EFL students' argumentative writing. The scientific novelty of this study lies in its integration of cognitive (e.g., logical reasoning, argument structure), metacognitive (e.g., planning and revising strategies), affective (e.g., engagement, stance), and socio-cultural (e.g., audience awareness, contextual appropriateness) dimensions into one practical and usable rubric. Unlike existing tools that assess writing in isolation from these domains, this rubric is designed to reflect the real-world demands of academic writing and provide meaningful formative feedback.

Based on the literature and educational needs, the research problem addressed is: How can an assessment rubric be developed to reflect the multidimensional nature of argumentative writing in EFL contexts? Therefore, this article aims to design, develop, and describe a rubric for assessing EFL argumentative writing based on a multidimensional framework, and to explain

how this rubric addresses gaps in current assessment practices while supporting more comprehensive and pedagogically useful evaluations.
article.

METHODS

This study employed a research and development (R&D) approach aimed at producing a valid and practical rubric for assessing EFL students' argumentative writing based on a multidimensional framework. The research procedures were adapted from the R&D model, encompassing three initial stages: (1) preliminary study, including a literature review and needs analysis; (2) product development, which involved designing the rubric based on theoretical and empirical foundations; and (3) expert validation, in which the draft rubric was reviewed and revised based on expert feedback. A comprehensive review of recent literature on writing assessment, argumentation, and rubric construction (e.g., Huang, 2020; Uludag, 2022; Yaman, 2018) informed the conceptualization of rubric components. In addition, informal interviews with tertiary-level writing instructors were conducted to identify challenges in evaluating argumentative writing and to gather expectations for a more holistic and applicable assessment tool.

Based on both theoretical and practical insights, an initial draft of the rubric was developed, comprising four core dimensions: cognitive (e.g., argument structure, reasoning, evidence use), metacognitive (e.g., planning and revising strategies), affective (e.g., stance and engagement), and socio-cultural (e.g., audience awareness and contextual relevance). The draft rubric was then subjected to expert validation by three professionals, two experienced writing instructors and one assessment specialist, who reviewed the content, clarity, and alignment with learning objectives. Feedback was collected through a structured rubric evaluation form and subsequently used to revise and improve the instrument.

The revised rubric was then implemented in a small-scale trial involving fifteen undergraduate EFL students enrolled in an academic writing course. Students were asked to produce an argumentative essay, which was then assessed using the rubric. In addition to the scoring data, qualitative feedback was collected from both students and the course instructor to evaluate the rubric's practicality and clarity. Based on the results of this limited implementation, further revisions were made to improve descriptor precision, inter-dimensional consistency, and linguistic clarity. The final version of the rubric thus reflects both theoretical grounding and empirical refinement, ensuring its usability in classroom assessment.

The flow of the research process is presented in Figure 1, which summarizes the sequential phases from literature exploration to final rubric refinement.

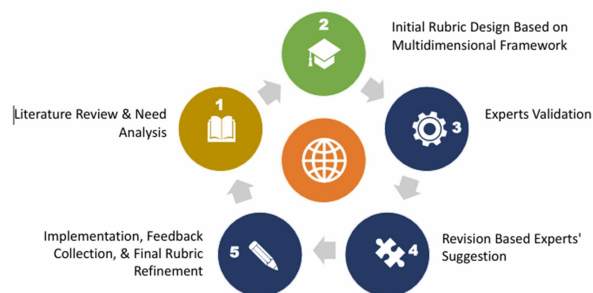


Figure 1. Research Flow of the Rubric Development Process

RESULTS AND DISCUSSION

The multidimensional rubric developed through this study was designed to assess argumentative writing in EFL contexts by integrating cognitive, metacognitive, affective, and socio-cultural dimensions. Its validation and implementation demonstrated both pedagogical relevance and classroom practicality.

A small-scale implementation involving 15 undergraduate EFL students revealed meaningful distinctions across rubric dimensions. Table 1 presents the average performance across the four assessed domains.

Table 1. Average Student Scores by Rubric Dimension (Scale: 1–4)

Dimension	Mean Score	Interpretation
Cognitive	3.3	Structured arguments, logical reasoning
Metacognitive	2.9	Moderate planning and revision strategies
Affective	2.6	Emerging stance and engagement
Socio-cultural	2.4	Limited audience awareness and context use

The results clearly indicate that students excelled in constructing arguments with sufficient logical reasoning and supporting evidence, which reflects their growing proficiency in academic reasoning. However, the metacognitive and socio-cultural aspects scored relatively lower, signaling that many learners still struggle with reflecting on their own writing process and tailoring their arguments to specific audiences or contexts.

This finding is significant because it highlights gaps often overlooked in traditional assessments. A rubric focused solely on linguistic correctness would not have revealed such insights. As noted by Andrade et al. (2022), rubric-based assessment that includes reflection-related criteria promotes learners' self-awareness and autonomy, skills essential in academic discourse development.

Beyond the numerical data, qualitative feedback from students and the instructor emphasized the rubric's role as a guiding framework. Several students reported that they began to consciously consider their stance, audience, and revision strategy, an indication that the rubric prompted deeper engagement with the writing process. The course instructor affirmed the rubric's clarity and usefulness in identifying students' strengths and learning needs beyond surface-level errors.

From a theoretical perspective, the integration of affective and socio-cultural dimensions into writing assessment aligns with current thinking in applied linguistics and writing studies. Unlike assessment models that reduce writing quality to grammatical accuracy or text structure (e.g., Bacha, 2018), this rubric echoes a constructivist approach to writing pedagogy, one that sees writing as a cognitive-social activity shaped by writer identity, purpose, and audience.

Furthermore, this study contributes to a growing effort to contextualize assessment practices within specific pedagogical realities. A recent study by Carrillo & Flores (2021), for instance, emphasized that assessment in higher education must move toward a transformative function that fosters learner development rather than merely categorizing performance. The rubric developed here supports this principle by functioning not just as a scoring instrument, but also as a pedagogical scaffold.

In terms of research impact, the findings answer the research problem clearly: a rubric that reflects the multidimensional nature of argumentative writing can be developed through a combination of theoretical grounding, expert input, and empirical testing. The rubric offers practical value by revealing dimensions of writing performance not easily observable through traditional tools. It also fills a gap in current assessment literature by providing a model that balances psychometric reliability with pedagogical usefulness.

However, the study acknowledges certain limitations. The trial was conducted with a small, homogeneous group, and further testing in more diverse educational settings is needed. Future research should include inter-rater reliability testing and examine long-term impacts on student writing development.

CONCLUSION

The present study concludes that a multidimensional rubric encompassing cognitive, metacognitive, affective, and socio-cultural dimensions provides a more holistic and pedagogically valuable tool for assessing argumentative writing in EFL contexts. The rubric enables educators to evaluate not only the structural and linguistic aspects of students' writing but also their reasoning process, engagement, and contextual awareness, dimensions often overlooked in traditional assessment models. Results from the small-scale implementation demonstrated that the rubric was both practical and informative, offering meaningful insights into students' strengths and areas needing support. Students benefited from the clarity of expectations, while instructors found the rubric helpful for guiding feedback and instruction. The study, therefore, contributes to the growing body of literature advocating for transformative and multidimensional approaches in language assessment, particularly in academic writing.

However, the study also acknowledges its limitations, especially regarding the small sample size and the limited classroom setting in which the rubric was trialed. Despite these constraints, the findings suggest that the rubric holds significant promise for broader application. To strengthen the generalizability and utility of the rubric, future research should apply it across diverse learning contexts and test its inter-rater reliability with larger cohorts. Moreover, it is recommended that teachers receive targeted training to implement the rubric effectively, particularly in interpreting affective and socio-cultural indicators. The rubric may also be adapted for integration into digital writing platforms to support formative feedback and autonomous learning. Longitudinal research is encouraged to explore how sustained use of the rubric influences students' writing development over time. Finally, involving students in using or co-constructing the rubric may further foster metacognitive growth, agency, and deeper engagement with the writing process.

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