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DEVELOPING AN ESP-BASED LANGUAGE LEARNING ENVIRONMENT TO HELP STUDENTS IMPROVE CRITICAL THINKING SKILLS IN WRITTEN OUTPUT

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Abstract
This study investigates how an ESP-based language learning environment can enhance students' critical thinking skills through written output. Drawing on a review of open-access literature, the paper analyzes international case studies from Vietnam, Indonesia, and other regions to explore effective instructional strategies such as Task-Based Language Teaching (TBLT), Content-Based Instruction (CBI), and ICT integration. Findings highlight that writing, when supported by context-specific materials, collaborative learning, and metacognitive activities, becomes a powerful tool for developing analytical and reflective thinking—skills essential for academic and professional success, including in Uzbekistan.

Keywords: ESP, critical thinking, written output, Task-Based Language Teaching, ICT, higher-order thinking, academic writing

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Introduction

In today's globalized academic and professional landscapes, English for Specific Purposes (ESP) has emerged as a powerful tool for equipping students with the language and cognitive skills necessary for success. Among the core competencies cultivated within ESP frameworks, critical thinking (CT) in written output holds a particularly significant role. As language teaching moves beyond the traditional focus on grammar and translation, the integration of cognitive and communicative tasks within subject-specific instruction is gaining momentum. This shift recognizes writing not merely as a linguistic task but as a vehicle for developing analytical, evaluative, and reflective thought.

Countries undergoing educational reform, such as Vietnam, offer valuable insights into how ESP can evolve to meet contemporary demands. Adopting communicative methodologies such as Content-Based Instruction (CBI), Task-Based Learning (TBL), and Problem-Based Learning (PBL), teachers have redefined the scope of ESP to improve both language acquisition and critical thinking development. These global trends are especially relevant to nations like Uzbekistan, where there is a growing emphasis on aligning higher education with international standards, fostering students' ability to think critically and write effectively within their professional fields.

Methodology

The author employed a qualitative research approach through the analysis of existing open-source literature on the integration of critical thinking skills within ESP-based language learning environments. The findings were synthesized from peer-reviewed journal articles, case studies, and educational reports, focusing on diverse instructional contexts and methodologies used to enhance students' critical thinking through writing. By exploring a range of pedagogical models and empirical studies, this literature-based analysis provides a comprehensive view of best practices and theoretical foundations relevant to ESP and cognitive skill development.

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Results

The shift in Vietnam's language education policy, from Russian to English post-1986 reform, underscores the nation's pivot toward global integration and its increasing reliance on English for science, technology, and professional communication. As Hassan (2023) emphasizes, this transformation has not only expanded the scope of English instruction but has also redefined English for Specific Purposes (ESP) to meet professional and academic demands. Initially rooted in technical vocabulary and reading translation, ESP in Vietnam now integrates communicative strategies through Content-Based Instruction (CBI), Task-Based Learning (TBL), and Problem-Based Learning (PBL) (Hassan, 2023, p. 1132; Nguyen et al., 2019). This evolution aligns with global educational trends that advocate for developing learners' higher-order thinking abilities—particularly critical thinking (CT)—in addition to language proficiency.

ESP's learner-centered nature is fundamental to cultivating critical thinking through written output. The instructor's role extends beyond traditional language teaching to include deep pedagogical content knowledge (PCK), which blends teaching strategies with subject expertise (Hassan, 2023, p. 1132–1133). Such a role is challenging because ESP instructors are often language experts rather than subject-matter specialists. However, they are expected to analyze learners' needs, select relevant materials, and deliver content that fosters analytical thinking and independent learning. As students must communicate complex ideas within specific domains, writing in ESP contexts becomes an ideal site for developing CT skills. For instance, case-based and task-based methodologies (Tatzl, 2015; Tsai, 2019) allow students to explore real-world problems, synthesize information, and articulate solutions—a process inherently tied to critical thought.

The implementation of ICT-enhanced strategies, such as flipped classrooms, blended learning, and online communities, further supports the integration of CT in ESP writing tasks. Studies such as those by Liu (2021) and Hsiao et al. (2021) illustrate the effectiveness of flipped models in improving learners' engagement, self-efficacy, and performance in writing tasks. Tools like WikiProject Cooperation (Wang, 2015) and Facebook groups (Rahman et al., 2019) provide collaborative platforms that encourage reflection, peer feedback, and iterative

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writing—crucial elements for cultivating critical thinking. In addition, approaches that incorporate discourse community awareness and rhetorical training (Cheng, 2019) help learners internalize disciplinary standards and articulate more structured, persuasive arguments, essential in developing CT in written outputs.

As Hassan (2023) suggests, an ESP-based environment should not merely transfer technical language knowledge but foster cognitive growth that equips learners for real-world professional challenges. This entails adopting an eclectic, adaptive teaching model that draws on constructivist frameworks (Liu, 2016), multimedia theory (Tsai, 2019), and personalized learning environments (Xu et al., 2020). The emphasis on writing as a cognitive and communicative activity positions it as a core tool for critical thinking development. With institutional support (Jiang et al., 2020) and diagnostic tools (Fox & Artemeva, 2017), educators can tailor instruction to students' academic and career trajectories. Thus, a well-structured ESP environment becomes a dynamic platform where language learning intersects with the cultivation of analytical and reflective skills vital for academic and professional success.

Developing an ESP-based language learning environment aimed at enhancing students' critical thinking in written output can be effectively supported through Task-Based Language Teaching (TBLT), as evidenced by Wibowo, Munir, and Suhartono's (2024) study on maritime cadets. Their research involving 64 cadets and two lecturers at a Merchant Marine Polytechnic in Surabaya demonstrated that TBLT significantly improved learners' critical thinking and reading comprehension skills through the use of ESP texts. Using a quantitative research design with observations, interviews, and pretest-posttest assessments, the study found that cadets exposed to TBLT outperformed their peers in analyzing, evaluating, and applying domain-specific knowledge to practical contexts. Statistical analysis via MANOVA and a significant Hotelling's Trace value ($p < 0.05$) confirmed the effectiveness of TBLT in fostering deeper cognitive engagement (Wibowo et al., 2024, pp. 5173–5175). These improvements in comprehension and reasoning directly support stronger, more analytical written output, making TBLT a powerful framework for cultivating critical thinking in ESP writing environments (Wibowo et al., 2024, p. 5177).

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An effective ESP-based language learning environment aimed at enhancing students' critical thinking in written output must be grounded in a comprehensive needs analysis and tailored instructional design. According to Syaripuddin and Latifa (2023), the lack of discipline-specific English materials at Universitas Muhammadiyah Parepare's Biological Department led to students rarely practicing English writing, despite its recognized importance in conveying scientific knowledge. The study emphasized the role of writing as a cognitive challenge (Olivier, 2019; Javed et al., 2013), which requires more than mastery of grammar—it demands engagement with higher-order thinking skills. To address students' needs, the authors identified necessary materials such as academic seminar language, biological texts from YouTube, and writing while listening exercises, underlining the importance of contextual relevance (Syaripuddin & Latifa, 2023, pp. 23–24). These findings highlight that ESP instruction should not only deliver content-specific vocabulary and discourse structures, but also cultivate the analytical and reflective skills central to academic success.

The writing process itself—comprising prewriting, composing, peer feedback, revising, editing, and publishing—acts as a scaffold for critical thinking development (Abas & Abd Aziz, 2016; Hernandez & Amarles, 2017). When students engage in activities such as evaluative writing, problem-solution writing, and cause-effect speculation, they must analyze information, construct logical arguments, and synthesize knowledge, thereby developing essential academic literacies (Horn, 2001; Goose, 2001). Writing also requires metacognitive awareness, as students are prompted to reflect on their choices during revision and peer review stages. For example, feedbacking and revising provide spaces for learners to examine not just content accuracy but also organization and argument strength—core elements of critical thinking (Syaripuddin & Latifa, 2023, pp. 25–26). Matching instructional materials to students' disciplinary and cognitive needs, ESP instructors can create a writing environment that fosters fluency, self-awareness, and intellectual rigour that will ultimately enable students to communicate effectively in both academic and professional settings.

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Discussion

The reviewed studies collectively highlight a strong correlation between ESP instruction and the development of critical thinking in writing tasks. In Vietnam's post-reform context, the evolution of ESP from a technical, vocabulary-heavy model to one enriched by communicative and problem-solving methodologies shows a deliberate shift toward cognitive development. Hassan (2023) and Nguyen et al. (2019) assert that integrating CBI, TBL, and PBL frameworks enables students to engage deeply with content, encouraging them to evaluate information, propose solutions, and articulate complex ideas—core components of critical thinking. Writing becomes an essential medium for expressing and refining thought, especially in technical and professional fields where precision and analysis are vital.

This emphasis on writing as a cognitive activity is further supported by studies incorporating technology-enhanced learning environments. Liu (2021) and Hsiao et al. (2021) demonstrate how flipped classrooms and online platforms improve not only students' engagement but also their self-directed thinking during writing tasks. Collaborative tools such as Wikis and social media communities foster iterative writing, reflection, and peer feedback—activities inherently linked to critical thinking development. Cheng's (2019) focus on rhetorical training and discourse awareness adds another layer by guiding learners to structure arguments more persuasively and with disciplinary appropriateness. These approaches point to the value of a multidimensional ESP environment that supports students' metacognitive awareness and intellectual growth.

Wibowo et al. (2024) and Syaripuddin & Latifa (2023) provide concrete examples of how task-based and discipline-specific instruction directly contribute to students' critical thinking skills. Wibowo's quantitative study of maritime cadets illustrates that TBLT, when applied with ESP materials, results in statistically significant gains in analytical reasoning and written performance. Meanwhile, Syaripuddin and Latifa highlight the importance of contextual relevance, demonstrating that students engage more meaningfully with writing tasks when materials reflect their disciplinary needs. These findings underscore a vital pedagogical principle: effective ESP environments must not only teach the

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language of a discipline but also enable learners to think and write like professionals within it.

Conclusion

The analysis of literature clearly shows that ESP-based instruction, when implemented with attention to communicative, task-based, and reflective methodologies, can significantly enhance students' critical thinking in written output. Writing, as both a product and a process, fosters the intellectual engagement necessary for success in academic and professional domains. Through techniques like flipped learning, peer feedback, and genre-specific discourse training, learners are encouraged to go beyond surface-level language use and develop deeper cognitive capacities. This positions ESP as a transformative approach, especially when writing is treated not just as a skill but as a developmental journey in thought and expression.

For countries like Uzbekistan, where English is increasingly viewed as a tool for academic advancement and international integration, these insights are particularly relevant. As universities strive to modernize curricula and prepare students for global challenges, adopting ESP-based writing instruction that prioritizes critical thinking can offer substantial educational gains. Based on international best practices and adapting them to local needs, teachers in Uzbekistan can help students become not only competent users of English, but also independent thinkers capable of articulating sound, cogent and contextualised ideas in writing.

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