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AI-powered pedagogy for argumentative essays in tertiary ELT: Insights from focus groups

Aldha Williyan[1], Muhammad Ilyas[2], Salah Shahat[3], Mochamad Guntur[4], Utami Rosalina[5]
[1]Universitas Siliwangi, Tasikmalaya, Indonesia
[2]STIT Al Hikmah Bumi Agung, Way Kanan, Lampung, Indonesia
[3]University of Benghazi, Benghazi, Libya
[4,5]Institut Prima Bangsa, Cirebon, Indonesia

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ABSTRACT

This study explores AI-powered pedagogy for teaching argumentative essays in tertiary English Language Teaching (ELT) through focus group discussions with six experienced ELT lecturers. The research addresses two key questions: how to develop AI-powered lesson plans for argumentative essay writing systematically, and what EFL students' perceptions of AI-powered tools' impact on specific dimensions of argumentative writing are. Using Framework Analysis of qualitative data, the study identifies four areas where AI enhances instruction: scaffolding argument development, providing real-time feedback, improving peer review, and fostering reflective revision. These insights informed the development of a structured 110-minute lesson plan integrating AI tools throughout the writing process. Student questionnaires revealed overwhelmingly positive attitudes (82-90%) toward AI-powered tools, with benefits perceived in generating better arguments, improving writing skills, structuring essays, and identifying flaws in reasoning. The findings suggest that AI, when thoughtfully integrated, can address persistent challenges in argumentative writing instruction by providing personalised support while maintaining a balance between technological assistance and learner autonomy. This research contributes to the growing discourse on AI integration in language education.

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Corresponding Author:

Muhammad Ilyas
STIT Al Hikmah Bumi Agung, Way Kanan, Lampung
Email: ilyaspujakesuma@gmail.com

1. INTRODUCTION

Argumentative essay writing represents a cornerstone of academic discourse, requiring students to investigate complex topics, establish and defend clear positions, and support their claims through logical reasoning and evidence-based argumentation. This sophisticated genre not only evaluates students' linguistic proficiency but also cultivates

critical thinking skills essential for academic and professional success [1], [2]. Constructing effective argumentative essays demands mastery of multiple competencies: developing compelling thesis statements, anticipating and addressing counterarguments, maintaining structural coherence, employing appropriate academic register, and integrating source material ethically and effectively [3]. For English as a Foreign Language (EFL) learners in higher education settings, these challenges are compounded by linguistic barriers, cultural differences in rhetorical organisation, and unfamiliarity with discipline-specific conventions.

In tertiary English language teaching (ELT), argumentative essay writing serves as a gateway to academic literacy and disciplinary discourse communities. University-level writing assignments increasingly expect sophisticated rhetorical awareness, nuanced argumentation, and precision in language use that surpasses secondary education standards. Research indicates that EFL learners face multidimensional challenges in this domain: cognitive difficulties in generating and organising arguments logically; linguistic obstacles in deploying appropriate lexical and grammatical resources; and metacognitive struggles in self-monitoring and revision processes [4], [5], [6]. Traditional pedagogical approaches—often characterised by prescriptive instruction, delayed feedback cycles, and limited individualisation—frequently fail to address these interconnected challenges [7]. Many conventional writing courses rely heavily on model-based instruction and summative assessment, offering limited opportunities for iterative practice and scaffolded development of argumentation skills [8]. As academic standards continue to evolve in response to globalisation and technological advancement, there is an urgent need for innovative instructional approaches that can bridge the gap between EFL learners' current capabilities and the sophisticated argumentation skills demanded in contemporary higher education and professional contexts.

Artificial intelligence (AI) powered pedagogy has emerged as a promising frontier in addressing these persistent challenges, offering unprecedented opportunities for personalised instruction, immediate formative feedback, and enhanced student engagement in writing development. The rapid evolution of natural language processing technologies has enabled the creation of sophisticated AI-driven educational tools that can analyse rhetorical structure, evaluate argument quality, identify logical inconsistencies, and suggest improvements in real-time [9]. These tools include intelligent writing assistants that provide scaffolded guidance on argument construction, automated feedback systems that offer instant commentary on structural coherence and linguistic accuracy, AI-enhanced collaborative platforms that facilitate peer review, and multimodal resources that support visual argument mapping and organisation. Unlike traditional approaches, AI-powered writing instruction can provide continuous, individualised support throughout the writing process—from brainstorming and outlining to drafting and revision—potentially addressing the specific needs of diverse EFL learners at their point of need [10], [11]. However, despite the proliferation of AI writing tools, there remains a significant gap between technological possibility and pedagogical implementation. Many educators lack structured frameworks for meaningfully integrating these tools into existing curricula,

raising questions about optimal instructional design, appropriate scaffolding, and effective assessment strategies in AI-enhanced writing environments.

To address this implementation gap, this study employs focus group discussions (FGDs) with experienced ELT lecturers who have directly engaged with AI tools in argumentative writing instruction. This methodological approach recognises that effective AI integration requires not only technological understanding but also pedagogical expertise and contextual awareness that experienced educators possess [12], [13]. FGDs provide a collaborative forum for practitioners to articulate challenges, share innovations, identify best practices, and collectively envision new pedagogical possibilities at the intersection of AI and argumentative writing instruction [14]. Through structured dialogue, these discussions aim to generate rich qualitative insights that transcend individual experiences, revealing patterns, tensions, and opportunities that might remain obscured in isolated case studies or experimental designs. Additionally, this research investigates EFL students' perceptions of AI-powered tools through surveys and reflective interviews, capturing their lived experiences with these technologies and their self-assessed impact on writing development. By triangulating educator expertise with student perspectives, this study aims to develop a comprehensive understanding of how AI can be effectively leveraged to enhance argumentative writing instruction in tertiary ELT contexts.

Guided by these objectives, this research addresses the following questions:

1. How can an AI-powered lesson plan be systematically developed for teaching argumentative essay writing based on ELT lecturers' collective insights and experiences?
2. What are EFL students' perceptions regarding the impact of AI-powered tools on specific dimensions of their argumentative essay writing skills?

The significance of this research extends beyond the immediate context of argumentative writing instruction. As AI technologies increasingly permeate educational settings, this study contributes to the broader discourse on critical digital pedagogy, offering empirically grounded insights into how these tools can be deployed ethically and effectively to enhance student learning while preserving instructor agency and pedagogical values. By developing practical frameworks for AI integration that are informed by both instructor expertise and student experiences, this research addresses a critical need in contemporary ELT: bridging the gap between technological innovation and pedagogical implementation in ways that honour disciplinary traditions while embracing new possibilities for teaching and learning argumentative writing.

Writing Process

This study is grounded in Langan and Albright's Writing Process Theory [15], which emphasises that effective writing instruction should be structured around four key stages: prewriting, drafting, revising, and editing (Figure 1). According to this theory, writing is not a linear process but a recursive one, where students move between these stages to refine and improve their work. Each phase plays a crucial role in developing writing proficiency, particularly in genres that require logical structuring and persuasive argumentation, such as argumentative essays.

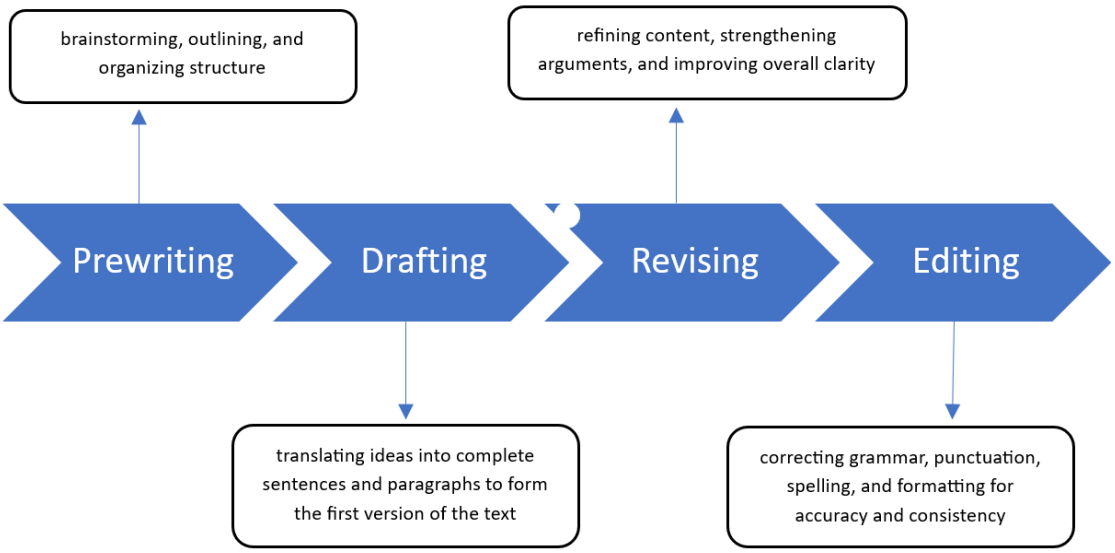

Figure 1. Langan and Albright's Writing Process Theory

The writing process consists of several key stages that contribute to the development of a clear and effective text. Prewriting involves brainstorming, outlining, and organising the structure of ideas to establish a foundation for writing. Drafting follows as the stage where these ideas are translated into complete sentences and paragraphs, forming the initial version of the text. Once a draft is completed, revising is necessary to refine the content, strengthen arguments, and enhance the overall clarity and coherence of the writing. Finally, editing focuses on correcting grammatical, punctuation, spelling, and formatting errors to ensure the text is polished and adheres to academic conventions. Langan and Albright [15] argue that a well-structured writing process helps students develop critical thinking skills, allowing them to engage with topics more deeply and present their arguments more effectively.

For EFL learners, mastering the writing process is particularly challenging due to linguistic barriers, difficulties in structuring logical arguments, and the need for continuous feedback. Traditional approaches to writing instruction often focus heavily on the final product rather than the process itself, leading to superficial revisions and limited engagement with argument development [16], [17]. Writing process theory by Langan and Albright, therefore, provides a structured framework that ensures students actively engage with their writing at each stage, improving both content quality and linguistic accuracy.

Given the increasing role of technology in education, integrating AI-powered tools into the writing process has the potential to enhance learning outcomes by providing real-time feedback, supporting argument development, and assisting students in refining their work. This study explores how AI-powered pedagogy can align with Writing Process Theory to improve argumentative essay instruction in tertiary-level ELT, ensuring that students receive structured guidance throughout the writing process.

2. METHOD

Study Context and Participants

This study used a qualitative design, focus group discussion (FGDs), which aims to collect more elaborate views from English Language Teaching practitioners. This article focuses specifically on the ways that lecturers address the creative dimension of incorporating Artificial Intelligence (AI) into their teaching practice using qualitative methodology. The purpose of the FGD is to compel self-evaluation and dialogue about instruction among participants within a group landscape [14]. The study involves six English Language Teaching (ELT) lecturers currently employed at tertiary institutions. Participants were selected using purposeful experience sampling, a method that allows for the deliberate inclusion of individuals who have specific or knowledge relevant to the research topic [14]. The selection process was guided by the criteria presented in the table below.

Table 1. Participants Selection Criteria

Selection Criteria	Explanation	Reason for Selecting the 6 Participants
Experience with AI Integration	Participants were selected based on their practical experience with integrating AI tools into language teaching.	Ensures the study gathers insights from lecturers who have direct experience with AI, making their contributions relevant and informed.
Diversity of Perspectives	Included lecturers with varying levels of expertise, from early adopters to experienced users.	Captures a wide range of strategies and experiences, offering a more comprehensive view of AI integration in ELT.
Institutional Representation	Participants were chosen from a mix of universities and colleges.	Reflects different academic contexts, exploring how institutional environments impact the adoption and use of AI in teaching.
Voluntary Participation	Participants agreed to join the study after being informed about the objectives and confidentiality procedures.	Ensures ethical recruitment and respects participant autonomy.

Participation was entirely voluntary, and participants were informed of their right to withdraw at any time without consequence. Confidentiality and anonymity were maintained by using coded identifiers in transcripts and reports. By selecting them, the study aims to provide a comprehensive understanding of AI-powered pedagogy employed by ELT lecturers at the tertiary level to teach argumentative essays, offering valuable insights that can inform the broader application of AI in higher education.

Table 2. Demographic Characteristics of Participants

Participant	Gender	Years of Teaching	AI Integration Experience	Specialisation	Institution Type
P1	Female	12 years	Advanced	Academic Writing	Public University
P2	Male	7 years	Intermediate	Curriculum Development	Private College
P3	Female	15 years	Advanced	Applied Linguistics	Public University
P4	Male	5 years	Beginner	EFL Writing Pedagogy	Private University
P5	Female	9 years	Intermediate	Digital Pedagogy	Public University
P6	Male	10 years	Advanced	TESOL/Composition Studies	Private College

The participating lecturers represented a broad range of academic expertise and institutional contexts, contributing to a rich and diverse set of perspectives. Their teaching experience spanned from 5 to 15 years, and their familiarity with AI tools varied from beginner to advanced levels. Gender representation was balanced (three female and three male lecturers), and their specialisations included academic writing, curriculum design, applied linguistics, and digital pedagogy. The inclusion of student perspectives, totalling approximately 240 EFL learners, adds an essential dimension to the study by revealing how AI integration in academic writing instruction is perceived and experienced from the learner's point of view. This demographic and methodological diversity strengthens the interpretive depth and enhances the credibility and transferability of the study's findings.

Data Collection and Analysis

Data collection comprised five focus group discussions (FGDs) addressing various objectives: introducing the research topic, exploring AI-powered pedagogy in prewriting, drafting, revising, editing, and concluding with a summary session. This approach allowed for a comprehensive examination of AI integration strategies for teaching argumentative essays. Following Hennink and Leavy [14], the structure and protocol for these discussions are outlined in the table below.

Table 3. Focus Group Discussion Protocol

Protocol Component	Details
Objective	Explore and identify innovative pedagogical strategies for integrating AI tools in the teaching of argumentative essays.
Participants	All 6 ELT lecturers participated in each FGD, contributing insights specifically focused on argumentative essay writing.
Discussion Structure	1. Introduction: Overview of the challenges and opportunities in teaching argumentative essays in tertiary education. 2. Exploration of AI Tools: Participants share experiences with AI tools that support the argumentative essay writing process (prewriting, drafting, revising, editing). 3. Identification of Strategies: Focus on identifying and discussing innovative AI integration strategies to enhance the teaching of argumentative essays. 4. Comparison and Reflection: Participants reflect on the effectiveness of various strategies and their potential application across different stages of essay writing. 5. Conclusion: Summary of key strategies discussed, with participant consensus on the most effective approaches.
Data Recording	Sessions were audio-recorded and transcribed verbatim for accuracy. Transcriptions were used for further analysis.
Timing and Duration	Each FGD lasted approximately 90 minutes online via Zoom, allowing for in-depth discussion and participant engagement.

The data from the FGDs was thoroughly analysed using Framework Analysis, adhering to the steps described by Goldsmith [18], as illustrated in the table below. This approach is especially well-suited for applied research, where the objective is to extract practical knowledge from intricate qualitative data. The method is well-organised and enables the consideration of both emergent and a priori themes.

Table 4. Framework Analysis Steps and Descriptions

Stage of Analysis	Description
Familiarisation	Immersing in the data by thoroughly reading through interview transcripts and observation notes to gain an overall understanding of the content.
Identification of a Thematic Framework	Initial coding and categorisation of the data, identifying key issues, concepts, and themes that relate to the research questions and objectives.
Indexing	Applying the thematic framework systematically to the data by indexing (or coding) specific pieces of data (quotes, statements) under identified themes.
Charting	Rearranging the data according to the appropriate part of the thematic framework to create charts that summarise the key points from each theme.
Mapping and Interpretation	Analysing the charts to identify patterns, connections, and relationships between themes, leading to the development of a structured interpretation of the data.

The final step involved transforming the key themes and strategies identified during the FGDs into a practical, AI-driven lesson plan for teaching argumentative essays. This plan was developed by mapping the innovative strategies discussed by the participants onto a structured framework, resulting in detailed lesson plans that reflect the pedagogical insights gained from the FGDs. In this way, the framework analysis not only allowed for a comprehensive exploration of the data but also facilitated the creation of practical outcomes in the form of a lesson plan. The lesson plan serves as a direct reflection of the innovative pedagogical strategies identified by the ELT practitioners, offering valuable contributions to the field of AI integration in tertiary-level English language instruction. The lesson plan was then implemented by an EFL lecturer and assessed for effectiveness through student feedback collected via questionnaires adapted from Zimmerman [19] and analysed using a Likert scale.

To evaluate EFL students' perceptions (Research Question 2), a structured questionnaire was used as the primary instrument for quantitative data collection. The questionnaire was adapted from Zimmerman (2018), with modifications to align the items specifically with dimensions of argumentative writing such as argument generation, essay structure, use of AI tools, feedback interpretation, and critical reflection. The instrument consisted of six Likert-scale items (1 to 4 scale), each designed to assess a distinct cognitive or metacognitive domain related to AI-assisted writing. To ensure content validity, the adapted questionnaire underwent expert review by two applied linguists and one educational technology specialist who confirmed the relevance and clarity of each item. Reliability was established through a pilot test involving 30 EFL students from a comparable tertiary institution. The internal consistency coefficient (Cronbach's Alpha) for the pilot responses was 0.87, indicating high reliability. This validated questionnaire was then administered to approximately 240 EFL students after the implementation of the AI-enhanced lesson plan, and their responses were analysed using descriptive statistics to capture general trends in perception.

To enhance the trustworthiness of the thematic analysis, the researchers independently coded the FGD transcripts using the initial thematic framework. The researchers first jointly developed a preliminary codebook based on the first transcript, followed by independent coding of the remaining transcripts. Discrepancies were discussed

and resolved through consensus. Intercoder agreement was assessed informally through discussion-based calibration, ensuring consistent interpretation across data sets. While no formal kappa coefficient was computed, consistency was emphasised through recursive discussion and iterative refinement of codes. Thematic saturation was determined when successive focus groups (particularly the fourth and fifth) yielded no substantially new themes. At this point, recurring patterns and categories stabilised, indicating adequate saturation for the study's aims, consistent with qualitative research standards.

3. FINDINGS

3.1 Development of an AI-Powered Lesson Plan Based on ELT Lecturers' Insights

The focus group discussions with six experienced ELT lecturers yielded rich insights into the systematic integration of AI tools for teaching argumentative essay writing. Through framework analysis of the FGD data, several key themes emerged regarding how AI can be strategically incorporated into different stages of the writing process. These themes directly informed the development of a comprehensive AI-powered lesson plan that addresses common challenges faced by EFL learners in argumentative writing.

The focus group discussions with ELT lecturers revealed four key areas where AI integration could significantly enhance the teaching and learning of writing skills among EFL learners. One prominent theme was the need to scaffold students' ability to develop coherent arguments. Many lecturers observed that EFL students often struggle to organise their ideas logically, especially when constructing complex argumentative texts. They emphasised the potential of AI-based tools such as mind mapping software to support students in planning their writing more effectively. As one participant explained:

> *"EFL students often struggle with organising their ideas logically. AI-based mind mapping tools can help them visualise relationships between claims and evidence before they begin writing."*

This visualisation process was seen as essential not only for improving logical flow but also for helping students grasp how their ideas interconnect, which is a critical component of academic writing. Another widely discussed opportunity involved the provision of real-time feedback during the drafting process. Unlike traditional feedback that often arrives too late to impact students' immediate learning, AI-powered writing assistants offer prompt and ongoing support. These tools were seen as particularly beneficial in promoting self-correction and reflection. One lecturer shared:

> *"Traditional feedback comes too late in the process. AI writing assistants provide instant guidance on grammar and style, allowing students to make corrections while their thinking is still fresh."*

This immediacy allows students to stay engaged with their ideas, refine their expression, and internalise feedback as they write, rather than after they have moved on to other tasks. Peer review was another area where lecturers saw room for AI support. Although peer feedback is an essential component of writing pedagogy, it is often difficult

for students, especially those still developing their academic literacy, to provide meaningful commentary. AI could play a guiding role by prompting students to focus on specific areas of improvement in their peers' work. One participant remarked:

> *"Students frequently struggle to provide substantive feedback to peers. AI-assisted peer review platforms can guide them toward more constructive commentary by suggesting specific areas to focus on."*

By scaffolding the peer review process, AI tools could enhance students' evaluative skills and foster deeper collaborative engagement in the classroom. Finally, the discussions highlighted the potential of AI to promote more reflective revision practices. Lecturers noted that many EFL students perceive revision as a task limited to surface-level error correction. They argued that AI tools can help broaden this perception by drawing attention to issues of coherence, clarity, and structure. As one lecturer noted:

> *"Many EFL students see revision as simply error correction rather than substantive improvement. AI tools that highlight readability issues can help shift this perspective toward deeper engagement with content and structure."*

These tools can help learners reframe revision as an opportunity for meaning-making and rhetorical improvement, rather than merely correcting mistakes. Taken together, these insights suggest that AI, when thoughtfully integrated, can address several longstanding challenges in writing instruction. Rather than replacing the teacher's role, AI tools were seen as valuable complements that support learners through the various cognitive, linguistic, and collaborative demands of writing. These insights were systematically mapped onto Langan and Albright's writing process model, resulting in a structured 110-minute lesson plan with AI integration at strategic points. Table 5 presents this comprehensive AI-based lesson plan for teaching argumentative essay writing.

The lesson plan strategically integrates AI tools at various stages of the writing process, carefully designed to reflect the collective insights and pedagogical values shared by the ELT lecturers during the focus group discussions. One of the central principles guiding the implementation is the concept of progressive scaffolding. The lesson plan begins by offering structured AI support during the early stages of thesis development and gradually reduces this support as students gain confidence and competence. This progression aligns with the emphasis on fostering learner autonomy, as articulated by one lecturer:

> *"There's a need to balance technological assistance with developing students' autonomy."*

Table 5. AI-Based Activities in Teaching Writing

Time	Activity	Objective	Description	AI Integration	Materials/Tools
10 mins	Introduction to Argumentative Essays	Introduce the key components and structure of an argumentative essay.	Brief lecture on thesis statements, supporting arguments, counterarguments, and conclusions.	None	Presentation slides, examples of argumentative essays.
15 mins	Thesis Statement Development	Help students craft strong, clear thesis statements.	Students write thesis statements based on a given topic.	AI Tool: Use an AI-powered writing assistant (e.g., Grammarly) to analyse and provide feedback on thesis statements.	Laptops/Tablets with AI tool access.
20 mins	Outline Creation	Guide students in organising their essays effectively.	Students create an outline, listing main arguments and supporting evidence.	AI Tool: AI-based mind mapping tools (e.g., MindMeister) to help students visualise their essay structure.	Mind mapping software with AI features.
30 mins	Writing the First Draft	Facilitate the drafting of the introduction and body paragraphs.	Students begin writing the first draft of their essays, focusing on the introduction and main arguments.	AI Tool: Use AI writing aids (e.g., ProWritingAid) for real-time feedback on grammar, style, and coherence.	Laptops/Tablets with writing software.
15 mins	Peer Review Session	Foster collaboration and critical thinking through peer feedback.	Students exchange drafts and give feedback on each other's work.	AI Tool: AI-assisted peer review platform (e.g., Peergrade) to guide students in providing constructive feedback.	Peer review platform, student drafts.
10 mins	Reflective Revision	Encourage students to reflect on feedback and revise their work.	Students revise their drafts based on peer feedback and AI suggestions.	AI Tool: AI-powered writing assistant (e.g., Hemingway Editor) for revising clarity and readability.	Laptops/Tablets with AI tools.
10 mins	Wrap-up and Homework Assignment	Summarise key takeaways and set the stage for next steps.	Recap of the day’s activities, Q&A, and assignment of completing the essay.	None	Assignment details, resources for further reading.

By tapering AI support as students advance, the lesson not only leverages technological tools for cognitive support but also respects the pedagogical aim of cultivating independent writers. In addition, the plan embraces a multimodal engagement strategy, employing both visual tools, such as AI-generated mind maps, and textual tools like writing assistants. This approach is particularly responsive to the diverse needs of learners. As one participant noted:

> *"Different students struggle with different aspects of argumentation. Having multiple AI touchpoints helps meet these varied needs."*

This insight underscores the importance of flexibility in instructional design, allowing AI to serve as a differentiated support system that adapts to students' varied entry points in mastering argumentative writing. The lesson also carefully balances the roles of human and AI interaction. While AI tools are used to provide immediate feedback on grammar, style, and organisation, essential human elements—such as peer review and instructor-led discussions—remain central to the learning experience. This balance reflects a shared belief among the lecturers that technology should enhance, not replace, meaningful pedagogical interaction. As one lecturer emphasised:

> *"AI should complement rather than replace human instruction and interaction."*

This human-AI synergy ensures that students not only benefit from timely and personalised feedback but also engage in the kinds of dialogic and collaborative practices that are crucial to writing development. Furthermore, the lesson plan adopts a process-oriented approach to writing, integrating AI tools across multiple stages—planning, drafting, reviewing, and revising. This reinforces the iterative nature of writing and responds to a common concern raised in the discussions about students' limited understanding of writing as a recursive process. One participant explained:

> *"Students tend to see writing as a one-and-done activity rather than a process of refinement."*

Through carefully sequenced AI-supported activities, the lesson helps shift students' mindsets from product-based to process-based writing, encouraging deeper engagement and continuous improvement. These pedagogical choices reflect broader trends in the literature on AI in writing instruction. Personalised feedback generated by AI not only improves the quality of student writing but also fosters collaborative learning environments. In this lesson plan, each AI component is purposefully aligned with instructional goals, supporting not just linguistic accuracy but also higher-order thinking, autonomy, and peer interaction.

3.2. EFL Students' Perceptions of AI-Powered Tools' Impact on Argumentative Essay Writing Skills

The second research question examined EFL students' perceptions regarding the impact of AI-powered tools on their argumentative essay writing skills. Data collected

through standardised questionnaires adapted from Zimmerman [19] revealed overwhelmingly positive attitudes toward AI integration in argumentative writing instruction. This positivity spanned multiple dimensions of argumentative writing, suggesting that students perceived AI tools as valuable across various aspects of the writing process.

As shown in Table 5, students reported high levels of satisfaction with AI-powered tools across all measured domains. The most striking response was observed in students' assessment of AI-powered feedback for general writing improvement, with 90% expressing positive attitudes. This finding suggests that students perceive AI as particularly valuable for enhancing fundamental writing skills that underpin effective argumentation. When asked specifically about argument generation—a core component of argumentative essay writing—84% of respondents indicated that AI tools helped them generate better arguments. This perception aligns with the cognitive scaffolding role that AI can play in helping students articulate and refine complex argumentative positions.

Table 6. EFL Learners' Attitudes on AI-powered pedagogy

Questionnaire Item	Likert Scale	Positive Attitude Percentage
How much do you think AI-powered tools have helped you generate better arguments in your essays?	1 (Not at all) - 4 (Very much)	84%
Do you feel that AI-powered feedback has been helpful in improving your writing skills?	1 (Strongly disagree) - 4 (Strongly agree)	90%
How effective do you find AI-powered tools in helping you structure and organise your argumentative essays?	1 (Not effective at all) - 4 (Very effective)	86%
Do you believe AI can help you identify and address potential flaws in your arguments more effectively?	1 (Strongly disagree) - 4 (Strongly agree)	88%
How confident are you in using AI to analyse and improve your own writing, especially for argumentative essays?	1 (Not confident at all) - 4 (Very confident)	82%
Have AI-powered tools helped you get a deeper comprehension of intricate subjects and arguments?	1 (Not at all) - 4 (Very much)	86%

The results from the questionnaire indicate a strong and consistent positive perception among students regarding the integration of AI-powered tools in their argumentative writing processes. A significant majority (84%) felt that AI tools have notably helped them generate stronger and more coherent arguments in their essays. This suggests that AI support may play a key role in strengthening students' critical thinking and reasoning skills during the prewriting and drafting stages. Even more compelling is the finding that 90% of students believed AI-generated feedback contributed meaningfully to the improvement of their writing skills, pointing to the value of real-time, personalised guidance in the development of language accuracy and rhetorical effectiveness. Furthermore, 86% of respondents found AI helpful in structuring and organising their essays, which aligns with the challenges often faced by EFL learners in managing the logical flow and cohesion of argumentative texts.

Notably, 88% of students acknowledged that AI tools enabled them to identify and address potential flaws in their arguments more effectively—an indication that AI does not merely assist with surface-level corrections but also supports deeper analytical engagement. Confidence in independently using AI for analysing and revising writing was also relatively high (82%), reflecting a growing sense of learner autonomy and ownership in the revision process. Finally, 86% of students agreed that AI tools enhanced their comprehension of intricate subjects and arguments, suggesting that AI's potential goes beyond writing mechanics and into supporting content understanding. Collectively, these results underscore the multifaceted benefits of AI integration, highlighting its capacity to scaffold both the cognitive and metacognitive dimensions of argumentative writing in EFL contexts.

4. DISCUSSION

This study explored the systematic development of an AI-powered lesson plan for teaching argumentative essay writing in tertiary ELT, as well as EFL students' perceptions of AI tools in enhancing their writing skills. The findings offer valuable insights into how AI can be effectively integrated into writing pedagogy while addressing common challenges faced by EFL learners. The focus group discussions with ELT lecturers revealed four key areas where AI tools can significantly enhance argumentative writing instruction: (1) scaffolding coherent argument development, (2) providing real-time feedback during drafting, (3) improving peer review through guided commentary, and (4) fostering reflective revision practices. These insights informed the development of a structured 110-minute AI-integrated lesson plan, which strategically incorporates AI tools at different stages of the writing process—from thesis generation to final revision. The lesson plan emphasises progressive scaffolding, multimodal engagement, and a balance between AI assistance and human interaction.

Students' perceptions, as captured through questionnaires, indicated overwhelmingly positive attitudes toward AI-powered writing tools. A strong majority (84-90%) reported that AI helped them generate better arguments, improve writing skills, structure essays more effectively, and identify flaws in their reasoning. Additionally, 82% expressed confidence in using AI independently, suggesting that these tools contribute to learner autonomy. The lecturers' emphasis on AI's role in scaffolding argument development aligns with cognitive load theory [20], as AI tools help students manage complex writing tasks by breaking them into manageable steps. The preference for real-time AI feedback over delayed traditional feedback supports the notion that immediate corrective input enhances learning retention [21], [22]. Furthermore, AI-assisted peer review addresses a common limitation in EFL classrooms—students' difficulty in providing substantive feedback—by guiding them toward more constructive critique.

Students' positive perceptions may stem from AI's ability to provide personalised, low-stakes feedback, which reduces writing anxiety and encourages iterative improvement [23], [24]. The high confidence levels in using AI tools suggest that these technologies can foster self-regulated learning, as students engage in continuous self-assessment and revision. However, the strong reliance on AI feedback raises questions about potential

over-dependence. While AI tools enhance efficiency, they should complement, not replace, critical thinking and instructor guidance. The lesson plan's gradual reduction of AI scaffolding reflects a pedagogical effort to balance technological support with the development of independent writing skills.

These findings align with recent studies on AI in writing instruction. The lecturers' advocacy for AI in scaffolding argument structure resonates with Krajka and Olszak's [25] findings that AI-enhanced planning tools improve logical coherence. Similarly, students' positive reception of AI feedback supports Malik et al.'s [26] observation that adaptive AI tools enhance engagement and writing quality. The emphasis on AI-assisted peer review extends Puertas Prats and Cano García's [27] work on collaborative learning, demonstrating that AI can mediate peer interactions to deepen evaluative skills. Additionally, the students' reported gains in argument analysis and comprehension corroborate Rad et al.'s [28] findings that AI-driven feedback improves higher-order thinking in writing. However, this study also highlights gaps in existing research. While previous studies often focus on AI's role in grammar correction (e.g., Grammarly's impact on accuracy), this research underscores AI's broader pedagogical potential, supporting argumentation, peer learning, and metacognitive reflection. Future studies should explore the long-term effects of AI integration on critical thinking and writing autonomy, particularly in diverse EFL contexts.

5. CONCLUSION

While this study provides valuable insights into the potential of AI-powered pedagogy for argumentative writing instruction, several limitations should be acknowledged. The research focused on lecturers' insights and students' perceptions rather than measuring actual improvements in writing quality, leaving questions about the objective impact of AI integration on writing outcomes. Future research should include pre- and post-assessments of student writing to determine whether perceived benefits translate into measurable improvements in argumentation skills. Additionally, the study's focus on tertiary ELT contexts limits the generalizability of findings to other educational settings or language learning contexts. Future studies might explore how similar AI-powered approaches could be adapted for different age groups, proficiency levels, or disciplinary contexts. Finally, this research captures a snapshot of AI integration at a specific moment in the rapidly evolving technological landscape. Longitudinal studies will be necessary to understand how sustained engagement with AI tools affects writing development over time and how instructional approaches might need to evolve as AI capabilities continue to advance.

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DECLARATION OF AI ASSISTANCE

This research article was independently developed by the authors, encompassing all aspects of the study, from selecting data collection and analysis methods to conducting the research, interpreting the results, and designing the overall framework. The conceptual development, critical evaluation, and presentation of the findings are entirely the authors' work. ChatGPT was used exclusively to refine the grammar, improve clarity, and enhance the readability of the manuscript. The AI assistance did not affect the study's intellectual substance, arguments, or originality in any way.

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