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Exploring EFL University Students' Experiences of Engaging with ChatGPT-Generated Feedback during Academic Writing: A Qualitative Case Study

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Abstract

Background:
This study investigates how EFL university students engage with ChatGPT-generated feedback during academic writing, focusing on behavioral, cognitive, and affective dimensions. Although generative AI is increasingly used as a feedback tool in EFL contexts, limited research has examined how students interpret, evaluate, and respond to AI-generated feedback as part of the writing process.

Methodology:
This qualitative case study involved five EFL university students who had experience using ChatGPT as a feedback tool during academic writing tasks. Data were collected through semi-structured interviews exploring students' reported experiences, perceptions, and decision-making processes when interacting with ChatGPT-generated feedback. The interview data were analyzed thematically to identify perceived behavioral, cognitive, and affective dimensions of AI-mediated feedback engagement.

Findings:
The findings suggest that participants reported engaging with ChatGPT-generated feedback through iterative revision, evaluative judgment, and emotional regulation, reflecting behavioral, cognitive, and affective dimensions of feedback engagement. Participants also perceived several affordances of ChatGPT, including immediate responses, explanatory support, and motivational encouragement, while simultaneously reporting challenges related to feedback accuracy, contextual appropriateness, and potential overreliance. These findings indicate that the pedagogical value of AI-generated feedback is not inherent in the technology itself but may emerge through learners' critical interpretation, evaluation, and adaptation of AI suggestions during the revision process.

Originality:
This study provides qualitative insights into EFL students' engagement with AI-generated feedback by examining their self-reported experiences of interacting with ChatGPT during academic writing revision. The findings reveal how students perceived behavioral, cognitive, and affective dimensions of engagement, including their reported practices of seeking, evaluating, and applying AI-generated feedback, as well as their emotional responses toward AI-assisted writing. Rather than providing direct evidence of students' revision processes, this study offers an in-depth understanding of how learners interpret and negotiate ChatGPT feedback within their academic writing experiences.

Keywords	:	ChatGPT; AI-generated feedback; learner engagement; feedback literacy; EFL academic writing
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1. INTRODUCTION

Feedback plays a central role in higher education because it provides learners with information that can guide improvement. However, the educational value of feedback is determined not only by the quality of the feedback provided but also by learners' ability to interpret, evaluate, and use it. Research on feedback engagement has demonstrated that students may fail to benefit from feedback when they lack sufficient feedback literacy, misunderstand feedback purposes, or have limited opportunities for meaningful interaction with feedback providers (Winstone et al., 2017; Ali et al., 2018; Carless, 2023). These challenges become increasingly relevant as feedback practices are transformed by emerging digital technologies, particularly generative artificial intelligence (GenAI).

Feedback literacy provides an important foundation for understanding how learners engage with feedback. It refers to students' ability to understand feedback information, make judgments about its relevance, and apply it to improve future performance (Carless & Boud, 2018; Chong, 2021). Learners with stronger feedback literacy are more likely to evaluate suggestions critically and make informed decisions about revision (Han & Xu, 2021). However, the emergence of GenAI introduces a new dimension to feedback engagement because learners are no longer interacting exclusively with human-generated feedback. Instead, they increasingly encounter algorithmically generated suggestions that require additional abilities to evaluate accuracy, contextual appropriateness, and limitations.

ChatGPT represents one of the most widely adopted GenAI tools in educational contexts because it can provide immediate explanations, revision suggestions, and language-related feedback (Bearman et al., 2023; Rawas, 2024). Within EFL academic writing, previous studies have explored ChatGPT as a support tool for grammar improvement, vocabulary development, organization, and textual clarity (Polakova & Ivenz, 2024; Werdiningsih et al., 2024). Nevertheless, access to AI-generated feedback does not necessarily result in meaningful learning. Similar to teacher feedback, AI feedback becomes educationally valuable only when learners actively interpret, evaluate, and negotiate the suggestions provided.

The interaction between students and ChatGPT-generated feedback also requires competencies beyond traditional feedback literacy. Specifically, EFL learners need AI literacy, defined as the ability to critically evaluate AI outputs, recognize potential limitations, question inappropriate suggestions, and maintain ownership of their writing. While feedback literacy focuses primarily on understanding and using feedback, AI literacy addresses the additional challenges of interacting with automated systems whose responses may appear convincing but

require contextual judgment. Therefore, effective engagement with ChatGPT feedback requires the integration of both feedback literacy and AI literacy.

Recent studies have begun examining how students engage with ChatGPT-generated feedback in writing contexts. Yan and Zhang (2024) explored L2 writers' engagement with ChatGPT-based automated written corrective feedback and highlighted learners' involvement in processing AI-generated suggestions. Koltovskaia et al. (2024) investigated behavioral, cognitive, and affective engagement among graduate students using ChatGPT for academic text revision. Similarly, Zhan and Yan (2025) examined ChatGPT feedback engagement from the perspective of student feedback literacy. These studies provide important insights into AI-assisted feedback practices; however, they primarily focus on feedback processing, uptake behaviors, or general perceptions of AI feedback.

Limited attention has been given to how EFL undergraduate students negotiate ChatGPT-generated feedback as a multidimensional experience involving behavioral actions, cognitive evaluation, and affective responses during academic writing revision. This gap is significant because EFL learners often encounter simultaneous challenges related to language proficiency, uncertainty about AI reliability, and concerns regarding authorship and ownership of their writing. Understanding students' reported experiences is therefore essential for explaining how AI feedback is interpreted, accepted, modified, or rejected within authentic writing practices.

This study addresses this gap by exploring EFL university students' experiences of engaging with ChatGPT-generated feedback during academic writing. Rather than evaluating whether ChatGPT improves writing performance, this study examines how students experience, interpret, and respond to AI-generated feedback through behavioral, cognitive, and affective dimensions. Using a qualitative case study approach, this research contributes to a deeper understanding of AI-assisted feedback engagement and highlights the importance of critical and responsible AI use in EFL writing contexts. Specifically, this study seeks to answer the following research questions:

1. How do EFL university students experience behavioral, cognitive, and affective engagement when interacting with ChatGPT-generated feedback during academic writing revision?
2. What affordances and challenges do EFL university students perceive when using ChatGPT-generated feedback during the academic writing process?

2. METHODOLOGY

2.1 Research Design

This study employed a qualitative case study design to explore EFL university students' engagement with ChatGPT-generated feedback during academic writing revision. The case examined in this study was the process of students' engagement with AI-mediated feedback within

a specific academic writing context at an Indonesian university. More specifically, the bounded case involved undergraduate EFL students who had experience using ChatGPT as a feedback tool while completing academic writing tasks. The boundaries of the case were defined by the participants (EFL undergraduate students), the context (academic writing learning), and the phenomenon investigated (students' engagement with ChatGPT-generated feedback).

A case study approach was selected because it enables an in-depth investigation of a contemporary phenomenon within its real-life context, particularly when the boundaries between the phenomenon and its context are closely connected (Yin, 2009). Unlike phenomenological research, which primarily seeks to understand the essence of individuals' lived experiences, this study aimed to examine patterns of engagement, contextual interactions, and perceived affordances and challenges surrounding AI-mediated feedback use. Similarly, compared with narrative inquiry, which focuses on constructing individual life stories and personal trajectories, this study was concerned with understanding a shared phenomenon experienced by multiple participants within a bounded educational setting. Therefore, a case study design was considered appropriate for capturing how students experienced, interpreted, and negotiated ChatGPT-generated feedback through behavioral, cognitive, and affective dimensions during academic writing revision.

2.2 Research Participants

This study aimed to gain in-depth insights into EFL university students who had prior experience using ChatGPT as a feedback tool during academic writing tasks. Five undergraduate students were recruited from an Indonesian public university through purposive sampling. The participants were selected based on four criteria: (1) prior experience using ChatGPT for academic writing-related purposes, (2) willingness to participate and share their experiences, (3) accessibility during the data collection period, and (4) sufficient academic writing experience to critically reflect on AI-generated feedback. All participants were enrolled in an advanced academic writing course that required them to produce argumentative and expository essays involving higher-level skills in grammatical accuracy, lexical selection, organization, and academic argumentation.

Each participant had at least one year of experience using ChatGPT or similar AI-assisted writing tools to support academic writing activities. Their reported uses of ChatGPT included requesting feedback on grammar, vocabulary, sentence structure, organization, and content development, as well as seeking explanations and alternative expressions during the revision process. These criteria ensured that participants had relevant experiences with AI-mediated feedback and were able to provide meaningful reflections regarding their interaction with ChatGPT during academic writing.

Although all participants were recruited from the same institutional context, they represented different levels of Elisha writing proficiency, categorized as intermediate and upper-

intermediate. The proficiency classification was determined based on their academic writing course performance, including lecturer assessments of previous writing assignments and students' demonstrated ability in areas such as grammatical accuracy, vocabulary use, coherence, and organization. This information was considered important because differences in writing proficiency may influence how students interpret, evaluate, and apply ChatGPT-generated feedback during the revision process.

To maintain confidentiality, participants were identified using pseudonyms (S1–S5). Before data collection, participants received information regarding the study objectives, procedures, confidentiality, and their right to withdraw from participation at any time. Written informed consent was obtained from all participants prior to the interviews. Table 1 presents the demographic and background information of the participants

Table 1. Demographic information of participants

Participant	Age (years)	Gender	Writing Proficiency	Experience Using ChatGPT
S1	21	Female	Intermediate	2 years
S2	21	Male	Upper-intermediate	2 years
S3	20	Male	Intermediate	≥1 year
S4	20	Female	Intermediate	≥1 year
S5	21	Female	Upper-intermediate	≥2 years

Table 1 presents the demographic and background information of the participants involved in this study. The five participants were undergraduate EFL students aged between 20 and 21 years old, consisting of three female and two male students. Their reported English writing proficiency ranged from intermediate to upper-intermediate levels, indicating varying levels of academic writing experience. All participants had prior experience using ChatGPT to support their writing activities, with experience ranging from at least one year to two years or more. This variation in writing proficiency and length of ChatGPT experience provided diverse perspectives on how students interacted with, evaluated, and responded to AI-generated feedback during academic writing revision. Although the participants came from a relatively small and bounded context, their varied experiences allowed the study to explore different patterns of behavioral, cognitive, and affective engagement with ChatGPT feedback

2.3 Research Instrument

Semi-structured interviews were employed as the primary research instrument to explore EFL university students' reported experiences of engaging with ChatGPT-generated feedback during academic writing. This interview format was selected because it provides both structure and flexibility, allowing participants to describe their experiences in depth while enabling the researcher to ask follow-up questions to clarify meanings and explore emerging issues. Given that this study focused on behavioral, cognitive, and affective dimensions of engagement, the interview

protocol was designed to examine how students interacted with, interpreted, and emotionally responded to ChatGPT-generated feedback.

The interview protocol was developed by drawing on previous research on student feedback engagement and AI-assisted writing, particularly studies by Koltovskaia et al. (2024) and Polakova and Ivenz (2024). These studies informed the development of interview questions exploring three analytical dimensions of engagement: behavioral engagement, cognitive engagement, and affective engagement. Behavioral engagement focused on students' reported interaction patterns with ChatGPT feedback, including how they requested, reviewed, and applied AI-generated suggestions. Cognitive engagement examined how students evaluated, interpreted, and decided whether to accept, modify, or reject ChatGPT feedback. Affective engagement explored students' emotional responses, confidence, trust, motivation, and concerns when using ChatGPT during academic writing.

To ensure alignment between the research objectives and interview protocol, the interview questions were mapped onto the research questions and analytical dimensions. Table 2 presents the relationship between the research questions, engagement dimensions, interview focus, and example questions.

Table 2. Alignment between Research Questions and Interview Protocol

Research Question	Engagement Dimension	Interview Focus	Example Interview Question
RQ1: Students' behavioral, cognitive, and affective engagement with ChatGPT feedback during academic writing revision.	Behavioral engagement	Students' interaction patterns and use of ChatGPT feedback.	How do you usually use ChatGPT feedback when revising your academic writing?
RQ1	Cognitive engagement	Evaluation, interpretation, and decision-making regarding AI suggestions.	How do you decide whether to accept, modify, or reject suggestions provided by ChatGPT?
RQ1	Affective engagement	Emotional responses, confidence, trust, motivation, and concerns.	How does receiving feedback from ChatGPT influence your confidence or feelings during the writing process?
RQ2: Perceived affordances and challenges of using ChatGPT-generated feedback.	Affordances and challenges	Perceived benefits, limitations, and concerns regarding AI feedback.	What benefits and difficulties have you experienced when using ChatGPT feedback for academic writing?

Table 2 demonstrates the alignment between the research questions, analytical dimensions, interview focus, and example interview questions. The interview protocol was developed based on the three dimensions of student engagement—behavioral, cognitive, and affective engagement—

to explore how participants interacted with, evaluated, and emotionally responded to ChatGPT-generated feedback during academic writing revision. In addition, questions related to affordances and challenges were included to examine students' perceived benefits, limitations, and concerns regarding the use of AI-mediated feedback. Before data collection, the interview questions were reviewed to ensure consistency with the research objectives and theoretical framework. Several questions were refined to improve clarity, avoid ambiguity, and encourage participants to provide detailed accounts of their experiences. The final semi-structured interview protocol consisted of open-ended questions supported by follow-up prompts, allowing participants to elaborate on their perceptions, decision-making processes, and experiences when engaging with ChatGPT-generated feedback.

2.3 Data Collection

Each interview session lasted approximately 45–60 minutes, with slight variations depending on the depth and richness of participants' responses. All interviews were conducted individually, with some sessions conducted face-to-face in a quiet room at the university and others conducted online via Zoom due to participants' availability and scheduling considerations. Both interview modes were intended to provide a comfortable environment that encouraged participants to share detailed reflections about their experiences with ChatGPT-generated feedback during academic writing.

To maintain consistency across different interview modes, the researcher used the same semi-structured interview protocol and applied similar follow-up prompts during all sessions. The researcher ensured that each participant had sufficient opportunity to elaborate on their experiences, perceptions, and decision-making processes when interacting with ChatGPT feedback. No substantial differences were identified in the depth and richness of responses between face-to-face and online interviews.

Prior to each interview session, participants were informed about the purpose of the study, interview procedures, confidentiality arrangements, and their right to withdraw from participation. The interviews were conducted in English using open-ended questions that encouraged participants to describe their experiences of engaging with ChatGPT-generated feedback during academic writing. The researcher took field notes throughout the sessions and used audio recording, with participants' permission, to ensure accurate data representation. The recordings were transcribed verbatim and, together with the field notes, constituted the primary data sources for analysis.

2.4 Data Analysis

The qualitative data were analyzed using thematic analysis following Braun and Clarke's (2006) six-phase framework. This approach was selected because it provides a systematic

procedure for identifying, organizing, and interpreting patterns within qualitative data. The analysis aimed to explore how EFL university students reported their behavioral, cognitive, and affective engagement with ChatGPT-generated feedback during academic writing.

The analysis began with familiarization with the data by repeatedly reading the interview transcripts and field notes to gain a comprehensive understanding of participants' experiences. In the second phase, initial codes were generated by identifying meaningful segments of data related to students' interaction with ChatGPT feedback. Coding was conducted by combining deductive and inductive approaches: the behavioral, cognitive, and affective engagement dimensions provided an initial analytical framework, while additional codes were allowed to emerge from participants' accounts.

In the third phase, related codes were compared and grouped into broader categories based on conceptual similarities. For example, codes such as requesting feedback, checking AI suggestions, and revising drafts were grouped under the category of feedback interaction practices. Similarly, codes related to evaluating AI accuracy, comparing suggestions with personal knowledge, and making revision decisions were grouped under critical evaluation processes.

In the fourth and fifth phases, categories were reviewed, refined, and developed into final themes that represented the central patterns within the data. The themes were named based on their conceptual meaning and alignment with the research questions. Finally, the researchers developed an interpretive account by connecting the identified themes with previous literature on AI-mediated feedback engagement.

Table 3. Example of Coding Process

Interview Excerpt	Initial Code	Category	Final Theme
I usually ask ChatGPT to review my writing and explain why some sentences need improvement.	Requesting feedback; seeking explanation	Feedback interaction practices	Behavioral Engagement
I do not always accept ChatGPT's suggestions because I compare them with my own ideas and assignment requirements.	Evaluating suggestions; comparing feedback	Critical evaluation process	Cognitive Engagement
I feel more confident because ChatGPT helps me check my mistakes without feeling judged.	Increased confidence; reduced anxiety	Emotional response toward AI feedback	Affective Engagement
Sometimes ChatGPT misunderstands my meaning, so I need to reconsider its suggestions.	Contextual mismatch; questioning AI accuracy	Feedback negotiation and limitations	Challenges in AI Feedback Use

Table 3 illustrates the analytical process through which raw interview data were transformed into meaningful codes, categories, and themes. The coding process involved identifying significant statements related to students' interactions with ChatGPT-generated feedback, grouping similar codes into conceptual categories, and developing broader themes

aligned with the research objectives. The examples demonstrate how participants' reported experiences were interpreted across behavioral, cognitive, and affective dimensions of engagement, while also allowing additional themes related to challenges in AI feedback use to emerge from the data. This systematic process supported the development of themes that represented patterns across participants' experiences rather than isolated individual responses.

3. FINDINGS

This study explored EFL university students' reported experiences of engaging with ChatGPT-generated feedback during academic writing. Analysis of interview data from five participants revealed three interconnected dimensions of engagement: behavioral, cognitive, and affective engagement. Participants described how they incorporated ChatGPT into their writing activities, evaluated AI-generated suggestions, and responded emotionally to AI-assisted feedback. The findings illustrate how students perceived and negotiated ChatGPT feedback within their academic writing practices

3.1. Multidemensional Engagaments

3.1.1. Behaviorial Engagement

Participants reported engaging actively with ChatGPT-generated feedback as part of their academic writing process. Rather than treating ChatGPT as a passive correction tool, participants described using it as an interactive resource to support writing development and revision. Their accounts suggested recurring practices of requesting feedback, reviewing AI-generated suggestions, reconsidering their drafts, and seeking further clarification when responses did not fully align with their writing intentions. These reported experiences indicate that participants perceived ChatGPT as a supportive feedback resource integrated into their writing routines.

The quotations presented in this section are derived from participants' interview responses. Because the interviews were conducted in English, minor grammatical adjustments were made to improve readability while maintaining the original meanings expressed by participants.

S1 explained that ChatGPT was used to obtain additional perspectives on writing quality:

> *"I often ask ChatGPT to review how my writing flows and whether my arguments make sense. If the explanation is too general, I ask again until it becomes clearer." (S1)*
> *Similarly, S2 described using ChatGPT after revision to reconsider aspects of clarity and organization:*
> *"After revising my draft, I usually paste it back into ChatGPT to check whether the sentences sound more logical. It feels like having another pair of eyes helping me evaluate my work." (S2)*
> *S3 highlighted the use of ChatGPT for checking linguistic accuracy and coherence:*
> *"I rely on ChatGPT to check grammar and coherence because I want to make sure my ideas connect clearly and do not confuse the reader." (S3)*

These accounts indicate that participants engaged with ChatGPT through repeated cycles of requesting feedback, reviewing suggestions, and revising their writing. Rather than using ChatGPT as a one-time correction tool, students described returning to AI feedback throughout different stages of the writing process. Overall, participants described ChatGPT as an integrated part of their revision routines. Their engagement was characterized by repeated interaction, where students requested feedback, evaluated suggestions, and returned to the tool for further clarification. These patterns indicate that behavioral engagement involved active participation rather than simple acceptance of AI-generated corrections.

3.1.2. Cognitive Engagement

Cognitive engagement emerged as an important dimension of how participants interacted with ChatGPT-generated feedback. However, the depth of cognitive engagement varied across participants. Some students demonstrated a more surface-oriented form of engagement by primarily evaluating linguistic aspects of AI suggestions, such as grammar, vocabulary choice, sentence structure, and clarity. In these cases, participants focused on whether ChatGPT corrections improved the accuracy and readability of their writing.

Beyond this level, other participants demonstrated deeper cognitive engagement by critically evaluating the broader implications of AI-generated feedback, including argument development, rhetorical effectiveness, coherence, and alignment with their intended meaning. These students did not simply determine whether a suggestion was grammatically correct but also considered whether it strengthened their ideas and matched the purpose of their academic writing. Their engagement involved comparing AI suggestions with their prior knowledge, writing goals, and disciplinary expectations before deciding whether to accept, modify, or reject the feedback.

These findings suggest that cognitive engagement with ChatGPT feedback exists along a continuum, ranging from the evaluation of surface-level linguistic features to higher-order reflection on rhetorical purpose and meaning construction. Therefore, students' interaction with AI-generated feedback should not be understood as a uniform process; rather, the educational value of ChatGPT depends on the extent to which learners critically interpret and negotiate the suggestions within their own writing contexts.

> *"…Sometimes ChatGPT's suggestions sound too formal, so I think about whether they fit my assignment. I do not always follow what it says because I try to adjust the feedback to match my writing goal…" - S5*
> *"…I often compare ChatGPT's feedback with my lecturer's comments. Sometimes they are similar, but in other cases ChatGPT misunderstands the point that I want to deliver…" - S4*
> *"…If I do not agree with ChatGPT's correction, I try to understand the reason. Sometimes my sentence is unclear and sometimes it misinterprets my meaning. This makes me think more carefully about my own writing choices…" - S3*

These showed that students engaged cognitively with ChatGPT-generated feedback by carefully evaluating the accuracy and relevance of the suggestions provided. Rather than accepting the feedback automatically, participants described comparing ChatGPT's responses with assignment requirements, their own understanding of the topic, and, in some cases, lecturers' feedback. This evaluative process required students to make deliberate decisions about whether the suggested revisions aligned with their intended meaning and academic writing objectives. These accounts indicate that participants did not respond to ChatGPT feedback uniformly. While some students focused on language-level corrections, others evaluated whether suggestions aligned with their arguments, writing purposes, and intended.)

When discrepancies or ambiguities emerged, students were prompted to reflect more deeply on content clarity, argument development, and language choices, suggesting a heightened level of cognitive involvement during revision. As a result, interaction with ChatGPT feedback appeared to support reflective thinking and positioned students as agents who mediated feedback based on their academic intentions rather than relying solely on automated suggestions.

3.1.3. Affective Engagement

Affective engagement represented another important dimension of students' experiences with ChatGPT-generated feedback. The emotional responses reported by the participants reflected a complex relationship between confidence, comfort, motivation, and uncertainty. Several students described feeling more confident and less anxious when using ChatGPT because the tool provided immediate feedback, explanations, and a non-judgmental interaction environment. This emotional support helped some participants feel more willing to experiment with language, reconsider their writing choices, and continue revising their work when encountering difficulties.

However, these positive emotional experiences were not necessarily beneficial in all situations. While feelings of comfort and reassurance could encourage students to engage more actively with revision, excessive reliance on ChatGPT's supportive responses could also reduce learners' motivation to independently evaluate feedback or develop their own solutions. Therefore, affective engagement should be understood as an ambivalent process in which emotional support may facilitate writing development while simultaneously creating possibilities for overdependence on AI assistance.

> *"…I feel calm and comfortable using ChatGPT because it does not judge my mistakes and explains its feedback clearly…" - S1*
> *"…ChatGPT motivates me to write more confidently and helps me correct my mistakes quickly. Sometimes the suggestions feel too perfect, and I start to question whether the writing still feels like mine…" - S5*
> *"…I feel more relaxed when writing because I know I can check my ideas with ChatGPT before submitting them…" - S2*

The findings revealed that students' interaction with ChatGPT-generated feedback was accompanied by varied affective responses during the academic writing process. Several participants reported feeling more confident and less anxious when revising their drafts, particularly when immediate feedback helped them clarify language use and improve sentence formulation. The availability of on-demand feedback appeared to reduce hesitation during revision and encouraged students to engage more willingly with their writing tasks. At the same time, students also expressed ambivalent feelings toward ChatGPT feedback, especially when the suggestions conflicted with their own ideas or were perceived as inaccurate. These accounts demonstrate that students experienced both supportive and uncertain emotions when using ChatGPT feedback. Confidence and reduced anxiety appeared alongside concerns about dependence. In this regard, students' affective responses appeared to influence how they trusted and responded to AI-generated feedback, highlighting the role of emotions in shaping sustained engagement with feedback during academic writing.

3.2. Pedagogical and Linguistic Affordances

3.2.1. The pedagogical affordances

Participants perceived several affordances of ChatGPT-generated feedback that supported their academic writing experiences. Rather than suggesting that ChatGPT directly improved students' writing abilities, this theme highlights the types of support and learning opportunities that participants associated with AI-generated feedback.

At the linguistic level, participants valued ChatGPT's ability to identify and explain issues related to grammar, vocabulary selection, sentence clarity, and textual organization. Students reported that these explanations helped them better recognize aspects of their writing that required revision rather than simply receiving corrected sentences. Participants described using ChatGPT feedback to notice language problems and reconsider possible improvements in their drafts.

Beyond linguistic support, participants also described pedagogical affordances related to reflection, self-evaluation, and decision-making. Students reported using ChatGPT explanations to reconsider their writing choices and evaluate whether suggested revisions matched their intended meanings and academic purposes. However, these accounts represent participants' perceptions of learning support rather than evidence of actual writing development or internalization of writing conventions.

> *"…ChatGPT helps me see my mistakes more clearly and explains the reasons behind them. This makes it easier for me to learn grammar and coherence at the same time…" - S1*
> *"…It helps me fix awkward sentences and improve the clarity of my ideas. I feel like I learn something new every time I revise with its help…" - S4*

These accounts indicate that participants perceived ChatGPT as more than a correction tool. Students described using AI-generated explanations to understand language issues, reflect on

revision choices, and evaluate possible improvements in their writing. However, the extent to which these perceived benefits resulted in long-term writing development requires further investigation through additional evidence, such as analysis of writing drafts or longitudinal data.

3.2.2. Affective and Motivational Affordances

Participants perceived several affordances of ChatGPT-generated feedback that supported their academic writing practices. Unlike affective engagement, which focuses on students' emotional responses toward AI-assisted writing, this theme highlights the functional and instructional support that students associated with ChatGPT feedback, particularly in relation to language improvement, reflection, and revision decision-making.

At the linguistic level, participants valued ChatGPT's ability to identify and explain issues related to grammar, vocabulary selection, sentence clarity, and textual organization. Rather than using ChatGPT only to obtain corrected versions of sentences, students described using the explanations provided by the tool to understand why certain revisions were suggested and how specific language choices influenced the quality of their writing. For example, participants reported that ChatGPT helped them recognize unclear expressions, grammatical problems, and areas requiring further refinement in their drafts.

Beyond linguistic assistance, participants also described pedagogical affordances related to reflection and self-evaluation. Students reported using ChatGPT explanations as a reference point for reconsidering their writing choices and evaluating whether suggested revisions were appropriate for their intended meanings and academic purposes. These accounts indicate that participants perceived ChatGPT not merely as an editing tool but as a resource that supported their evaluation of writing decisions and encouraged greater awareness of revision processes.

> *"…I feel more motivated to write because I am not afraid of making mistakes. ChatGPT explains everything in a clear and friendly way…" - S2*
> *"…I feel supported when ChatGPT gives me feedback because it helps me check my writing step by step. This reduces my anxiety before submitting assignments…" - S5*

Overall, participants perceived ChatGPT as providing explanatory and reflective support during academic writing revision. The affordances identified in this theme relate primarily to how students used AI-generated feedback to understand language issues, evaluate possible revisions, and make informed decisions about their writing. However, these findings represent participants' perceptions of learning support rather than evidence of actual improvement in writing ability or long-term internalization of academic writing conventions.

3.3. Challenges in Using ChatGPT Feedback

3.3.1 Contextual and Technical Challenges

Although participants perceived several benefits from using ChatGPT-generated feedback, some participants also reported experiencing contextual and technical challenges during the writing process. A recurring concern among these participants was that ChatGPT occasionally provided suggestions that did not fully align with their intended meaning, writing context, or desired tone. These experiences were particularly evident when participants worked on argumentative writing, where maintaining personal viewpoints and contextual appropriateness was considered important. Rather than accepting AI-generated suggestions automatically, participants described the need to evaluate the relevance of the feedback and decide whether to modify, adapt, or reject the recommendations.For example, S2 explained that ChatGPT sometimes produced grammatically acceptable revisions that changed the intended meaning of the original sentence:

> *"Sometimes ChatGPT gives a sentence that is correct grammatically, but the meaning becomes different from what I want to say. So, I need to adjust it again based on my original idea." (S2)*
> *Similarly, S4 reported that AI suggestions were not always appropriate for the specific context of academic writing:*
> *"ChatGPT can help me improve my writing, but sometimes the suggestions are too general and do not really match the argument I am trying to develop." (S4)*

These accounts suggest that contextual misinterpretation was not experienced uniformly by all participants but emerged as a concern among some students who critically evaluated the suitability of AI-generated feedback. The findings highlight that effective use of ChatGPT feedback requires students to exercise judgment and contextual awareness rather than relying on AI suggestions without further evaluation.

3.3.2. Overreliance and Ethical Concerns

Students also expressed ethical concerns related to dependence and originality. Some participants worried that relying heavily on ChatGPT would diminish their personal voice or lead them away from developing their own writing strengths. These concerns reflect a heightened awareness of the moral responsibilities associated with AI use in academic settings.

> *"…I sometimes feel unsure about whether the writing still feels like mine because ChatGPT's suggestions can be very polished…" - S5*
> *"…If I follow everything ChatGPT suggests, my writing does not sound like my own voice anymore. I want to keep my originality…" - S3*

Such reflections indicate that students are not only learning from ChatGPT but are also reflecting on the ethical boundaries of using AI in academic contexts. Their comments reveal a desire to balance the benefits of assistance with a commitment to maintaining personal authorship. This ethical tension underscores the importance of encouraging students to develop awareness and

responsibility in using AI tools appropriately. In addition, these concerns raise awareness of the ethical dimensions of AI use in academic writing, particularly in relation to originality and responsible authorship (Hasib & Islam, 2025).

3.3.3. Cognitive Emotional Tensions

Cognitive emotional tensions also emerged as students reflected on the balance between efficiency and deep thinking. While ChatGPT helped them revise their work more quickly, some participants expressed concern that the convenience of AI might reduce their engagement with the underlying cognitive processes involved in writing.

> *"…I appreciate how quickly ChatGPT helps me correct mistakes, but I worry that I am not thinking as deeply as before…" - S5*

This demonstrates a sophisticated awareness of the cognitive implications of using AI tools. Students recognize that while ChatGPT enhances efficiency, it may inadvertently undermine deeper intellectual engagement. Such concerns resonate with prior research cautioning that excessive reliance on AI can foster forms of reduced metacognitive effort, in which learners become less engaged in critical thinking and self-regulation (Järvelä et al., 2025). Moreover, overreliance on AI has been associated with diminished problem-solving abilities and creative engagement, both of which are central to sustained academic development (Ahmad et al., 2024; Baltà-Salvador et al., 2025). From this perspective, students' reflections suggest the need for a balanced use of AI, where the tool supports learning processes without replacing critical and reflective thinking.

4.DISCUSSION

The findings of this study provide a more critical understanding of EFL students' engagement with ChatGPT-generated feedback during academic writing. Participants' accounts suggest that ChatGPT was not used merely as an automated correction tool but as a feedback support resource that students interacted with through processes of interpretation, evaluation, and revision. For example, S1 and S2 reported repeatedly consulting ChatGPT to clarify sentence meaning and improve coherence, while S3 emphasized the importance of evaluating whether AI suggestions matched his intended message. These patterns suggest that ChatGPT may function as a potential mediational tool within the writing process when learners actively negotiate AI-generated feedback rather than passively accept it.

From a sociocultural perspective, learning is mediated through cultural tools that shape individuals' thinking, meaning-making, and knowledge development (Vygotsky, 1978). Within this perspective, ChatGPT can be understood not as an independent source of learning but as a technological artifact that may support learners' reflective activity when combined with human judgment and contextual awareness. The participants' experiences indicate that interaction with ChatGPT created opportunities for recursive engagement with writing, allowing students to revisit,

reconsider, and refine aspects of their texts. However, these opportunities should be interpreted cautiously because the present study examined students' reported experiences rather than direct changes in writing performance. Therefore, the educational value of ChatGPT depends on learners' ability to critically evaluate suggestions and make informed decisions about their writing.

4.1 Cognitive Engagement

The cognitive dimension of engagement demonstrated variation in how deeply participants processed ChatGPT feedback. Some participants primarily used ChatGPT to evaluate linguistic features, such as grammar, vocabulary, and sentence clarity. For instance, S3 reported using ChatGPT to check whether sentences were grammatically accurate and understandable. In contrast, S2 and S5 described evaluating whether AI suggestions influenced the logical organization and intended meaning of their arguments. These differences indicate that cognitive engagement with AI feedback exists along a continuum, ranging from surface-level correction checking to deeper evaluation of rhetorical purpose and argumentative effectiveness.

This finding extends previous feedback engagement research by showing that AI-generated feedback requires learners not only to understand feedback content but also to exercise judgment regarding its appropriateness. As Wilcoxen and Lemke (2021) argue, feedback becomes meaningful when learners actively interpret and apply it rather than simply receive it. Nevertheless, cognitive engagement with ChatGPT remains conditional because fluent AI responses may appear authoritative even when they fail to consider contextual or rhetorical factors. Therefore, students require sufficient AI literacy to question, evaluate, and negotiate AI-generated suggestions (Wang & Wang, 2025).

4.2 Affective Engagement

The affective dimension revealed that students experienced both supportive and challenging emotional responses toward ChatGPT feedback. Several participants, including S1 and S4, reported that immediate feedback reduced anxiety and increased confidence when dealing with grammar and academic expression. These experiences suggest that ChatGPT may provide emotional support by creating a low-pressure environment where students can experiment with writing without fear of immediate judgment. However, affective engagement was not entirely positive. S3 and S5 expressed concerns regarding authorship, originality, and maintaining their personal writing voice when relying on AI-generated suggestions. These concerns demonstrate that emotional comfort provided by ChatGPT may coexist with uncertainty about ownership and independence. Therefore, affective engagement should be understood as an ambivalent process: AI feedback may encourage confidence and persistence, while excessive dependence may reduce students' sense of control over their own writing.

4.3 Pedagogical Affordances

The findings also indicate that ChatGPT provided both linguistic and pedagogical affordances, although these benefits were dependent on how students engaged with the tool. At the linguistic level, participants reported using ChatGPT to identify grammatical problems, improve sentence clarity, and receive explanations about language choices. However, these linguistic affordances did not automatically translate into learning gains. Instead, students perceived that ChatGPT explanations helped them better understand writing conventions and reflect on possible revisions.

At the pedagogical level, ChatGPT appeared to support opportunities for reflection, self-evaluation, and decision-making. For example, S2 and S4 described comparing ChatGPT suggestions with their original intentions before deciding whether to incorporate changes. These findings highlight the importance of critical AI literacy, as learners need to evaluate not only whether AI feedback is linguistically accurate but also whether it is contextually appropriate and aligned with their rhetorical purposes (Wang & Wang, 2025).

5. CONCLUSION

This study explored EFL university students' engagement with ChatGPT-generated feedback during academic writing and revealed that students' experiences involved behavioral, cognitive, and affective dimensions. Participants reported using ChatGPT for iterative revision, evaluating AI-generated suggestions, and managing emotional responses toward AI-assisted writing. The findings suggest that the value of ChatGPT feedback depends not only on its technological capabilities but also on learners' ability to critically interpret, evaluate, and negotiate AI-generated suggestions. This study contributes to the growing literature on AI-assisted writing by highlighting the importance of learner engagement and AI literacy in determining how students interact with generative AI feedback. Rather than positioning ChatGPT as a replacement for teachers or independent thinking, the findings emphasize its role as a supplementary feedback support tool that requires learners to maintain responsibility for revision decisions, authorial voice, and academic integrity.

However, several limitations should be acknowledged. First, the study involved only five undergraduate EFL students from one institutional context, which limits the transferability of the findings. Second, the data were based primarily on self-reported interview accounts and did not include direct analysis of students' writing drafts, ChatGPT interaction logs, prompt histories, or revision records. Third, interviews were conducted in English, which may have influenced participants' ability to fully express complex experiences. Finally, the specific ChatGPT versions used by participants were not systematically documented, meaning that possible differences in AI feedback quality across models could not be examined. Future research should address these

limitations by incorporating multiple data sources, including writing drafts, AI interaction records, and longitudinal observations of revision processes. Larger-scale and mixed-method studies are also needed to investigate how AI literacy develops over time and how different forms of engagement with AI-generated feedback influence students' writing performance and learning outcomes in diverse educational contexts.

DECLARATION OF GENERATIVE AI

During the preparation of this manuscript, the authors used AI-assisted tools, including ChatGPT and Grammarly, solely for language-related purposes, such as improving grammatical accuracy, refining sentence structure, and enhancing the clarity of academic expression. These tools were not used to generate research data, conduct data analysis, interpret findings, develop theoretical arguments, or replace the authors' intellectual contributions. All AI-generated suggestions were critically reviewed, modified where necessary, and verified by the authors. The authors take full responsibility for the originality, accuracy, integrity, and final content of this manuscript.

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