How Students Develop Prompts in AI-Assisted English Writing: From Commands to Conversation

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Abstract

The increasing use of generative artificial intelligence (GenAI) in English writing has shifted attention from AI-generated products to the ways learners interact with AI during the writing process. However, limited research has examined prompting as an evolving discourse practice in authentic academic writing. This study investigated university students' prompting strategies, their linguistic and sequential development, their communicative functions, and the ways they reflected self-regulated learning and AI literacy. A qualitative design was employed using Discourse Analysis (DA) and Computer-Mediated Discourse Analysis (CMDA). Data were collected from the ChatGPT interaction histories and semi-structured interviews of 20 master's students over a three-week academic writing period. The findings identified six recurring prompting strategies: formulation, revision, refinement, adaptation, clarification, and evaluation or confirmation. Students' prompts became increasingly explicit, contextualized, and sequentially dependent as interactions progressed. Five communicative functions were also identified: requesting information, directing text production, clarifying meaning, negotiating revisions, and evaluating responses. The interaction patterns further revealed recurrent processes of monitoring, evaluation, clarification, and strategic prompt adjustment associated with self-regulated learning and emerging AI-literacy practices. These findings suggest that prompting should be understood not merely as a technical input mechanism but as an evolving discourse practice through which learners negotiate meaning, regulate writing processes, and manage human-AI interaction. The study highlights the importance of integrating prompt literacy into AI-assisted English writing instruction by developing students' ability to formulate, evaluate, and strategically revise prompts while critically engaging with AI-generated responses.

Keywords *AI-assisted writing, AI literacy, computer-mediated discourse, prompt literacy self-regulated learning.*

INTRODUCTION

The rapid expansion of generative artificial intelligence (GenAI) has altered the landscape of English language teaching and learning, particularly in academic writing. Tools such as ChatGPT, Gemini, and Claude are increasingly used by university students to generate ideas, organize content, revise drafts, improve linguistic accuracy, and obtain immediate feedback (Barrett & Pack, 2023; Kumar et al., 2025; Moorhouse et al., 2025; Özturan, 2025). Unlike conventional digital writing tools, GenAI systems respond dynamically to user input, making the quality of human–AI interaction central to the writing process (Chia & Frattarola, 2025; Chuang & Yan, 2025; Crosthwaite & Sun, 2025; K. Wang et al., 2024). In this context, prompting is no longer merely a technical act of entering commands

(Kohnke & Moorhouse, 2025; Liu & Zhang, 2025; Prilop et al., 2025; C. Yang et al., 2025). It is becoming an important communicative practice through which learners articulate intentions, specify writing goals, evaluate outputs, and regulate subsequent interaction with AI (Benbya et al., 2024; Chanpradit, 2025; Kim et al., 2025). This development has positioned prompting within broader discussions of digital and AI literacy, learner autonomy, and strategic decision-making in technology-supported writing (Eager & Brunton, 2023; Guo et al., 2024; Hwang et al., 2025).

Research on GenAI-assisted writing has expanded rapidly and has provided important evidence regarding its pedagogical potential. Existing studies report that AI-supported writing can facilitate idea generation, vocabulary development, grammatical accuracy, revision, feedback, and learner engagement. Other studies have examined students' perceptions of GenAI, technology acceptance, motivation, and the conditions under which learners use AI as a writing partner. These strands of research have helped establish the educational relevance of GenAI in language learning and have demonstrated that AI can support multiple stages of the writing process (Georgopoulou et al., 2025; Barrot, 2026; Maruf & Halyna, 2023) . At the same time, an emerging line of research has focused on prompt engineering and prompt optimization, emphasizing how carefully designed instructions can improve the quality, relevance, and contextual appropriateness of AI-generated responses (Chang et al., 2023; Carrasco-Sáez et al., 2025).

Despite these contributions, much of the existing literature still gives greater attention to the outcomes of AI-assisted writing than to the interactional processes through which those outcomes are produced. Writing quality, learner achievement, technology acceptance, satisfaction, and perceptions are frequently treated as the primary objects of investigation, while students' prompts are often regarded simply as inputs used to obtain better AI-generated texts. Such an orientation risks overlooking the linguistic and communicative work embedded in prompting itself. During authentic writing activities, learners do not necessarily formulate a single prompt and accept the first response. They may clarify intentions, add contextual information, revise instructions, request explanation, evaluate generated content, and reformulate subsequent prompts in response to emerging writing needs. These interactional moves suggest that prompting develops sequentially and can reveal how learners negotiate meaning and regulate their writing activity during human–AI interaction (Reeves & Sylvia, 2024; Andewi et al., 2025; Wang & Tian, 2025).

This issue is particularly relevant in English as a Foreign Language (EFL) contexts, where learners must simultaneously manage linguistic demands, academic writing conventions, disciplinary expectations, and the affordances and limitations of AI-generated feedback. From this perspective, prompts constitute potentially rich discourse data because they capture learners' changing intentions and decisions across successive interactional turns (Andewi et al., 2025; Tengler & Brandhofer, 2025; Tzirides et al., 2024). However, comparatively limited attention has been devoted to the linguistic realization, communicative functions, and sequential development of prompts produced during authentic English writing. Qualitative studies have often prioritized students' experiences or perceptions rather than examining the discourse generated throughout the interaction itself. As a result, there is still insufficient understanding of how prompting evolves from an initial request into a sequence of reformulation, refinement, clarification, and evaluation during the writing process (Vettriselvan, 2025; Zou et al., 2025).

Addressing this gap requires a shift from viewing prompts as isolated technical inputs toward examining prompting as an evolving discourse practice. A discourse-oriented perspective makes it possible to investigate not only what learners ask an AI system to do, but also how those requests are linguistically constructed, how they change in response to AI-generated output, and what communicative purposes they perform across an interaction. Discourse Analysis (DA) is useful for examining how language is used to accomplish communicative goals, while Computer-Mediated Discourse Analysis (CMDA) is

particularly relevant for tracing how meaning and interaction develop through sequential exchanges in digitally mediated environments. Applied to human–AI writing interaction, these perspectives allow prompting to be examined as naturally occurring language use rather than merely as a technical mechanism for optimizing generated text.

A discourse perspective can also be connected to the learning processes underlying students' interaction with GenAI. Prompt revision, clarification, and evaluation may indicate processes of planning, monitoring, reflection, and strategic adjustment that are central to self-regulated learning. Similarly, the ability to formulate effective requests, critically evaluate AI-generated responses, recognize limitations, and revise interaction strategies reflects important dimensions of digital and AI literacy. Accordingly, the present study treats DA and CMDA as the primary analytical perspectives for identifying and interpreting discourse patterns in students' prompts, while Self-Regulated Learning (SRL) and Digital/AI Literacy are used as complementary interpretive lenses for explaining what those patterns reveal about learners' strategic engagement with AI. This arrangement avoids treating the frameworks as equivalent and instead assigns each a clear role in the analysis.

The present study therefore investigates university students' prompting practices during GenAI-assisted English writing by treating prompts and prompt sequences as the principal units of analysis. Its contribution lies in moving beyond the dominant focus on writing products, learner perceptions, and prompt effectiveness to provide a discourse-oriented account of how prompting develops through interaction. Rather than assuming that effective prompting is a fixed technical skill, the study examines it as a process in which learners progressively formulate, revise, refine, adapt, clarify, and evaluate requests while responding to AI-generated feedback. In doing so, the study seeks to provide empirical evidence for understanding prompt literacy as a communicative and strategic competence that is enacted through iterative human–AI interaction. This perspective is particularly relevant to English language education because it connects the linguistic form of prompts with the learning decisions that occur during academic writing.

Specifically, the study addresses four questions: (1) What prompting strategies do university students employ when interacting with generative AI during English writing tasks? (2) How are these prompting strategies linguistically realized and developed across successive interactional turns? (3) What communicative functions do students' prompts perform during the generation, revision, and refinement of English writing? and (4) How do students' prompting practices reflect self-regulated learning and AI literacy during AI-assisted English writing? By addressing these questions, the study aims to contribute a more process-oriented understanding of AI-assisted writing and to generate pedagogical insights for developing prompt literacy in higher education.

METHOD

Research Design

This study employed a qualitative research design to investigate how university students constructed and developed prompts while using generative artificial intelligence (GenAI) for English academic writing. The study treated prompting as naturally occurring discourse produced through human-AI interaction rather than as a set of isolated technical commands. Discourse Analysis (DA) and Computer-Mediated Discourse Analysis (CMDA) provided the primary analytical perspectives for examining the linguistic realization, communicative functions, and sequential development of students' prompts. The identified discourse patterns were subsequently interpreted through Self-Regulated Learning (SRL) and Digital/AI Literacy to explain how prompting reflected students' strategic regulation, critical evaluation, and engagement with AI-generated feedback.

A qualitative design was appropriate because the study aimed to explain how prompting practices emerged and changed across successive interactional turns rather than to test causal relationships or measure learning outcomes statistically. The analysis

therefore focused on the form, function, and development of prompts within their interactional context.

Research Context and Participants

The participants were 20 master's students enrolled in English Language Education. Their ages ranged from 23 to 31 years, with a mean age of approximately 26.4 years. The group consisted of 8 male students and 12 female students. Regarding prior experience with generative AI, 14 participants reported having used ChatGPT before the study, whereas 6 reported using it for the first time in an academic writing context during the study. In terms of English proficiency, the participants were generally at an upper-intermediate to advanced level, based on their program admission requirements, previous English-learning experience, and self-reported proficiency. This level was considered sufficient for participation in English academic writing activities and for producing prompts and reflective interview responses in English.

These characteristics are reported to clarify the context in which the prompting practices occurred. Because the study used a qualitative design and a purposive sample from one master's program, the participant profile is not intended to support demographic generalization. Instead, it enables readers to assess the relevance and transferability of the findings to comparable postgraduate EFL writing contexts.

Data Sources and Data Collecting

The primary data consisted of complete ChatGPT interaction histories generated by the participants during the three-week writing period. The records included initial prompts, revised and follow-up prompts, ChatGPT responses, prompt sequences, and successive versions of students' writing when available. The principal units of analysis were individual prompts, prompt sequences, and interactional exchanges through which students modified their requests in response to AI-generated output.

To complement the interactional data, semi-structured reflective interviews were conducted with all 20 participants after the writing activities had been completed. Each interview lasted approximately 15 minutes and addressed participants' intentions, decision-making, experiences of evaluating AI responses, and reasons for revising or extending their prompts. The interviews were used to clarify the interpretation of selected interactional episodes and were not treated as the primary source of evidence.

All participant names and identifying information were removed before analysis. Participants were assigned anonymous codes from P01 to P20. The codes were used consistently in the reporting of prompt excerpts, interview excerpts, and analytical examples. Any information that could identify an individual, course group, or specific assignment was omitted or generalized.

Data analysis

Data analysis followed an iterative procedure combining inductive coding with discourse-oriented interpretation. First, the complete interaction histories were read repeatedly to establish familiarity with the participants' writing activities, interactional sequences, and prompting practices. Second, the data were segmented into analytical units consisting of individual prompts, relevant ChatGPT responses, and prompt sequences associated with a particular writing objective.Third, the prompts were coded inductively according to the action performed in the interaction. The initial coding identified formulation, revision, refinement, adaptation, clarification, and evaluation or confirmation. The coding categories were not treated as mutually exclusive when a single prompt performed more than one action. For example, a prompt could evaluate an earlier response and simultaneously request a revision. Fourth, the coded segments were compared across participants and interactional episodes. Similar codes were grouped into broader categories,

while differences between revision and refinement, and between refinement and adaptation, were examined carefully. Prompt revision was defined as a modification of a previous request after an AI response. Prompt refinement referred to the addition of constraints or contextual information while maintaining the basic purpose of the request. Prompt adaptation referred to a change in the interactional approach when a previous response was considered inadequate. Fifth, Discourse Analysis and Computer-Mediated Discourse Analysis were applied to examine the linguistic and sequential realization of the prompts. The analysis focused on the wording and structure of prompts, their communicative functions, changes in explicitness and contextualization, and the ways in which later prompts responded to previous AI outputs.

Finally, the discourse patterns were interpreted through Self-Regulated Learning and Digital/AI Literacy as complementary interpretive lenses. Self-Regulated Learning was used to interpret observable patterns of goal orientation, monitoring, evaluation, and strategic adjustment. Digital/AI Literacy was used to interpret students' developing ability to communicate requirements to AI, evaluate generated responses, identify inadequacies, and revise their interactional strategies. These concepts were not directly measured using psychometric instruments. Therefore, the findings are presented as evidence of interactional practices associated with self-regulated learning and emerging AI-literacy dimensions.

The following example illustrates how an interactional episode was analyzed.

Participant #4:
Prompt 1: "*Write an introduction about AI in English writing.*"
ChatGPT response – abbreviated:
The response provided a general introduction to the use of artificial intelligence in English writing but did not identify a specific research gap.

Participant #12:
Prompt 2: "*Rewrite it in an academic tone and highlight the research gap related to students' prompting strategies*."
Prompt 2 responds to the inadequacy of the preceding AI response. The student retains the original writing objective but adds two constraints: academic register and a specific rhetorical function, namely the presentation of a research gap. The prompt is therefore more explicit and contextually constrained than Prompt 1.
Interpretive category: Sequential specification and strategic adjustment.
Interpretation through Self-Regulated Learning: The sequence provides interactional evidence of monitoring and evaluation because the student identifies a mismatch between the generated introduction and the intended research purpose, then modifies the subsequent request.
Interpretation through Digital/AI Literacy: The sequence indicates an emerging ability to communicate more precise requirements to the AI system and to redirect the interaction when the output does not meet the academic objective.

The analytical procedure was applied across the complete dataset. The researchers compared coded episodes across participants and revisited earlier coding decisions when new examples challenged or extended the emerging categories. The final interpretations were based on recurring patterns across the interaction corpus rather than on isolated examples.

Trustworthiness and Ethical Considerations

Trustworthiness was addressed using the criteria of credibility, dependability, confirmability, and transferability. Credibility was strengthened through peer debriefing and participant reflection during the follow-up interviews, particularly when interpretations of selected prompting episodes required clarification. Dependability was supported by

maintaining an audit trail documenting the stages of data collection, coding, category refinement, and interpretation. Confirmability was enhanced through reflexive memo writing and systematic documentation of analytical decisions. Transferability was supported by providing contextual information about the course, participants, data sources, and analytical procedures so that readers could assess the relevance of the findings to comparable educational settings. Before data collection, all participants provided informed consent. Participation was voluntary, and identifying information was removed from the dataset. Anonymous participant codes were used throughout data organization, analysis, and reporting.

RESULTS

RQ1. What prompting strategies do university students employ when interacting with generative AI during English writing tasks?

The analysis identified six recurring prompting strategies: prompt formulation, prompt revision, prompt refinement, prompt adaptation, clarification requests, and evaluation or confirmation. These strategies represented different ways in which students initiated, maintained, and redirected their interaction with ChatGPT during writing. The strategies were not strictly sequential categories; several could occur within the same interaction episode, and students moved between them depending on the adequacy of the response they received.

Table 1. Emerging prompting strategies identified in the interaction corpus.

Prompting strategy	Description	Qualitative prevalence
Prompt formulation	Initial requests specifying a writing goal or task	Very frequent
Prompt revision	Modification of a previous prompt after an AI response	Very frequent
Prompt refinement	Addition of detailed constraints or contextual information	Frequent
Prompt adaptation	Change of prompting approach when a previous response was unsatisfactory	Frequent
Clarification requests	Requests for explanation, simplification, or justification	Moderate
Evaluation and confirmation	Requests to verify grammar, coherence, or academic style	Moderate

Prompt formulation generally marked the beginning of an interaction. At this stage, students stated the main task or requested assistance with idea generation, topic development, or another writing need. One example was: "Generate three possible research topics about AI in English language teaching." This type of prompt established the initial direction of the interaction but did not always contain sufficient contextual detail to produce the response the student ultimately wanted. Prompt revision occurred when students changed an earlier request after seeing the AI-generated response. Revision was especially visible when the first answer was considered too broad or insufficiently aligned with the writing task. For example, the initial topic-generation request was subsequently revised to: "Make the topic more specific for master's research and focus on discourse analysis." The revised prompt introduced two additional constraints: the academic level of the study and the preferred disciplinary focus.

Prompt refinement involved adding further detail to an existing request without changing its basic purpose. Students used refinement to specify such matters as academic tone, research focus, expected text structure, citation style, or word length. Prompt adaptation differed slightly from refinement because it involved changing the prompting approach when a previous response was unsatisfactory. In such cases, students did not merely add detail; they redirected the interaction in an attempt to obtain a more useful

response.

Clarification requests were used when students wanted the system to explain, simplify, or justify a response. Evaluation and confirmation prompts, by contrast, were used to check whether a text met particular linguistic or academic expectations, including grammar, coherence, and academic style. Although these two strategies were less frequent than formulation and revision, they show that students also used prompts to interrogate and assess AI output, not only to generate new text. The interview data supported the pattern of repeated revision. Participants reported that their first prompts were often too general and that the content missing from an AI response became the basis for the next prompt. One participant stated:

Excerpt 1

"Usually my first prompt is too general. After seeing ChatGPT's answer, I know what information is still missing, so I revise the prompt."

Overall, RQ1 shows that students used a repertoire of six prompting strategies rather than relying on a single prompting technique. Formulation and revision were central to the interaction, while refinement, adaptation, clarification, and evaluation enabled students to progressively reshape the exchange in accordance with their writing needs.

RQ2. How are these prompting strategies linguistically realized and developed across successive interactional turns?

The discourse analysis showed a noticeable change in the linguistic form of prompts as interactions progressed. Initial prompts were commonly short and task oriented, whereas later prompts were more explicit, contextualized, and structurally detailed. This change suggests that the linguistic realization of prompting was closely connected to the sequential development of the interaction.

An initial request such as "Help me write an introduction" contains only a general action and the target text type. A later version, however, could be phrased as: "Rewrite the introduction using an academic tone, include a research gap related to prompting strategies, and limit it to approximately 200 words." Compared with the initial request, the later prompt adds information about the required action, academic register, rhetorical function, topic focus, and length. The contrast illustrates how students progressively transformed broad instructions into more tightly specified writing requests.

Three linguistic patterns were recurrent across the interaction corpus. First, prompts became increasingly explicit through the addition of instructions and constraints. Second, students incorporated contextual information, including research objectives, target audiences, citation styles, and expected text structures. Third, prompt development was sequential: later turns frequently depended on what had been produced in the preceding turn, so the meaning of a prompt was partly shaped by the interactional context in which it occurred.

Table 2. Sequential development of an illustrative prompt sequence.

Interaction turn	Prompt	Developmental function
Prompt 1	Write an introduction about AI.	Establishes the general topic and writing task
Prompt 2	Focus on AI in English writing.	Narrows the topical scope
Prompt 3	Include recent studies from 2023-2026.	Adds an evidential and recency constraint
Prompt 4	Highlight the research gap related to prompting strategies.	Adds a specific rhetorical objective

The sequence in Table 2 demonstrates progressive specification. Prompt 1 establishes only a broad topic and text type. Prompt 2 narrows the domain to AI in English

writing. Prompt 3 adds a requirement concerning the recency of supporting studies, while Prompt 4 introduces the rhetorical requirement of identifying a research gap. Each turn therefore builds on the previous one by adding a new layer of specificity.

This pattern is important because it shows that prompts were not best understood as isolated linguistic units. Their meaning and function were often dependent on the response that preceded them. A follow-up prompt could be brief because the interactional context had already established the topic, or it could become more elaborate when the student needed to correct, constrain, or redirect the AI response. Interview responses confirmed that students intentionally increased the specificity of subsequent prompts after evaluating earlier outputs.

Thus, the answer to RQ2 is that prompting strategies were linguistically realized through increasing explicitness, contextualization, and turn-by-turn modification. The development from broad to more constrained requests indicates that prompt construction was an interactional process in which students progressively articulated what they needed from the AI system.

RQ3. What communicative functions do students' prompts perform during the generation, revision, and refinement of English writing?

The analysis identified five recurring communicative functions: requesting information, directing text production, clarifying meaning, negotiating revisions, and evaluating responses. These functions show that students' prompts were used for more than content generation. They also served to manage the interaction, assess previous output, and guide the subsequent development of a text.

Table 3. Communicative functions identified in students' prompts.

Communicative function	Purpose	Typical linguistic realization in prompts	Role in the writing process
Requesting information	Seeking ideas, explanations, examples, or background information related to the writing task	Use of interrogative forms or requests for information (e.g., *"Can you provide possible topics about…?", "Explain the concept of..."*)	Supports topic exploration, knowledge development, and understanding of the writing focus
Directing text production	Instructing AI to generate specific writing outputs or textual components	Use of imperative structures specifying writing actions, genres, and expected outputs (e.g., *"Write an introduction about…", "Develop a paragraph using an academic style"*)	Supports drafting, text generation, and initial organization of written ideas
Clarifying meaning	Requesting further explanation, simplification, examples, or justification of AI-generated responses	Use of clarification questions and requests for elaboration (e.g., *"What do you mean by…?", "Explain this idea further"*)	Resolves uncertainty and helps students interpret AI responses before continuing the writing process
Negotiating revisions	Asking AI to modify, improve, or restructure previous outputs based on perceived weaknesses	Use of revision-oriented instructions containing evaluation and modification requests (e.g., *"Make this paragraph more argumentative", "Revise this section by adding a clearer research gap"*)	Supports redrafting, refinement, and alignment of AI-generated text with academic writing goals
Evaluating responses	Assessing the quality, accuracy, relevance, and appropriateness of AI-generated content	Use of checking and verification requests (e.g., *"Check whether this paragraph is academically appropriate", "Evaluate the coherence of this argument"*)	Supports quality control, critical judgment, and decision-making regarding AI-generated content

Requesting information was visible when students sought ideas, possible topics, explanations, or other content needed to continue writing. Directing text production occurred when students asked ChatGPT to produce a particular written output, such as an introduction or a revised paragraph. These two functions were closely related to generating and developing written material.

Clarifying meaning was used when students needed further explanation of an AI response. Negotiating revisions was more explicitly oriented toward changing an existing text. For example, the prompt "The paragraph is still too general. Please make it more argumentative and include recent references" first identifies a perceived weakness and then requests a specific revision. The prompt therefore performs both an evaluative and a revision-oriented function. A similar overlap can be observed in the prompt "Can you explain why this paragraph does not clearly show the research gap?" The question asks for clarification, but the request is triggered by the student's evaluation that the research gap remains unclear. These examples demonstrate that communicative functions frequently co-occurred within the same sequence rather than appearing as isolated categories.

The interview data further indicated that students rarely accepted AI-generated responses without modification. They often asked for clarification, requested revisions, or checked whether a response matched their academic writing objectives. This pattern suggests that prompts functioned as interactional moves through which students managed both the content being produced and the quality of the ongoing human-AI exchange. Therefore, RQ3 shows that students' prompts fulfilled multiple communicative purposes across the writing process. They were used to seek information, direct text generation, resolve uncertainty, negotiate changes, and evaluate output. The co-occurrence of these functions further supports the view that prompting involved ongoing communication rather than a series of unrelated commands.

RQ4. How do students' prompting practices reflect self-regulated learning and AI literacy during AI-assisted English writing?

The interaction histories revealed three consistent patterns relevant to this research question: students monitored the relevance and quality of AI-generated responses, revised prompts after evaluating those responses, and made their prompts progressively more specific as the writing process developed. These observable behaviors provide the main evidence for understanding how prompting reflected self-regulated learning and AI literacy.

Monitoring was evident when students compared an AI response with their own writing objectives rather than treating the response as automatically acceptable. When a response was judged to be too broad, insufficiently academic, or otherwise misaligned with the intended task, students modified the next prompt. One participant explained:

> **Excerpt 2**
> *"If the answer doesn't match what I need, I don't copy it directly. I change my prompt until I get a better response."*

This statement is consistent with the interaction records showing repeated prompt revision and refinement. Students first assessed the usefulness of an output and then adjusted their next request. In this sense, the prompting sequence contained an observable cycle of goal setting, response monitoring, evaluation, and strategic modification.

The data also showed that students used clarification requests when they needed to understand an AI response before continuing the writing process. Another participant stated:

Excerpt 3
"Sometimes I ask ChatGPT why it gives that answer before I continue revising my paper."

This behavior indicates that some students did not use ChatGPT only as a text-generating tool. They also attempted to question the basis or adequacy of a response before deciding how to revise their writing. Similarly, evaluation and confirmation prompts were used to check grammar, coherence, or academic style, indicating an effort to assess rather than simply accept generated content.

In relation to AI literacy, the interactional evidence shows that students increasingly learned how to communicate their requirements more explicitly to the system. They added contextual information, specified constraints, asked for clarification, and redirected the interaction when an output did not match their intention. These practices show an emerging capacity to manage AI-assisted writing through more deliberate and critical interaction. The findings do not indicate that all participants followed exactly the same sequence or demonstrated the same level of strategic control. Rather, the recurring pattern across the corpus was a movement between generation, evaluation, clarification, revision, and refinement. This variation is important because it shows that the relevant evidence lies in the way students adjusted their interaction over time, not in the assumption that every student used an identical prompting procedure.

Accordingly, RQ4 is answered by showing that students' prompting practices reflected self-regulated learning through monitoring, evaluation, and strategic adjustment, while AI literacy was reflected in their increasingly deliberate communication with ChatGPT, critical checking of responses, and modification of prompts in response to perceived limitations in AI-generated output.

DISCUSSION

This study shows that university students' prompting during generative AI-assisted English writing developed as an iterative discourse process rather than as a sequence of isolated technical commands. Across the four research questions, students formulated writing goals, interpreted ChatGPT responses, evaluated their adequacy, and modified subsequent prompts. This process-oriented view complements existing research that has largely emphasized writing outcomes, feedback, learner perceptions, and technology acceptance. Yang & Li, (2024), for example, note that L2 research on ChatGPT has concentrated heavily on writing support and learner experiences. By focusing on prompt sequences, themselves, the present study makes visible the interactional processes through which learners progressively shape AI-generated support.

The six prompting strategies identified formulation, revision, refinement, adaptation, clarification, and evaluation or confirmation suggest that prompting functions as an adaptive repertoire. Students did not necessarily construct a fully specified prompt at the outset. Instead, they often discovered what needed to be added, narrowed, or redirected after examining the preceding AI response. This finding extends work on prompt engineering by showing that prompt effectiveness may emerge across interactional turns rather than from a single optimized instruction. Woo et al., (2024) demonstrate the value of explicit prompt-engineering instruction for EFL writing, while the present study shows how similar strategic behaviors can also arise naturally as students respond to mismatches between their intentions and AI output. In this sense, prompt literacy involves not only formulating an initial request but also recognizing when and how the interaction needs to be adjusted.

The linguistic development of prompts further supports this interpretation. Initial prompts were generally brief and task oriented, whereas later prompts became more explicit and contextualized through added information about topic, academic register,

rhetorical purpose, evidence, citation, or length. Importantly, later prompts were often sequentially dependent on earlier turns. Their meaning could not always be understood without reference to the preceding request and AI response. From a discourse perspective, this indicates that prompting shares a central feature of interactional communication: each turn responds to prior discourse while shaping what follows. The finding also complements studies of AI-supported feedback. Han & Mimi Li, (2024) show that students incorporate ChatGPT-supported feedback into revision, and Yan, (2024) demonstrates that the way learners process AI feedback influences subsequent writing development. The present study extends this logic to prompting by showing that AI responses themselves become resources for the learner's next communicative decision.

The five communicative functions identified—requesting information, directing text production, clarifying meaning, negotiating revisions, and evaluating responses also demonstrate that prompts perform more than a text-generation function. Several functions could occur within the same turn; for example, a student could evaluate a response as too general while simultaneously requesting a more argumentative revision. Such multifunctionality supports treating prompts as communicative acts rather than merely technical input strings. This interpretation is consistent with Mahapatra, (2024) dialogic view of ChatGPT-supported formative feedback, in which learners clarify expectations and act on feedback through interaction. The present findings provide discourse-level evidence of this dialogic process by showing how students used prompts to question, evaluate, redirect, and renegotiate AI-generated material.

These patterns broaden the notion of prompt literacy. Prompt engineering commonly emphasizes the construction of instructions that elicit relevant or accurate output, whereas the present data show that productive interaction also requires learners to decide when clarification is needed, when a response should be evaluated, and when revision must be negotiated. Prompt literacy can therefore be understood as a communicative and strategic competence involving goal articulation, contextualization, response evaluation, and follow-up interaction. This interpretation aligns with Wang & Wang (2025) account of critical AI literacy in L2 writing, which emphasizes critical awareness, strategic interaction with AI, and evaluation of AI affordances.

The recurrent cycles of monitoring, evaluation, clarification, and prompt adjustment also reflect processes associated with self-regulated learning. Students compared AI responses with their writing goals and altered subsequent actions when a mismatch was perceived. Prompt sequences therefore made visible a regulatory cycle in which a goal was expressed, a response was generated, the response was assessed, and the next action was adapted. Wang (2024) similarly reports that productive use of machine translation and generative AI in academic EFL writing depends on learners' ability to regulate technology use in relation to writing objectives. The present study adds a micro-level discourse account by showing how such regulation is linguistically enacted through revision, refinement, and clarification.

The same behaviors indicate emerging dimensions of AI literacy. Students progressively specified requirements, checked the relevance of responses, asked for explanation, and redirected ChatGPT when generated content did not match their intentions. Chen et al. (2025) conceptualize generative AI literacy as including interaction with AI and evaluation of its output, while Tzirides et al., (2024) emphasize the importance of critical engagement with generative AI. The current findings are consistent with these dimensions, although they should not be interpreted as evidence of comprehensive AI literacy. Ethical, epistemic, and broader sociotechnical dimensions were not directly assessed. The more defensible conclusion is that students' prompt sequences displayed emerging interactional and evaluative practices associated with AI literacy.

Taken together, the findings position prompting as an evolving discourse practice in which strategic choice, linguistic formulation, communicative purpose, and learning

regulation are interconnected. The study therefore shifts attention from what AI produces to how learners communicate with AI in order to shape those outputs. This contribution is particularly relevant to English language education because prompting draws simultaneously on linguistic knowledge, rhetorical awareness, strategic decision-making, and digital competence. Prompting is thus not external to the writing process; it increasingly forms part of how learners plan, develop, evaluate, and revise texts in AI-mediated environments.

Pedagogically, AI-assisted writing instruction should therefore move beyond providing students with model prompts. Learners need opportunities to examine prompt-response sequences, diagnose why an output is inadequate, add relevant context, request clarification, evaluate linguistic and rhetorical quality, and reformulate requests. This recommendation is consistent with evidence supporting guided use of ChatGPT in writing contexts (Mahapatra, 2024; Woo et al., 2024) and with research emphasizing teacher mediation in AI-supported feedback (Han & Li, 2024; Wang, 2024). A practical activity could require students to document an initial prompt, the AI response, their evaluation, and a revised prompt. Such tasks would make the interactional process visible while supporting more critical and self-regulated use of generative AI.

CONCLUSION

This study examined how master's students used and developed prompts during generative AI-assisted English writing by analyzing naturally occurring ChatGPT interactions and follow-up interviews. Rather than treating prompts as isolated technical instructions, the study focused on the strategies students employed, the linguistic and sequential development of their prompts, the communicative functions those prompts performed, and the ways the interaction reflected self-regulated learning and emerging AI-literacy practices. Discourse Analysis and Computer-Mediated Discourse Analysis provided the primary analytical perspectives, while Self-Regulated Learning and Digital/AI Literacy were used to interpret the educational significance of the interactional patterns.

The findings show that prompting developed as an iterative and adaptive process. Students employed six recurring strategies - formulation, revision, refinement, adaptation, clarification, and evaluation or confirmation - and moved among them according to the demands of the writing task and the adequacy of the preceding AI response. Their prompts also became progressively more explicit and context-sensitive, often developing from broad instructions into more constrained requests that specified topic, rhetorical purpose, academic style, evidence, or text structure. At the same time, prompts served multiple communicative functions, including requesting information, directing text production, clarifying meaning, negotiating revisions, and evaluating responses. These patterns indicate that prompting was not simply a means of obtaining text from an AI system, but an interactional process through which students progressively articulated and adjusted their writing intentions.

The principal contribution of the study is therefore its process-oriented conceptualization of prompting as an evolving discourse practice. The findings suggest that human-AI writing interaction is better represented as a recursive sequence of intention, prompt formulation, AI response, human evaluation, and renewed formulation than as a simple prompt-output exchange. This perspective extends current work on AI-assisted writing by foregrounding the discourse through which learners shape, question, and redirect AI-generated content. It also broadens the notion of prompt literacy by locating it at the intersection of linguistic formulation, communicative judgment, response evaluation, and strategic interaction rather than reducing it to the technical construction of effective commands.

The interactional evidence further suggests that iterative prompting can make aspects of self-regulated learning and AI literacy visible during writing. Students monitored

whether responses matched their goals, requested clarification when necessary, evaluated linguistic or rhetorical quality, and modified subsequent prompts when the output was unsatisfactory. These behaviors are consistent with processes of monitoring, evaluation, and strategic adjustment, while also reflecting emerging capacities to communicate more deliberately with generative AI and to critically manage its output. However, these findings should not be interpreted as evidence that the participants possessed comprehensive AI literacy, because ethical, epistemic, and wider sociotechnical dimensions of AI literacy were not directly measured in this study.

Pedagogically, the findings suggest that AI-assisted English writing instruction should address prompt literacy as part of the writing process itself. Rather than providing students only with model prompts, teachers can engage learners in examining prompt-response sequences, identifying why an AI response does or does not meet a writing goal, reformulating prompts, requesting clarification, and justifying decisions to accept, reject, or modify generated content. Such activities can help make human-AI interaction more visible and reflective while supporting academic writing, strategic learning, and critical engagement with generative AI. Prompt literacy should therefore be approached as a developing communicative and evaluative competence that supports, rather than replaces, learners' responsibility for academic writing decisions.

Several limitations delimit the interpretation of these findings. The study involved 20 master's students from a single university, was conducted over a three-week period, and focused exclusively on ChatGPT. The results are consequently context-specific and are not intended to represent prompting practices across all learners, institutions, writing genres, or generative AI platforms. In addition, the study analyzed naturally occurring discourse without directly measuring changes in writing quality or participants' levels of self-regulation and AI literacy. Future research could examine prompt development across educational levels, disciplines, writing genres, and AI platforms; employ longitudinal or comparative designs; and combine discourse analysis with screen recordings, classroom observation, writing-performance measures, or validated measures of self-regulated learning and AI literacy. Experimental or design-based studies could also investigate whether explicit instruction in prompt literacy produces measurable changes in learners' prompting practices, writing processes, and critical use of generative AI.

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