

## From Prompts to Progress: Leveraging Generative AI in College English Writing Instruction

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### Abstract

With the rapid rise of large language models like ChatGPT, generative AI (GenAI) is transforming language education. This study investigates prompt engineering in a college English writing course, showing how structured prompts scaffold the writing process. By aligning prompt types with stages of academic writing, the framework systematizes GenAI use and extends theories of scaffolding and meta-cognition. Findings indicate that prompts enhance engagement, support evidence-based argumentation, and enable recursive writing via real-time feedback. Compared with conventional teacher feedback, the model fosters autonomy, reflection, and frequent revisions, offering theoretical and practical insights for AI-supported L2 writing and sustainable English teaching.

### Keywords

Prompt Engineering, GenAI, College English Writing, Sustainable Learning

### Introduction

The integration of Generative Artificial Intelligence (GenAI) into education has accelerated rapidly and shown significant function in enhancing various aspects of teaching and learning (Chan & Hu, 2023). Large Language Models (LLMs), automated conversational applications, are capable of generating immense information such as new text, images, audio, and other types of content, and are increasingly being applied in diverse educational domains including academic writing (Usher & Amzalag, 2025).

The rapid adoption of LLMs such as ChatGPT, trained on massive datasets to master language structure and context, enables interactions that mimic human conversation and support diverse language tasks (Giray, 2023). While these abilities enhance productivity and creativity, many users still struggle to craft effective prompts that elicit accurate, context-relevant, and valuable responses.

Here, prompt engineering becomes essential. Defined as the process of designing and refining input to convey user intent (Ekin, 2023), it empowers users to optimize AI interaction for pedagogical purposes. Prompts act as the key communication channel, where clarity,

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constraints, context, and output format determine response quality (Ekin, 2023; Giray, 2023). Cultivating prompt literacy is thus vital in the era of digital intelligence.

Given the increasing role of GenAI in educational environments, especially in writing class, it is imperative to explore how students can be supported in designing and optimizing prompts based on their writing needs and learning environment. Helping learners acquire prompt engineering skills is not just a technical solution—rather, it is a matter of pedagogical necessity in terms of promoting digital literacy, learner agency, and sustainable writing growth. This paper addresses this need by examining prompt patterns in a particular writing direction that can scaffold students’ engagement with GenAI and enhance the effectiveness of AI-assisted writing tasks.

## Methodology

This study adopts conceptual research methodology aimed at designing a scaffolding prompt engineering model for use in college-level English writing instruction. Rather than empirical data collection, the study relies on educational theories and prior research on GenAI and language models to construct a theoretically informed, pedagogically sound framework.

### Theoretical Foundations

The conceptual model draws on multiple educational and cognitive theories, including Scaffolding Theory and Vygotsky’s Zone of Proximal Development (ZPD), which emphasizes that learning is most effective when students are guided just beyond their current proficiency. Recent studies further clarify the link between scaffolding and ZPD in educational contexts (Xi & Lantolf, 2021). In GenAI-based writing, prompt engineering functions as scaffolding, guiding learners’ writing step by step.

Research indicates that GenAI tools can serve as creativity support systems. Gero et al. (2022) introduced “sparks”—AI-generated ideas that enhance coherence, diversity, and engagement in scientific writing. Similarly, AI systems that generate prompts rather than full content, promoting semantic control and human-AI collaboration in writing.

Meta-cognitive strategies further support the model. Reflective prompts raise students’ awareness of their writing processes, fostering planning, monitoring, and revision behaviors that improve overall writing quality (Sun & Zhang, 2022).

### Prompt Pattern Framework

This model is developed by combining ideas from recent literature on prompt engineering. Prompt classifications and techniques are adapted from Giray (2023) and Ekin (2023), who highlight the importance of prompt clarity, structure, and purpose and propose the common pitfalls of writing prompts. The writing process is divided into five typical stages: brainstorming, drafting, revising, language polishing, and expansion. Each stage is matched with a prompt type that functions as a scaffold to support students’ writing progress.

Table 1. Prompt Pattern Framework

| Writing Stage | Prompt Pattern Type | Example Prompt                               | Pedagogical Function                  |
|---------------|---------------------|----------------------------------------------|---------------------------------------|
| Brainstorming | Exploratory         | “List 2-3 opinions or arguments of topic and | Stimulates idea generation and builds |

|                    |            |                                                                                                |                                                          |
|--------------------|------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------|
|                    |            | suggest one solution for each.”                                                                | background knowledge.                                    |
| Drafting           | Directive  | “Write an introductory paragraph on the topic. Include a hook, background, and thesis.”        | Provides structure and guides logical organization.      |
| Revising           | Reflective | “Does each paragraph logically connect to the essay? Identify one improvement you could make.” | Fosters meta-cognitive awareness and coherence checking. |
| Language Polishing | Evaluative | “Highlight and improve any awkward or unclear sentences in this paragraph.”                    | Supports grammar, clarity, and stylistic refinement.     |
| Expansion          | Suggestive | “What example or case study could strengthen your argument?”                                   | Enhances development and critical depth.                 |

### Prompt Wording and Instructional Specificity

To further illustrate the impact of instructional precision in prompt patterns, this section compares two versions of prompts across writing stages based on their clarity, cognitive demand, genre specification, and learner positioning. It illustrates how prompt wording affects instructional quality across different writing stages. Set the writing topic “how to rise to the challenges of AI in people’s daily lives” as an example.

Table 2. Comparison of different prompt patterns

| Writing Stage      | Prompt Pattern Type | Prompt 1(Basic)                                                                                            | Prompt 2 (Optimized)                                                                                                                                                     | Key Differences                                                                                           |
|--------------------|---------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Brainstorming      | Exploratory         | “List some challenges of AI presents in the workplace and daily life.”                                     | “List 3 challenges AI presents in daily life and suggest one solution for each. It’s an argumentative writing.”                                                          | Prompt 2 adds quantity, solution, and genre; raises task clarity and specificity.                         |
| Drafting           | Directive           | “Write an essay named ‘How to rise to the challenges of AI in the workplace and in people’s daily lives.’” | “As a sophomore student. Write an argumentative essay about the topic ‘How to rise to the challenges of AI in people’s daily lives.’ The essay should be 120–180 words.” | Prompt 2 adds learner role, genre, and length; improves task clarity and aligns with output expectations. |
| Revising           | Reflective          | “Does each paragraph make sense? Revise the unclear part.”                                                 | “Does each paragraph logically connect to the essay? Identify one improvement you could make.”                                                                           | Prompt 2 focuses on coherence and reflective revision, promoting meta-cognition.                          |
| Language Polishing | Evaluative          | “Check the vocabulary, sentence pattern and grammar. Polish them.”                                         | “Highlight and improve any awkward or unclear expression in this essay. Make sure the language level aligns with CEFR B1–B2.”                                            | Prompt 2 specifies clarity, register, and target level; better instructional focus.                       |
| Expansion          | Suggestive          | “Find some examples or                                                                                     | “Identify a real-world case study that                                                                                                                                   | Prompt 2 emphasizes source selection,                                                                     |

|  |  |                                         |                                                                                                                      |                                                                       |
|--|--|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
|  |  | case studies relating to the argument.” | strengthens one of your arguments. Integrate it into your body paragraph with explanation and citation if possible.” | integration, and explanation, reinforcing evidence-based development. |
|--|--|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|

## Results and Discussion

### Theoretical Outcomes of the Prompt Framework

The model is supported by emerging research on AI-supported idea generation. Gero et al. (2022) found that language model-generated “sparks” enhanced fluency and creativity in scientific writing, supporting the pedagogical value of exploratory and directive prompts in early writing stages.

The prompt-based scaffold model bridges the gap between the unstructured use of GenAI tools and a structured, pedagogically sound writing process. By matching specific prompt types with the stages of academic writing, the model provides a systematized means for leveraging GenAI. This contributes to theoretical understandings of how scaffolding and meta-cognition can be applied to AI-mediated learning environments, particularly in L2 writing contexts. At the same time, it raises concerns over possible drawbacks, such as reduced learner originality if prompts are overly directive or the risk of routinized, AI-driven responses replacing authentic inquiry.

### Anticipated Student Benefits

The prompt framework offers a range of learner-centered benefits that enhance students’ writing development holistically. By engaging learners in idea generation, structural planning, critical reflection, and language refinement, the model promotes deeper cognitive involvement and improves overall writing quality. It also supports students in constructing evidence-based arguments and fosters greater autonomy in navigating AI-assisted tasks. These stage gains respond to current calls for equipping students with sustainable learning strategies and higher-order thinking in AI-rich environments (Usher & Amzalag, 2025). Nonetheless, benefits may not be evenly realized, as students with weaker digital literacy or limited critical awareness may struggle to produce effective prompts or assess AI feedback reliably.

### Advantages over Conventional Feedback Models

Traditional writing instruction often depends on teacher feedback loops, which may be delayed or limited by time constraints. In contrast, GenAI tools like ChatGPT, when mediated through well-crafted prompts, offer real-time and personalized feedback. Such responsiveness can facilitate more frequent revisions and fluency in writing. Unlike generic AI assistance, the proposed framework also encourages deliberate prompt formulation, which increases the depth and accuracy of GenAI feedback. This allows learners to pursue recursive writing processes with increased clarity and motivation. However, risks of over-reliance remain; without sufficient teacher mediation, students may privilege AI-generated suggestions over their own reasoning, potentially weakening independent judgment.

### Limitations and Future Directions

The framework remains conceptual and yet to be validated by being implemented in classrooms. Limitations such as student variability in producing high-quality prompts, over-reliance on AI response if not carefully weighed, and unequal digital access or proficiency among learners may be incurred. Future research should pilot the framework in classroom settings, comparing

outcomes with control groups. Overall, this study positions prompt engineering not merely as a technical strategy but as a pedagogical bridge that can transform AI from a static tool into an interactive writing partner.

### Conclusion

This study proposes a conceptual framework for integrating prompt engineering into college English writing instruction through scaffolding prompt patterns aligned with five stages of the writing process. Drawing on scaffolding and meta-cognitive theories, the framework demonstrates how well-structured prompts can serve as cognitive and instructional supports for students engaging with GenAI tools. By employing exploratory, directive, reflective, evaluative, and suggestive prompts, the model fosters deeper cognitive engagement, improved writing organization, meta-cognitive control, linguistic accuracy, and evidence-based argumentation. Comparisons between basic and optimized prompts show that small adjustments in clarity, role setting, and genre specificity can significantly enhance AI interaction and student performance. Rather than replacing instruction, the study advocates pedagogically meaningful integration of GenAI. Positioned as a form of academic literacy, prompt engineering empowers students to engage critically and creatively with AI while reinforcing autonomy, reflection, and sustainable learning. Future empirical work should validate the framework and explore strategies for teaching, assessing, and adapting prompt literacy across disciplines.

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