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# Prompting Metacognition: Using Prompt Writing as a Language Task and Metacognitive Tool in ELT

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**ABSTRACT**

Generative Artificial Intelligence (GenAI) tools have made their way into English Language Teaching (ELT) contexts, yet their pedagogical value remains contested. While many learners engage with GenAI primarily as a quick hack for producing answers, fewer use it as a resource for reflective language learning. This study explores prompt writing as a language learning task that supports both language development and metacognitive awareness. The study was conducted with a target group of pre-seminary, tertiary-level learners with mixed linguistic proficiency. Over the course of four instructional sessions, the study used a classroom-based action research design. Learners engaged in cycles of prompt drafting, GenAI-generated responses, peer discussion, and prompt refinement. Classroom observations, learner reflections, and group discussions were used to gather qualitative insights. The findings indicate measurable improvement in learners' autonomy, as learners became aware of how lexical choices shape meaning, along with increased engagement, teamwork, and reflective thinking. The study argues that prompt writing, when treated as a language task rather than a technical skill, can function as a practical tool for fostering metacognition in ELT classrooms.

***KEYWORDS:*** Prompt writing, Generative AI, ELT, Metacognition, Pedagogy

## INTRODUCTION

The rapid advancements in technology have significantly transformed contemporary educational methodologies. The pedagogical approach has undergone constant evolution, especially with the recent integration of Generative Artificial Intelligence (GenAI) in educational contexts. Many language teaching aids and tools have integrated AI to support learner autonomy through personalised learning systems and automated feedback tools.

Enhancing learner engagement and linguistic proficiency remains the primary focus of modern language teaching pedagogy. Thus, Generative Artificial Intelligence (GenAI) tools have become seamlessly integrated into language teaching platforms, much like computer-assisted learning methodologies once did. Due to their versatility, ease of accessibility, and rapid results, these tools have garnered widespread attention among both learners and educators. GenAI tools such as ChatGPT and Gemini have greatly reshaped learner interaction and autonomy. While these tools enhance language learning, uncritical reliance simultaneously risks diminishing independent critical thinking skills (Arif & Naeem, 2025).

Most learners use GenAI passively, focusing primarily on the direct generation of answers rather than the active learning process. These tools have increasingly become a regular, ubiquitous companion for learners, providing rapid results and seemingly reliable solutions for academic tasks. This consequently raises concerns regarding academic integrity, assessment validity, and cognitive over-reliance. Although AI detection systems and tools exist, learners continue to find innovative ways to evade them while still using GenAI tools for academic purposes. Therefore, this research proposes prompt writing (the central mechanism of GenAI interaction) as a structured pedagogical task for language learners to improve digital literacy and linguistic proficiency.

Prompt writing serves as one of the primary means through which users interact with GenAI tools, in which output generation is directly contingent upon the specificity of the prompt. Despite its utility, prompt writing is rarely treated as a structured learning task in ELT classrooms. Furthermore, limited research has

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examined its potential in supporting learners' metacognitive development. Metacognition has always been vital for language learners, enhancing their ability to comprehend language functions and applications effectively.

Previous research predominantly focuses on the use of AI and GenAI tools for providing automated, quick feedback; offering cognitive-offloading shortcuts for language-writing tasks; or functioning as administrative aids for educators. Although recent studies highlight the benefits of GenAI integration, they often position learners as passive recipients of GenAI-generated output. In contrast, prompt writing has received minimal attention as an active pedagogical task for language writing. In particular, very little research has examined how prompt writing can function as a pedagogical task to foster metacognitive awareness among learners. Thus, this study investigates the impact of structured prompt writing as both a language learning task for linguistic development and a tool for metacognitive awareness in an ELT context.

The objective of this study is to examine how GenAI-mediated prompt writing, when used as a language learning task, supports the development of metacognitive awareness among English as a Second Language (ESL) learners.

The research question guiding this study is: How does GenAI-mediated prompt writing, as a classroom task, contribute to the development of metacognitive awareness among English as a Second Language (ESL) learners?

## LITERATURE REVIEW

### GenAI Landscape in ELT

Research on the integration of GenAI in education has expanded significantly, transitioning from early adaptive learning systems to modern GenAI applications. Within this broader technological shift, systematic reviews of GenAI integration, especially in English Language Teaching (ELT), consistently demonstrate its efficacy in enhancing fundamental language skills, assessment practices, and overall learner satisfaction (Sharadgah & Sa'di, 2022; Sharifuddin & Hashim, 2024). The immediate feedback mechanism of these GenAI-integrated tools improves language skills while actively lowering language-learning anxiety (Sutrah et al., 2025). Despite these benefits, most of these studies lack pedagogical task designs to support educators in structuring GenAI use in classrooms (Sharadgah & Sa'di, 2022; Sharifuddin & Hashim, 2024).

### GenAI, Learner Autonomy and Writing Skills

As GenAI tools become more prevalent among learners, empirical studies investigating language-writing classrooms reveal a clear dichotomy between the technological benefits and underlying cognitive vulnerabilities. Learners widely use tools like Google Translate and Grammarly to build vocabulary, generate ideas, and complete writing tasks (Alghasab, 2025; Arif & Naeem, 2025). Conversely, relying on these platforms without critical thinking affects independent and active learning. Alghasab (2025) raises valid concerns that students' independent writing skills deteriorate when there is minimal human guidance. Furthermore, while GenAI improves the baseline quality of written tasks, its impact on critical thinking is mixed; evidence shows that learners themselves are aware of the dangers of relying heavily on technology (Arif & Naeem, 2025).

### The Pedagogical Gap in Prompting and Metacognition

Navigating these cognitive challenges requires carefully designed pedagogical tasks, yet prompt writing (the primary method of interaction with GenAI) lacks strong empirical exploration as a structured classroom activity. An effective prompt requires practical strategies, including clear instructions, context provision, and role specification. However, empirical evidence measuring the impact of these strategies on student fluency or accuracy development remains absent (Kasimova, 2025). Prompt writing is also a subskill of writing that requires intense mental effort. To provide a precise prompt to the GenAI, the learner must actively plan their vocabulary and carefully evaluate how their words shape the meaning. This cognitive demand is precisely where metacognition becomes essential. In traditional ELT settings, foundational research shows that when students become conscious of managing their thinking processes, language comprehension and task performance improve significantly (Habibian, 2015; Rahimi & Katal, 2012). Therefore, prompt writing can also be treated as an active metacognitive language task to improve language proficiency.

## METHODOLOGY

This study adopted a qualitative, classroom-based action research design, utilising the foundational framework developed by Kemmis and McTaggart (1988), which consists of four cyclical stages: planning, acting, observing, and reflecting. This methodology was selected because it allows the implementation of an instructional intervention within

a natural classroom context, followed by systematic observation of its impact on learners' language-learning processes. This approach is highly effective for capturing observable shifts in learners' metacognitive awareness and for providing in-depth insights into their learning evolution while interacting with GenAI tools.

The primary focus of the study was to examine how GenAI-mediated prompt-writing activities function as both a language-learning task and a tool for promoting metacognitive awareness among ESL learners. Notably, the learners were already familiar with such prompts due to ongoing Gemini-based art trends, such as Ghibli-style filters, anime art, and the 'Cartoonize Me' trend.

## Learner Profile

The participants of the study were a total of 19 tertiary-level, pre-seminary learners enrolled in an ESL programme at Concordia, Nagercoil. All the participants were male, aged from their early twenties to over forty years old. It was a multilingual classroom in which learners from different regions participated. The majority of the learners spoke at least three languages. The learners spoke Tamil, Malayalam, and English, and a few also knew Hindi. The learners showcased a mixed level of English language proficiency, ranging from basic communicative ability to advanced academic language; as per the Common European Framework of Reference for Languages (CEFR), the learners fell within the A1 to B2 range of language proficiency. As the institution operates as an English-medium environment, learners are exposed to English every day. Learners get opportunities to read and write in English most days, which also impacts their proficiency. This diverse, heterogeneous group provided a suitable context for examining how GenAI-based prompt-writing activities support metacognitive awareness across varying proficiency levels and age groups.

## Instruments and Materials

The instructional intervention utilised the free tiers of two primary GenAI tools, ChatGPT and Google Gemini. These platforms were selected specifically because of their high popularity among language learners. They allow learners to experience prompt formulation directly and observe how variations in linguistic input immediately influence the clarity and quality of GenAI outputs across both text and image generation. As the participants mostly came from rural and suburban backgrounds, prioritising free-tier applications ensured accessibility without placing a financial burden on the learners.

## The Procedure

The intervention was conducted over four sessions of 50 minutes each. The researcher structured all interventions, adhering to Krashen's (1985) i+1 comprehensible input hypothesis, to ensure a manageable cognitive load for the learners. The sessions were executed through Kemmis and McTaggart's (1988) four cyclical stages:

### *1. Planning:*

The researcher designed the pedagogical intervention by selecting free-tier GenAI platforms to ensure accessibility. Abstract themes were chosen as initial linguistic stimuli. A three-phase sequence was mapped to guide learners' progressive transition from individual interpretation to collaborative linguistic refinement.

### *2. Acting:*

**Phase 1 – Unstructured Prompting (a vague theme):** In the first phase, learners were provided with a broad, abstract, and minimally described theme. They were instructed to independently generate an image using Gemini with no peer discussion. The theme "LOVE" was used for the first two sessions, while the other two sessions had different themes. The researcher observed that learners in later sessions began conducting independent research on the given abstract themes before generating images, indicating active improvement in prompt awareness.

**Phase 2 – Guided Prompt Task:** In the second phase, the researcher introduced and demonstrated the relationship between linguistic input and GenAI output. The researcher modelled the addition of descriptive vocabulary, provided context and setting, and specified the role of the GenAI, drastically changing the resulting image. The earlier-generated Phase 1 images were compared with the refined images to visually highlight the linguistic choices. This phase aimed to raise learners' metacognitive awareness regarding their linguistic choices for prompting.

**Phase 3 – Collaborative Refinement:** During the third phase, learners were divided into small groups of three to encourage active engagement and collaboration, and to refine their prompts. The researcher provided necessary scaffolding on prompt revision while encouraging peer discussion. The resulting images were then displayed in a 'gallery walk.' During the third and fourth sessions, this phase

included a prompt-guessing game in which learners were expected to deduce the specific vocabulary and prompt structures used by their peers for image generation. This helped learners develop a clearer, more conscious awareness of prompting, enabling them to visualise the image through their prompt before generating it.

***3. Observing:***

Data were continuously collected during the acting phase, comprising learners' written prompt drafts from Session 1 to Session 4, along with GenAI-generated images. Additionally, the researcher took field notes and partial transcriptions of peer discussions during gallery walks, tracking improvement in learners'

***4. Reflecting:***

Learners actively reflected through Phase 3 peer evaluations and the prompt-guessing games, forcing them to justify their linguistic choices. The researcher evaluated and reflected on the data collected after each session to critically enhance and adjust scaffolding for subsequent cycles.

## DATA ANALYSIS

The collected data (written prompt drafts, generated images, observational notes and transcripts) were evaluated using thematic analysis to trace qualitative shifts in linguistic output and cognitive awareness. The analysis was conducted in two primary tiers.

**Tier 1:** Lexical and syntactic analysis was conducted on the written prompts to track the evolution of prompt specificity, selection of vocabulary, and context development. Initial drafts (e.g., 'love, give me a picture of love') were compared against final drafts to measure increases in descriptive and specific vocabulary, contextual details with settings, and character specification.

**Tier 2:** The observational notes and transcribed peer interactions were tracked for metacognitive processing. Moments indicating active comparison (such as, 'Why is mine less detailed than his?') were tracked. Inquiries regarding vocabulary acquisition (e.g., 'Kevin, where did you get those words?') were tracked. Finally, observational data regarding peer scaffolding – particularly the interaction between younger and older learners navigating the GenAI tools' user interfaces – were also coded to assess the social dynamics of the designed task.

## FINDINGS AND RESULTS

Learners showcased increased awareness of the use of lexical choices and descriptive details in prompt writing, and their impact on results. Initial prompts were general, brief, vague, and abstract; later prompts were clear and detailed, with contextual information and precise description. Learners actively reflected on their own output as well as their peers' output, analysing the relationship between their input and output, and demonstrating metacognitive processes such as planning, monitoring, and evaluation. Peer collaboration supported prompt refinement, especially among the older learners. The gallery walk activity prompted a higher level of learner engagement and participation.

### Evolution of Prompt Specificity

Analysis of learners' prompts indicated that there was an increase in prompt awareness and lexical selection. Initially, especially during the first two sessions, learners generated general, brief, and abstract prompts, resulting in similar, predictable outputs. For example, baseline prompts included phrases such as 'love, give me a picture of love.' Following the guided practice, learners actively began to research and include appropriate vocabulary and word families. Learners' growing research into descriptive prompts, emotional undertones, and colour coding reflected a clear shift from vague abstraction to concrete linguistic input.

### Peer Collaboration and Engagement

As the sessions progressed, the gallery walk and peer-review activities generated high-level learner engagement and demonstrated increased metacognitive awareness. Observational data revealed that learners scrutinised their peers' data, focusing on the differences from their own. The visual feedback from the generated images triggered direct inquiries into the lexical choices used in the prompts. Recorded peer comments included statements such as 'How come yours is brighter and more visible?', 'How did you add a couple in between the hearts?' and 'How did you find those words? Teach me!' Another notable remark reflected a learner's shifting perception of the tool: 'I thought GenAI is more about hacking answers and Ghibli style, but this is good.'

Peer interaction played a significant role in supporting prompt development. Older learners initially relied on their younger peers for guidance in structuring prompts and typing, with some even depending on them to understand the user manuals of the chatbots used. As the phases progressed, a noticeable change was observed among the older learners in their ability to prompt independently. Given the heterogeneous nature of the group, collaborative refinement enabled

learners to observe alternative strategies for improving their outputs through increased prompt clarity and specificity.

The tasks contributed to a high level of learner engagement; peer discussion and the gallery walk again motivated learners to be actively involved in prompt development for better outputs. Peer discussion increased confidence in experimenting with prompt structures and lexical choices. This created a low-anxiety environment, a safe space for learners to make mistakes and grow. A lower affective filter is conducive to better learning.

## DISCUSSION

The findings of this study directly address the pedagogical gap in the current literature on using GenAI as a language-learning task among ESL learners. The observable shift from brief, abstract prompts to highly specific prompts, along with the development in lexical usage for prompt inputs, illustrates a clear development in learners' metalinguistic awareness. The immediate visual feedback (the generated images) forced learners to question their own lexical choices. When learners recognised the difference between their intended meaning and the AI-generated output, it triggered active metacognitive monitoring. This cognitive friction prompted learners to critically question the differences between their results and the quality of their prompts. This shifted their perception of the GenAI platform away from being a mere cognitive shortcut. The gallery walk increased learner engagement, serving as a critical pedagogical mechanism for peer scaffolding and functioning as an internal metacognitive process. By treating prompt refinement as an iterative, peer-supported process, the pedagogical design successfully lowered the learners' affective filter (Krashen, 1982). Ultimately, this study suggests the genuine pedagogical value of GenAI in the ESL classroom.

## LIMITATIONS

Despite its contributions, this study has several limitations that should be addressed and acknowledged, beginning with the small sample size. There were only 19 participants in the study, and all were male, which limits the generalisability of the findings. Second, the intervention was conducted over a very short period of four sessions of fifty minutes each, which might not capture long-term changes or challenges in learners' metacognitive development. Finally, the study heavily relied on qualitative data, which provides in-depth insights but does not allow for statistical or quantitative measurement of the learning outcomes. Future research could address these limitations by involving a larger and more diverse participant pool, longer interventions, or mixed-methods approaches for more robust outcomes.

## CONCLUSION

This study examined how GenAI-mediated prompt writing contributes to the development of metacognitive awareness among ESL learners. These findings indicate that prompt-writing activities and tasks can also support learners' reflection, lexical awareness, and strategic use of language. The findings also suggest several pedagogical implications for ELT practitioners. Prompt writing can be integrated as a language task through which GenAI tools promote metacognitive awareness, as learners analyse and revise their prompts, focusing on refinement rather than simply accepting the initial GenAI-generated outputs. Learners here no longer rely on GenAI as a hack tool; instead, they become masters of GenAI, commanding and modifying its outputs. By treating prompt writing as a learning task rather than a technical skill, the study highlights the value of GenAI integration in ELT.

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