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Evaluating ChatGPT's Memory and Conversation Continuity:Insights from Academic Prompting

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ABSTRACT

As ChatGPT becomes a prominent tool in education, a growing challenge emerges: should educators start a new chat for each task, or continue an existing thread to retain context? This decision has become particularly pertinent with the advent of ChatGPT's memory feature, which allows the system to remember user information and past interactions across sessions. While this capability introduces opportunities for efficiency and personalisation, it also presents risks such as context drift, irrelevant recall, or unintentional bias, especially in academic settings that demand precision and adaptability. This study explores the implications of ChatGPT's memory feature through structured and emergent prompting exercises conducted with five academics. Each academic was provided with the same sequence of prompts, addressing common academic tasks including assessment design, feedback generation, and curriculum alignment. Their interactions were observed under two conditions: (1) continuing conversations with memory enabled, and (2) starting fresh sessions without memory. The authors analysed these interactions to assess accuracy, coherence, responsiveness, and relevance. Reflections on this analysis suggest that ongoing conversations enabled more nuanced, context-aware responses, particularly valuable for iterative educational tasks. However, these benefits were occasionally offset by outdated or misplaced contextual references that hindered objectivity and clarity. Conversely, fresh chats supported cleaner outputs in tasks requiring analytical rigour or neutrality. The study suggests that educators must adopt a context-sensitive approach when engaging with ChatGPT, selectively leveraging memory for continuity-driven tasks while favouring new chats for objectivity-critical outputs.

Keywords: ChatGPT, conversational AI, memory feature, ICT education, academic prompting.

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1 INTRODUCTION

The integration of generative artificial intelligence (GenAI) in education has accelerated the demand for effective prompt engineering (Rodriguez & Trainor, 2025). Prompt engineering is the strategic crafting of queries or instructions that guide large language models (LLMs) like ChatGPT to produce accurate, relevant, and coherent outputs. In education, where tasks often require analytical precision, logical structuring, and contextual relevance, the role of prompt design becomes especially crucial (Lee & Palmer, 2025). As educators increasingly adopt AI for assistance (Wang, Liu & Tu, 2021), such as automated assessment generation (Owan et al., 2023) and curriculum planning (Karatas, Eriçok & Tanrikulu, 2023), the effectiveness of prompt engineering directly impacts learning quality and pedagogical efficacy (Walter, 2024).

One of the latest developments in conversational AI is the introduction of memory features in tools like ChatGPT. On April 10, 2025, the memory update is: *"Memory in ChatGPT is now more comprehensive. In addition to the saved memories that were there before, it now references all your past conversations to deliver responses that feel more relevant and tailored to you. This means memory now works in two ways: "saved memories" you've asked it to remember and "chat history", which are insights ChatGPT gathers from past chats to improve future ones"* (Memory and new controls for ChatGPT, 2025). June 3, 2025, update*: Memory improvements are starting to roll out for free users. In addition to the saved memories that were there before, ChatGPT now references your recent conversations to provide more personalised responses.* (Memory and new controls for ChatGPT, 2025).

These features allow the AI to remember user-specific information across sessions, enabling more personalised and context-aware responses (Oppenlaender et al., 2024). While such memory-enhanced interactions offer efficiency and continuity, they also present challenges. Context drift, where the model's retained memory influences new responses in unintended or outdated ways, may hinder objective tasks such as code validation or technical explanations (Zawacki-Richter et al., 2023). Furthermore, prompt strategies that work well in memory-free settings may yield unpredictable results when past context is introduced (Chen, 2025).

Prompt engineering is more than a technical skill it is a pedagogical lever that shapes how educational technologies function in practice (Cain, 2024). This practice demands a deliberate and contextual approach due to the diverse range of learning tasks, such as essay writing, specific tasks within assessments, debugging code, generating algorithms, interpreting network models, and writing reports. As AI becomes a partner in writing (Koh et al., 2023), the ability to formulate prompts that guide its generative outputs with accuracy and relevance becomes essential (Korzynski et al., 2023).

Despite increasing interest in GenAI in higher education, including policies (Luo, 2024), assessment design (Ogunleye et al., 2024), feedback design (Lee & Moore, 2024), perceptions, benefits and challenges (Chan & Hu, 2023), there is a notable gap in the literature regarding how memory influences prompt strategies in education. Most existing studies emphasise either the capabilities of AI systems (Wang, Sun & Chen, 2023) or their ethical implications (Li, Dhruv & Jain, 2024; Slimi & Carballido, 2023; Williams, 2024), but few explore the operational decisions educators must make such as whether to continue a chat or start afresh when prompting (Bahar & Doleck, 2023). This study seeks to address that gap by analysing how the memory function interacts with prompt design in real-world educational tasks. The analysis was carried out collaboratively by five academic researchers, unfolding a multi-turn conversation shaped by prior prompts, feedback, and clarification (Geroimenko, 2025).

Ahmed, Hassan & Saeed (2024) highlight how students and instructors often unknowingly shift the instructional focus in long AI interactions, especially when memory is active. This can be both a strength, allowing for exploratory, iterative discourse and a vulnerability, when clarity is replaced by compounding ambiguity. The structure and progression of prompts over time, therefore, must be intentionally managed where conceptual progression builds cumulatively (Krajcik & Shin, 2023). The pedagogical role of AI-generated content is not merely to answer questions but to provoke new ones, clarify misconceptions, and scaffold inquiry-based learning (Pratschke, 2024; Shah, 2023; Bilton & Segal, 2025). Research in AI-enhanced tutoring systems suggests that when learners generate their own prompts, they engage more metacognitively than when simply consuming AI-generated material (Følstad & Brandtzaeg, 2022). These insights have implications for prompt engineering in memory-based contexts: personalised memory should enhance, not replace, the learner's active role in shaping inquiry.

In response to the rising integration of AI tools in education, several universities have proactively developed guidelines and training materials to support effective prompt engineering. For instance, the University of Melbourne has published instructional toolkits that help educators design AI prompts aligned with pedagogical goals, emphasising specificity, transparency, and iterative refinement (University of Melbourne, 2023). The University of Sydney offers professional development modules for academic staff on how to construct prompts for tasks such as formative feedback, academic writing, and curriculum planning, particularly using AI tools like ChatGPT (University of Sydney, 2023). The Australian Catholic University has also issued a framework for AI use in assessments, underscoring the importance of prompt structure to preserve academic integrity and promote critical engagement (Australian Catholic University, 2023). These institutional efforts reflect a broader recognition that prompt engineering is not just a technical skill but a form of digital pedagogy requiring instructional design literacy. Such initiatives reinforce the urgency for educators to adopt structured prompting strategies, particularly as AI systems with memory capabilities introduce new complexities into academic workflows.

Thus, the significance of prompt engineering in education must be understood not only in technical terms, but also in ethical, cognitive, and instructional dimensions (Cain, 2024). As AI tools evolve from static assistants to dynamic co-authors, the onus falls on educators to master the subtleties of prompting, especially in environments where memory may skew or override intention. The current study is grounded in this multidimensional challenge, seeking to provide insight into how educators can optimise their interactions with ChatGPT through effective prompt design in both memory-enabled and fresh chat scenarios.

The significance of this inquiry is reinforced by recent findings indicating both promise and risk in memory-based AI applications. While some studies suggest increased productivity and student engagement (Nguyen et al., 2024; Rahman et al., 2025; Lee & Palmer, 2025), others caution against reliance on AI tools due to declining academic performance when overused without critical oversight (Kostanek & Li, 2025; Zhao, Chapman & Sabet, 2024; Dolan, 2024). Understanding how prompt engineering adapts within memory-enabled environments can inform best practices for educators navigating this evolving landscape.

To investigate this, we focused on a set of research questions that address both the practical and pedagogical dimensions of using ChatGPT in education. Given the introduction of memory features and the increasing reliance on AI for curriculum and assessment tasks, we sought to understand how these capabilities affect prompt design and educational effectiveness. Generated outputs were examined for accuracy, relevance, and pedagogical utility. The study is guided by the following research questions:

- Research Question (RQ1): How does ChatGPT's memory feature influence the effectiveness of prompt engineering in educational tasks?
- Research Question 2 (RQ2): What are the comparative impacts of initiating new chats versus continuing conversations?
- Research Question 3 (RQ3): How can prompt strategies be optimised to mitigate memory-related limitations?
- Research Question 3 (RQ3): What best practices should educators adopt when designing prompts in memory-enabled AI systems?

This paper is structured as follows: Section 2 outlines the methodological approach, rooted in collaborative authorial reflection. It details the reflective inquiry design, contextual background of the contributors, and the evaluative lens through which ChatGPT's memory feature was examined in relation to its effectiveness in educational tasks. Section 3 introduces the specific prompts used in the study, describing how they were constructed to reflect realistic academic tasks in education, specifically in ICT education, and how they were administered across memory-enabled and memory-disabled conditions. Section 4 presents the results and findings; Section 5 discusses the research questions through comparative analysis and reflection on AI performance under different prompting strategies. Finally, Section 6 offers a conclusion and a set of recommendations for ICT educators and AI developers, summarising key insights and proposing best practices for effective use of ChatGPT in academic contexts.

2 METHODOLGY

This paper is grounded in a collaborative reflective inquiry conducted by five educators. This reflective methodology aligns with established traditions in pedagogical scholarship where academics analyse their professional practice to uncover actionable insights (Brookfield, 2017; Zeichner & Liston, 2013). The work is therefore not subject to ethics approval, as no external participants or identifiable data were involved. All observations were self-directed, and the reflections are presented as professional insights relevant to peers in similar teaching and curriculum design roles.

2.1 Context and Contributors

The five contributing authors are academic staff across higher education institutions. Each author has integrated GenAI into their professional workflows and has actively engaged with ChatGPT for purposes such as curriculum design, teaching support, and student feedback. All contributing educators have over twenty years of experience in academia, bringing deep pedagogical expertise. This extensive professional background enriches the quality of insights, as their interactions with ChatGPT are informed by decades of curriculum design, assessment development, and classroom practice. Their experience allows for more critical evaluation of AI outputs, particularly in identifying subtle shifts in pedagogical alignment, tone, or technical accuracy. Consequently, the findings reflect not just functional observations, but also context-aware judgements shaped by seasoned educational practice, adding credibility and practical relevance to the study's recommendations for the academic use of GenAI.

To ensure consistency in our reflection, we followed a shared protocol. Each author independently engaged with ChatGPT-4 using a defined set of educational prompts. For each prompt, authors tested two interaction styles:

- Starting a new chat without memory enabled (shown in figure 1)
- Continuing a previous chat with memory retained (shown in figure 2)

Notes were made during and after each session, focusing on response quality, contextual alignment, and cognitive load. The prompts were designed to span planning, teaching, assessment, and reflective tasks. Each author used all prompts in both a memory-enabled and memory-disabled setting.

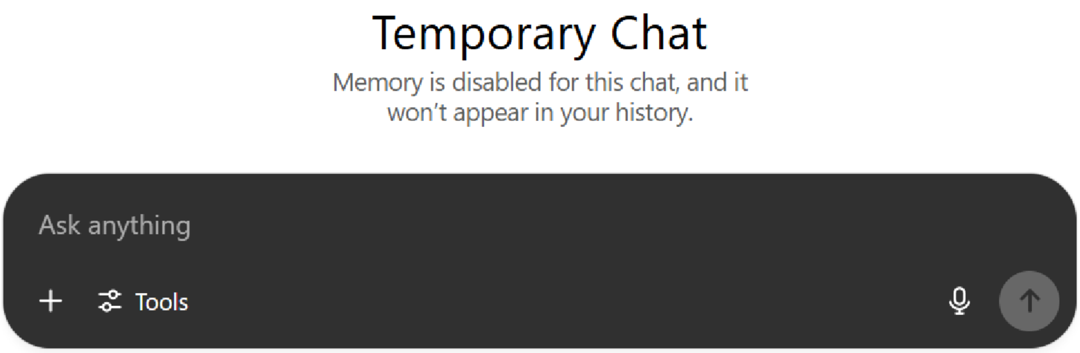

Figure 1. Chat without memory enabled

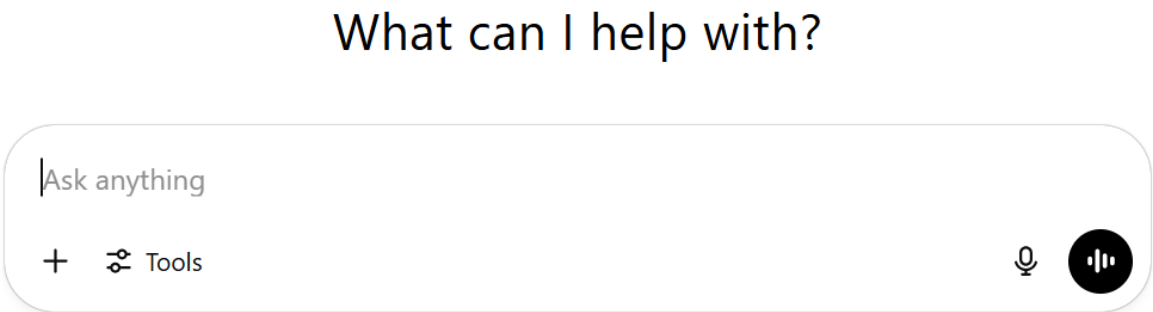

Figure 2. Chat with memory retained

The insights were recorded, focusing on:

- Whether the AI's response quality improved or declined with memory
- Whether responses reflected evolving user context
- If memory created benefits or drawbacks in terms of relevance, clarity, and cognitive load

We met as a group to discuss our experiences, compare notes, and collectively identify thematic patterns. This approach aligns with the traditions of action research and reflective practice in education, where practitioners explore their own use of technology to guide future implementation

(Schön, 1983; Zeichner & Liston, 2013). The findings provide examples of how prompt engineering interacts with memory features in practical use.

2.2 Analytic Approach

The analysis followed a reflective inquiry approach grounded in traditions of practitioner research in education. Each author independently engaged with the same set of prompts under two conditions: memory-enabled conversations and fresh chat sessions. Observations were documented during and after each interaction, focusing on key evaluation criteria relevant to academic use of AI-generated responses. These criteria included response accuracy, relevance to the task, and contextual alignment with pedagogical intent. Following the individual sessions, the authors met to compare observations and identify recurring patterns across the interactions. Through collaborative thematic comparison, shared insights were synthesised to highlight how ChatGPT's memory feature influenced prompt effectiveness, response coherence, and instructional usefulness. This analytic process prioritised practitioner interpretation informed by academic experience while maintaining consistency through the shared prompt protocol.

2.3 Strengths and Limitations of the Reflective Methodology

The reflective methodology adopted in this study offers several strengths. First, it draws on the professional expertise of experienced academics who regularly engage with AI tools in authentic teaching, assessment, and curriculum design contexts. This grounded the analysis in realistic academic tasks rather than artificial experimental scenarios, thereby enhancing the practical relevance of the findings. The collaborative nature of the reflection also enabled comparison of experiences across multiple educators, helping to identify common patterns in how ChatGPT's memory feature influenced prompt interactions. However, this approach also has limitations. The participant group was small and consisted of the authors themselves, which may introduce potential bias and limit the generalisability of the findings. In addition, the study relied on reflective observation rather than formal qualitative coding or triangulation with external data sources. While reflective practitioner research can generate valuable exploratory insights, future studies could strengthen the evidence base by incorporating larger participant samples, systematic coding procedures, and mixed-method approaches.

To further clarify the analytical process, the observations generated through the prompting exercises were examined using a comparative reflective approach. The responses produced in memory-enabled conversations were compared with those generated in fresh chat sessions to identify differences in response quality, contextual coherence, and pedagogical relevance. Following the individual interactions, the authors collectively reviewed their observations and discussed emerging patterns across the sessions. This collaborative reflection enabled the synthesis of shared insights regarding the advantages and limitations of memory-enabled interactions in academic prompting.

3 PROMPTS: STRUCTURED AND EMERGENT USE

3.1 Structured Prompt Set

The structured component consisted of six standardised prompts, collaboratively developed by the educators. The prompts were designed to reflect recurring academic tasks encountered in ICT education. The goal was to ensure some consistency in how ChatGPT responded under memory-enabled and memory-disabled conditions, providing a basis for comparing the influence of prompt structure and context. The six prompts included are as follows:

i. Curriculum Design: Draft weekly topics and outcomes for a 12-week undergraduate course on Data Structures.

ii. Assessment Rubric Development: Design a marking rubric for a group software development project.

iii. Formative Feedback Generation: Provide constructive feedback on a student's explanation of recursion.

iv. Technical Explanation: Explain polymorphism in object-oriented programming with examples.

v. AI Ethics Discussion: Suggest discussion points on the ethical use of AI-generated code in assessments.

vi. Student Engagement Strategy: List five AI-supported strategies to enhance student engagement in large classes.

In addition to the shared prompts, emergent prompts were incorporated based on real academic scenarios encountered in teaching and curriculum development. These prompts were not predefined but arose organically during use. This emergent use allowed for reflection on how prompting strategies evolved. In contrast, in memory-disabled chats, prompts often had to be longer and more self-contained to ensure accuracy and clarity.

3.2 Observations on Prompt Strategy

The hybrid use (structured and emergent) of prompts revealed that ChatGPT responded differently depending on the amount of prior context it had access to. In memory-enabled sessions, structured prompts were sometimes interpreted with greater personalisation, which was helpful; other times, they led to unwanted assumptions. Meanwhile, emergent prompts enabled authors to explore real-world academic uses more flexibly, offering insights into how GenAI can support or complicate teaching practices based on prompt clarity and session history.

This dual strategy provided a nuanced view of prompt engineering in practice, balancing consistency with authenticity and replicability with relevance. Table 1 compares the six structured prompts used in the study and summarises the observed differences between memory-enabled and memory-disabled interactions. It highlights how ChatGPT's memory feature influenced continuity, personalisation, response clarity, and contextual relevance across common ICT education tasks.

Table 1: Comparison of ChatGPT's performance across six structured ICT education prompts

Prompt Task	Example Prompt	Observed Impact (Memory ON)	Observed Impact (Memory OFF)
Curriculum Design	Draft weekly topics and outcomes for a 12-week undergraduate course on Data Structures.	Enabled continuity and efficient content scaffolding; reduced re-explaining tasks.	Required full re-specification of unit scope but ensured a fresh instructional framing.
Assessment Rubric Development	Design a marking rubric for a group software development project.	Maintained tone and structure across iterations but risked carrying over outdated criteria.	Produced cleaner, unbiased rubric structures; no carry-over from past criteria.
Formative Feedback Generation	Provide constructive feedback on a student's explanation of recursion.	Produced tailored feedback consistent with earlier inputs, improving personalisation.	Feedback was concise and technically sound but lacked personalisation.
Technical Explanation	Explain polymorphism in object-oriented programming with examples.	Sometimes it retained inappropriate analogies or prior technical focus, requiring resets.	Clear, standalone explanations are ideal for quick concept delivery.
AI Ethics Discussion	Suggest discussion points on the ethical use of AI-generated code in assessments.	Echoed previous ethical positions; beneficial for continuity, risky for objectivity.	Responses were varied and objective; good for introducing diverse perspectives.
Student Engagement Strategy	List five AI-supported strategies to enhance student engagement in large classes.	Generated strategies that built upon earlier context, aiding thematic cohesion.	Offered broader ideas not influenced by earlier tone or scope.

4 RESULTS AND FINDINGS

4.1 Continuity Strengthens Coherence in Ongoing Tasks

Across multiple sessions, it was found that continuing a chat was most effective when working on tasks that involved iterative development. For instance, in curriculum planning prompts, where the AI had previously helped scaffold weekly content for a Data Structures unit, returning to the same chat allowed it to recall tone, sequence, and intended learning outcomes without needing re-prompting. This efficiency saved time and promoted thematic coherence, especially when generating descriptions, assessments, and follow-up student activities that needed internal consistency.

Our results align with the general recommendation that continuity supports productivity in ongoing work (Sharin, 2024). The model effectively retained the flow of ideas within the same session and built responses that logically followed from previous ones. For example, when working on a multi-step rubric for software development projects, continuing the chat helped ChatGPT fine-tune criteria across the complexity, functionality, and teamwork dimensions without manually reintroducing context.

4.2 When Memory Works Against You: Context Drift and Assumption Bias

However, the memory feature also introduced moments of unexpected bias or context drift, in which the AI appeared to carry over stylistic or thematic assumptions from earlier prompts that no longer aligned with the current need. One notable example occurred when a concise rubric was requested after previously requesting a detailed one, and the model defaulted to verbosity, which was misaligned with the updated instruction. Instead of adjusting accordingly, the model defaulted to the earlier response. This observation suggests that Memory, while useful for maintaining continuity, may inhibit the model's responsiveness to new instructions when prior context dominates its generative pattern.

Such behaviour poses pedagogical concerns. If AI responses continue to echo past interactions, educators risk receiving outputs that are redundant, overly complex, or misaligned with the current learning objective. Moreover, this form of contextual inertia may go unnoticed if the user assumes the model is adapting solely to the most recent prompt, thereby subtly eroding instructional intent. This observation cautions that the memory occasionally overhelped, generating outputs that echoed past interactions, even when we intended to pivot. This behaviour was particularly evident in creative or critical prompts, such as drafting ethical discussion starters. Once the model had internalised a tone or stance, resetting it mid-conversation became difficult. Thus, memory may reduce cognitive friction in sustained work, but it can also introduce inertia, making the model less agile when the educator wants to switch direction or tone.

4.3 Fresh Chats Yield Neutrality and Clarity

Conversely, starting a new chat led to noticeably cleaner, more objective responses. In tasks requiring precision, such as explaining recursion or polymorphism, a fresh chat ensured that no residual assumptions influenced how examples or analogies were structured. This was particularly valuable in our context as ICT educators, where clarity and technical accuracy are required.

We observed that when ChatGPT responses became convoluted or tangential, especially after long iterative exchanges, a fresh start functioned as a useful reset. It restored the model's generalist neutrality and eliminated baggage from earlier messages. In particular, when seeking a new perspective on an idea previously discussed (e.g., writing alternative versions of feedback), the fresh chat often yielded more distinct and original responses.

These findings suggest that new chats are best suited to topic shifts, fresh takes, or scenarios where the prior tone or framing may be counterproductive. Figure 3 presents a decision framework guiding when educators should continue an existing ChatGPT conversation or initiate a new chat, based on task continuity, clarity requirements, and the influence of memory on response quality.

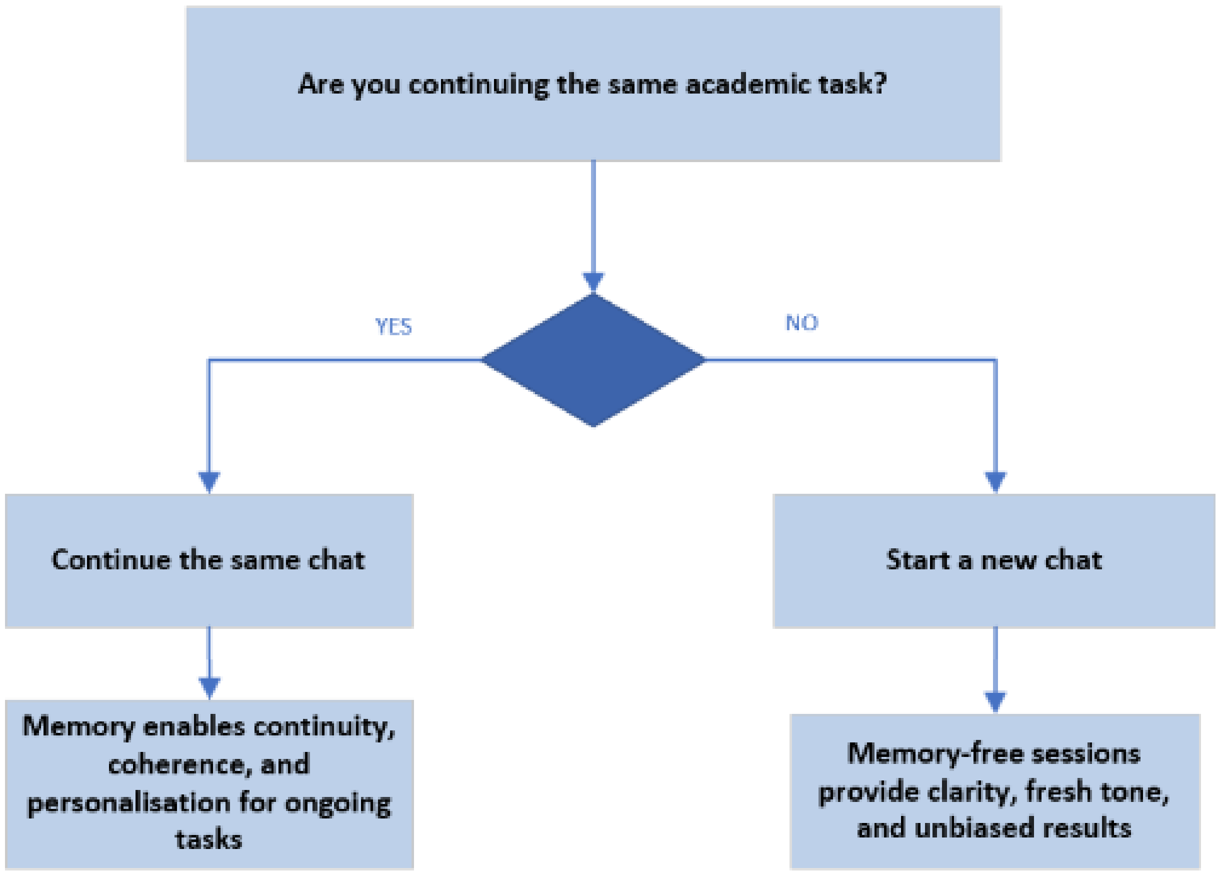

Figure 3. Decision framework for when to continue an existing ChatGPT conversation versus start a new chat, based on task continuity, clarity requirements, and potential memory effects in educational contexts.

4.4 Emergent Use Cases Showcase Flexibility

Beyond structured testing, emergent prompts highlighted ChatGPT's adaptability when used creatively. These ad hoc tasks included rephrasing assessment documents, preparing AI literacy quizzes, and simulating student discussion as starters. In these settings, prompt specificity mattered more than memory continuity. Whether we continued or started anew, it was the precision and clarity of prompt construction, not history, that most affected quality.

This affirmed that prompt engineering skill itself is the primary lever for effectiveness, with memory acting more as a facilitator than a substitute for good design. Interestingly, emergent tasks were more susceptible to hallucinations when context was unclear, regardless of memory state, again reinforcing the centrality of clear input. For example, when prompted to explain the significance of recursion in solving divide-and-conquer problems, a vague prompt such as "Tell me about recursion in algorithms" occasionally led to generic or even misleading responses, including references to recursion in binary pathing algorithms without clear context. However, when the prompt was revised to: *"Explain how recursion enables divide-and-conquer strategies using the example of merge sort and identify common pitfalls students face when learning this concept"*, the model produced a coherent, pedagogically aligned explanation. This improvement occurred regardless of whether memory was on, affirming that detailed prompt construction, not memory state, is the key driver of accuracy and instructional value.

Although our reflections focused mostly on memory and chat continuity, we explored the 'Projects' feature (available to paid users). This allowed document uploads, persistent memory, and session threading. We noted its potential for structured research or course development, as it reduced the need for repetitive file uploads or re-explanation.

However, its utility seemed better suited to larger, multi-session tasks such as building an entire course or drafting a research proposal rather than to daily, responsive teaching needs. While we see value in further exploration of Projects, this feature was not central to our reflections in this study.

5 DISCUSSION

In this section, we revisit each of the four research questions to interpret the results through both a pedagogical and technical lens.

RQ1: *How does ChatGPT's memory feature influence the effectiveness of prompt engineering in ICT educational tasks?*

The memory feature generally enhanced the effectiveness of prompt engineering for iterative, continuity-driven tasks, such as curriculum planning, assessment rubric refinement, and feedback generation. It allowed ChatGPT to retain preferences and previously discussed structures, reducing repetition and preserving instructional tone. However, this benefit was not universal. In several cases, memory inhibited adaptability, particularly when switching intent within the same session. For instance, a prompt asking for a concise version of a rubric was misinterpreted due to lingering assumptions from earlier detailed responses. These findings suggest that while memory can support personalisation and coherence, it also carries the risk of contextual overreach, leading to diminished prompt responsiveness when precision is required.

RQ2: *What are the comparative impacts of initiating new chats versus continuing conversations?*

Continuing a chat yielded better outcomes when educators were engaged in thematic or task continuity, such as developing components of a single project or refining AI-generated outputs over multiple iterations. This mode enabled ChatGPT to maintain flow, tone, and progression across exchanges. In contrast, initiating a new chat proved more effective for clarity, objectivity, and conceptual resets, especially when educators sought unbiased explanations or alternative perspectives. The results suggest that chat continuity aligns well with constructivist pedagogies that involve scaffolding and iteration, whereas new chats are better suited to discrete instructional events or comparative evaluation.

RQ3: *How can prompt strategies be optimised to mitigate memory-related limitations?*

Prompt optimisation in memory-enabled contexts requires a context-aware approach. Educators found that explicitly restating task goals or instructing the model to disregard prior prompts helped mitigate memory drift. When engaging in extended sessions, prompts needed to be progressively specific and self-contained to prevent misalignment. Monitoring for signs of memory-induced assumptions such as recurring tone, verbosity, or thematic repetition was essential. In these moments, resetting the chat or rephrasing prompts with neutral framing was an effective mitigation strategy. Therefore, prompt optimisation under memory relies not only on linguistic precision but on the educator's proactive management of session history and interaction trajectory.

RQ4: *What best practices should ICT educators adopt when designing prompts in memory-enabled AI systems?*

The study surfaces several best practices:

- Use continued chats for interconnected tasks that benefit from cumulative context (e.g., lesson sequences, feedback cycles).
- Use new chats when switching topics, perspectives, or task types, especially when neutrality or objectivity is required.
- Design prompts to be explicit in intent and anchored in instructional purpose, particularly when memory is active.
- Include clarifying statements or instructions (e.g., "ignore previous response," "summarise in new tone") to counteract residual memory effects.
- For emergent uses, focus on prompt clarity and specificity, as memory had less influence than instructional design in unstructured contexts.

To situate these findings within the broader scholarship on GenAI in higher education, it is important to recognise that existing studies have primarily focused on the capabilities, adoption, and ethical implications of AI tools in educational contexts (Chan & Hu, 2023; Lee & Moore, 2024; Nguyen et al., 2024). These studies generally highlight the potential of GenAI to enhance instructional support, automate feedback processes, and improve student engagement, while also cautioning against overreliance on automated outputs. Our findings contribute to this growing body of literature by examining a more specific but increasingly relevant dimension of GenAI interaction: how memory and conversational continuity influence prompt engineering and pedagogical use. While prior research has often emphasised GenAI performance or student perceptions, this study foregrounds the operational decisions educators make when interacting with GenAI systems during real academic tasks. Future research could build on these insights by conducting larger empirical studies to evaluate the impact of memory-enabled GenAI systems using measurable indicators such as response accuracy, educator workload reduction, and user satisfaction with GenAI-assisted outputs. Incorporating such metrics alongside qualitative perspectives would help provide a more comprehensive understanding of how conversational GenAI tools can effectively support teaching and learning in higher education.

6 LIMITATIONS OF THE STUDY

While this study provides useful insights into the pedagogical implications of ChatGPT's memory feature in academic prompting, several limitations should be acknowledged. First, the study is based on a reflective inquiry involving five academics, all of whom are the authors of the paper. Although this approach enabled rich, practice-based insights grounded in authentic academic tasks, the small, relatively homogeneous participant group limits the generalisability of the findings. The observations, therefore, reflect the professional experiences and interpretations of a specific group of educators with extensive experience in higher education and ICT-related teaching contexts. As such, the findings should be interpreted as exploratory practitioner insights rather than broadly generalisable empirical conclusions.

Second, the study relies primarily on structured reflection and comparative observation rather than formal qualitative coding or quantitative measurement. While reflective methodologies are widely used in pedagogical research to examine professional practice, this approach may introduce subjectivity into interpretation. Future research could extend this work by involving a larger, more diverse group of participants across disciplines and levels of AI familiarity, and by incorporating more systematic qualitative analysis and quantitative measures, such as response accuracy, workload reduction, or user satisfaction, to further validate and expand the insights presented here.

7 FUTURE RESEARCH DIRECTIONS

The exploratory nature of this study highlights several opportunities for future research. While the present work provides practitioner-based insights into how ChatGPT's memory feature influences academic prompting, further studies could examine these dynamics across a broader range of educational contexts. Future research could involve larger, more diverse participant groups, including educators from different disciplines and students who interact with AI systems for learning support. Such studies could also adopt mixed-method approaches that combine qualitative reflections with quantitative evaluation. For instance, empirical measures such as response accuracy, task completion efficiency, educator workload reduction, and user satisfaction with AI-assisted outputs could provide a more systematic assessment of the pedagogical value of memory-enabled AI systems. In addition, comparative studies across different AI platforms or institutional contexts could further clarify how conversational memory affects instructional design, assessment practices, and academic workflows in higher education. Expanding research in these directions would help develop evidence-based guidelines for educators seeking to integrate generative AI tools effectively and responsibly into teaching and learning environments.

8 CONCLUSION AND RECOMMENDATIONS

This reflective exploration highlights the evolving dynamics of interacting with ChatGPT in education. Our findings affirm that while continued conversations enhance efficiency and coherence in multi-step academic tasks, they can also introduce unintended assumptions or drift in context. Conversely, initiating new chats fosters clarity and neutrality, particularly for discrete or analytical prompts. The choice between continuity and a fresh start is not binary but strategic, dependent on task type, instructional intent, and the desired balance between consistency and objectivity. As ChatGPT continues to develop, educators must cultivate an adaptive, critical approach to prompt design and interaction management to harness its full pedagogical potential. Educators should match their use of ChatGPT's memory and chat features to the nature of the task at hand: continuing chats for iterative or longitudinal work and starting new ones for topic shifts or fresh perspectives. Prompts should be clear, specific, and context-aware to guide the model effectively, with attention paid to signs of contextual drift or memory overreach. Educators must maintain reflective oversight, treating ChatGPT not as a substitute for academic judgement, but as a responsive, adaptable co-pilot in the teaching and learning process.

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