

Peer Review

Review of: "Unlocking Proficiency: Experts' Views on the Use of Generative AI"

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This paper tackles an incredibly timely and relevant issue: understanding what it truly means to be proficient with Generative AI (GenAI) as a knowledge worker. The qualitative approach, using expert interviews, is spot-on for exploring this new terrain. The proposed framework of competencies, proficiency, and benefits (Figure 1) provides a really useful starting point for thinking about this.

This paper can be a great contribution. Much of the current discussion around GenAI tests the AI itself—its capabilities or the performance it enables. As an early adopter who uses GenAI extensively in my own research, I think the paper's angle is fantastic: it shifts the focus to the *user*, exploring what skills or competencies *we* need to better leverage these powerful tools. The inclusion of interviews with recognized experts from various fields is especially beneficial, capturing front-line insights that are often missing from more theoretical discussions. Given the novelty of GenAI, this kind of information, drawn directly from real-world users, is highly valuable—perhaps even more so than synthesizing findings from scattered literature.

Some strengths:

Structure and Clarity: There's strong internal consistency, with the three research questions mapping clearly to the three main parts of the results section. The literature review, the description of purposive sampling for participants, and the data analysis process are all laid out with good clarity and detail.

Competency Framework: The framework for competencies is complete, distinguishing between personal traits/knowledge/skills (Competencies), how proficiency is demonstrated (Proficiency), and

the outcomes achieved (Benefits). The experiences within the framework are rather rich, and the diverse quotations help build a concrete and nuanced understanding.

Limitations and Future Research: I was impressed by the insights in the limitations and future research sections, which is quite rare. For example, the discussion about how the rapid evolution of GenAI tools can affect social science research findings is insightful. I can relate to this experience. I also really appreciate the authors highlighting "AI native workers" in the Future Directions. Many of us in academia might be more adapted to traditional tools, but today's students are an "AI native generation" with different foundational skills, perceptions, and creative approaches to AI. Focusing research on this group is vital.

While the initial structure is promising, a few areas could be strengthened to really boost the paper's impact.

Areas for Consideration and Suggestions:

- **Consistency in the "Proficiency" Concept (and Connection to the Literature):** I found the use of the term "Proficiency" inconsistent. In the abstract, introduction, and title, "Proficiency" seems to be an umbrella term, covering everything the paper discusses—implying a broader concept that includes both abilities and performance. However, in the conceptual framework (Figure 1 and Section 3), "Proficiency" is presented as distinct from "Competency," where "Proficiency" refers more to the demonstrated behaviors/performance, and "Competency" refers to the underlying personal attributes. This shift could be confusing for readers.

Suggestion: Perhaps you could add a qualifier to "Proficiency" in the framework, like "Demonstrated Proficiency" or just "performance," to clearly distinguish it from the broader use of the term and from "Competency." However, it could be beneficial to ground these core definitional choices more explicitly in existing social science, management, or psychology literature to ensure the labels are not only clear and logical within the paper but also resonate with established conceptualizations.

Clarifying Key Themes: The qualitative analysis presents a good number of themes and sub-themes. To help readers get a quicker, more comprehensive overview directly from Figure 1, consider adding very concise, simplified definitions or key descriptors next to each core theme in the diagram. For instance, a brief parenthetical note next to "Competencies," "Proficiency," and "Benefits" summarizing their essence as used in your model.

- **Potential Limitation – Exploring Domain/Role Differences:** The paper does a great job summarizing the commonalities in competencies and proficiency among knowledge workers across different sectors. A potential area that's not deeply explored is how these might *differ* across specific domains or roles. This is a minor issue and an optional improvement that the author could consider.

Suggestion: Even some preliminary observations or a brief discussion on potential variations (if any emerged from your data, even anecdotally) could be incredibly helpful for researchers focusing on domain-specific GenAI use. This could also broaden the paper's impact for those who looked at domain-specific GenAI use.

- **Streamlining the Discussion Section:** The discussion section currently feels a bit lengthy and could be more sharply structured. While it seems to follow the sub-themes from the framework, the points sometimes feel a little scattered, making it harder to follow the main takeaways. The results section itself is quite detailed and rich.

Suggestion: Consider structuring the discussion with clearer subheadings (perhaps aligned with your main framework categories or different angles to interpret your findings). It might also be effective to condense the discussion somewhat, focusing on the most critical and novel insights you want to emphasize, so readers don't get lost in the detail.

- **Formatting Limitation and Future Research:**

The "Directions for Future Research" section contains several valuable ideas. Breaking this down into a bulleted list or distinct sub-paragraphs for each main point could make these suggestions even clearer and more impactful.

Also, I think the limitation regarding the rapid evolution of GenAI is crucial; perhaps consider highlighting it as the first point in your limitations section due to its overarching importance.

Consistency in Terminology/Labeling: Overall, the terminology is quite consistent, but a final check for minor variations could enhance reader comprehension. For example, a topic sentence in 3.3. Benefits, page 23, reads, "*the other theme to the quality of the output produced when working with GenAI, including accuracy and novelty.*" The subsequent subsection heading (3.3.2) is "Quality improvement." In the framework diagram (Figure 1), "Quality" and "Originality" are listed as separate benefits. Ensuring that labels used in the text, headings, and diagrams are perfectly aligned will make it easier for readers to connect the dots.

Overall, this is a rigorous, well-structured, and novel paper. Thanks again for this interesting and thought-provoking work!

Declarations

Potential competing interests: No potential competing interests to declare.