

Rethinking Artificial Intelligence (AI) in Qualitative Research

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ABSTRACT

Artificial intelligence (AI) is increasingly being integrated into qualitative research. While AI provides tools that claim to promise greater efficiency and productivity, it also raises vital concerns about methodological integrity, ethical conduct, and the maintenance of contextual depth. This paper explores the implications of AI for qualitative research. It seeks to address the ethical, methodological, and epistemological concerns associated with AI integration. It also aims to promote critical engagement with AI while upholding the foundational values of context-rich qualitative research. The article initially addresses the growing publicity that AI has received in studies and public discourse, focusing on inflated hopes and misconceptions. The central debate concerns the impacts of AI on qualitative research, such as the way it could improve analysis and transcription efficiency. However, the use of AI is not without issues related to ethics, bias, loss of interpretive depth, and over-reliance on automation. The article argues in favour of responsible, critical, and ethically aware use of AI in qualitative research. AI can be a valuable tool to support, but not replace, qualitative researchers. Its use must be governed by reflexivity, ethical sensitivity, and contextual knowledge to uphold the foundational values of qualitative inquiry.

Keywords: Artificial intelligence; Technology; Qualitative research method

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INTRODUCTION

The recent proliferation of artificial intelligence (AI) technologies has rapidly transformed multiple sectors, including education, healthcare, and scientific research. This rapid expansion of AI has significantly influenced various fields, including healthcare and scientific research. While quantitative research has long adopted computational tools, the integration of AI into qualitative research remains an emerging process. This development raises important considerations: To what extent can AI reflect the human nuances that are central to qualitative research? How can its use be guided to support; rather than compromise, the interpretive depth that defines qualitative inquiry?

PURPOSE

This paper examines the implications of AI for qualitative research and highlights both its potential to enhance efficiency and its limitations in capturing human nuance. By addressing the ethical, methodological, and epistemological concerns related to AI integration, the paper supports qualitative researchers in making informed, reflective decisions about using AI tools. It contributes to the advancement of qualitative inquiry by promoting critical engagement with technology while safeguarding the core values of context-rich research.

THE IMPACTS OF ARTIFICIAL INTELLIGENCE (AI) ON QUALITATIVE RESEARCH

One notable advantage of integrating AI into qualitative research is the improved efficiency and workflow it offers. AI-powered transcription tools such as Otter.ai and NVivo Transcription have significantly reduced the burden of manual transcription, a task that is typically highly time-consuming for researchers (1). These tools not only transcribe interviews and focus group discussions with reasonable accuracy but also offer features such as speaker differentiation, timestamping, and real-time editing. Additionally, AI platforms can assist in cleaning, formatting, and even translating raw data, thereby reducing researcher fatigue and expediting the data preparation phase (2). This allows researchers to handle larger datasets more effectively, potentially leading to more comprehensive insights.

Another area where AI is making a positive contribution is enhancing analytical capabilities. AI-assisted coding software such as NVivo and ATLAS.ti can identify patterns, categorise responses, and detect recurring themes within qualitative datasets. This is especially valuable when working with large volumes of data, such as transcripts from dozens of interviews or thousands of social media posts (3). AI tools such as ChatGPT enable more scalable and systematic approaches to data analysis, allowing researchers to identify overarching narratives or outliers with greater ease and speed (4).

AI also supports researchers during the literature review and writing stages. Generative AI tools can help in brainstorming research questions, structuring outlines, summarising articles, and paraphrasing content. These tools act as productivity aids, enhancing clarity and cohesion during academic writing (5). Some platforms even provide automated referencing features and citation generation, which can reduce technical errors and save time when managing bibliographies.

AI can serve as a valuable tool across various stages of the research process. Its use must be guided by critical thinking, ethical awareness, and methodological integrity. Researchers must thoughtfully assess whether and how AI tools align with their epistemological stance and research aims. For instance, relying on generative AI to paraphrase or summarise sensitive narratives may risk stripping away context or meaning. Therefore, the integration of AI should be approached reflexively with an understanding that efficiency should not come at the cost of depth, participant voice, or ethical responsibility. Applying AI in a way that respects context, voice, and lived experience means staying reflexive. When guided by critical thinking and ethical awareness, AI becomes not just a tool for speed, but a companion in preserving the integrity of qualitative research (6). Adopting a critical lens ensures that AI tools are used to support, rather than overshadow, the human-centred nature of qualitative research.

Despite its many advantages, the use of AI in qualitative research entails several risks and limitations. These must be critically considered when ethical sensitivity and contextual depth are vital. One major concern is the loss of contextual and emotional nuance. While AI can

identify patterns and recurring themes, it lacks the capacity to understand tone, cultural context, or emotional undercurrents that often define qualitative data (1). Human researchers interpret meaning through lived experience, empathy, and contextual awareness using skills that machines cannot replicate. Over-reliance on AI for data analysis may result in superficial interpretations that overlook the richness and complexity of participants' voices (7).

Concerns also exist related to data privacy and confidentiality. Many AI platforms, especially cloud-based transcription or analysis tools, require sensitive audio or text data to be uploaded to external servers. This raises issues about who can access the data, how it is stored, and whether the storage process complies with institutional privacy standards (8). Therefore, researchers must be vigilant in selecting tools that prioritise data protection and meet ethical review board requirements.

There are also risks of de-skilling and over-dependence. When researchers rely heavily on AI tools for coding, summarising, or even writing, they may gradually lose essential qualitative research skills such as thematic analysis, critical reflection, and narrative interpretation. Rather than being a technical process, qualitative research is an interpretive art grounded in human judgement. Over-dependence on automation may undermine the reflective dimensions of the qualitative research process (9).

Moving forward with the responsible use of AI in qualitative research calls for deeper exploration in several key areas. First, empirical studies are needed to investigate how researchers are currently using AI tools in practice, highlighting both the benefits and the challenges they encounter. Such research can generate evidence-based guidance that reflects disciplinary diversity and real-world application. Second, participatory and co-design approaches should be encouraged, allowing qualitative researchers, participants, and AI developers to collaboratively design tools that align with values like reflexivity and cultural sensitivity. Third, the development of discipline-specific ethical frameworks is essential to address concerns around data security, informed consent, algorithmic bias, and intellectual ownership, ensuring compliance with the institutional policies and community values.

In addition, future initiatives should focus on enhancing AI literacy and reflexivity in research training. Researchers must be equipped not only with technical know-how but also with critical awareness of the methodological and epistemological implications of AI use. Lastly, theoretical work should also delve deeper into the epistemological tensions between human-centred knowledge creation and machine-assisted interpretation, including how AI may reshape researcher-participant dynamics and the construction of meaning.

As AI continues to influence the research landscape, its use must not compromise the fundamental principles of qualitative research: reflexivity, ethical sensitivity, and the preservation of lived experience. AI should be used to complement, not replace, human researchers. Its optimal function is to provide supportive tools for technical tasks such as transcription, translation, and preliminary coding, while the researcher's role in interpreting context, emotions, and nuance remains essential. It is important to maintain methodological rigour by applying established frameworks and critically evaluating AI-generated outputs through triangulation and reflexive interpretation. Ethical and secure use of AI tools must also be guaranteed in cases of mandatory adherence to data protection policies, institutional guidelines, and informed consent procedures. Furthermore, fostering interdisciplinary collaboration with experts in AI, ethics, and qualitative methodology can enhance the research process, support innovation, and help mitigate potential risks. This would ensure that AI implementation aligns with best practices and ethical standards.

CONCLUSION

AI offers transformative potential in qualitative research, providing tools that can enhance productivity and broaden access. However, its application must be guided by critical thinking, ethical awareness, and methodological integrity. By embracing AI as a collaborator rather than a substitute, qualitative scholars can harness its capabilities while preserving the essence of qualitative inquiry. Qualitative researchers must consider AI as a meaningful aid that enhances human understanding rather than replaces them as they traverse the rapidly changing research field. To preserve the principles of empathy, context, and story integrity, future studies should involve

qualitative researchers in investigations to co-design AI tools.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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AUTHOR CONTRIBUTIONS

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