Chapter 5
Generative AI in Qualitative Research:
A Systematic Review (2022–2024)

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ABSTRACT

In today's world, generative artificial intelligence (GenAI) is driving transformative shifts in technological advancements and research paradigms, requiring new methods and ideas to be adopted in qualitative research. This chapter explores the opportunities of using GenAI for advanced data analysis in qualitative methodologies. It focuses on how GenAI integration can reveal previously hidden patterns in the analysis of social phenomena. By reviewing the latest advancements in GenAI applications for qualitative studies from 2022 to 2024, the chapter highlights the significant role of GenAI in improving the quality, validity, and creativity of qualitative research. Furthermore, it discusses how GenAI can open up new pathways for comprehensive exploration, allowing a deeper understanding of complex social dynamics.

INTRODUCTION

The introduction of GenAI marks a critical turning point in contemporary research paradigms, catalysing transformative changes in investigative methodologies and the scope of scientific analysis. By employing its unparalleled capabilities to process and analyse large datasets rapidly and accurately, GenAI unlocks new levels

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of exploration in areas previously considered unreachable or poorly understood. This technological advancement not only enhances our ability to decipher complex phenomena, but also extends the boundaries of scientific inquiry, setting the foundation for seminal discoveries across diverse disciplines (Bail, 2024; Entropik, 2023; Perkins & Roe, 2024).

This research is designed to critically examine the significant impact of GenAI on qualitative research methodologies, with a particular emphasis on its potential to transform the analysis of human behaviours and interactions. Despite its promising capabilities, there are substantial theoretical gaps in how GenAI integrates with established qualitative research paradigms. Moreover, existing methodological frameworks are often inadequate in fully harnessing the analytical power of GenAI, particularly in the nuanced interpretation of qualitative data. This is further exacerbated by a lack of empirical research that systematically evaluates the effectiveness and broader consequences of GenAI applications within management sciences.

To bridge these gaps, our study employs a rigorous methodological strategy grounded in the proven frameworks of Munn et al. (2018) and Yin (2003). We conducted a systematic literature review, focusing on publications from 2022 to 2024 found in major academic databases. These articles were rigorously selected based on stringent criteria to ensure both their relevance and methodological soundness. The data from these studies were thematically analysed, providing a profound insight into how GenAI is being used to analyse human behaviour and interactions and discussing potential revolutionary changes in qualitative analysis. This method also allows for a detailed exploration of the ethical considerations and challenges posed by these technologies.

Our findings are structured into three main themes: (I) detailing the scientific implications of integrating AI into qualitative research methodologies; (II) conducting a systematic review of the current state of the art, using scientific publications from the Scopus and Web of Science databases; and (III) considering the future directions of qualitative research in the age of artificial intelligence.

Integrating AI Into Qualitative Research Methodology: What Are the Scientific Implications?

Generative AI refers to a technology that autonomously creates new content (Nhavkar, 2023). It relies on artificial intelligence algorithms that address the problem of generative modeling by studying training examples and learning the probability distribution that generated them (Goodfellow et al., 2020).

As a subfield of artificial intelligence, generative AI uses deep learning techniques to generate creative outputs such as images, music, and text (Sanhita Kar et al., 2023). These generative AI tools are capable of producing high-quality artistic