

### AI in Qualitative Research

It Can Interpret Answers. Can It Ask the Right Questions?

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## LLMs already show an impressive ability to assist in the analysis of qualitative data.

In our ongoing effort to identify worthy applications for AI in market research, the realm of qualitative research already stands out. LLMs with their natural language processing and generative capabilities, make the potential for innovation in this area especially promising. LLMs and AI have already demonstrated clear value in assisting with critical tasks intrinsic to every qualitative method. And there's no going back. Having experimented with various tools over the past year, we are now finding it difficult to imagine conducting a study without making use of them. AI has clearly changed the game with its skill at handling these tasks:

- TRANSCRIPTION & TRANSLATION. When conducting international or multi-lingual qualitative research, LLMs can assist with automatic transcription of interviews and real-time translation of responses, allowing qualitative researchers to work across languages with far greater ease and speed.
- DATA MINING. LLMs can dig into large qualitative datasets quickly, making it easier to find specific quotes and themes, or run crossreferences across subgroups or individual respondents.
- TEXT SUMMARIZATION. LLMs can summarize the extensive textual data generated in qualitative studies, making it easier to distill key points or trends.
- THEMATIC ANALYSIS. LLMs can process vast amounts of unstructured text, identifying patterns, themes, and sentiments. Not only is it very good at analyzing open-ended survey responses, it does a bang-up job at analyzing interview transcripts and even focus group discussions, saving enormous amounts of time on manual coding.

This is not to say that human analysts are no longer needed to analyze qualitative data. Quite the opposite. While LLMs are adept at identifying and interpreting common themes, current versions do not necessarily display nuanced interpretation, critical thinking, or

emotional intelligence. Human expertise is still essential for deriving rich insights. But AI has proven itself to be a very good listener.

### LLMs also have the wherewithal to be a pretty good conversationalist...

Moderating would seem to be a plausible application, given that LLMs have already demonstrated their ability to engage in human conversations—as evidenced by the widespread use of chatbots and voice-automated customer support. Likewise, many of the known strengths of LLMs mirror the qualities of effective moderators, such as analytical capabilities, mimicking interpersonal skills, and adaptability:

- NATURAL LANGUAGE UNDERSTANDING. LLMs like GPT-4 can comprehend and respond to natural language effectively, making them good at simulating human-like conversation. They can handle various topics and levels of semantic complexity, ranging from simple questions to complex discussions, generating responses that sound coherent and relevant.
- **CONTEXTUAL AWARENESS.** LLMs can maintain short-term context within a conversation, tracking the flow of dialogue and tailoring responses accordingly. This enables smooth, natural-feeling exchanges, especially in brief interactions.
- VERSATILITY. LLMs are not restricted to specific topics and can provide useful information or opinions on a wide array of subjects. They can engage in technical, creative, or general knowledge conversations, making them adaptable.
- EFFICIENCY AND AVAILABILITY. LLMs can converse without fatigue or time limitations. They can serve as an always-available assistant or chatbot, helping users with various tasks such as brainstorming, answering factual questions, or assisting with customer service queries.

### But while AI is able to chat and query, it lacks the skills needed to be an adept moderator.

While LLMs are undoubtedly very good at facilitating basic to moderately complex conversations, answering questions, and simulating human-like interactions—which makes them well-suited to customer support or even brainstorming—they fall short in areas requiring deep understanding and conversational dexterity over sustained periods:

 LIMITED UNDERSTANDING. LLMs can generate impressive text based on patterns learned from vast datasets because they are good at predicting what should come next. But we can't confuse conversation quided by probabilities with conversation starsed by presentions.

guided by probabilities with conversation steered by perceptions or interpretations.

- **DIFFICULTY WITH LONG-TERM CONTEXT.** LLMs struggle to maintain context over long, multi-turn conversations. If a conversation requires tracking nuanced information across many turns, the model may lose track, resulting in errors or irrelevant responses.
- INSENSITIVITY TO INPUT. LLMs can produce varying responses to slightly different prompts, and their output may sometimes seem biased or inappropriate if the input is unclear—an issue not necessarily caused by prompt engineering. Additionally, they often lack awareness of conversational nuances such as sarcasm or irony.
- LACK OF REAL-TIME LEARNING AND ADAPTABILITY. This is a critical deficit. Unlike humans, LLMs don't learn from individual conversations or user corrections in real-time. Their learning is static between updates, meaning they can repeat mistakes without adapting dynamically during an ongoing conversation.

# Are there any viable use cases for AI-enabled interviewing today? *So far, a few.*

As expected, the most promising use cases draw primarily on the advantages of speed and efficiency when quick responses will do. For instance, AI-based tools excel in user experience testing by querying gut reactions to interface designs and analyzing feedback, reviews, and support tickets to identify recurring themes, pain points, or feature requests. Basic message or ad testing is also a natural fit, with AI handling A/B tests gauging immediate consumer reactions to different marketing visuals or messages.

In addition, emerging platforms offer the opportunity to conduct short Aladministered interviews enhanced with Al-generated probes of each openended response. The operative word here is short, and the emphasis would be on basic information in verbatim form—not depth of emotion or the sort of insight one needs to understand how a brand can change habits or meet complex psychological needs.

The key point is that AI is driving innovative approaches to qualitative research, geared toward quick, actionable insights, more akin to sentiment analysis than qualitative analysis as we've traditionally understood the term. Just a layer deep, lacking the full sensitivity, richness, and motivational depth that human-guided conversation can produce.

### As AI gains new skills, the way human researchers and AI collaborate will continue to evolve.

We can never deny the transformative potential of tools like LLMs to streamline content analyses and generate swift, actionable insights. But the limitations of AI—particularly in interpreting complex human behaviors and probing intricate emotional issues—underscore the irreplaceable value of human expertise. Those limitations mean that chatbots are unlikely to

replace humans in the role of true qualitative moderators anytime soon—at least not so long as we retain our appreciation for true qualitative research excellence and resist the temptation to trade insight for expediency.

Stay tuned as we continue to explore how AI is redefining the possibilities in market research. Future articles will delve deeper into the evolving trends and technologies shaping the qualitative research landscape and continue to probe the boundaries and limitations of AI-guided research.

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#### About NAXION

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