E-Learning Series Live Discussion

ChatGPT as a Junior Researcher: Exploring how AI could and maybe shouldn't yet be used for data analysis

September's Community of Practice delved into various ways AI can be used and perhaps not used for research, with guest speaker Dan Vandebelt, Community Engagement Coordinator with the Immigration Partnership in Waterloo Region.

Here's a summary of what CoP participants found AI can do well, as well as challenges and limitations when using AI for engaging in community-based research at this time.

What AI Can Do Well:

1. Summarizing Content
Many participants shared that AI has helped them to quickly summarize content in plain language, such as for literature reviews, environmental scans, and generating glossaries. Some shared that the paid version was necessary to generate the most up-to-date information.

4. Generating Ideas
Some participants have used AI to overcome writer's block and generate creative ideas such as drafting titles for manuscripts, generating a theory of change, and creating titles and summaries for infographics.

2. Creating Content
AI has been used to support writing, such as creating outlines and structuring content, and has been used by participants to: create presentations, generate ideas to compose difficult emails, developing recruitment materials and consent forms, and fine-tuning research protocols and procedures.

5. Analyzing Data
Some participants shared they have used AI for data analysis, particularly qualitative data. One participant expressed using AI for regression analysis. Many others have not yet used AI or have expressed concerns over using AI for data analysis.

3. Proofreading and Formatting
AI has helped some participants in editing their writing and formatting references and citations.

6. Transcribing Content
AI has been used by some participants for transcription purposes.

7. AI Seen as a Junior Researcher
AI can be seen as a secondary researcher that can help support the research process, where beneficial, under review of human researchers.

Challenges and Limitations of AI:

1 **Editing and Fact-Checking:** Content generated by AI often requires significant review and editing to make it useful. Some participants shared that AI had particular difficulty when inputting larger transcripts.

2 **Privacy, Security and Confidentiality:** Many participants shared concerns about using AI for research that contained private or confidential information, especially when the data was highly sensitive and/or involved vulnerable populations. There is a need for more collective discourse and the development of policies, regulations, and guidelines for the use of AI in research.

3 **Inaccuracies and Lack of Information:** Many participants have experienced AI generating inaccurate information and errors in AI generated data. AI also often does not include what the research team would deem important information.

4 **Quantitative Analysis:** Participants shared more hesitancy for using AI for quantitative analysis, particularly considering there are already existing and reliable tools for these purposes.

5 **Lack of Domain Knowledge and Intersectionality:** AI lacks domain knowledge and may struggle to categorize data appropriately. Many questioned the ability for AI to capture nuances held by individuals with lived experiences and to account for intersectionality.

6 **Data Sovereignty:** Participants expressed concerns around data ownership when uploading data into AI systems, particularly for data involving Indigenous populations. There is a lack of transparency when around what happens to data inputted into AI systems.