



# A Practical Workshop on Using Generative AI in the Research Process

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**Date:** November 14, 2025 (Friday)

**Time:** 1:00 p.m. - 3:50 p.m.

**Venue:** Main Campus, HKU

## Overview

This 3-hour hands-on workshop equips research postgraduate (RPg) students with practical skills to integrate Generative AI (GenAI) tools effectively and ethically throughout the research lifecycle. Participants will explore real-world applications of GenAI in designing research, conducting literature reviews, analyzing qualitative and quantitative data, supporting thematic coding, and enhancing academic writing. Examples will be drawn from education research but designed to be transferable across disciplines. The workshop emphasizes critical evaluation, responsible use, and maximising the productivity and creativity benefits of AI, without compromising research integrity.

## Learning Outcomes

By the end of the workshop, participants will be able to:

- Understand the basics of generative AI and DeepSeek's capabilities for text generation and analysis.
- Apply prompt engineering techniques (e.g. adding context, specifying style/format, iterative refinement) to get more effective results from AI.
- Use AI tools to assist in a qualitative coding task (thematic analysis of text data) and compare AI-generated themes with human insights.
- Recognize the strengths and limitations of AI in these tasks – e.g. AI's strong reasoning abilities vs. its tendency to miss subtle context or "hallucinate" information if not properly guided.
- Identify best practices for ethically and effectively integrating GenAI into their own work (e.g. data privacy, verification of AI outputs, human oversight).

## Learning Activities

This 3-hour interactive workshop introduces participants to Generative AI tools (with a focus on DeepSeek), effective prompt engineering techniques, and using AI for qualitative coding in research. The session is designed for a mixed audience of different backgrounds, so no advanced technical knowledge is required. The learning design balances different formats:

- **Lecture** – Short presentations to introduce core concepts and demos.
- **Hands-On Practice** – Guided activities where participants actively use AI tools to craft prompts, generate content/code, and perform qualitative coding tasks.
- **Group Discussion** – Structured discussions for participants to share results, reflect on their experiences, and discuss benefits/limitations of GenAI.

This blend of lecture, practice, and discussion will cater to varied familiarity levels and ensure participants learn by doing while having space to clarify concepts and reflect. For example, participants will experience how small changes in prompting can affect an AI's output and will discuss where AI can or cannot replace human judgment in qualitative analysis.

## Remarks

Ahead of the workshop, participants should try different GenAI tools. DeepSeek will be the primary tool used. This ensures everyone can log in and follow along without delay. If possible, also have an alternative (e.g., ChatGPT) as backup. All participants must bring a laptop.

To tailor the session, a brief survey will be sent to participants upon registration. This will collect basic information and help gauge their backgrounds and expectations.

