

Prompting tips: Using AI tools to support qualitative analysis.

Introduction

These tips aim to help Australian Public Service (APS) officers interested in using Gen AI tools to support them in analysing qualitative data. They relate to **video 11** from the “Artificial Intelligence (AI) tools for Evaluation in the Australian Government” series.

This video series and resources are meant to inspire ideas and learning. They are not designed to be a manual. It aims to show how AI tools, especially generative AI (Gen AI) can support the evaluation process. The goal is to help evaluators and APS staff explore how AI can be useful, and where it is less useful.

AI can help with repetitive tasks but cannot replace expert knowledge. APS officers must carefully review AI outputs. Any AI-based decisions and products must be owned by the officers. This human oversight can help ensure that results are accurate, fair, and culturally appropriate.

Please note that you should only use AI tools that have been approved by your agency or department. Any documents that you upload to the tool should only be up to the security clearance level approved for the tool by your agency or department.

Prompt engineering

A prompt is an instruction in natural language that tells a Gen AI tool to perform a task. Prompt engineering is the process of creating and refining these prompts to get a suitable output from the tool.¹ Table 1 below shares some overarching tips for using Gen AI tools. This is derived from the AI Colab’s “AI for Policy People” course, available through APSLearn. These tips are organised along four pillars:



Share specifics and context



Provide examples



Avoid leading or biased prompts



Chat, not search

¹ [Prompts overview | Microsoft Learn](#)

Table 1: Essential prompt engineering tips

Share specifics and context	Provide examples	Avoid leading or biased prompts	Chat, not search
Gen AI tools like Copilot are not search-engines. They don't work on keywords, they work on the meaning of words and how they are used, just like people. For more tailored, and useful responses from AI tools, you should provide as much context as you can, with specific requests. Vague prompts lead to generic answers.	Gen AI tools can “read between the lines” pick up a lot of indirect instructions when you share raw examples about your topic of interest. Examples help reinforce your specific requests.	Use balanced prompts/requests to get well-rounded responses. Avoid leading or biased prompts. If you are unsure that the Gen AI tool has considered all aspects of your query, simply ask it to be appropriately critical.	Use Gen AI tools conversationally. Ask clarifying questions, build on responses, and treat it like a colleague you're bouncing ideas off. Don't expect a perfect response in one go. Iterate, get a rough version, revise and refine through additional prompts.

What is natural language processing?

Natural Language Processing (NLP) enables AI tools to understand, interpret, and generate human language.² It powers:

- Chatbots and virtual assistants
- Text summarisation and sentiment analysis
- Theme extraction from qualitative data
- Automated translation and transcription

NLP can support evaluations by helping us process large volumes of text. This can include interview transcripts, survey comments, and policy documents. Analysing this qualitative data can help us identify patterns, themes, and insights to answer key evaluation questions.

Examples of NLP-enabled tools

NLP-enabled tools are increasingly available to evaluators and APS officers. Some examples include dedicated qualitative data analysis tools such as NVivo and Qualtrics. These have embedded NLP functions. Other Gen AI tools such as Copilot, ChatGPT tools, and Claude, among others also have NLP capabilities. These tools can be used to support evaluation planning, data analysis, and reporting, and can “read and understand” uploaded reference documents.

² <https://www.ibm.com/think/topics/natural-language-processing>

Prompt examples by use case

Identifying key themes

1. “Provide a two-page summary of the uploaded transcripts/survey responses.” (this helps prime the Gen AI tool with reference content)
2. “Based on the uploaded transcripts/survey responses, what are the three key themes that participants discussed for [insert topic]”
3. “Provide supporting quotes for each theme”. You may repeat prompts 2 and 3 for any number of topics. You can also ask follow-up questions to explore any sub-themes.

Sentiment analysis and comparison

1. “Provide a two-page summary of the uploaded transcripts/survey responses.” (this helps prime the Gen AI tool with reference content)
2. “From the uploaded transcripts/survey responses, summarise participant sentiments about [insert topic]. Categorise these sentiments as positive, negative, and mixed sentiment.”
3. “Provide supporting quotes for each theme”. You may repeat prompts 2 and 3 for any number of topics. You can also ask follow-up questions to explore any sub-themes.
4. “Summarise any similarities and differences in sentiment between [insert stakeholder group] and [insert stakeholder group] about [insert topic].
5. “Summarise any similarities and differences in themes between [insert stakeholder group] and [insert stakeholder group] about [insert topic].
6. “From the uploaded transcripts/survey responses, extract participant suggestions for improving the program/services. Share these as a concise list ranked by how frequently a particular theme has been expressed. Provide reference quotes for each theme.”

Things to look out for when using AI tools for qualitative data analysis

1. **Hallucination risk:** AI tools can “hallucinate” or create false or misleading responses based on their training data instead of responding with an “I don’t know.” It is important to ask these tools to reference all responses. Manually check that these references exist, and that the conclusions are logically based on these references.
2. **Biased prompting:** Ensure that your prompts use neutral language, rather than asking leading questions. For example, it is better to ask, “What do program participants say about the sign-up process?”. Rather than asking “Do the participants agree that the sign-up process is easy to follow?”. The first question has a greater chance of producing a balanced result.
3. **Context matters:** Humans must validate all AI outputs. Sense-making with stakeholders can reveal any errors, and uncover nuances. This can also help unpack any contextual factors which could explain reasons for a particular outcome.

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4. **Privacy risks:** You must store and use any qualitative data in accordance with the Privacy Act (1988)³, and other relevant legislation. Ensure that data is de-identified before being used in any reporting products.

Policy and training

All use of AI tools must comply with the [Policy for the responsible use of AI in government](#). Your use of AI tools should also comply with any guidance and any specific requirements from your entity's accountable official under the Policy for the responsible use of AI in government.

The ACE strongly recommends that you complete the APS Learn course, [AI in government fundamentals](#). This course has been designed to provide all APS staff with foundational knowledge of AI, and the principles of safe and responsible use. Lastly, you can test a suite of AI tools on [GovAI](#). This is a secure, APS-only platform designed to help APS officers learn about and use artificial intelligence (AI).

³ [Privacy Act 1988 - Federal Register of Legislation](#)