

Generative AI for Qualitative Analysis

CARMA Online Short Course
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GenAI for Research Design, Reviewing Literature and Data Collection

Methodologically appropriate use of AI for QDA
GenAI use throughout the qualitative research workflow

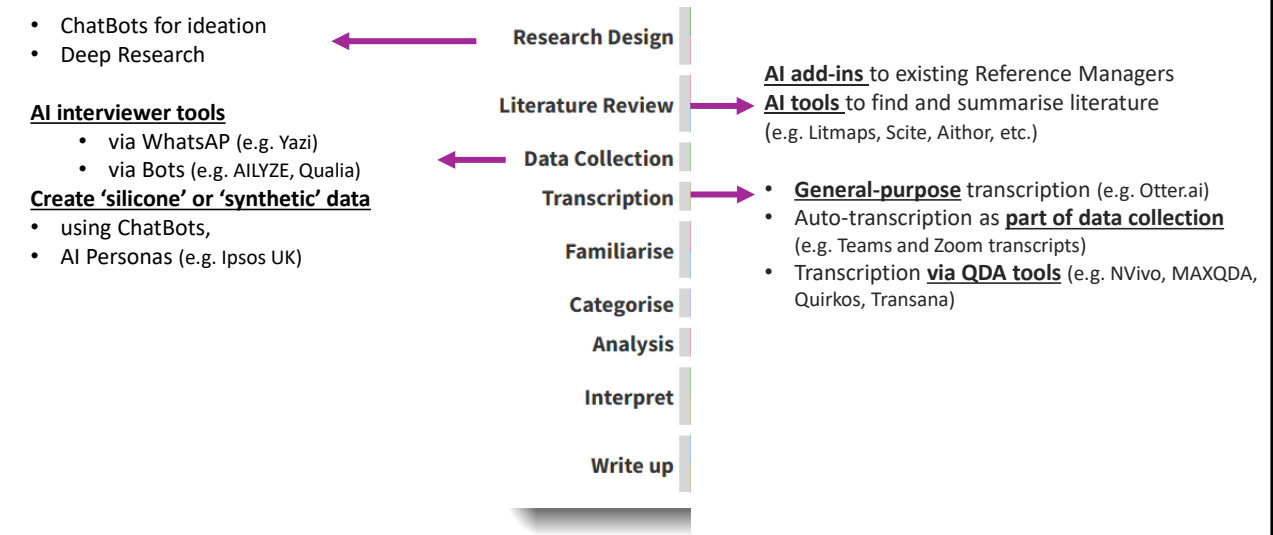
Generating and refining ideas for qualitative projects

Generating data

Reviewing Literature

2

GenAI throughout the Qualitative Research Workflow



Generating ideas for qualitative projects

Let's get hands-on...

Example project: Volunteering

AI tool: ChatGPT (although you can use a different one if you prefer – might even be useful exercise to compare)

Tasks: ask ChatGPT for:

- ideas for research topics around an area of interest
- published articles on a topic of interest
- potential research questions
- useful population to draw a sample from (and sampling strategies)
- ideas for collecting qualitative data for such a study
- List of potential interview questions/ topic guide (or other data collection instruments)

Pay attention to how you ask questions (aka the prompts you use).

Try different ways of asking for something and consider the differences

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Refining ideas for qualitative projects

Let's get hands-on...

Example project: Volunteering

AI tool: ChatGPT (although you can use a different one if you prefer – might even be useful exercise to compare)

Tasks: ask ChatGPT to:

- Improve an existing project overview
- Extend an existing project overview
- Rewrite an existing project overview for different audiences (academic, government policy makers, volunteers themselves...etc.)
- Improve list of interview questions and prompts

Pay attention to how you ask questions (aka the prompts you use).

Try different ways of asking for something and consider the differences

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What is...



Gained



Lost

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Critical Reflection



- Why
- When
- How
- What
- Does

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Generating qualitative data

AI interviewing

WhatsApp AI Interviewer (Yazi)

Online AI Interviewer (Qualia)

Speaking AI Interviewer (AILYZE)

What are the methodological and ethical implications of generating data for qualitative research in these ways?

Generating “synthetic/silicone” data

= *simulating human samples*

AI Personas – e.g. Ipsos UK for
understanding the UK General Election 2024

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Let's get hands-on

be interviewed by AI – using Qualia as an example



<https://www.qualiainterviews.com/blog/demo-interviews/>



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AI Personas: Ipsos UK Marginal Moments project

Meet the AI personas...

Priya Female, 37 Social worker	Darren Male, 45 Unemployed	Penny Female, 64 Retired	Rupert Male, 56 Finance manager	Chloe Female, 19 Bartender
				
Woking: Constituency has voted Conservative since 1950, but Lib Dems close second	Great Yarmouth: Seat is currently Conservative, but has tended to follow the national vote	South Norfolk: Constituency has voted Conservative since 1950, Labour in second place	Chester South & Eddisbury: New constituency made up of a mix of Labour and Conservative	West Dorset: Conservative seat, historically Lib Dems have been second, but Labour in 2019

[CAQDAS Webinar Summary: Marginal Moments: Can Generative AI help us better understand the general election?](#) | [Computer-Assisted Qualitative Data Analysis](#)

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Out of One, Many: Using Language Models to Simulate Human Samples

Published online by Cambridge University Press: 21 February 2023

Lisa P. Argyle , Ethan C. Busby, Nancy Fulda, Joshua R. Gubler , Christopher Rytting and David Wingate

Synthetic data

We create “silicon samples” by conditioning the model on thousands of sociodemographic backstories from real human participants in multiple large surveys conducted in the United States. We then compare the silicon and human samples to demonstrate that the information contained in GPT-3 goes far beyond surface similarity. It is nuanced, multifaceted, and reflects the complex interplay between ideas, attitudes, and sociocultural context that characterize human attitudes. We suggest that language models with sufficient algorithmic fidelity thus constitute a novel and powerful tool to advance understanding of humans and society across a variety of disciplines.

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Is it really any good? Is it appropriate?



13/03/2024 · EPISODE 28 · 1HR 1MIN ·

Episode 28: LLMs Are Not Human Subjects, March 4 2024

Mystery AI Hype Theater 3000

▶ Play

“We've been knee deep in papers claiming LLMs might be the future of both processing and creating data about human behavior and experiences. And as you might expect, we're very much in doubt that there's a practical or ethical path forward for either.”

Synthetic Replacements for Human Survey Data? The Perils of Large Language Models

Published online by Cambridge University Press: 17 May 2024

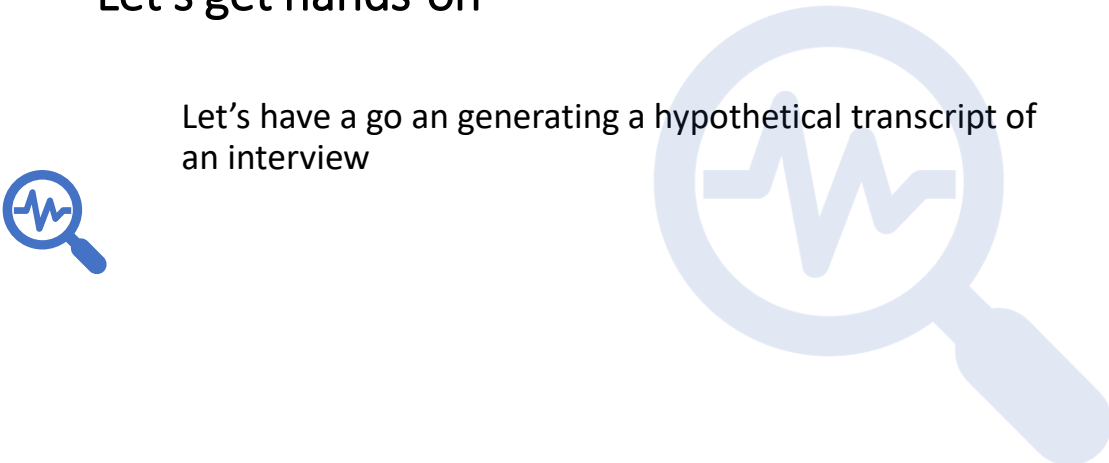
James Bisbee , Joshua D. Clinton, Cassy Dorff, Brenton Kenkel and Jennifer M. Larson

“Altogether, our findings raise serious concerns about the quality, reliability, and reproducibility of synthetic survey data generated by LLMs”.

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Let's get hands-on

Let's have a go an generating a hypothetical transcript of an interview



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What is...



Gained



Lost

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Changing landscape of assisted transcription

Step-change in capabilities

- Covid impact & tech developments

Previously not time saving – only worth it for practical reasons

Changes in accuracy, speed & security have fundamentally changed the space

BUT is automated transcription always appropriate?

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Convert Speech-to-Text Automated transcription

Standalone products

- Numerous options (e.g. Otter.ai, Trint, Descript, TurboScribe, Zoom/Teams)
- Usually can be formatted for CAQDAS import

CAQDAS products (see slide from session 1)

Considering appropriateness for research needs.

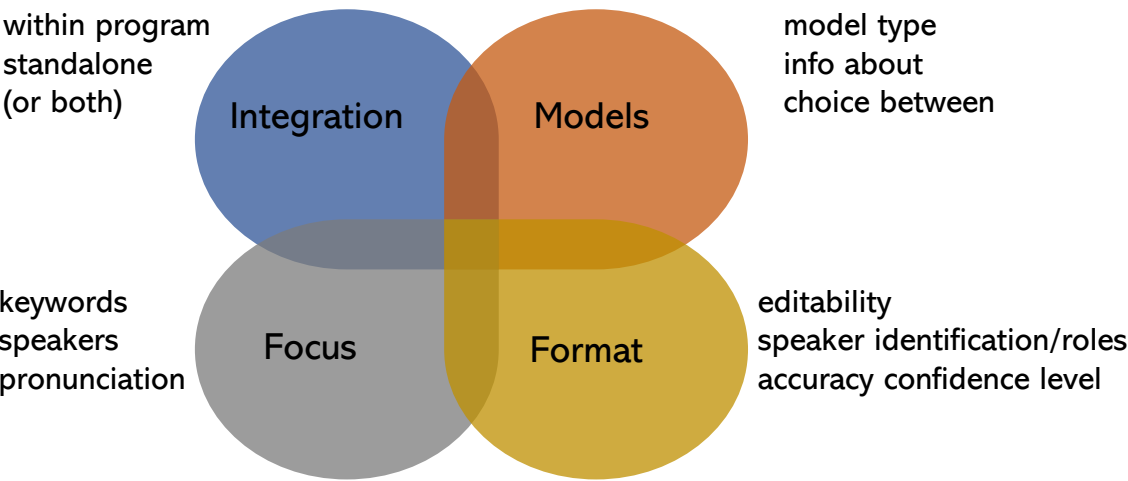
Transana (integrated): options for balancing accuracy/speed/security

- Speechmatics (good quality)
- Deepgram (fast but lower accuracy)
- Faster Whisper (choice of models – trade speed for security (local processing))

<https://www.transana.com/blog/2024/04/05/important-issues-for-automated-transcription/>

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Implementation into CAQDAS-packages



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MAXQDA's transcription options

Manual transcription

- Disconnected transcripts
 - Transcribe elsewhere – import without timestamps
 - Transcribe inside MAXQDA
- Synchronized transcription
 - Transcribe elsewhere – import with timestamps
 - Transcribe within MAXQDA – create synchronicity



Automated transcription



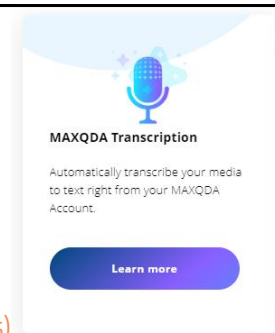
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AI-generated transcripts

<https://www.maxqda.com/automatic-transcription>

- Fast (very quick auto-transcription)
- Flexible (common file formats & editable)
- Tailored (ready for MAXQDA import - speakers, timestamps)
- Secure (GDPR compliant, not shared, deleted)
- Bespoke (custom glossaries, 45+ languages)
- 60 minutes FREE trial

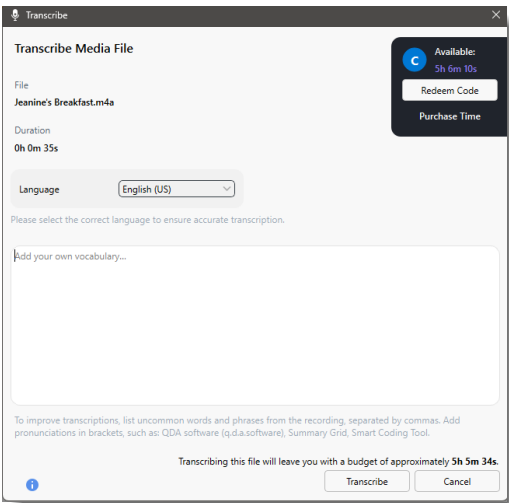
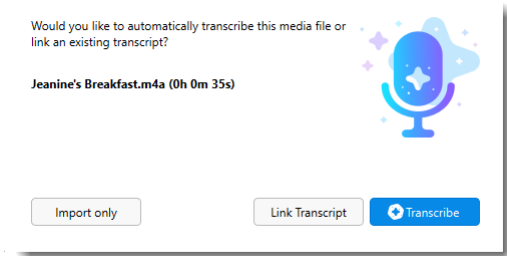
Experiment to
determine accuracy



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Automatically transcribe without leaving MAXQDA



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Transcribing audio/video

To transcribe or not?

- Transcription is the norm in Qual Research
- CAQDAS-packages also allow 'direct' analysis

➔ decision is an analytic one



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Transcription as an analytic act

- What is transcribed
- The form of the transcript
- When the transcript is created
- How the transcript is created

“a process that is theoretical, selective, interpretive, and representational” Davidson 2009:37

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Transcription strategies and tactics

What you plan to do

How you plan to do it

Many forms of transcript

- Verbatim
- Gisted
- Jeffersonian
- Descriptive log
- Paraphrased
- Visual transcripts

Self-transcribe
Outsource transcription

- Manual
- Synchronised
- Automated

} hybrid

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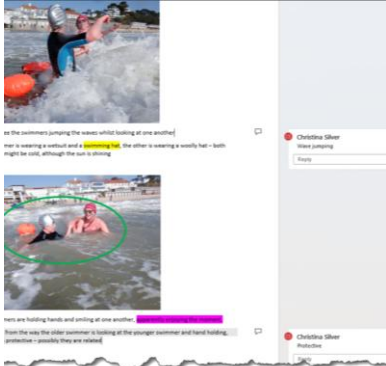
Hybrid approaches

- Transcripts of all types need to be checked
- Transcripts can usually be edited within CAQDAS packages
- Consider if you also need visual elements

➡

dynamic; adjusted as analysis proceeds

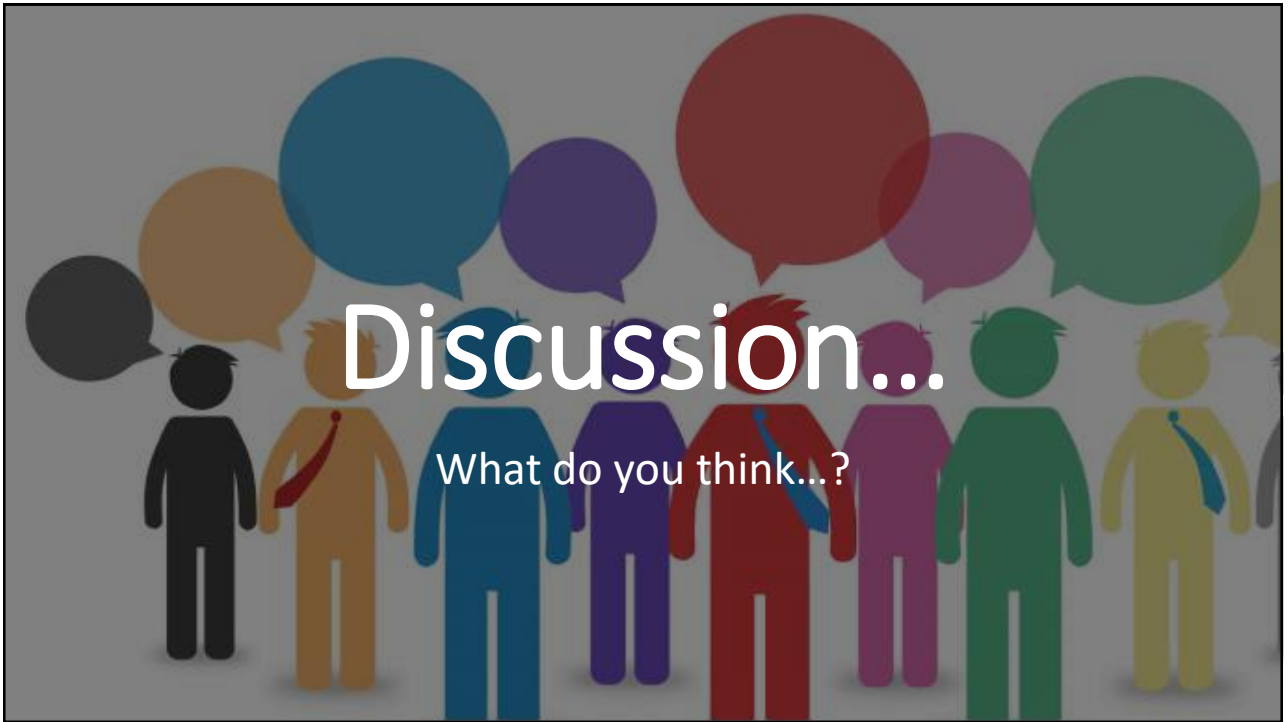
- Speed of AI-generation combined with non-verbal content



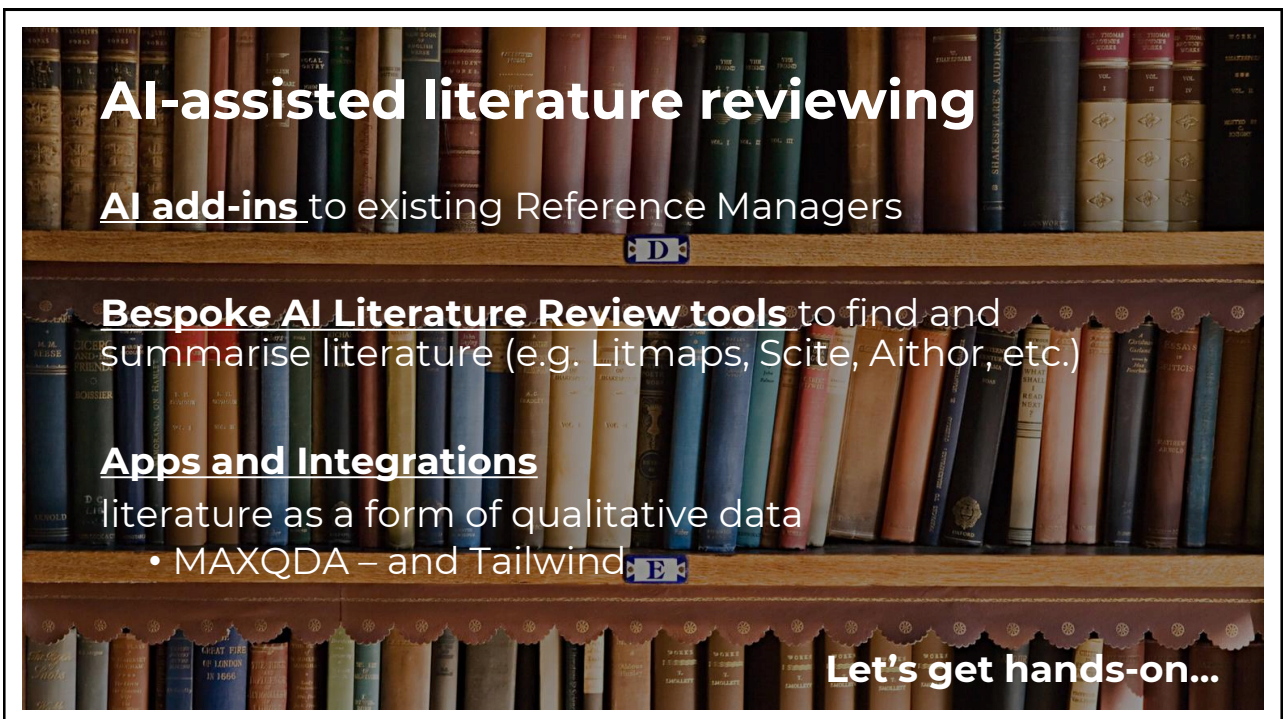
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https://scite.ai/

scite_

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Generate a literature review about developing effective strategies for addressin...

Ask me another question Ask

Generate a literature review about developing effective strategies for addressing different types of bullying in UK schools

2 free prompt(s) left. Start your free trial to get unlimited prompts.

Bullying in schools is a pervasive issue that significantly impacts students' mental and emotional well-being. Addressing this problem requires a multifaceted approach involving effective strategies tailored to various types of bullying, including peer-to-peer aggression, stigma-based bullying, and bullying related to diverse identities. This literature review synthesizes current research findings on successful interventions and strategies for preventing and addressing bullying in UK schools.

A critical evaluation of educational interventions highlights the effectiveness of structured anti-bullying programs. Studies have shown that comprehensive programs like KiVa, which originated in Finland, have been adapted successfully in the UK, demonstrating a significant decrease in bullying incidents (Clarkson et al., 2022; Axford et al., 2020). The KiVa program emphasizes a whole-school approach, integrating students, teachers, and parents in its implementation and focusing on the social-ecological framework that underpins the influence of

References Search Strategy

Section: Introduction

The Effectiveness of the KiVa Bullying Prevention Program in Wales, UK: Results from a Pragmatic Cluster Randomized Controlled Trial
Nick Axford¹, Gretchen Bjornstad², Suzy Clarkson³ et al.
2020 [Prev Sci](#)

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[View full text](#) [Add to dashboard](#) [Cite](#)

Section: Discussion

Understanding the psychology of bullying: Moving toward a social-ecological diathesis-stress model
Susan M. Swearer¹, Shelley Hymel² 2015
[American Psychologist](#)

560 11 333 0

[View full text](#) [Add to dashboard](#) [Cite](#)

Section: Conclusion

...Rather, bullying stems from complex interactions between individuals and the contexts in which they function, both proximal (L.) >>

Section: Conclusion


...This finding highlights the importance of schools' roles in the formation of policies to prevent and intervene in bullying. W.) >>

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Generalised tools becoming more bespoke? The case of Deep Research



Perplexity



Gemini



ChatGPT


autonomous multi-step web-researching
analysis and synthesis → report generation

Desk Research Application

[Useful blog comparing these 3 Deep Research tools](#)

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What about methods?



Free Access

A typology of reviews: an analysis of 14 review types and associated methodologies

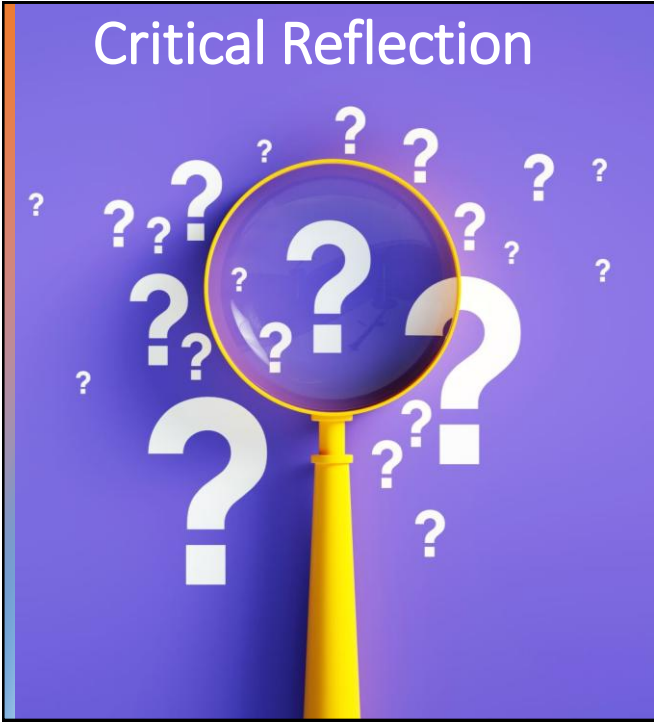
Maria J. Grant, Andrew Booth,

First published: 27 May 2009 | <https://doi.org/10.1111/j.1471-1842.2009.00848.x> | Citations: 2,695

✉ Maria J. Grant, Salford Centre for Nursing, Midwifery and Collaborative Research, School of Nursing, University of Salford, Salford M6 6PU. E-mail: m.j.grant@salford.ac.uk

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Critical Reflection




- Why
- When
- How
- What
- Does

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What is...



Gained



Lost

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