

Critically Exploring GenAI- Tools for Literature Discovery

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Introduction



Agenda

Time	Activity
2-5 min	Welcome and introduction
5 min	Setting the scene: Traditional vs. AI search
10 min	Evaluation criteria
20 min	Experiment searching literature with AI
15 min	Sharing findings & assessing evaluation criteria
5 min	Conclusions and Wrapping-up

Setting the scene: traditional vs AI literature search

Traditional	AI
Search first	Answer first (Lo, 2026)
Based on keywords (e.g. Boolean's)	Question-led
Defined & specialised database(-s)	Unclear definition/In development
Discipline controlled vocabulary	?

Evaluation Criteria for search output

1. **Transparency:** Can we trace the search process & presentation of the output?
2. **Accuracy:** Is it correct information?
3. **Reliability:** Can I trust the information presented here? Where does it come from?
4. **Relevancy:** Is it relevant? Does it relate to my goal/research question?
5. **Coverage:** Is the information complete? Does it cover all relevant viewpoints? Can we detect bias?
6. **Repeatability:** Can we repeat the search? Does that lead to the same output?

Note for publication: These criteria are work in progress and still in development. Please contact the presenters before usage.

Evaluation Criteria

- Is there something missing in the list of criteria?
 - What?
- Do we need to adjust one/more criteria?
- Is the order of the criteria logical?

1. **Transparency:** Can we trace the search process & presentation of the output?
2. **Accuracy:** Is it correct information?
3. **Reliability:** Can I trust the information presented here? Where does it come from?
4. **Relevancy:** Does the information relate to the question? Does it answer the question?
5. **Completeness:** Does it cover all relevant information? Does it cover all viewpoints? Can we detect bias?
6. **Reproducibility:** Can we repeat the search? Does it lead to the same output?

Note for publication: These criteria are work in progress and still in development. Please contact the presenters before usage.

Experiment (20 mins)

- You will conduct a literature search with AI and apply the evaluation criteria on the output.
(We also conducted a traditional search with the same question, we will compare the results later)
- Our research question is: “How do AI literature searches compare to traditional literature searches?”

Experiment instructions (20 mins)

1. You can work with your neighbour or by yourself.
2. You can use [undermind.ai](#) (if you have an account), [Perplexity](#) (if you have an account), ChatGPT, Claude, or your preferred AI tool for this task. If you do not want to sign up for an AI tool use the [AI pedagogy comparison tool](#).
3. We suggest you use the following prompt, or tweak it as you see fit:
“Act as a librarian and recommend me relevant, up-to-date and traceable references for a research on the following research question: “How do AI literature searches compare to traditional literature searches?” The results should be academic articles and valid for higher education covering student researchers. Give me a top 10 overview and explain why these resources were selected from.”
4. Take the first three outputs of your search and see whether you can find them below to test the usefulness of the AI output.
5. Enter your thoughts in the wooclap in questionnaire “Evaluation of AI literature searches”
<https://app.wooclap.com/LITGCE?from=instruction-slide>

You can download the full instructions here:



Sharing findings & assessing evaluation criteria

Let us know what you think. Use
“Evaluation Criteria”:



Traditional search results

Database	Search	#results	#relevant results
Library, Information Science & Technology Abstracts (EBSCO)	(SU("ARTIFICIAL intelligence" OR "ARTIFICIAL neural networks" OR "AUTOMATIC summarization" OR "ERROR-correcting cos" OR "EXPERT systems" OR "KNOWLEDGE representation (Information theory)" OR "MACHINE learning" OR "MACHINE translating" OR "NATURAL language processing" OR "QUESTION answering systems" OR "SEMANTIC networks (Information theory)") N5 search*) OR TI((AI OR "Artificial intelligence" OR GENAI) N5 search*) OR AB((AI OR "Artificial intelligence" OR GENAI) N5 search*) OR KW((AI OR "Artificial intelligence" OR GENAI) N5 search*)) AND (SU("DATABASE searching" OR "ONLINE bibliographic searching" OR "QUERYING (Computer science)") OR TI(("database" OR literature OR bibliographic OR systematic) N5 search*) OR AB(("database" OR literature OR bibliographic OR systematic) N5 search*) OR KW(("database" OR literature OR bibliographic OR systematic) N5 search*))	40	12(30%)
Web of Science	TS=((AI OR "Artificial intelligence" OR GENAI) NEAR/5 search*) AND TS=("database" OR literature OR bibliographic OR systematic) NEAR/5 search*)	357	39(11%)

AI output versus traditional search in two databases

AI Tool	Recall
ChatGPT	3/10 (medical journals)
Consensus	4/10 (preprints and abstracts)
Perplexity	0/10 (student library guides)

Conclusions and Wrapping-up

- Speed vs rigour
- Evaluation Criteria

(Additional) Resources

- Lo, L. S. (2026). The CARE approach for academic librarians: From search first to answer first with generative AI. *The Journal of academic librarianship*, 52(1). <https://doi.org/https://doi.org/10.1016/j.acalib.2025.103186>
- Lin, Z. (2025). AI chatbots are already biasing research — we must establish guidelines for their use now. *nature*, 645. <https://doi.org/https://doi.org/10.1038/d41586-025-02810-5>
- www.Alpedagogy.org



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Thank you!



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