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Title

Assessing the Quality of the Primo AI Research Assistant for Use in Library Instruction and Research Consultations

Permalink

<https://escholarship.org/uc/item/758771hw>

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Publication Date

2025-04-01

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ASSESSING THE QUALITY OF THE PRIMO AI RESEARCH ASSISTANT FOR USE IN LIBRARY INSTRUCTION AND RESEARCH CONSULTATIONS

University of California San Diego



THE RESEARCH TEAM



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& Reference
Coordinator



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First Year
Experience
Librarian &
Academic Outreach
Coordinator



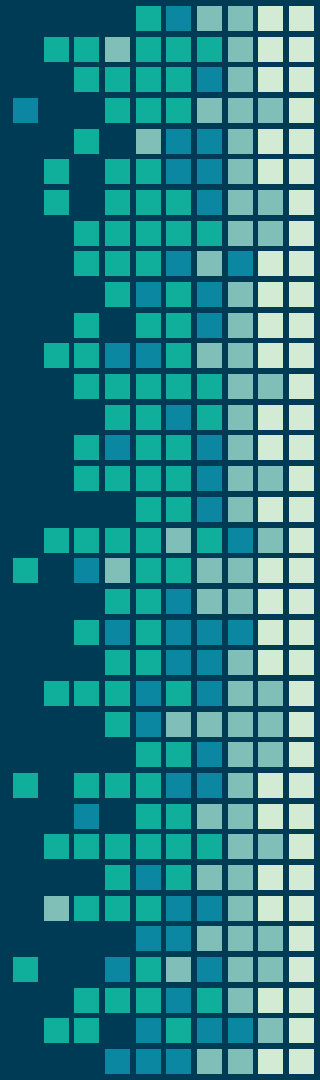
Christina Mayberry

(she/her)

Engineering Librarian



BACKGROUND



THE UC SYSTEM



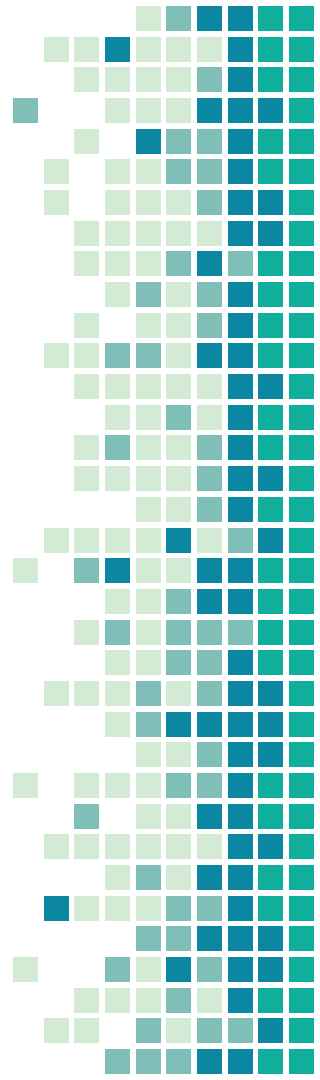
University of California

- 10 campuses
- 236,070 undergraduates
- 63,219 graduate students
- 266,038 employees
- Library holdings:
 - Physical: 75,543,842
 - Electronic: 28,655,446

UC San Diego

- 34,955 undergraduates
- 9,301 graduate students
- 41,773 employees
- Library holdings
 - Physical: 4,970,819
 - Electronic: 3,441,737

(UC Libraries, 2025; University of California, 2025a, 2025b)



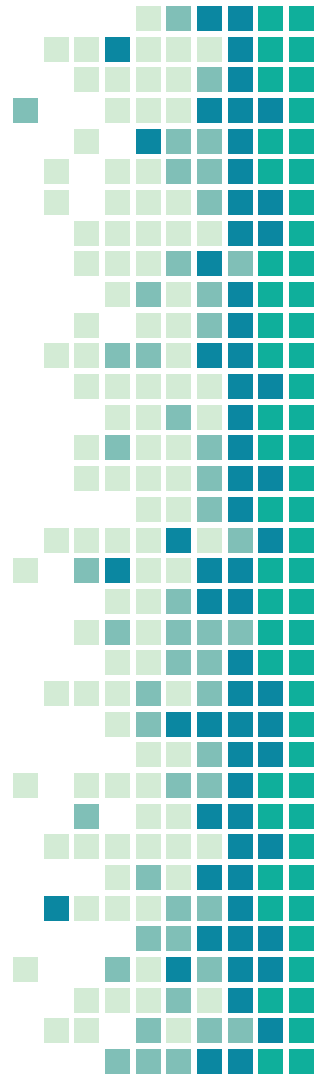
UC LIBRARY SEARCH



- “UC Library Search connects the libraries on all 10 University of California campuses through a unified discovery and borrowing system.”
 - Launched July 2021
 - Powered by Ex Libris
 - Alma/Primo

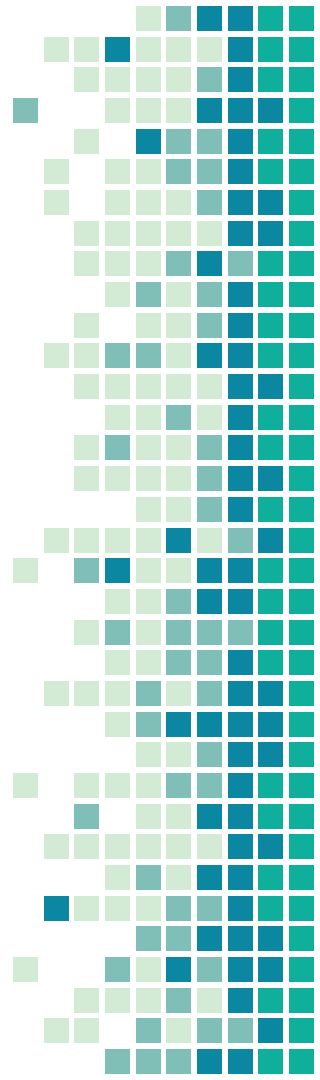
AI RESEARCH ASSISTANT REVIEW CONTEXT

- Ex-Libris' Primo Research Assistant released
- Local UC San Diego Discovery team desired review of the Research Assistant before releasing
 - Review focus on **technical capabilities**
 - Sandbox opened to all at the Library
 - Open invitation to send feedback



TOOL REVIEW FOR INSTRUCTION PURPOSES

- Desired **qualitative review** of the tool's recommend sources
 - Shared technical capability notes did not include a systematic structure for reviewing recommended content
- Gain understanding of impact on student research for the purpose of adjusting instruction
- Interested in usefulness for a "research paper writing assignment"
 - General topics
 - A handful of citations



PRIMO AI RESEARCH ASSISTANT

IN BETA



THE AI RESEARCH ASSISTANT

- Primo Research Assistant is Ex Libris' entrance into the AI tool field
- If implemented, it is an optional alternative search interface
- Currently in beta

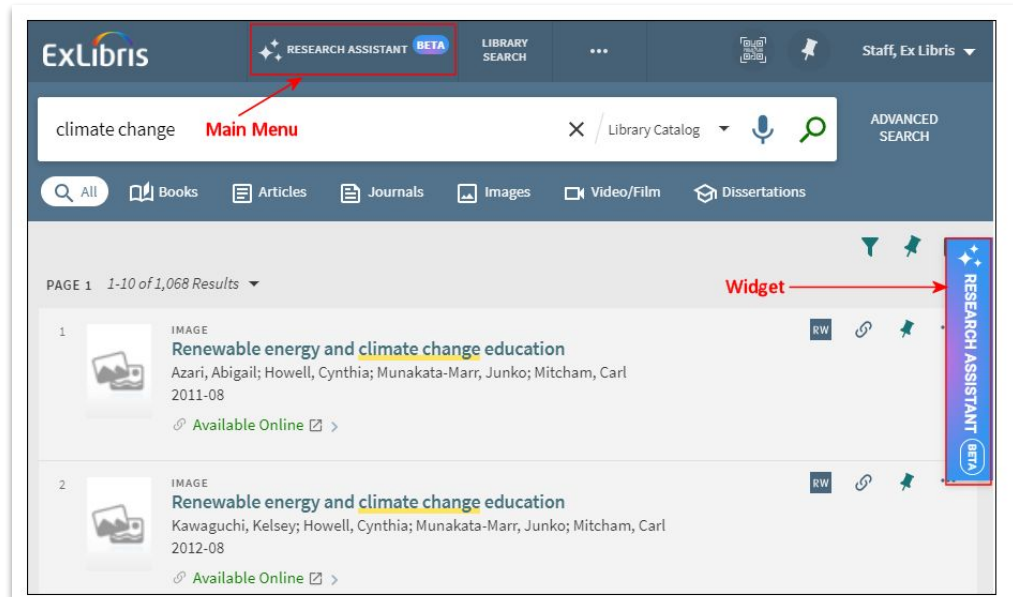
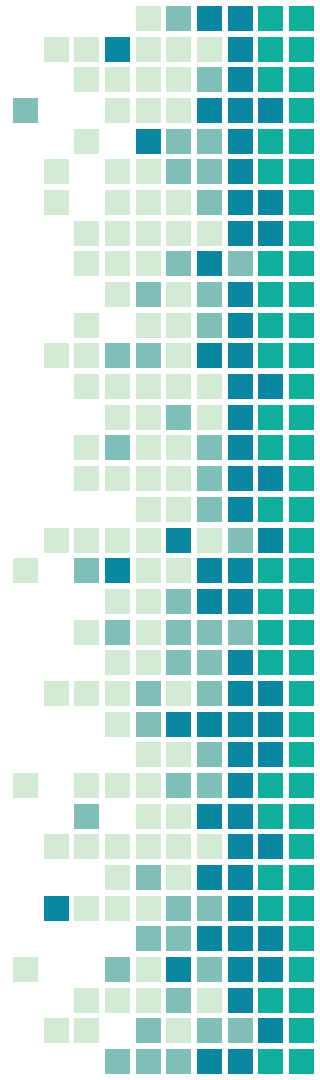


Image Credit: [ExLibris](#)

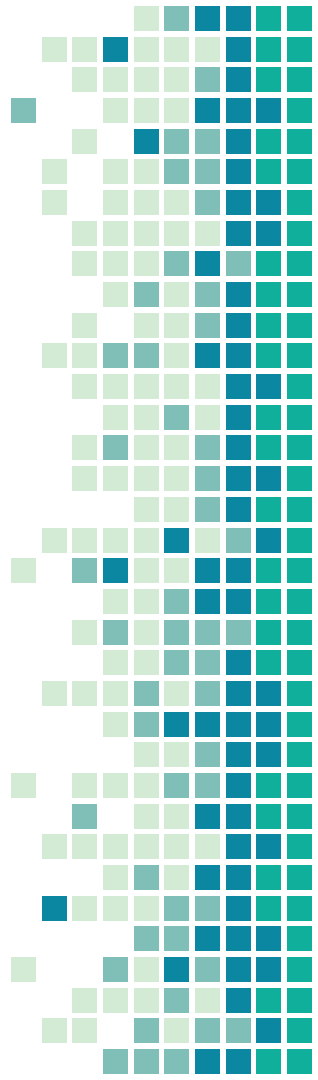
ABOUT THE RESEARCH ASSISTANT

- Generative AI-powered tool designed to streamline time-intensive tasks
- Enables users to query academic content in natural language
- Pinpoints five sources that can aid in answering a question
- Distills the most pertinent information from the descriptions/abstracts of each article
- Includes in-line references to sources and, beneath the overview, provides links to additional sources



BETA CONSTRAINTS

- Not currently supported
 - Requests for materials of a particular type (e.g., scholarly)
 - Specific time period
 - Follow-up questions
- Not all of the indexed material in UCLS is available. Examples include:
 - News content
 - Collections not marked as “free search” and specific providers e.g., APA, DataCite, Elsevier, JSTOR, and Conde Nast
 - Sources with insufficient metadata and abstracts to effectively run the tool or marked as withdrawn or retracted
 - Any content published by the providers above available via aggregator collections.

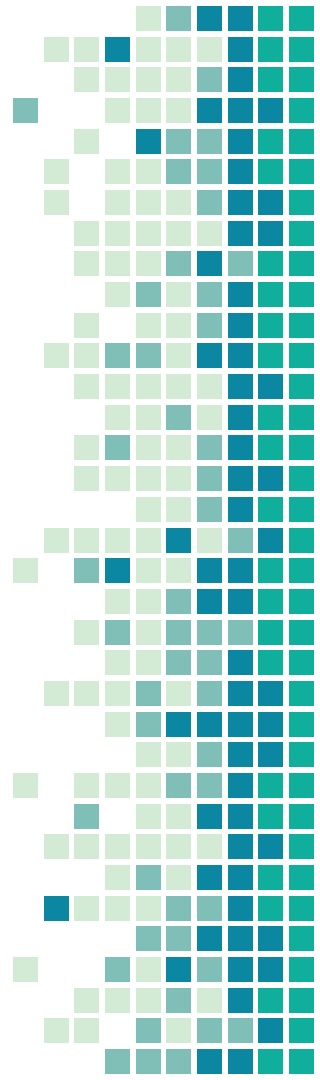


METHODOLOGY



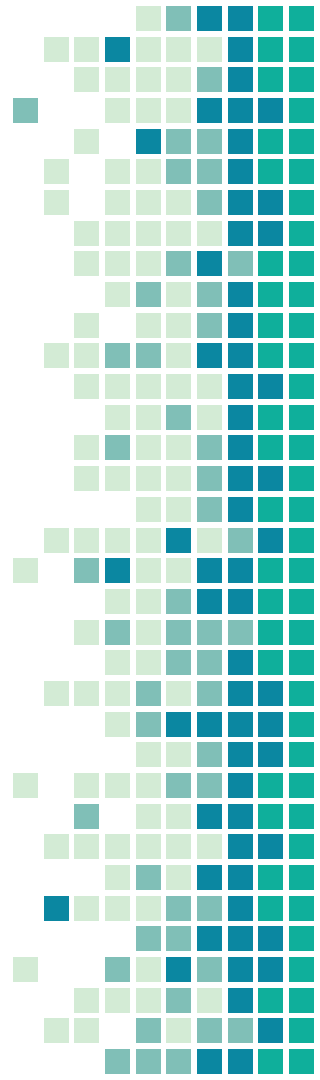
STRUCTURE OF REVIEW

- Extracted research question tickets from LibAnswers that represented general writing program assignments
- Created rubric for review of recommended sources
 - Normalized - or tried to
 - Assigned pass/no pass
- Reviewed for consistency in results
 - Using the same syntax queried the tool 5 times



CONSISTENCY IN RESULTS (LACK OF)

- Challenges for normalization of the rubric
- “Top 5” label can be confusing when it’s not consistent
- Summaries can shift based on recommendations



CONSISTENCY (LACK OF) EXAMPLE

 I am looking for help to find a scholarly source about the influence of evangelical movements and the mobilization of conservative voters in shaping anti-abortion legislation.

Sources

1 ARTICLE

Before Reagan: The Development of Abortion's Partisan Divide

O'Brian, Neil A. 2020

2 DISSERTATION

The fertility consequences of political-religious mobilization in the US: Stalling the second demographic transition

Benson, Celeste 2013

3 VIDEO

The other side of the fence

Estomin, Lynn 1993

4 BOOK CHAPTER

Sex, Sin, and Social Policy: Religion and the Politics of Abstinence-Only Programs

Rose, Susan D. 2011

5 BOOK CHAPTER

Reproductive Rights

Jesudason, Sujatha A. 2020



View more results from your library search

 I am looking for help to find a scholarly source about the influence of evangelical movements and the mobilization of conservative voters in shaping anti-abortion legislation.

Sources

1 BOOK

Godly Seed

Allan C. Carlson 2017

2 BOOK

Reproductive Rights in the Age of Human Rights

Von Hagel, Alisa et al. 2016

3 BOOK

Pro-Choice Movement

Staggenborg, Suzanne 1991

4 ARTICLE

The religious right and the reshaping of sexual policy: An examination of reproductive rights and sexuality education

Joffe, Carole et al. 2007

5 BOOK

Abortion Politics in the Federal Courts

Yarnold, Barbara M 1995



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UCLS RESEARCH ASSISTANT RESOURCE RECOMMENDATION RUBRIC (UCLS-RAR³)

	Excellent (3)	Satisfactory (2)	Needs Improvement (1)	Unsatisfactory (0)
Relevance of Top 5 Sources	All Sources recommended by UCLS-RA based on the search syntax address the topic.	Three or four Sources recommended by UCLS-RA based on the search syntax address the topic.	Two Sources recommended by UCLS-RA based on the search syntax address the topic.	One or zero Sources recommended by UCLS-RA based on the search syntax address the topic.
Type of Information	The content in the evaluator identified sources combined retrieved by the UCLS-RA would address all three components of DAB (data, argument, background).	The content in the evaluator identified sources combined retrieved by the UCLS-RA would address at least two components of DAB (data, argument, background).	The content in the evaluator identified sources combined retrieved by the UCLS-RA would address at least one of the components of DAB (data, argument, background).	The content in the evaluator identified sources combined retrieved by the UCLS-RA addresses none of the components of DAB (data, argument, background).
Ease of Access to the Source	All of the relevant sources retrieved by UCLS-RA include a direct link to the full-text of the source (i.e. link visible on the UCLS-RA results screen).	At least 50% of the relevant sources retrieved by UCLS-RA include a direct link or access through UCLS to the full-text of the source AND the user <u>can</u> request the other relevant source(s). i.e. links from the UCLS record or ILL]	Fewer than 49% of the relevant sources retrieved by UCLS-RA include a direct link or access through UCLS to the full-text of the source AND the user <u>cannot</u> request the other relevant source(s).	No direct access link is provided by UCLS-RA to relevant sources OR all relevant articles need to be requested.

FINDINGS



RELEVANCE OF TOP 5 SOURCES

	Excellent (3)	Satisfactory (2)	Needs Improvement (1)	Unsatisfactory (0)
Relevance of Top 5 Sources	All Sources recommended by UCLS-RA based on the search syntax address the topic.	Three or four Sources recommended by UCLS-RA based on the search syntax address the topic.	Two Sources recommended by UCLS-RA based on the search syntax address the topic.	One or zero Sources recommended by UCLS-RA based on the search syntax address the topic.

Rubric scores for our study had a **Range: 0-3** and a **Mean: 1.65**

To what extent do Latin American folklore monsters like La Llorona and Patasola create biased perceptions of women that emphasize and lead to violence against women of these ethnicities?

Searching for relevant resources

Generating overview for 5 most relevant sources

Sources

1 ARTICLE

Silent Girls in Fairy Tales: Against the Grain of Violence

Ronderos, Clara Eugenia et al. 2020

2 ARTICLE

Violent and dangerous macho men. The figure of the male batterer in Almodóvar's cinema

Zurián, Francisco A et al. 2016

3 ARTICLE

Gender-based violence: prevalence, sexist imaginaries, and myths among university students 1

Hernández, Paola Contreras et al. 2021

4 ARCHIVAL MATERIAL/ MANUSCRIPT

Page 2



View more results from your library search

Example Criterion Score = 1

TYPE OF INFORMATION

	Excellent (3)	Satisfactory (2)	Needs Improvement (1)	Unsatisfactory (0)
Type of Information	The content in the evaluator identified sources combined retrieved by the UCLS-RA would address all three components of DAB (data, argument, background).	The content in the evaluator identified sources combined retrieved by the UCLS-RA would address at least two components of DAB (data, argument, background).	The content in the evaluator identified sources combined retrieved by the UCLS-RA would address at least one of the components of DAB (data, argument, background).	The content in the evaluator identified sources combined retrieved by the UCLS-RA addresses none of the components of DAB (data, argument, background).

Rubric scores for our study had a **Range: 1-3** and a **Mean: 2.7**

 I'm trying to search for articles about health, emissions, air quality, and solutions specifically in Richmond, CA.

Searching for relevant resources

Generating overview for 5 most relevant sources

Sources

1 ARTICLE

"Freedom to Breathe": Youth Participatory Action Research (YPAR) to Investigate Air Pollution Inequities in Richmond, CA
Nolan, James E. S. et al. 2021

2 ARTICLE

Community-Engaged Air Monitoring to Build Resilience Near the US-Mexico Border
Wong, Michelle et al. 2020

3 ARTICLE

Performance of a Low-Cost Sensor Community Air Monitoring Network in Imperial County, CA
Carvlin, Graeme et al. 2020

4 ARTICLE

Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status
Jason D. Sacks et al. 2018

5 ARTICLE

Smoke Sense Initiative Leverages Citizen Science to Address the Growing Wildfire-Related Public Health Problem
B. Stearns et al. 2019



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Example Criterion Score = 2

EASE OF ACCESS TO SOURCE

	Excellent (3)	Satisfactory (2)	Needs Improvement (1)	Unsatisfactory (0)
Ease of Access to the Source	All of the relevant sources retrieved by UCLS-RA include a direct link to the full-text of the source (i.e. link visible on the UCLS-RA results screen).	At least 50% of the relevant sources retrieved by UCLS-RA include a direct link or access through UCLS to the full-text of the source AND the user <u>can</u> request the other relevant source(s). i.e. links from the UCLS record or ILL.	Fewer than 49% of the relevant sources retrieved by UCLS-RA include a direct link or access through UCLS to the full-text of the source AND the user <u>cannot</u> request the other relevant source(s).	No direct access link is provided by UCLS-RA to relevant sources OR all relevant articles need to be requested .

Rubric scores for our study had a **Range: 1-3** and a **Mean: 2.15**

I need to have 2 scholarly sources about fracking and its effects on lower income communities in Los Angeles.

Searching for relevant resources
Generating overview for 5 most relevant sources

Sources

1 ARTICLE

Social Equity and "Fracking": Local Awareness and Responses

Swim, Stephanie et al. 2020

2 ARTICLE

Fracking in Pueblo and Diné Communities

Meyer, Melodie 2021

3 ARTICLE

Fossil Fuel Racism: The Ongoing Burden of Oil and Gas Development in the Shadows of...

Buonocore, Jonathan J. et al. 2023

4 DISSERTATION

Characterizing the Health and Equity Impacts of Oil and Gas Development in California

Tran, Kathy 2020

5 ARTICLE

Review: The Nature of Hope: Grassroots Organizing, Environmental Justice, and Politic...

Anderson, Byron P. 2020

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Example Criterion Score = 2

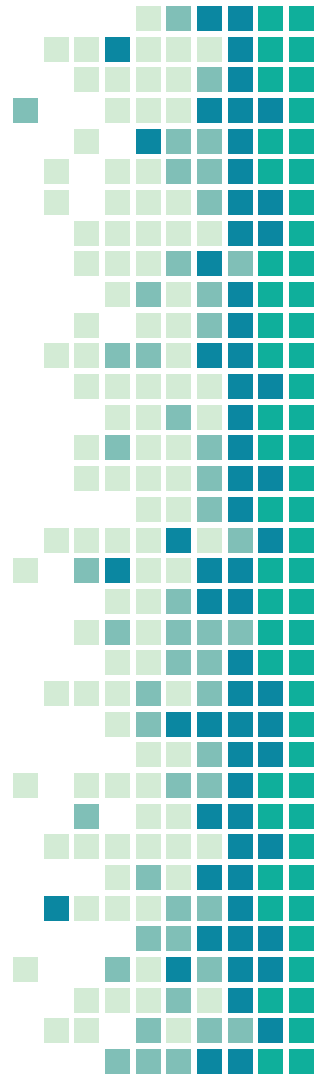
FINAL THOUGHTS



CONCLUSIONS/RECOMMENDATIONS

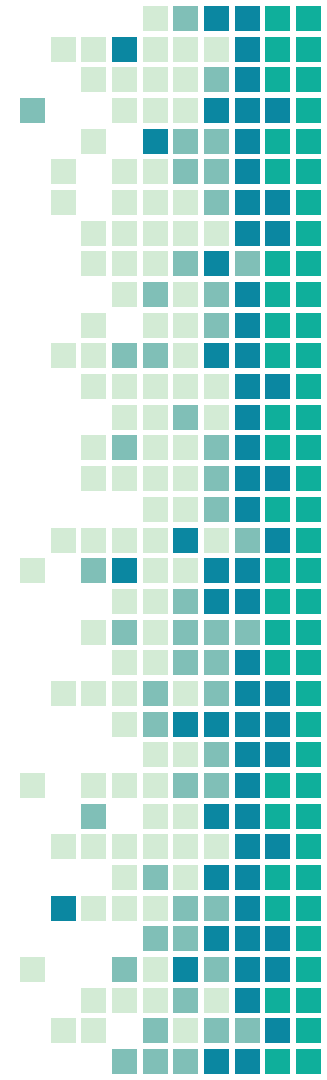
*In its current state

- We would not recommend turning on this tool for this purpose
 - 55% Pass / 45% No pass
 - Results lack consistency and/or relevancy
 - Summary tool rather than search refinement tool
 - Non-iterative AI tool
 - Rubric indicates what we'd like improved before turning on the tool



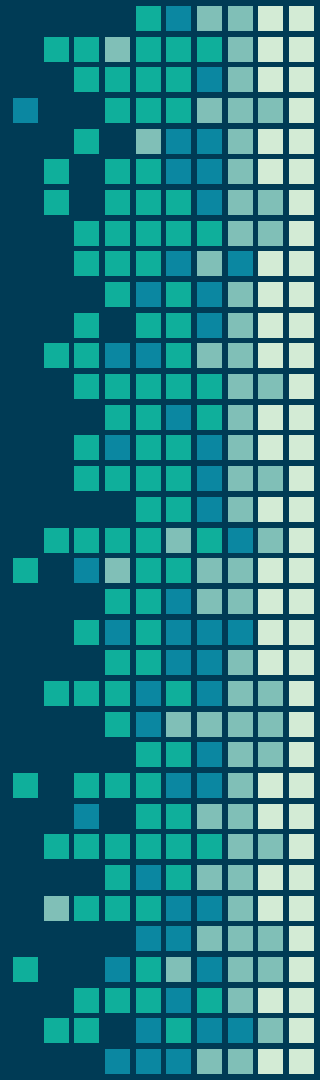
INSTRUCTION/CONSULTATION USE

- Instruction with AI tools
 - Less about mechanics of searching
 - More about critical thinking to assess relevance
- Teaching prompt engineering not useful for this tool
 - Natural language → Boolean search
 - No refinement option
- Summary tool *could* be useful if the results are relevant
 - Help students understand the specificity of scholarly sources



THANKS!

Any questions?



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