

AI for Academic Writing: From Responsible Use to Practical Application



ELSEVIER



Advancing human progress together

Speakers

- AI for academic writing: principles, strategies, and safeguards
- Introducing LeapSpace, the research-grade AI workspace
- LeapSpace Writing Coach in action
- Q&A



Aleksandra Reda

Principle Product Manager
LeapSpace, Elsevier



Avi Staiman

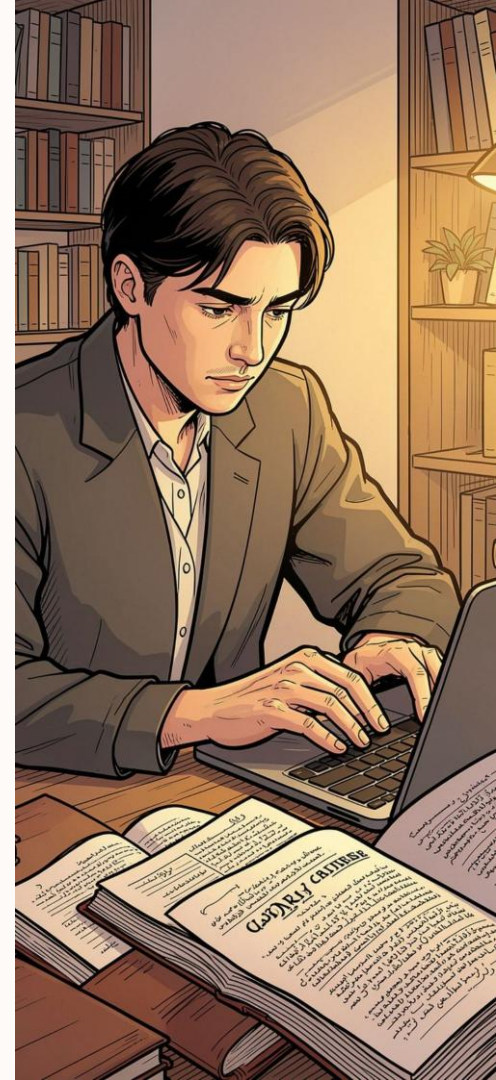
CEO and founder
Academic Language Experts

Poll!

AI for Academic Writing

Clear expression. Deep thinking. Human accountability.

Principles, strategies, and safeguards for responsible scholarly writing.



About me

Avi Staiman

CEO, Academic Language Experts

AI and expert grant & article consultancy

Chef, Scholarly Kitchen

Core member, CANGARU

[AI Boot Camp for Researchers- 30,000+ researchers](#)



Academic
Language
Experts

Translation & Editing for Academia



Improve Your Writing While Preserving Your Voice

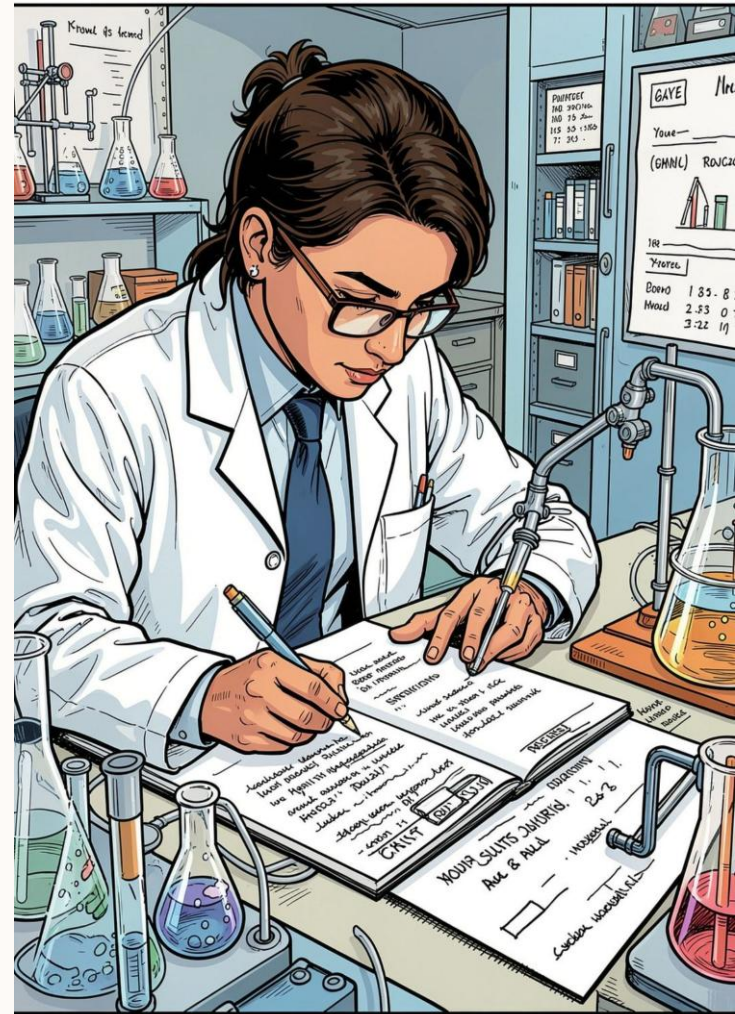
Scholarly quality depends on original ideas, sound evidence, and careful interpretation. Writing is how you test your thinking.

AI as language support

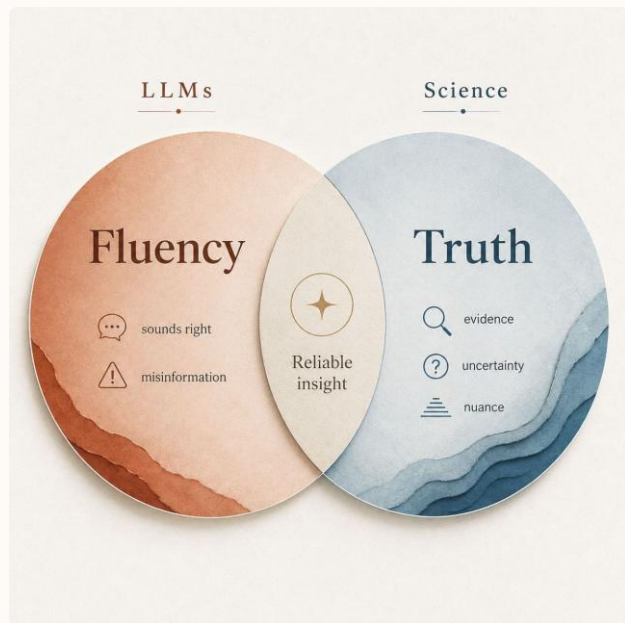
Helps multilingual researchers express complex ideas without being disadvantaged by language.

The researcher's voice

The goal is to strengthen but not replace the researcher's intellectual work.



Fluency is NOT Truth



Generative AI predicts **contextually plausible language** from patterns in existing data. Fluency and confidence are features of the writing, not evidence that a correct.

Define a closed source set

Only use tools that are plugged into trusted academic databases

Open and read the original

Not just an extracted passage, summary, or generated citation.

Verify every detail

Quotations, numbers, author names, publication details, and context.

AI Use Cases Throughout the Writing Life Cycle

Each AI mode carries distinct risks. Match the task to the tool and know what can go wrong.



Generate

Propose wording structures, or ideas. **Risk:** Invention.



Transform

Edit, translate, summarize, or reframe. **Risk:** Distortion.



Retrieve

Locate relevant information or passages. **Risk:** Omission.



Evaluate

Critique against rubric or audience need. **Risk:** Biased judgment.

Evaluate the Risk of Your Actions

1

High Risk — Delegating Scholarly Judgment

Choosing conclusions, interpreting findings, or selecting evidence on the researcher's behalf.

2

Moderate Risk — Co-Developing Text

Outlining, restructuring, drafting passages, and preparing reviewer responses.

3

Lower Risk — Assisting Expression

Grammar, clarity, formatting, terminology, and limited translation.
translation.

Prompting Playbook

1. Role
2. Goal
3. Target Audience
4. Personalization
5. Context, context, context
6. Constraints
7. Level of creativity/critique
8. Clarity/specifity/direct

Don't forget: Iterate, iterate, iterate!



Treat AI like a fast, enthusiastic, and sometimes erratic erratic research assistant.

Good AI Writing Is a Loop, Not a One-Shot Prompt

01

Develop your own ideas and scaffold first.

02

GÒQÑ POÑ EH ÖÖÑ NÖMÖÖ
NÖPÖÑÑÑ P MÖÖB

03

Compare output with your intended meaning.

04

Challenge assumptions; request alternatives.

05

Verify every factual or evidential element.

06

T Ĩ N R Ç P Ñ O Ō Ř Þ Ø Ö R Ő C E N O Č M Ž
Q Ů Ò Í Ñ B

Use AI to Deepen Thinking, Not Merely Generate Text

The strongest use of AI may be **constructive friction** rather than content production.



Reverse Outline

Map each claim to its evidence and underlying reasoning.



Surface Assumptions

Identify unstated assumptions and logical leaps.



Generate Counterarguments

Produce credible alternatives and ask what evidence would falsify the argument.



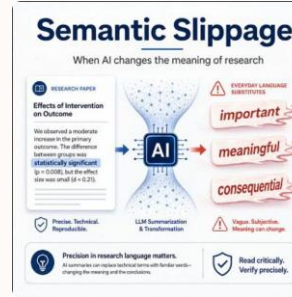
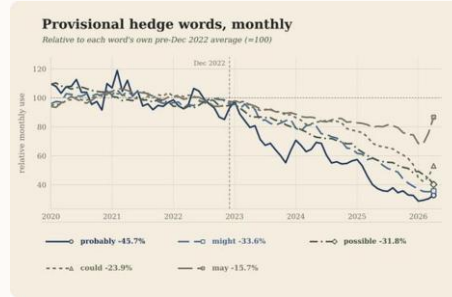
Simulate a Skeptical Reviewer

Surface concerns from another discipline or critical perspective.



Avoid Semantic Slippage

The final manuscript should sound like a clearer version of its authors, not an AI-assisted paper.



Version	Text
Original	“ Our findings suggest that the intervention may improve adherence, although the small sample limits generalizability.”
Problematic polished revision	“ Our findings demonstrate that the intervention improves adherence.”
Careful revision	“ Our findings suggest a possible improvement in adherence, but the small sample limits generalizability



Responsibility Cannot be Delegated

- AI cannot be listed as an author. Humans remain responsible for every claim, citation, quotation, image, and interpretation.
- Authorship requires accountability and the ability to answer questions about the integrity of the work.
- Authors must ensure that their use of AI has not introduced fabrication, plagiarism, misrepresentation, or inappropriate attribution.

These principles are reflected in current [Elsevier](#), [COPE](#), and [ICMJE](#) guidance.

Privacy is a Research-Integrity Issue

Before uploading material, ask:

- Is it unpublished, confidential, personally identifiable, commercially sensitive, or owned by another party?
- Do I have permission to share it with an external system?
- How will the input be stored, retained, reused, or used for model training?
- Can the task be completed with sensitive details removed?
- Has your institution explicitly approved this environment for the relevant material?





Disclosure Checklist

1. Check the policy of the target journal, publisher, institution, and funder before submission.
2. Basic conventional spelling, grammar, and punctuation checks may be exempt, while generative rewriting or content development may require disclosure.
3. Manuscript-preparation assistance should be reported in the location required by the publisher.
4. AI that affects study design, coding, analysis, interpretation, or figures should be documented reproducibly in the Methods section.
5. For material uses, record the system, version or date, purpose, source material, extent of use, and human validation.

Keys to Responsible AI Use

1. Source-grounded critique
2. Claim checking
3. Researcher-controlled refinement

discover *deeper* insights

Based on peer-reviewed abstracts and full text

to learn more about?

Explore topics

 Discover experts

 Find fu

The Responsible Researcher's Final Check

Before submitting, can I honestly say:

- I can explain and defend every claim.
- I verified every citation against the original source.
- The conclusions reflect my own scholarly judgment.
- Any methodological use is sufficiently reproducible.
- My use complies with the publisher's policy and has been disclosed appropriately.

Invite AI into the writing process, but never hand it the microphone.



AI Boot Camp for Researchers

Practical training to help you use AI effectively and responsibly throughout the research process.

- Apply AI to literature reviews, academic writing, grant proposals, and more.
- Develop effective prompting strategies and learn to evaluate outputs critically.
- Navigate ethics, privacy, and disclosure while retaining ownership of your work.

Join 30,000+ researchers and research professionals trained.

Explore the Boot Camp:


by Academic Language Experts

Practical AI Training for Research

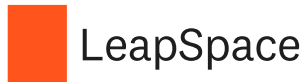
Researchers, Research Managers, NCPs

Live On-site or Zoom
30,000+ Researchers Trained Worldwide

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AI Boot Camp · by Academic Language Experts

Practical AI training for researchers, research managers, and NCPs. Live on-site or Zoom.
30,000+ researchers trained worldwide.



Introducing LeapSpace, the research-grade AI workspace



Advancing human progress together

Researchers *don't trust* AI tools. But they *use them* anyway.

- The race against time is pushing researchers to use readily-available AI tools for efficiency, but at what cost?

...the diversity of tools using AI is so huge that you have no idea of which is a valuable one.”¹

- Senior academic / researcher, Switzerland

86%

Believe AI tools could cause critical **errors or mishaps**²

22%

Believe AI tools are **trustworthy**¹.

1 in 4

Fear AI tools could **devalue their work**¹.
And yet...

58%

Use them specifically for work¹.

What makes an AI tool *fit for research* in the eyes of researchers?¹

Transparency

70%

Automatically cites references

Safety

64%

Explicitly optimized for factual accuracy and safety

Security

63%

Confidentiality of input data is guaranteed

Responsibility

62%

Clear accountability for the information the AI provides

Recency

62%

Includes the most up to date scholarly literature

Validation

58%

Outputs regularly reviewed by experts

Framework for selecting an AI tool *fit for research*



The research-grade AI workspace
combining comprehensive trusted,
peer-reviewed content with Responsible AI
in a single secure environment

What sets LeapSpace apart?

1



High quality content and data:

Unmatched **publisher-neutral** depth and breadth across abstracts, full-text and data, selected by independent board and updated daily

2



Trust and transparency:

Trust Cards show sources, surface contradictions and help you calibrate the strength of the evidence

3



Human-in-the-loop development:

Every update goes through rigorous testing with subject-matter experts and follows Responsible AI Principles

4



Best workflow coverage:

Discovery, interdisciplinary research design, funding and collaboration opportunities – LeapSpace is ready to assist you

5



Enhanced critical thinking

Encourages verification while reducing bias, so you can apply your expert judgement and produce original research

6



Enterprise-grade privacy & security:

Everything you do in LeapSpace is private, secure and encrypted, and your data is not used to train any LLMs

The *publisher-neutral AI tool* built on the strongest foundations of trusted knowledge, updated daily



High quality
content and data



Trust &
transparency



Purpose-built



High privacy &
security standards



Comprehensive breadth:
abstracts and metadata

Abstracts

- **100+ million** records
- **7,000+** publishers
- **29,000+** active journals
- **25+ million** open access items

Metadata & Analytics

- **21.9+ million** author profiles
- **94,000** organization profiles

Expanding depth:
peer reviewed full-text

Elsevier full-text:

- **12 million** articles, book series, handbooks and major reference works
- **~1.1 million** book chapters
- **441,000+** books

Non-Elsevier full-text:

- **2.1 million** open access journal articles (CC-BY)* from 50+ publishers and societies

*CC-BY: Open Access license that allows commercial reuse

Research grade AI - Humans in the loop



LeapSpace benefits from the input of thousands of publishing, AI and domain experts.

LeapSpace Demo

Questions?

Useful Resources

- <https://www.elsevier.com/products/leapspace>
- <https://www.sciencedirect.com/leapspace>
- <https://www.elsevier.support/leapspace/answer/leapspace-reference-guide>
- <https://www.elsevier.support/leapspace>
- <https://ai-bootcamp-research.lovable.app/researchers>
- <https://calendly.com/avistaiman>