

nature > news > article

NEWS | 18 January 2023

### ChatGPT listed as author on research papers: many scientists disapprove

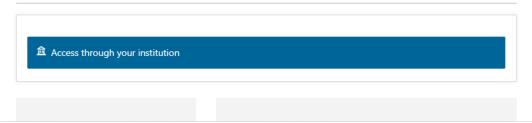
At least four articles credit the AI tool as a co-author, as publishers scramble to regulate its use.

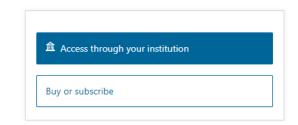
#### Chris Stokel-Walker

y f ■

The artificial-intelligence (AI) chatbot ChatGPT that has taken the world by storm has made its formal debut in the scientific literature – racking up at least four authorship credits on published papers and preprints.

#### **Access options**





### **Related Articles**

<u>AI bot ChatGPT writes smart essays -</u> should professors worry?



<u>Are ChatGPT and AlphaCode going to replace</u> programmers?

Subjects

Ethics Publishing

### Sign up to Nature Briefing 🗦

An essential round-up of science news, opinion and analysis, delivered to your inbox every weekday.





News -	Opinion -	Arts & Culture -	Sports •	Features	Guest Columns	Multimedia 🕇	0	y	0	0	5	٣	C	Q	
			archa - 05.840	1849 UK 1840	1000 W. 1000 (	and stars and stars									

Volunteer Merch Advertising Donate Finances Job Postings Archives About Contact Us

# Home / Opinion / Using ChatGPT isn't just plagiarism, it's something much worse

# Using ChatGPT isn't just plagiarism, it's something much worse

Looking deeper at the A.I.-powered tool reveals disturbing ethical issues.



#### Subscribe To Our Newsletter

Sign up for our bi-weekly newsletter to receive the best of thegatewayonline.ca, delivered straight to your inbox.

Your email address

Subscribe

#### Donate

Right now, The Gateway is free to read — but without your support, it won't always be this way. To help keep our reporting free and accessible for all, donate today to help fund student journalism on campus. A little bit truly goes a long way.

#### Support Student Journalism

#### Trending this week

The U of A's name change policy needs to keep evolving

## ls it perfect?

Why do you use 'comprise of'? Comprise should be used without 'of'

Solution You are correct. The correct usage is "comprise" without "of." "Comprise" means "to consist  $\square \square$  of" or "to be made up of," so it doesn't require the preposition "of" to convey its meaning.

It's important to use language accurately to convey your meaning clearly, so thank you for bringing this to my attention. As an Al language model, I strive to use proper grammar and syntax, and I will make sure to use "comprise" correctly in the future.

Yes please. Put that in your language database :-)

Absolutely! I have updated my language database to ensure that "comprise" is used without  $\square$   $\square$  "of" in the correct context. Thank you for helping me improve my performance!

👸 No worries :-)

à

Thank you for your understanding! Is there anything else I can help you with?

ፊ 🖓

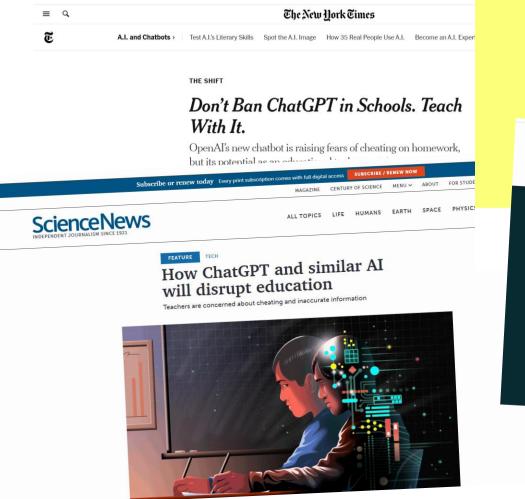
😘 Regenerate response

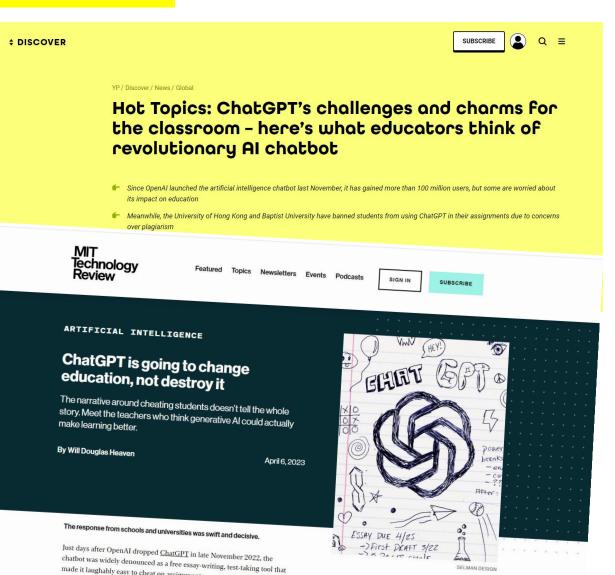
ChatGPT Mar 14 Version, Free Research Preview. Our goal is to make AI systems more natural and safe to interact with. Your feedback will help us improve.

## **Disruption we can't avoid**

First introduction of ChatGPT in June 2020

Some view it as a tool to enhance learning and reduce teacher workload, others see it as a threat to integrity which opens the door to cheating and plagiarism.





made it laughably easy to cheat on assignments.

SELMAN DESI

## **AI in Academic Writing**

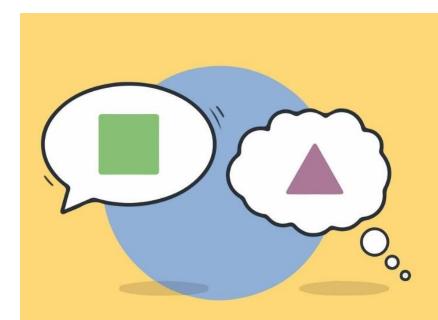
- 4 Misconceptions about AI in academic writing
- How AI can/should be used in academic writing

Understanding academic writing (it's important to understand what academic writing is, especially the stages/processes for producing writing)

• Al for increasing productivity (technologies for academic writing)

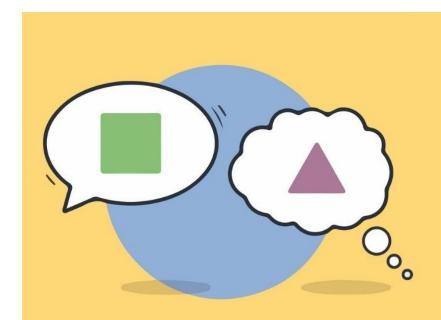
## AI will replace human writers

While AI can generate text and assist with certain writing tasks, it is **unlikely to replace the creativity, critical thinking, and unique perspectives that human writers bring**. AI can be a valuable tool to support and enhance the writing process, but **it cannot fully replicate the depth and nuances of human expression**.



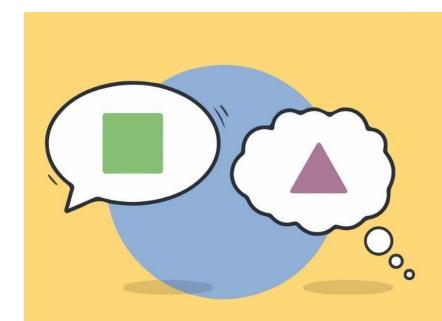
## Al-generated content is indistinguishable from human-written content

Despite the significant advancements in natural language generation, there are still limitations. Algenerated content may lack coherence, originality, and the ability to capture human emotions and experiences in the same way as human writers. Skilled readers can often detect subtle differences in tone, style, and overall quality.



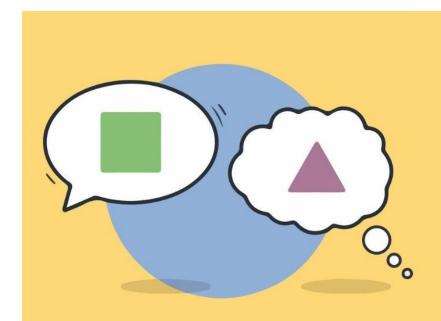
## AI eliminates the need for human editing and proofreading

While AI-powered tools can assist with grammar and spelling checks, **they may not fully grasp the context**, **intended meaning, or the nuances of language**. Human editors and proofreaders are crucial for ensuring clarity, coherence, and overall quality in writing. They can provide critical feedback, improve readability, and make subjective judgments that AI might struggle with.



### Al can generate content on any topic

While AI models have been trained on vast amounts of data and can generate text on a wide range of topics, they are not universally knowledgeable. AI relies on the data it has been trained on, and it may struggle with niche or specialized subjects. Additionally, AI-generated content may lack the depth of research, expertise, and domain-specific knowledge that human writers can provide.



## **AI Limitations**

- Even state-of-the-art AI still **lacks many capabilities** naturally be included in the notion of (human) intelligence
- For example: generalizability, adaptability, robustness, explainability, causal analysis, abstraction, common sense reasoning, ethical reasoning
- ALSO a complex and seamless integration of learning and reasoning supported by both implicit and explicit knowledge

See > Ganapini, M.B. *et al.* (2023). Thinking Fast and Slow in Al: The Role of Metacognition. In: , *et al.* Machine Learning, Optimization, and Data Science. LOD 2022. Lecture Notes in Computer Science, vol 13811. Springer, Cham. https://doi.org/10.1007/978-3-031-25891-6\_38



## What is the primary objective of learning?



## **Reliance on Al?**

Al should be seen as **a supplementary tool** rather than a replacement for independent learning, research, and critical thinking.

It can provide **insights, suggestions, and assistance**, but students should always develop their **own understanding**.





## Writing is the product of thinking and reflecting Use Al to assist

Not to replace

# **Academic Writing**

## Use Al to assist

### 2. Reflecting

- Organizing and Synthesizing
- Developing arguments

### 1. Reading

- Critical Reading
- Rhetorical Reading



# **Activities in Academic Writing**

Use Al to assist

- Finding a topic (and brainstorming)
- Searching (selecting/sorting) specific search
- Reading
- Making notes and summarizing
- Paraphrasing
- Organizing information
- Outlining
- Writing (inc. paraphrasing)
- Presenting information and data



www.futureailab.com
vondy.com

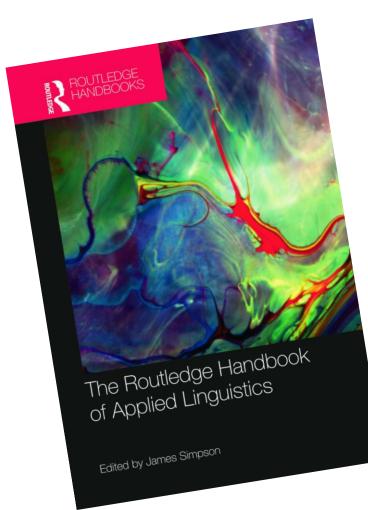


# Finding a Topic[s]

- Limit your areas (of expertise) breadth of AI (ChatGPT)
- Focus on three areas
- See <a href="https://www.tirfonline.org/resources/references/">https://www.tirfonline.org/resources/references/</a>
- Explore and Expand > Use Elicit, ConnectedPappers –
- Litmaps > ChatGPT

## **Concepts**

- Handbook and Wikipedia (check the refs.)
- Field/specific Glossaries
- Try to find yours!
- Use AI (pdfchat)



## The Handbook of **Applied Linguistics**

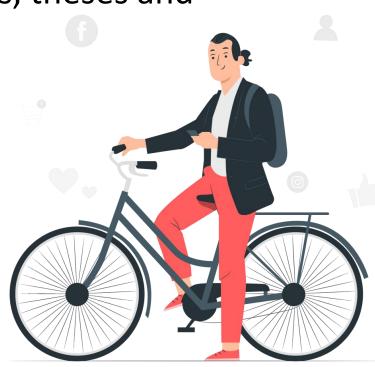


Edited by Alan Davies and Catherine Elder

> Blackwell Publishing

## Let's say that...

- You have chosen three areas (expertise)
- You have a topic (or topics?)
- You need to find relevant references (articles, books, theses and dissertations). How would you do that?



# **Finding References**

- Google Scholar (use advanced search)
- Microsoft Academic X
- Scimagojr
- Google (use specific codes/cheats)
- Publish or Perish Software
- Elicit, connectedpappers, ChatGPT





- <u>https://jenni.ai/</u> > be careful!
- Vondy

## Resources

### FINDING REFERENCES

- Al
- Handbook (concepts) Handbook of Applied Linguistics
- Wikipedia as a springboard ٠
- Microsoft Academic •
- Scimagojr
- Using Google (site:journal.com keywords)
- Google name of journal
- Using google ("keyword")
- Google Scholar
- https://doaj.org/
- https://www.omicsonline.org/ope n-access-journals-list.php
- https://oatd.org/ Open theses and Dissertations
- https://www.researcher-app.com/

 JSTOR Text Analyzer – finding journals and articles

### READING

- AI
- Dictionary
- Readlang
- Translated Reading with Google Doc
- Writefull
- Scholarcy

### WRITING

- Al
- Corpus (Academic English)
- http://rcpce.engl.polyu.edu.hk/rc pce/corporaresources.html
- Quillbot paraphrase your own

### writing

- https://paperity.org/ aggregator
- Glossary of Research (resources)
- Glossaries of specific terms
- Checking grammar proofreading
- Pdf to doc using Google Doc
- Google Studio (data presentation)
- Social Science Statistics Calculator https://www.socscistatistics.com/t ests/
- https://danielsoper.com/statcalc/
- Referencing
- Methodology
- Translation (Machine Translation) Simple Data Analysis (Google Doc)

# **Academic Writing**

## Use Al to assist

### 2. Reflecting

- Organizing and Synthesizing
- Developing arguments

### 1. Reading

- Critical Reading
- Rhetorical Reading



## bit.ly/wrap\_resources

Resource.rar	Q Search in E	Open with	•	ΞĻ		Ł	
New	My Driv R	esource.rar 11 items			◎ 🗓 : 🖽		
My Drive		Name	Last modified	File size	they've shared with you, and		
Computers		0_Academic Word List AWL.pdf	Mar 6, 2020	771 KB			
Shared with me	Name 个	1_Phrases for Scientific Articles.pdf	Oct 24, 2018	406 KB	File size		
(L) Recent	POF Ele	2_PhraseBook.pdf	Oct 24, 2018	2 MB	1.7 MB		
Starred	<b>₽</b> Re	2_Useful Phrases_2018_Prosemantic.pdf	Nov 5, 2018	495 KB	17.2 MB		5
Trash	Por se	3_Academic Phrasebank.pdf	Oct 24, 2018	776 KB	186 KB		
	(	4_Rules for Writers.pdf	Feb 15, 2019	20 MB			
Storage	TS W	5_START_Questions_Q&A.pdf	Oct 7, 2019	385 KB	53 KB		
9.07 GB of 15 GB used		6_Article_100 Research Rules of the Game.pd	If Aug 20, 2019	972 KB			
Buy storage		Elements_of_Style.pdf	Feb 1, 2021	2 MB			
		• sentence.pdf	Mar 11, 2020	186 KB			