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1st year

Introduction to Artificial Intelligence

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March 2026



AI for Scientific Writing



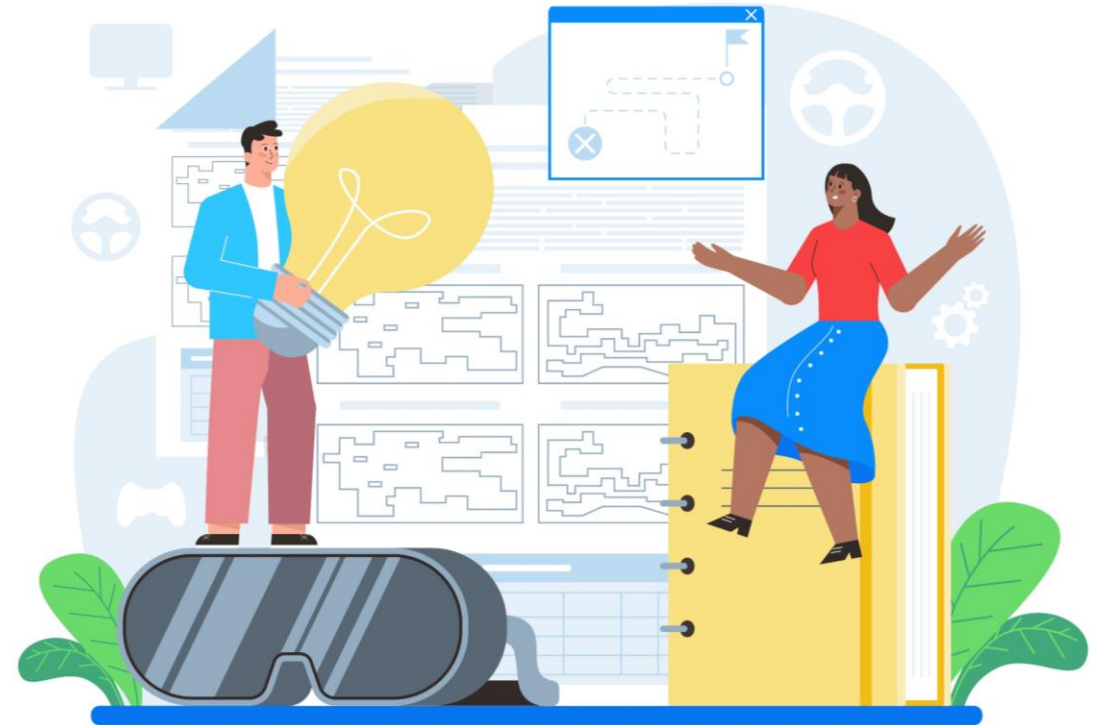
From Ideas to Structure

When writing we don't start with a perfectly organized paper.

They usually begin with:

- A general topic
- A few notes
- Some readings
- Scattered ideas

Idea



However, scientific writing requires logical architecture.

A research paper is not a collection of paragraphs; it is a structured argument that typically includes:

- An introduction defining context and objective
- A clearly formulated problem statement
- A methodology or analytical approach
- Results or findings
- A discussion interpreting those results
- A conclusion summarizing contributions

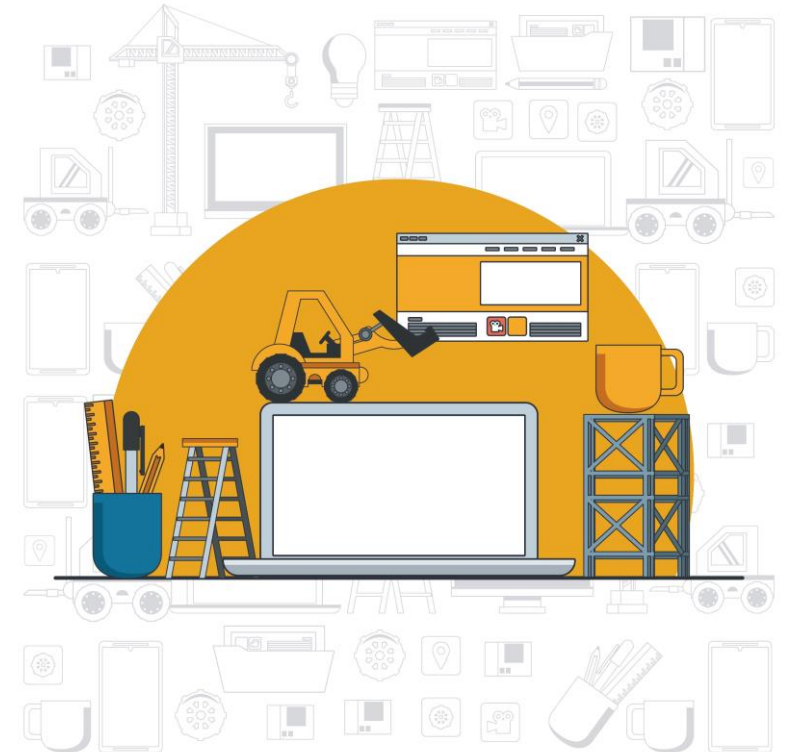


AI tools can assist at this early stage by transforming an unstructured topic into a coherent outline.

Tools that support structuring:

- ChatGPT → generates structured outlines and section breakdowns
- Notion (with AI features) → organizes projects into hierarchical plans
- Overleaf (with AI extensions) → supports structured academic formatting

AI helps organize thinking but it does not produce research.



Example: Structuring a Research Paper

prompt:

“Help me structure a report about machine learning in healthcare.”

AI may generate:

- Introduction: background and importance of AI in medicine
- Literature review of existing approaches
- Methodology overview
- Applications in diagnosis and prediction
- Ethical and regulatory considerations
- Conclusion and future perspectives

However:

**The outline is only the skeleton.
The intellectual contribution must come from the student.**

AI as a Planning Tool, Not an Author

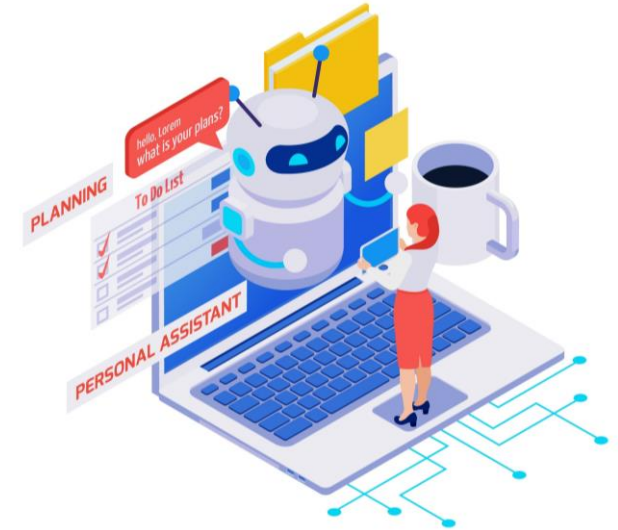
AI can assist by:

- Proposing section titles
- Suggesting logical order
- Identifying missing structural components
- Improving transitions between sections

For example, **Notion** can reorganize scattered notes into structured headings, while Overleaf helps format academic sections correctly.

But AI cannot:

- Replace critical reasoning
- Replace original analysis
- Replace engagement with scientific literature



Structure can be assisted. Understanding must remain personal.

Reformulation and Style Improvement



Reformulating Text Clearly

Many understand concepts but struggle to express them in academic language.

AI tools can help improve clarity without changing ideas.

For example:

Original sentence:

“AI is kind of useful and helps doctors do stuff better.”

Using Grammarly or QuillBot, this may become:

- “Artificial Intelligence enhances clinical decision-making by improving diagnostic accuracy.”

The idea remains similar, but the tone becomes academic.

AI supports expression. But we must ensure that the meaning remains accurate.



The AI writing partner for anyone who has work to do



Complimenting human **potentiak** is what the future of AI is about.

Rephrase Sentence

The future of AI is about complementing human potential.

Insert

Dismiss



Demo document

Goals

67 Overall score

The basics

Misspellings and grammatical errors can affect your credibility. The same goes for misused commas, and other types of punctuation. Not only will Grammarly underline these issues in red, it will also showed you how to correctly write the sentence.

Underlines that are blue indicate that Grammarly has spotted a sentence that is unnecessarily wordy. You'll find suggestions that can possibly help you effortlessly revise a wordy sentence.

Review suggestions

Write with generative AI

Check for AI text & plagiarism

Review suggestions 19

Correctness

Clarity

Engagement

Delivery

Style guide

Correctness · Fix your grammar

Accept 3 suggestions at once

Correctness · Remove the comma ⓘ

...for misused commas and other...

Accept

Dismiss

...

Always Strike the Right Tone

Can we catch up this afternoon? I'd love your input on my presentation for tomorrow's meeting. I'd especially love it if you could double-check the sales numbers with me. There's a coffee in it for you!

Tone Detector

Here's how your text may sound to readers



Confident



Joyful



Optimistic



Can we catch up this afternoon? I'd love your input on my presentation for tomorrow's meeting. I'd especially love it if you could double-check the sales numbers with me. There's a coffee in it for you!

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What it does:

- Corrects grammar
- Improves clarity
- Adjusts tone
- Suggests formal vocabulary

Useful for:

- Non-native English speakers
- Improving academic tone
- Reducing language errors

Limitation:

It improves form, not content quality.



01



AI-powered
paraphrasing

02



Different writing
modes

03



Word flip

04



Multi-language
support

05



Integration with
writing
platforms

06



Thesaurus

07



Premium
version

08



User-friendly
interface

Paraphrasing Tool - QuillBot

quillbot.com/paraphrasing-tool

Relaunch to update

 **QuillBot**

Paraphrasing Tool

Upgrade to Premium

Paraphraser

Grammar Checker

AI Detector

Plagiarism Checker

Summarizer

Translator

Citation Generator

QuillBot Flow

QuillBot Premium

QuillBot for Chrome

English (US)

French

Spanish

German

All

Modes: Standard Fluency Natural Formal Academic Simple More

Synonyms:

To rewrite text, enter or paste it here and press "Paraphrase."

Paste Text

Upload Doc

Paraphrase

History

Compare Modes

Statistics

Tone

Settings

Feedback

Hotkeys

English (US)

Portuguese (Brazilian)

French

Spanish

All ▾

Modes:

Standard

Fluency

Humanize

Formal

Academic

Simple

Creative

Expand

Shorten

Custom

Synonyms:



Modes are settings in the QuillBot Paraphraser that adjust how the AI rewrites your text. Each mode has a specific focus — from improving grammar to making your text sound more formal, simple, or creative. Using the right mode helps you customize your writing to match your goals.



The QuillBot Paraphraser **has** settings **called** modes that **change** how the AI **rewords** your text. **Every** mode has a **distinct goal**, such as **enhancing** grammar or **giving your writing a more professional, straightforward, or imaginative tone**.

You **can tailor** your writing to your **objectives** by using the **appropriate** mode.

Expand to view suggested modes



47 Words



Rephrase



3 / 3 Sentences • 49 Words



● Changed Words — Structural Changes ● Longest Unchanged Words ⓘ

Sample text

In the past, Internet users primarily consumed material online, whether it was text, video, or audio. Yet, users are increasingly turning to tools like wikis, blogs, social networking sites, and video sharing websites to produce, alter, distribute, and debate online media.



Paraphrased output by

SciSpace

Gone are the days when Internet enthusiasts were satisfied with merely browsing online content, be it in textual, visual, or auditory form. Nowadays, these users have taken to embracing a vast array of innovative resources such as wikis, blogs, social media platforms, and video-sharing sites to create, modify, circulate, and discuss online content.



Paraphrased output by

Quillbot

Internet users used to rely heavily on the Internet for their media consumption needs. Wikis, blogs, social networking sites, and video sharing websites are just a few examples of the tools that people are increasingly resorting to in order to create, modify, disseminate, and discuss online material.

Improving Academic Style

Scientific writing requires:

- Precision
- Objectivity
- Neutral and formal tone
- Clear logical progression

Tools such as:

- Grammarly → grammar and clarity correction
- Writefull → academic phrase suggestions
- ChatGPT → rewriting for clarity and coherence
can refine vocabulary and improve transitions.

However, students must verify that:

- Scientific accuracy is preserved
- Technical terminology is correct
- The text reflects their own reasoning

AI improves style. It does not generate knowledge.

Plagiarism and Originality



The Risk of Plagiarism in the AI Era

AI can generate entire paragraphs within seconds.

This creates a serious academic risk:

- Submitting AI-generated content as personal work.

Plagiarism includes:

- Copying text without citation
- Paraphrasing without referencing the source
- Using AI-generated content without acknowledgment

Even if AI writes it, the responsibility remains with the student.

Tools for Similarity and Plagiarism Checking

To maintain originality, institutions use detection tools such as:

- **Turnitin** → similarity detection in academic assignments
- **iThenticate** → used in journal publication screening

These tools compare text against databases of published material.

However, detection tools are not a substitute for ethical writing.

Originality means:

- Personal interpretation
- Independent analysis
- Proper citation
- Transparent use of AI assistance



In Progress

Hannah Ratner
Trintuin University

Match Overview

41%

1 27%

2 10%

3 2%

4 2%

5 1%

earthly Kingdom - one where the Gentiles could be reconciled to the one God. This term will take on a different role and meaning in the future.

Given the Early Church's appropriation of the term "kingdom," in this tradition, it's not surprising that it appears in Greek in the New Testament. In the Apocalypse of John 11:15, for example, the term βασιλεία returns: "ἐγένετο ἡ βασιλεία τοῦ κόσμου τοῦ κυρίου ἡμῶν καὶ τοῦ χριστοῦ αὐτοῦ, καὶ βασιλεύσει εἰς τοὺς αἰῶνας τῶν αἰώνων" - ¹ The kingdom of the world becomes the kingdom of the Lord and of the Christ and he shall rule into the ages of ages (NIV). Interesting here, the use of the noun "kingdom" discussed above. Nevertheless, the Kingdom of God manifested in this New Testament writing within the framework of Christology, the 1000 year reign of Christ on earth before the final judgement. While some Christian denominations hold this belief to this day, the early Church also began to move away from a physical understanding of the "kingdom" to a more spiritualized version of the Kingdom, whether in effect now or in the future.

Any Instructor Comments will appear here.

You can view your Similarity Index here.

Match Overview

2%

1 mlbible.com
Internet Source

2% >

38% Overall Similarity

Filters

- Match Groups
- Sources

1 Integrity Flags

Go to Flags

28 matches found with Turnitin's database

Show Help

16 Not Cited or Quoted

18%

4 Missing Quotations

4%

5 Missing Citation

9%

3 Cited and Quoted

7%

1

Not Cited or Quoted

16 matches from 12 sources

Missing Quotations

4 matches from 3 sources

Missing Citation

5 matches from 4 sources

Cited and Quoted

3 matches from 3 sources

2

Abstract—This study investigates the way of human best memory. This paper is to introduce a method of storing a variety. These were important to learn everything. Understanding way of good memory, the study progresses, too, and the knowledge increases, too.

Index Term—memory, storage, way of memory, mnemonics

INTRODUCTION

When we study, memory is very important. If you study hard, you do not quite learn. Some people lament the lack of memory of his well. If you find a good method for storing, studying will it get on much. According to Wikipedia, memory is defined as “That y¹ remember to not forget things”. The thing to remember”[1].

In psychology, memory is the process in which information is encoded, stored, and retrieved. Encoding allows information that is from the outside world to reach our senses in the forms of chemical and physical stimuli. In this first stage we must change the information so that we may put the memory into the encoding process. Storage is the second memory stage or process. This entails that we maintain information over periods of time. Finally the third process is the retrieval of information that we have stored. We must locate it and return it to our consciousness. Some retrieval attempts may be effortless due to the type of information[2].

Everyone when trying to memorize something, is it remember just repeated vague? Mnemonics There are various mnemonics in order to learn more efficiently in the world.

In this paper, I try to show thememory³ a variety of ways[3,4,5,6,7,8,9,10] what kind of storage method is good, state.

Match Overview

1	en.wikipedia.org Internet source	6%
2	www.mindr.com Internet source	4%
3	www.findsomearticles.... Internet source	1%

38% Overall Similarity

 Filters

Match Groups

Sources



1 Integrity Flags

[Go to Flags](#)

28 matches found with Turnitin's database

[Show Help](#) 

A



16 Not Cited or Quoted

18%

B



4 Missing Quotations

4%

C



5 Missing Citation

9%

D



3 Cited and Quoted

7%

Turnitin does not just give a percentage.

It categorizes similarity into:

- Serious issues (A)
- Technical mistakes (B, C)
- Acceptable use (D)

The key is not avoiding similarity at all costs.

The key is using sources responsibly.

Responsible Use in Writing

Students may responsibly use AI to:

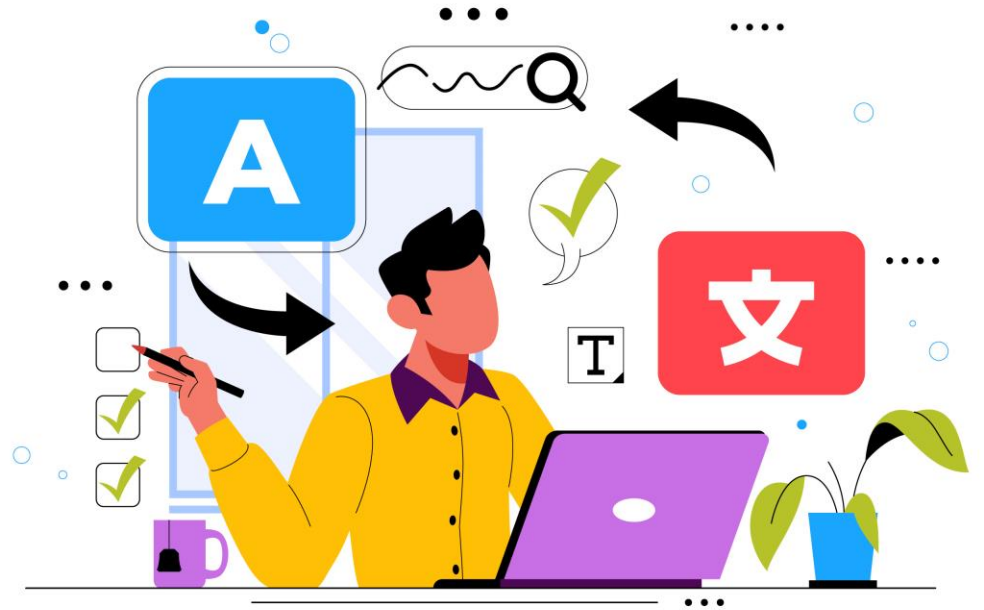
- Generate outlines
- Improve grammar
- Clarify structure
- Translate content

But they must:

- Read original scientific sources
- Develop their own arguments
- Cite properly
- Verify all claims

AI supports communication. It does not replace intellectual work.

Translation and Multilingual Writing



Writing Across Languages

- Many students write in a second language.
- AI tools help reduce language barriers.

Common tools include:

- DeepL → contextual and high-quality translation
- Google Translate → rapid multilingual conversion
- ChatGPT → context-aware rewriting and tone adjustment

For example, a paragraph written in French can be translated into structured academic English while preserving meaning.



Auto-translation Glossary

Help auto-translation
with DeepL glossaries

<

>

Glossary

A glossary is a list of words and phrases that are specific when using DeepL auto-translation. Please note that gloss the translation. [Learn more](#)

Create new entry

English

Source text

Polish

Target text

English (en)

>

German (de_DE)

Pillow Menu

Orange Hostel

English (en)

>

Spanish (es)

Pillow Menu

Orange Hostel

DeepL Write: AI-powered writing

DeepL Introducing our new AI writing

+

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🔖

🔒 https://www.deepl.com/write

🔗

🛡️

📱

📁

☰

 **DeepL Write** BETA ▼

Login ☰

Perfect your writing in seconds

Write clearly, precisely, and with ease

English (American) ▼

↕

↶

×

DeepL, maker of DeepL Translator, launched DeepL Write, a companion product, today. DeepL Write is an AI writing companion that is designed to improve written communication according to the company.

🔊

↶

DeepL, maker of DeepL Translator, today launched a companion product, DeepL Write. I AI writing companion that, according company, is designed to improve w communication.

🔊

👍

👎

Alternatives

☰

☰

×

launched ...

has today ...

announced ...

launches ...

has launched ...

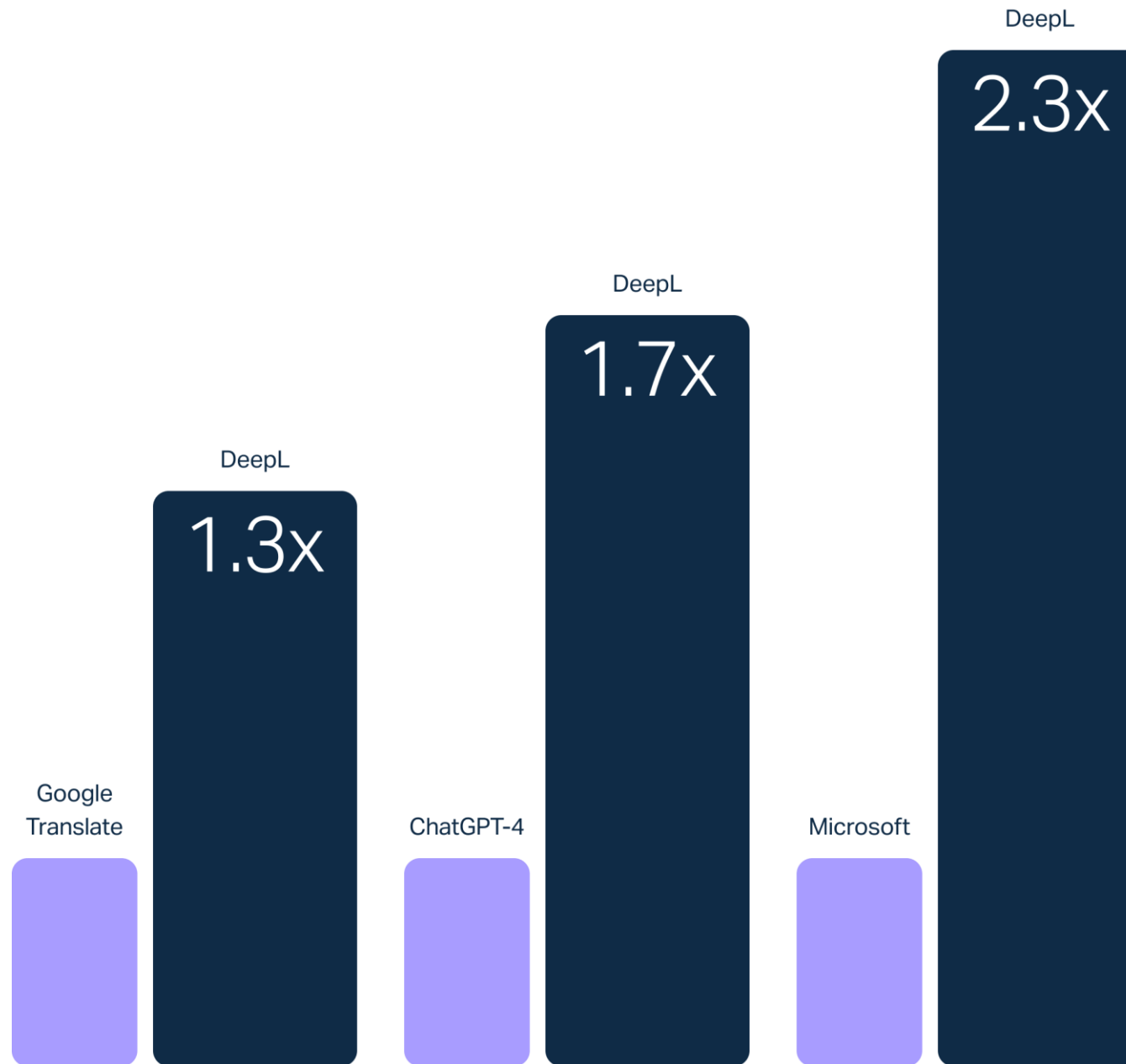
Feedback

DeepL Rises up the Ranks to Become the Most Used MT Provider in 2024

Calculated from responses to the question: Which MT providers do you use?

	Rank in 2024	Rank in 2023	% Share in 2024	% Share in 2023	Difference in Rank
DeepL	1	3	82%	57%	2
Google	2	4	46%	41%	2
Microsoft	3	5	32%	27%	2
Amazon AWS	4	1	17%	68%	-3
Systran	5	6	8%	2%	1
Language Weaver	6	9	7%	2%	3

71 translation service providers answered this question in 2024. Results for 2023 are from the 2023 ALC Industry Survey in which 44 companies answered this question.



What it does:

- High-quality multilingual translation
- Maintains context better than literal translators
- Supports academic vocabulary

Still requires:

- Terminology verification
- Subject-specific review
- Translation does not equal understanding.



Risks in Translation

However, translation tools are not perfect.

Risks include:

- Literal translation of idiomatic expressions
- Incorrect technical terminology
- Loss of scientific nuance

Students must always:

- Review translated text carefully
- Compare technical terms with textbooks
- Verify domain-specific vocabulary

Translation assists communication. Understanding must already exist.



Balanced Perspective

AI in scientific writing can:

- Improve clarity
- Reduce language barriers
- Accelerate structural planning
- Support editing and revision

But it cannot:

- Replace research
- Replace critical thinking
- Replace originality
- Scientific writing reflects intellectual effort.

AI is a refinement tool not an author.



