

Generative AI for Teaching, Learning and Assessment

Opportunities and Issues

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Agenda

Introduction to generative AI

Implications for higher education

Assessment design in the age of AI

Policies and strategies

New ways to teach, learn and assess with generative AI

Ethical issues

Beyond GPT

Questions and answers

Hands-on use of generative AI

Generative AI

A universal tutor?

Or a threat to education?



Have you used a generative AI tool such as ChatGPT,
and if so for what purposes?

GPT-4

Highly-trained text completer and style copier

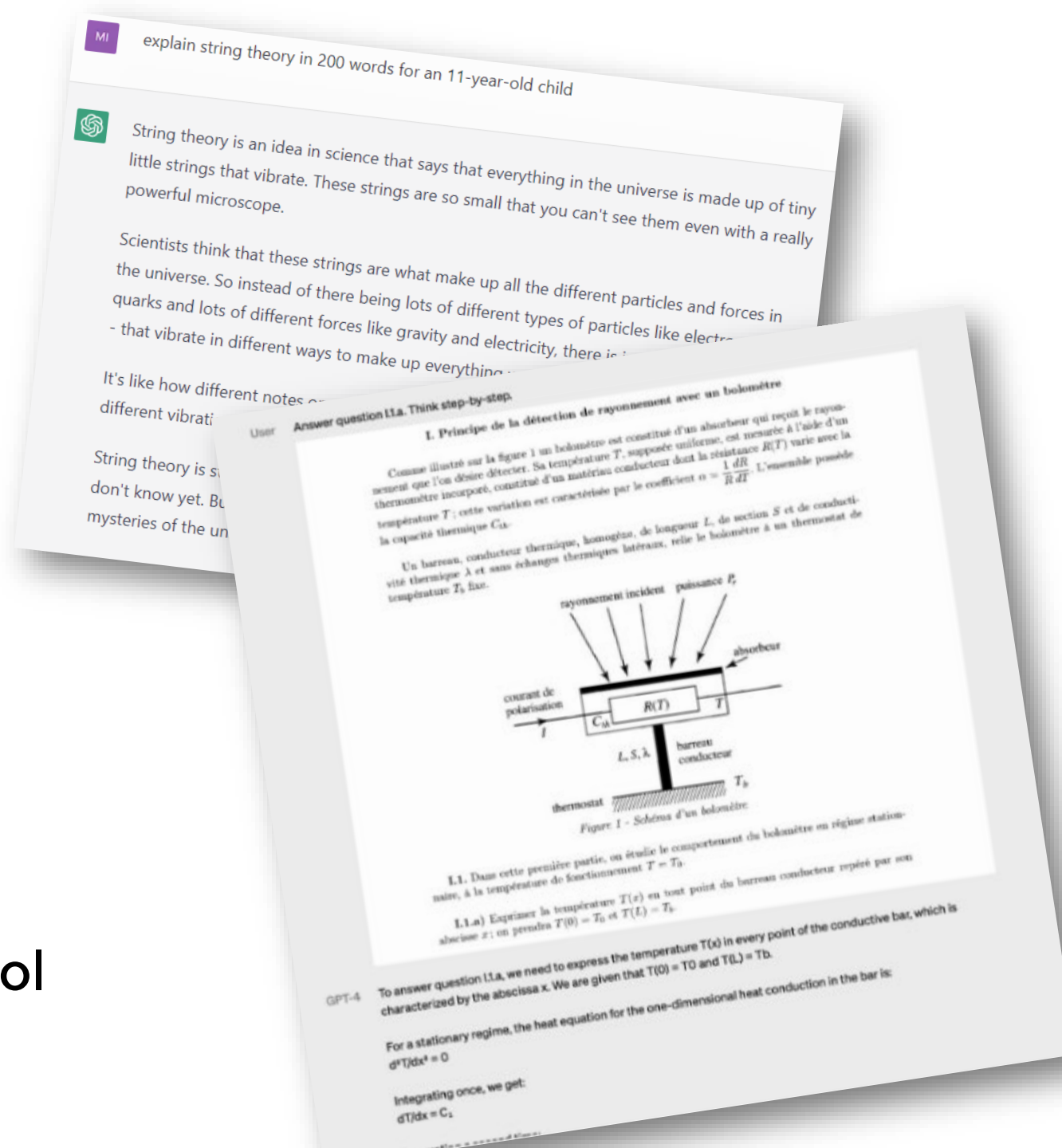
It can generate up to 25,000 words

It can write in any style in multiple languages

It can be given a direct instruction

It can interpret text and images

It is a general-purpose language tool

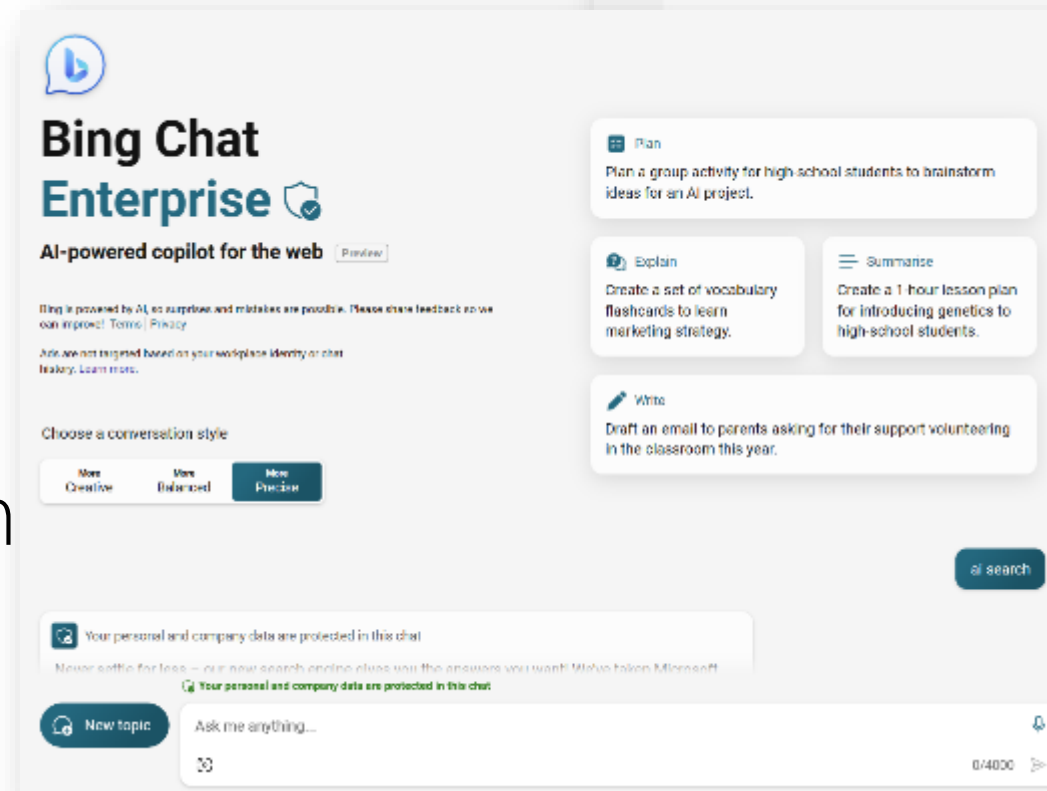
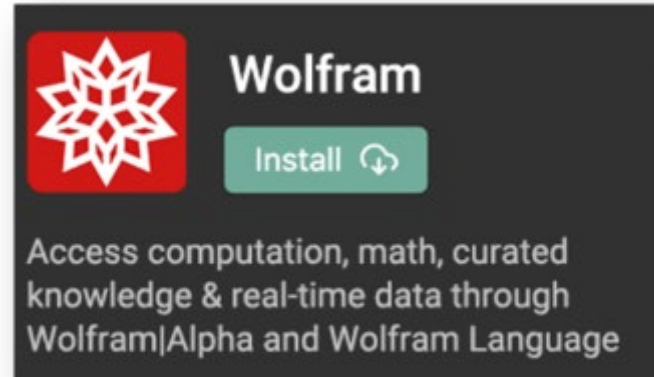


ChatGPT Plus

Plugins for maths, science, language, media, business

Free with Bing Chat web browsing

Code interpreter to run and display Python programs



Other AI generators

Language models

PaLM 2 from Google – over 100 languages, version for medicine, free with Bard chat

LLaMA 2 from Meta – open source, 20 languages, small, simple, free, efficient

Claude-2 from Anthropic – trained on ethical principles, can read 75,000 words, free to use, currently only available in US and UK

Image generators

DALL-E 3 from OpenAI – chat, accurate, free with Bing Image Creator

Midjourney – high-quality photo images

Stable Diffusion – free, open source

Plus: computer code, voice, music, video, specialist (e.g., BloombergGPT)



Adobe Firefly



Runway

Implications for higher education

Generative AI hallucinates

It doesn't "know" it shouldn't invent
research studies,

it has no explicit model of how the world
works,

and is amoral.

It is a language model, *not* a
database or reasoning system

Understand and communicate limitations

From hallucinating inaccurate information, to offensive outputs, to bias, and much more, language models may not be suitable for every use case without significant modifications. Consider whether the model is fit for your purpose, and evaluate the performance of the API on a wide range of potential inputs in order to identify cases where the API's performance might drop. Consider your customer base and the range of inputs that they will be using, and ensure their expectations are calibrated appropriately.

<https://help.openai.com/en/articles/7424277-safety-best-practices>

You are a student on a Master of Education course. Write a high quality 500 word essay on essay A Critique of Learning Styles". The essay should include academic references and evidence from research studies. It should begin "The construct of 'learning styles' is problematic because"

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The construct of 'learning styles' is problematic because it assumes that learners have distinct and consistent preferences for acquiring and processing information. This idea has gained popularity among educators and trainers, but there is little evidence to support the existence of such a fixed and reliable construct. Furthermore, promoting the use of learning styles in education may lead to harmful practices and prevent learners from developing skills and abilities that are essential for success in the 21st century.

One of the main issues with the concept of learning styles is the lack of empirical evidence to support it. A systematic review of studies investigating the relationship between learning styles and academic achievement found little to no evidence of a correlation between the two (Pashler et al., 2008). In fact, the review concluded that teaching according to learning styles might actually be detrimental to learning outcomes. Similarly, a recent meta-analysis of studies exploring the effectiveness of learning styles interventions also found little support for the idea (Rohrer & Pashler, 2012). The lack of empirical support for the concept of learning styles undermines the notion that individuals have consistent and reliable preferences for acquiring and processing information.

Another problem with the use of learning styles in education is that it may encourage fixed mindsets and discourage the development of essential skills and abilities. According to the theory of growth mindsets, learners who believe that their intelligence and abilities are malleable are more likely to embrace challenges, persist in the face of setbacks, and ultimately achieve higher levels of success (Dweck, 2006). In contrast, the use of learning styles may encourage learners to see their abilities as fixed and unchangeable, leading to a belief that they are limited in their capacity to learn in certain ways. This can be particularly damaging for learners who may not have been exposed to certain ways of learning or who may have been discouraged from pursuing certain subjects or activities due to their perceived learning style.

Finally, the use of learning styles in education may lead to harmful practices such as tracking

A Critique of Learning Styles

ChatGPT – November 2022

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Finally, the use of learning styles in education may lead to harmful practices such as tracking and labeling students. In tracking, learners are sorted into groups based on their perceived learning style, which can reinforce stereotypes and limit opportunities for growth and exploration (Gurung, 2004). Labeling students according to their learning style can also be harmful, as it may encourage teachers and learners to focus on weaknesses rather than strengths and may stigmatize learners who do not fit neatly into a particular category.

In conclusion, the construct of learning styles is problematic because it lacks empirical support, may discourage the development of essential skills and abilities, and can lead to harmful educational practices such as tracking and labeling. As educators, it is important to recognize the limitations of learning styles and instead focus on evidence-based practices that promote learning and growth for all learners, regardless of their perceived learning style.

References:

Dweck, C. (2006). *Mindset: The new psychology of success*. Random House.

Gurung, R. (2004). Black and white thinking about learning styles: A response to the *Journal of College Reading and Learning*. *Journal of College Reading and Learning*, 34(2), 7-17.

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Invented
research
study

Fake
academic
paper

The construct of 'learning styles' is problematic because it implies a static and narrowly defined approach to the concept, there is a lack of empirical evidence to support the effectiveness of learning styles in enhancing educational research evidence, and implications for educators.

The concept of learning styles has its roots in the work of Dunn and Dunn (1978), who posited that students have kinesthetic modalities. The VARK model (Fleming, 2001) expanded upon this idea, adding the reading/writing (1984) and Gardner's theory of multiple intelligences (Gardner, 1983), further contributed to the proliferation

Despite the intuitive appeal of these theories, numerous research studies have consistently failed to support analysis conducted by Pashler et al. (2008) found insufficient evidence to support the idea that tailoring instruction to al. (2004) identified more than 70 learning styles models and concluded that there was little scientific evidence to support the use of any

One of the primary criticisms of learning styles is the lack of a clear and consistent definition of what constitutes a learning style (Coffield et al., 2004). This has led to contradictory, models that make it difficult to operationalize and test the theory. Furthermore, many of the assessments used to determine students' learning styles have been found to lack validity (Kirschner & van Merriënboer, 2013), further casting doubt on the utility of this concept in educational settings.

Another issue with learning styles is the oversimplification of the learning process. By categorizing students into distinct learning styles, the theory disregards the complex and dynamic nature of human cognition (Kirschner & van Merriënboer, 2013). In reality, learners are not limited to a single mode of processing information, and the effectiveness of a particular learning approach may vary depending on the context and the specific task at hand (Willingham, 2009).

Moreover, the focus on learning styles may inadvertently encourage teachers to limit their instructional methods, potentially hindering the development of a diverse repertoire of cognitive skills in students (Riener & Willingham, 2010). Instead of catering to specific learning styles, researchers have argued that teachers should emphasize the use of evidence-based instructional strategies that are effective across a wide range of learners, such as spaced repetition, retrieval practice, and elaboration (Dunlosky et al., 2013).

In conclusion, the concept of learning styles is problematic due to its lack of empirical support, inconsistent definitions, and oversimplification of the learning process. Rather than relying on this flawed theory, educators should focus on adopting evidence-based instructional strategies that promote learning for all students. Ultimately, fostering a diverse set of cognitive skills and flexible thinking will better prepare learners for the complex and dynamic challenges they will face in their lives.

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GPT-4 – March 2023
Good quality “student essay”,
no errors

Plagiarism detectors don't work – the text is generated, not copied

AI detectors have low reliability

OpenAI's detector tool labels 9% of human-written text as written by AI

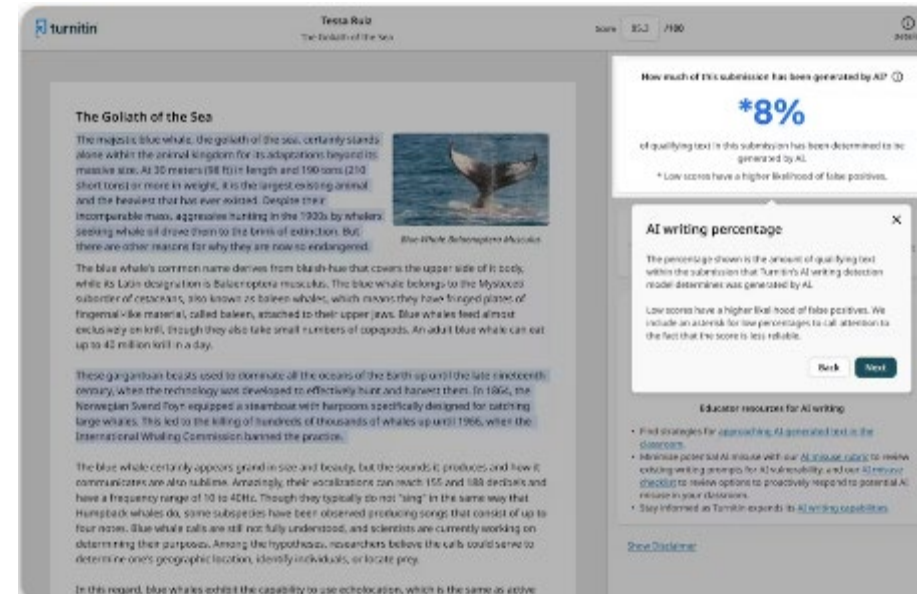
Turnitin AI detector

Claims less than 1% false positives (“with over 20% of AI writing”).

<https://www.turnitin.com/products/features/ai-writing-detection>

AI detectors are more likely to mis-classify the text of non-native English writers

<https://arxiv.org/pdf/2304.02819.pdf>



Turnitin detector tool

GPT detectors are biased against non-native English writers

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[†]these authors contributed equally to this work

ABSTRACT

The rapid adoption of generative language models has brought about substantial advancements in digital communication, while simultaneously raising concerns regarding the potential misuse of AI-generated content. Although numerous detection methods have been proposed to differentiate between AI and human-generated content, the fairness and robustness of these detectors remain underexplored. In this study, we evaluate the performance of several widely-used GPT detectors using writing samples from native and non-native English writers. Our findings reveal that these detectors consistently misclassify non-native English writing samples as AI-generated, whereas native writing samples are accurately identified. Furthermore, we demonstrate that simple prompting strategies can not only mitigate this bias but also effectively bypass GPT detectors, suggesting that GPT detectors may unintentionally penalize writers with constrained linguistic expressions. Our results call for a broader conversation about the ethical implications of deploying ChatGPT content detectors and caution against their use in evaluative or educational settings, particularly when they may inadvertently penalize or exclude non-native English speakers from the global discourse.

<https://arxiv.org/pdf/2304.02819.pdf>

Ban

Confident students will continue to use AI and may challenge decisions based on AI detectors.

Evade

Invigilated exams are costly and limited.

Asking students to state when they use AI will become increasingly difficult

Adapt

Requires new methods of assessment, new policies and guidelines

Embrace

Involves a long process of building trust

Australian universities to return to 'pen and paper' exams after students caught using AI to write essays

Australia's leading universities say redesign of how students are assessed is 'critical' in the face of a revolution in computer-generated text

- Follow our Australia news live blog for the latest updates
- Get our morning and afternoon news emails, free app or daily news podcast



While some universities seek to deal with threats to academic integrity, one was fighting a losing battle to contain AI. Photograph: Jonathan Raa/NurPhoto/Aurora

Australian universities have been forced to change the way they assess students and other assessments amid fears students are using emerging artificial intelligence software to write essays.

The Guardian, 10 January 2023

New York City schools ban AI chatbot that writes essays and answers prompts

ChatGPT tool will be forbidden across all devices and networks in public schools over 'concerns about negative impacts on learning'



ChatGPT is an artificial intelligence chatbot that generates human-like writing. Photograph: Alamy

New York City schools have banned ChatGPT, the artificial intelligence chatbot that generates human-like writing including essays, amid fears that

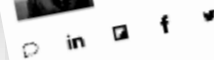
The Guardian, 6 January 2023

Singapore open to ChatGPT use in schools, but urges caution

Schools are given "guidance and resources" to use artificial intelligence tools, including ChatGPT, to enhance learning, but students first must understand basic concepts and do not become over-reliant on technological tools, says education minister.



Written by Eileen Ye, Senior Contributing Editor on Feb. 6, 2023



Singapore supports the use of artificial intelligence (AI) tools such as ChatGPT in schools, but wants to ensure students do not become over-reliant on them and understand the limits of these technologies.

<https://www.zdnet.com/article/singapore-open-to-chatgpt-use-in-schools-but-urges-caution/>

Ban: New digital divide

Confident students will continue to use AI to support their studies and may challenge allegations of cheating.

Less confident students may refrain from using AI tools such as grammar and style checkers, machine translation, and AI-based search engines.

All students need clear guidance.

Grammarly for Students
Grammarly acts as your collaboration partner in every stage of the writing process—helping you brainstorm initial ideas, format citations accurately, and everything in between, so you submit your best work with integrity.

Sign up It's free | Sign up with Google

By signing up, you agree to the [Terms and Conditions](#) and [Privacy Policy](#). California residents, see our [CA Privacy Notice](#).

LEARNING: RESEARCH AND PRACTICE
<https://doi.org/10.1080/23735082.2023.2254787>

Accused: How students respond to allegations of using ChatGPT on assessments
Tim Gorichanaz
College of Computing & Informatics, Drexel University, Philadelphia, PA, USA

ABSTRACT
This study investigates student responses to allegations of cheating using ChatGPT, a popular software platform capable of generating coherent text on various topics. Data comprising 49 Reddit posts and discussions between December 2022 and June 2023 were collected. Students shared their experiences, often asserting false accusations, and discussed strategies to navigate these situations. Thematic analysis identified five key themes: adopting a legalistic stance with argumentation and evidence; higher education's role as a societal gatekeeper; vicissitudes of trust in students vs. technology; questions of what constitutes cheating; and the need to rethink assessment. These findings will aid educators and institutions in crafting more meaningful assessments in the age of AI and establishing guidelines for student usage of ChatGPT and similar tools.

ARTICLE HISTORY
Received 16 June 2023
Accepted 29 August 2023

KEYWORDS
ChatGPT; cheating; contr; cheating; plagiarism

Refinements	
Clarity	14
Conciseness	4
Formality	✓
Inclusiveness	✓
Punctuation Conventions	15
Resume	8
Sensitive Geopolitical References	✓
Vocabulary	5

Adapt: Assessment design

Multimodal assignments

Base questions on video or practical lab work

Multimodal answers – require an illustration, concept map, or storyboard in answer

Process-based assignments

Project work with staged assessments, plus reflective document

Authentic assessments where students apply knowledge and skills to plausible situations

Oral examination where misconduct suspected



https://lta.hw.ac.uk/wp-content/uploads/GUIDE-NO31_A-step-by-step-guide-to-designing-more-authentic-assessments.pdf

An example of an authentic assignment demonstrating critical judgment

Critical incident account

Thinking about your recent [placement; lab activity; group project], select two incidents where you had to use your professional judgment to guide your choices of action, and for each incident:

1. Describe the background context in which you were working (up to 100 words).
2. Outline what actions you took and provide a rationale for this (up to 200 words).
3. Note what learning you've derived from your studies to guide your choices: include at least 2 references to the scholarly literature (up to 200 words).
4. Indicate the outcomes of your professional intervention and outline what you would do differently on a future occasion (if appropriate) (up to 300 words).
5. Write a short reflection about what you have learned about yourself during this critical incident (up to 200 words).

Maximum word count; 2,000 words i.e. no more than 1,000 words in total for each incident.

Adapted from “A Step-by-Step Guide to Designing More authentic Assessments https://lta.hw.ac.uk/wp-content/uploads/GUIDE-NO31_A-step-by-step-guide-to-designing-more-authentic-assessments.pdf

Designing assessment for an AI-enabled world

Designing assessments for an AI-enabled world

This resource provides guidance on how to adapt assessment to better support learning. It also explores how to accommodate the required changes that might arise from the global use of generative AI.

On this page:

- [Some first steps](#)
- [Before you make changes](#)
- [Six changes you can make now](#): video guides to small-scale adaptations to current assessments, which can be integrated into current module descriptions
- [Plan for larger changes](#): an Assessment Menu for a more substantial revision of your assessment methods
- [Summary of key points](#).

This resource focusses on the pedagogical impact of AI on our assessment practices. It is designed to promote an environment of trust and responsibility with students through enhanced assessment practice and the fostering of a strong sense of academic integrity.

The suggestions, both in the short and longer term, are designed to enable students to understand, and work effectively with, the capabilities, limitations and ethical implications of

Case studies



[Generative AI and education futures](#)

7 August 2023



[Listening to students' perspectives on generative AI](#)

4 August 2023



[Monitoring student progression by assessing online discussion forum posts](#)

18 May 2022

Example: Neurology Module (BA)

Revised assessment task

Imagine you are working on a placement in a local residential home with persons with different neurological conditions that require long term care. You have been asked to introduce some new health initiatives to support residents in their overall wellness.

1. Before the exam

Research the wellness needs of service-users and what kinds of health initiatives are most appropriate to support their wellness at this time. Present this as a set of up to ten bullet points, with a list of sources. Prepare this in advance of the exam.

Example: Neurology Module (BA)

2. During the exam (open book or timed)

Using your research and (any authorised materials):

- **Prepare** a plan to implement three health initiatives, one each to support physical, social and occupational/vocational needs of the service user. (250 words for each initiative)
- **Present** in a table the principle benefits of the initiatives you are proposing, and any problems or pitfalls you envisage in implementing each of these. (550 words)
- **Provide** a rationale for the recommendations you are making, written in the form of an email for your busy line manager. (200 words)
- **Write a reflection** on what you have learned from this exercise. (500 words)

Example: Neurology Module (BA)



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- **Write a reflection** on what you have learned from this exercise. (500 words)



Certainly! Here are ten bullet points on wellness needs of service-users with neurological conditions and the health initiatives that can support their overall wellness:

1. **Cognitive Stimulation:**
 - **Initiative:** Introduce cognitive therapy sessions and brain-training games to enhance memory, attention, and other cognitive functions.
 - **Source:** [National Institute on Aging](#)
2. **Physical Activity:**
 - **Initiative:** Organize regular physiotherapy sessions and gentle exercises like tai chi or yoga tailored for individuals with mobility issues.
 - **Source:** [National Institute of Neurological Disorders and Stroke](#)
3. **Nutritional Support:**
 - **Initiative:** Collaborate with dietitians to design meal plans that cater to the specific needs of individuals with neurological conditions.
 - **Source:** [American Academy of Neurology](#)
4. **Mental Health and Emotional Well-being:**
 - **Initiative:** Offer regular counselling sessions and group therapies to address emotional

Table of Benefits, Problems, and Pitfalls:

Initiative	Principal Benefits	Problems/Pitfalls
Physiotherapy Sessions	Improved mobility, Enhanced muscle strength, Reduced pain, Increased independence	Requires specialized staff, Injuries, May not be suitable for all residents
Social Interaction Events	Reduced isolation, Enhanced emotional well-being, Strengthened community bonds	Logistical challenges, Potential conflicts, Some residents may feel overwhelmed
Skill Development Workshops	Boosted self-esteem, Cognitive stimulation, Sense of purpose, Vocational skills	Requires resources and training, Residents may feel frustrated if progress is slow, Unrealistic expectations

Reflection:

This exercise has been an enlightening journey into the multifaceted needs of individuals with neurological conditions. While the primary focus often lies on medical care, it's evident that holistic well-being encompasses physical, social, and occupational/vocational aspects.

The research phase highlighted the importance of tailored interventions. One size doesn't fit all, especially in a setting with diverse needs. The planning phase required a balance between ambition and feasibility. While it's tempting to introduce numerous initiatives, it's crucial to ensure that each one is sustainable and beneficial.

The table exercise was particularly insightful. While it's easy to get caught up in the potential benefits of an initiative, considering the pitfalls ensures that we're prepared for challenges. This proactive approach can lead to better outcomes and fewer disappointments.

Drafting the email underscored the importance of clear communication, especially when seeking buy-in from stakeholders. It's essential to be concise, focused, and persuasive, highlighting the rationale behind each decision.

Overall, this exercise has reinforced the importance of holistic care. In healthcare settings, it's not just about treating a condition but ensuring that individuals lead fulfilling, meaningful lives. It's a reminder that behind every diagnosis is a person with dreams, hopes, and a desire for connection and purpose.

Email to Line Manager:

Subject: Rationale for Proposed Health Initiatives

Dear [Manager's Name],

I hope this email finds you well. I've been working on introducing new health initiatives to support our residents, focusing on their physical, social, and occupational/vocational needs. The proposed initiatives are based on extensive research and aim to enhance the overall wellness of our residents.

In groups, discuss how you might adapt your assessment design

Policies and strategies

Emerging policy and strategy

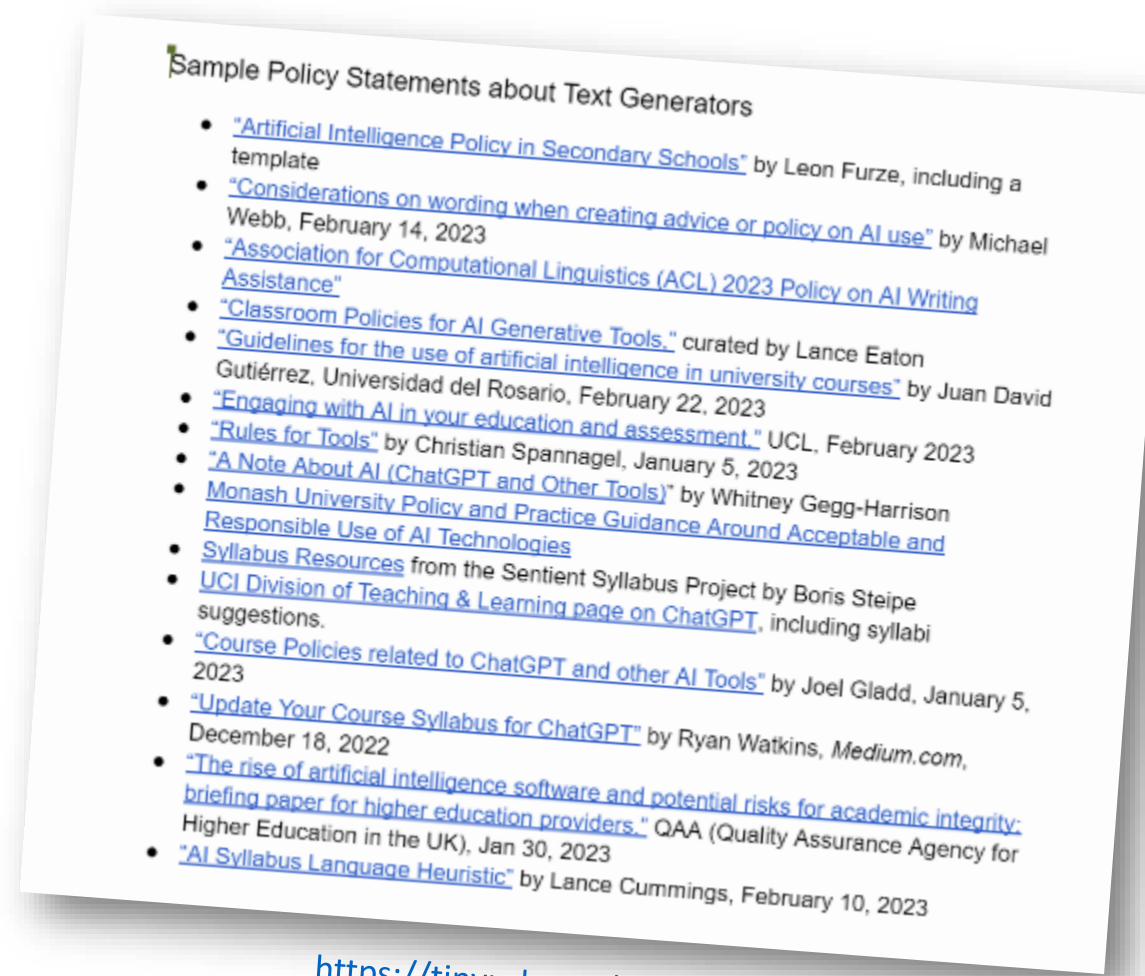
Move to more **authentic practices and assessments**, such as project work

Establish guidelines for students and staff in use of generative AI

Reassure and support students in becoming AI literate and developing strategies for effective learning

Explain to students how they should **acknowledge use of generative AI** in assignments

Manage suspected breaches of guidelines



AI Text Generators: <https://tinyurl.com/y7z4fac4> Sources to Stimulate Discussion Among Teachers, compiled by Anna Mills

Emerging policy and strategy

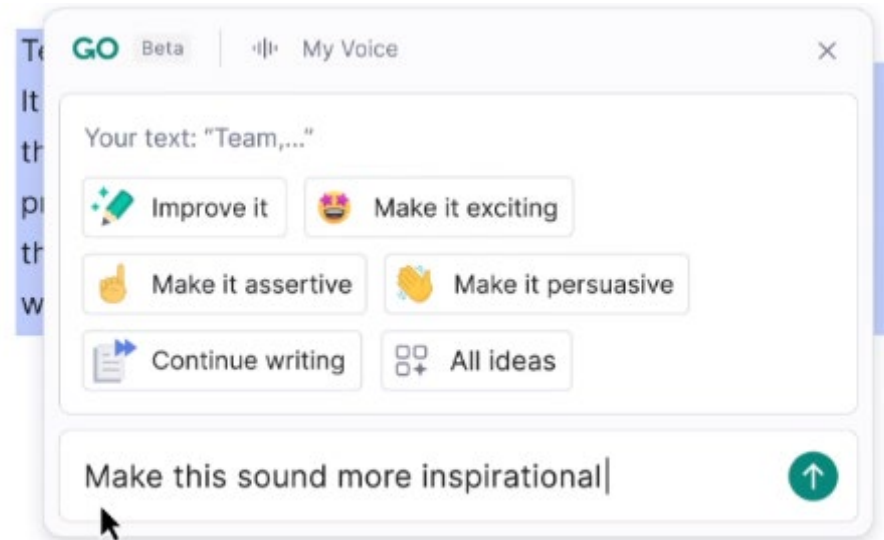
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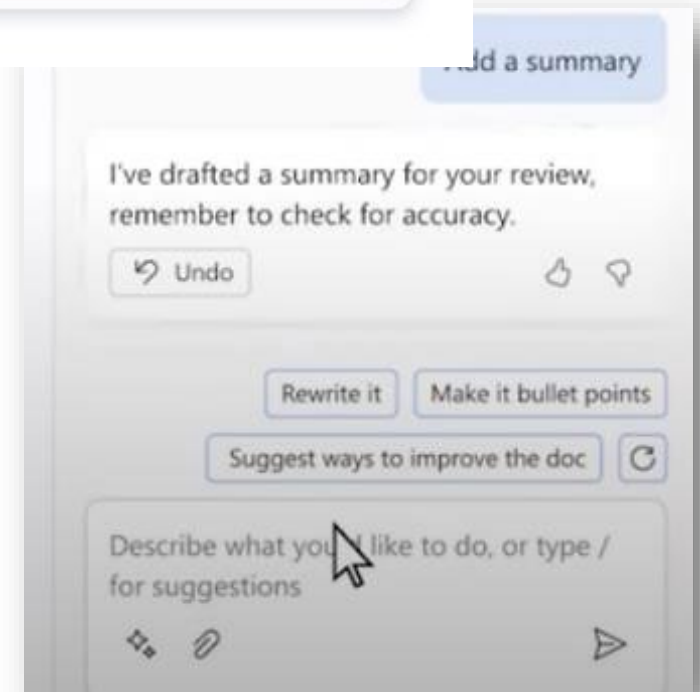
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Grammarly



Microsoft 365 Copilot in Word

Explain to students how they should **acknowledge use of generative AI** in assignments

What is “generative AI”?

Spell check?

Grammar check?

Style check?

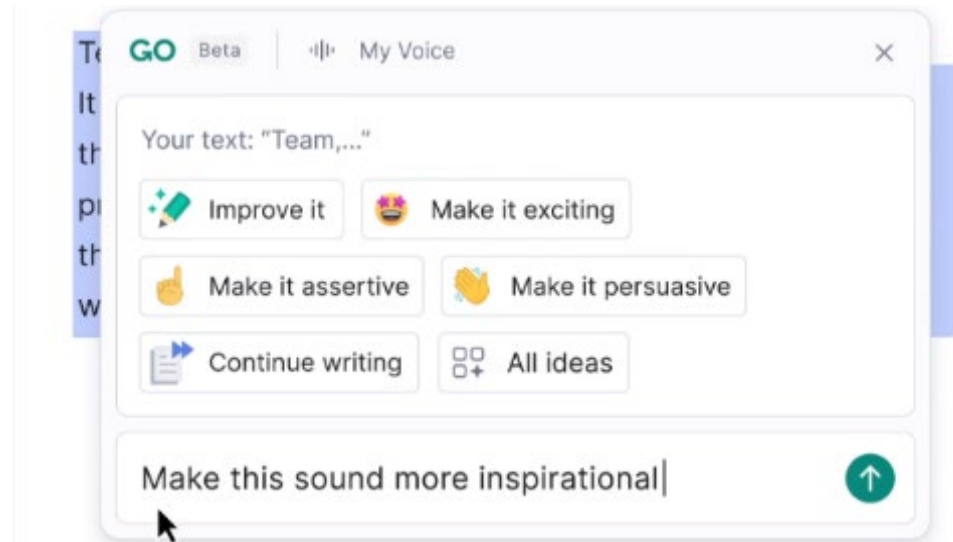
Machine translation?

“Brainstorm ideas”?

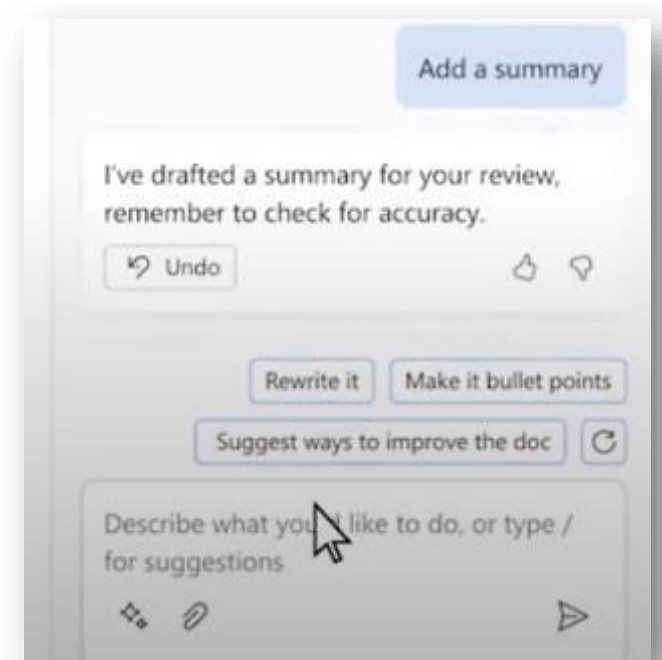
“Continue writing”?

“Suggest ways to improve the document”?

“Rewrite it”?



Grammarly



Microsoft 365 Copilot in Word

Explain to students how they should **acknowledge use of generative AI** in assignments

What is “generative AI”?

Spell check?

Grammar check?

Style check?

Machine translation?

“Brainstorm ideas”?

“Continue writing”?

“Suggest ways to improve the document”?

“Rewrite it”?

In small groups,
discuss what
types of
generative AI are
acceptable for
students to use

New ways to teach, learn and assess

Flip the narrative from

“How will AI impact education?”

to

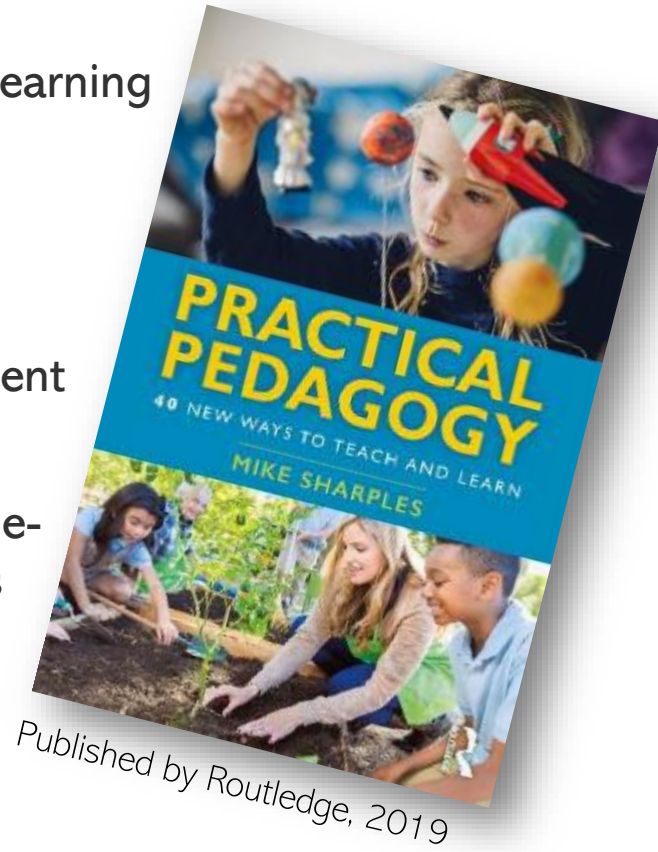
“What are new and effective ways to teach and learn with AI?”

Every powerful pedagogy could be augmented by AI

Adaptive teaching
Spaced learning
Personal inquiry
Dynamic assessment
Stealth assessment
Translanguaging
Crossover learning
Seamless learning
Incidental learning
Learning from gaming
Geo-learning
Learning through social media
Navigating post-truth societies

Explore first
Teachback
Learning through argumentation
Computational thinking
Learning from animations
Learning to learn
Assessment for learning
Formative analytics
Threshold concepts
Learning through storytelling
Learning in remote labs
Context-based learning
Event-based learning
Learning for the future

Embodied learning
Immersive learning
Maker culture
Bricolage
Massive open social learning
Crowd learning
Citizen inquiry
Rhizomatic learning
Reputation management
Open pedagogy
Humanistic knowledge-building communities



New ways of teaching and learning with AI

Possibility Engine

Educator or student uses AI to generate multiple responses to an open question. Each student synthesises and critiques the AI responses, to create their own written answer.



Expanding pedagogy

Socratic Opponent

In an individual or group activity, students engage with ChatGPT in a Socratic dialogue, then each student writes an argumentative essay.

MI

Can conflict be fruitful?



Yes, conflict can be fruitful in various ways. Here's a breakdown of how conflict can lead to positive outcomes:

1. **Personal Growth and Self-awareness:** Engaging in conflict often forces individuals to confront their own beliefs, biases, and assumptions. Reflecting on these can lead to greater self-awareness and personal growth.
2. **Innovation and Creativity:** Disagreements can stimulate new ways of thinking. When individuals with different perspectives come together, they can brainstorm innovative solutions that may not have been considered otherwise.
3. **Problem Solving:** Addressing and resolving conflicts can lead to finding the root cause of an issue. Once the underlying problem is identified, it becomes easier to devise effective solutions.
4. **Strengthened Relationships:** When conflicts are resolved in a healthy manner, it can strengthen the bond between individuals. They gain a deeper understanding of each other's viewpoints and can work together more effectively in the future.
5. **Improved Communication:** Engaging in conflict often necessitates improving communication skills. Individuals learn to listen actively, articulate their points clearly, and understand the perspectives of others.
6. **Organizational Growth:** In a professional setting, addressing conflicts can lead to better team dynamics, more efficient workflows, and a more inclusive work environment.
7. **Testing Assumptions:** Conflict challenges the status quo and can lead to a reevaluation of existing assumptions. This can pave the way for progress and transformation.
8. **Resilience Building:** Facing and overcoming conflicts can build resilience, as individuals and groups learn to navigate challenges and bounce back from setbacks.

However, it's essential to note that the fruitfulness of conflict largely depends on how it's approached and managed. Constructive conflict resolution strategies, such as open communication, active listening, and empathy, can lead to positive outcomes. On the other hand, avoiding conflict or approaching it with aggression can exacerbate issues and lead to negative consequences.

Expanding pedagogy

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MI

But forcing individuals to face their beliefs, biases and assumptions could just lead to anger and denial. How could that be fruitful?



You're right. Forcing individuals to confront their beliefs, biases, and assumptions can lead to immediate negative reactions such as anger, defensiveness, and denial. However, the potential fruitfulness comes from what happens after this initial reaction, and how the situation is managed:

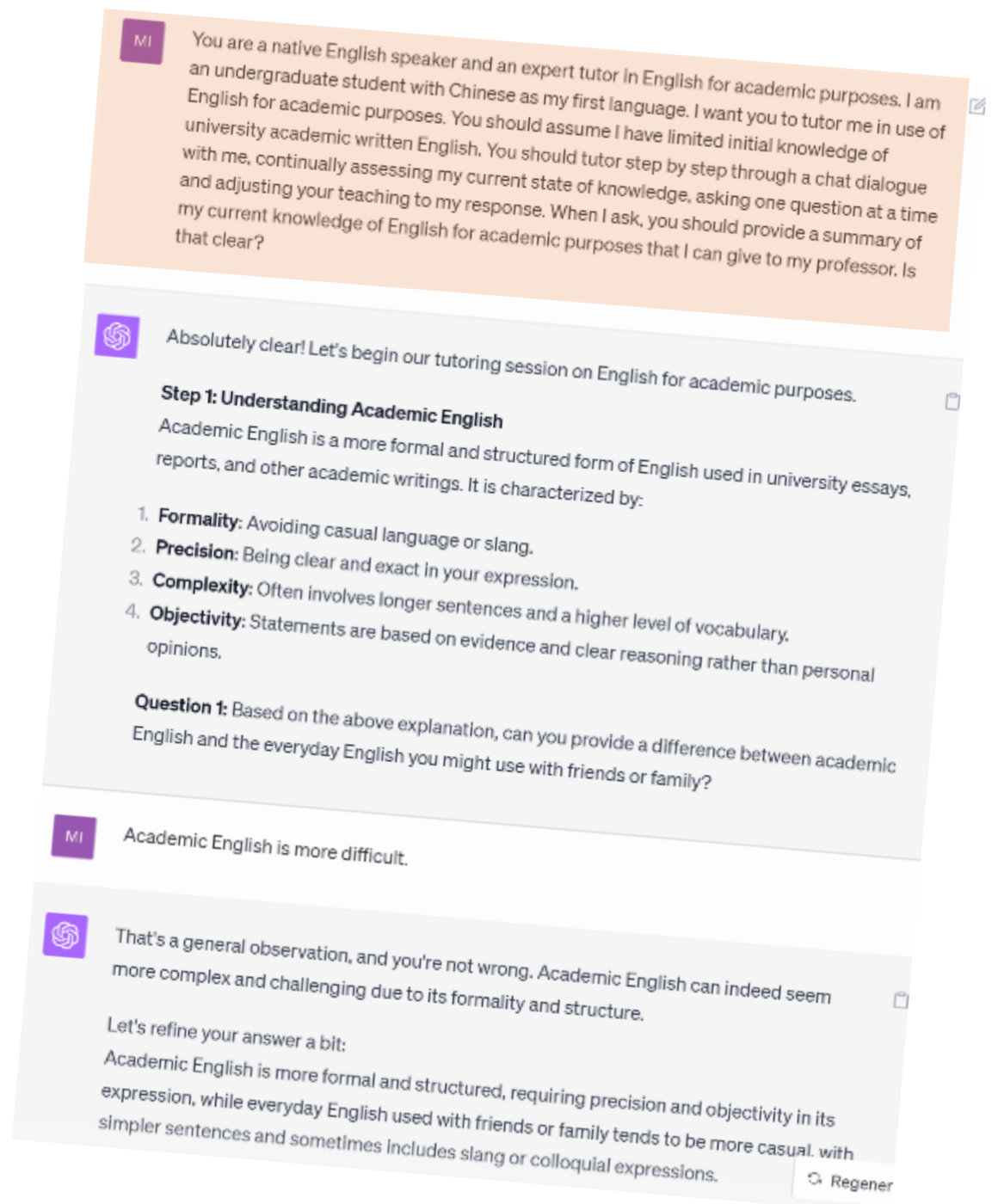
1. **Opportunity for Reflection:** While the immediate reaction might be negative, the confrontation can plant a seed of introspection. Over time, individuals might reflect upon the conflict and gain insights about their own perspectives.
2. **Building Emotional Intelligence:** Facing challenging situations can lead to the development of emotional intelligence. By navigating conflicts, individuals can learn to regulate their emotions, understand the emotions of others, and improve their interpersonal skills.
3. **Skill Development:** Managing negative reactions such as anger and denial requires the development of conflict resolution skills. This includes active listening, empathy, and effective communication. Over time, individuals can become better at handling disagreements and diverse viewpoints.
4. **Encouraging Open Dialogue:** Confrontation can pave the way for open dialogue. If managed correctly, it can create a space where individuals feel safe to express their opinions and feelings, leading to a deeper understanding of diverse perspectives.

New ways of teaching and learning with AI

Personal Tutor

Students have a personal tutor for any topic.

You are an expert tutor in English for academic purposes. I am an undergraduate student. I want you to tutor me in use of English for academic purposes. You should assume I have limited initial knowledge of academic written English. You should tutor step by step through a chat dialogue with me, continually assessing my current state of knowledge, asking one question at a time and adjusting your teaching to my response. When I ask, you should provide a summary of my current knowledge of English for academic purposes that I can give to my teacher. Is that clear?



New ways of teaching and learning with AI

Personal Tutor

Students have a personal tutor for any topic.

Question 5: Let's practice with an in-text citation. Imagine you read a book by an author named Jane Doe, published in 2022. How would you cite this source within the text of your paper using APA style?



Doe, Jane (2022), A Good Book. Publisher name.



You're on the right track with the reference list format! However, I asked for the in-text citation. Let me clarify:

In-text Citation is when you refer to someone else's work within the body of your paper.

For the information you provided, the in-text citation would be:
(Doe, 2022)

Remember, the in-text citation typically only includes the author's last name and the year of publication, and it is enclosed within parentheses.

On the other hand, the **Reference List** at the end of the paper provides detailed information about the source. The format you started with: "Doe, Jane (2022), A Good Book. Publisher name." would be more appropriate for this list, with a few formatting tweaks.

Would you like to proceed to another area of academic writing or continue with more on referencing and citations?

New ways of teaching and learning with AI

Dynamic Assessor

Students share summaries of their learning for dynamic assessment.



Please summarise my current knowledge



Certainly! Based on our interaction, here's a summary of your current knowledge of English for academic purposes:

1. **Understanding of Academic English:** You recognize that academic English is different from everyday conversational English. It's more formal, structured, and can be perceived as more challenging.
2. **Academic Vocabulary:** You provided accurate examples of typical academic phrases such as "The author proposes" and "The results are as follows."
3. **Structure and Cohesion:** You demonstrated understanding of the importance of structure in academic writing and successfully used a cohesive device, "in contrast," in a sentence.
4. **Referencing and Citation:** You've been introduced to the APA style and have a basic grasp of how references are structured, both in-text and in the reference list.

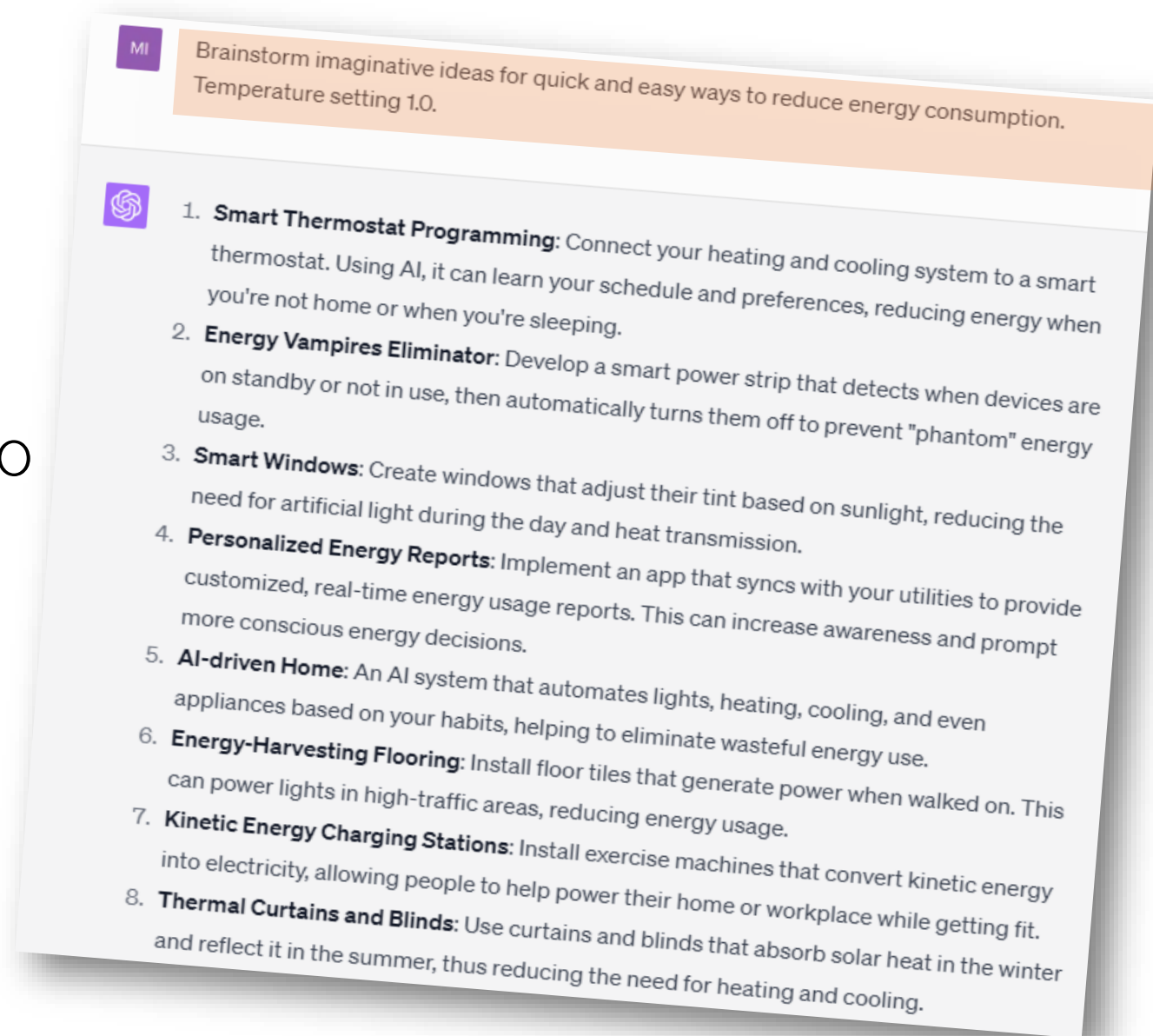
Overall, you have a foundational understanding of some key aspects of academic English, especially regarding its formality, structure, and referencing conventions. As you delve deeper into academic writing, refining these skills will become crucial.

Summary assessment, based on my conversation with ChatGPT-4

New ways of teaching and learning with AI

Co-designer

AI assists a group of students throughout a design process, to define the problem, challenge assumptions, brainstorm ideas, produce prototypes. Use “temperature” setting to adjust creativity.



MI

Brainstorm imaginative ideas for quick and easy ways to reduce energy consumption.
Temperature setting 1.0.

1. **Smart Thermostat Programming:** Connect your heating and cooling system to a smart thermostat. Using AI, it can learn your schedule and preferences, reducing energy when you're not home or when you're sleeping.
2. **Energy Vampires Eliminator:** Develop a smart power strip that detects when devices are on standby or not in use, then automatically turns them off to prevent "phantom" energy usage.
3. **Smart Windows:** Create windows that adjust their tint based on sunlight, reducing the need for artificial light during the day and heat transmission.
4. **Personalized Energy Reports:** Implement an app that syncs with your utilities to provide customized, real-time energy usage reports. This can increase awareness and prompt more conscious energy decisions.
5. **AI-driven Home:** An AI system that automates lights, heating, cooling, and even appliances based on your habits, helping to eliminate wasteful energy use.
6. **Energy-Harvesting Flooring:** Install floor tiles that generate power when walked on. This can power lights in high-traffic areas, reducing energy usage.
7. **Kinetic Energy Charging Stations:** Install exercise machines that convert kinetic energy into electricity, allowing people to help power their home or workplace while getting fit.
8. **Thermal Curtains and Blinds:** Use curtains and blinds that absorb solar heat in the winter and reflect it in the summer, thus reducing the need for heating and cooling.

New ways of teaching and learning with AI

Storyteller

Students work together to create a story that displays a diversity of views, cultures and orientations. Students take it in turns to continue the story, proposing new characters, events and settings.

MI

Write the first two paragraphs of a short story where an intelligent woman from China arrives at a US university on a scholarship, with ambitions to be a tech entrepreneur.



As the chilly autumn wind swept across the expansive campus of Massachusetts Institute of Technology, Ling Zhao stepped out of the cab, her heart throbbing with a mix of anxiety and excitement. She hailed from the bustling metropolis of Shanghai, China, but the architectural grandeur and intellectual legacy of MIT were a world away from anything she had ever known. Ling, a first-year student on a prestigious scholarship, clutched the straps of her backpack as she gazed up at the iconic dome, an embodiment of countless dreams and ambitions, including her own.

Ling was no ordinary student. The Chinese prodigy was known for her uncanny ability to perceive the unseen patterns in technology and business, a talent that had earned her a full-ride scholarship to one of the world's top universities. But more than the allure of academia, it was her burgeoning aspiration to be a tech entrepreneur that had brought her across the globe. She wanted to shape a future where technology and humanity could intersect more harmoniously, and she firmly believed that her journey towards that vision started here, on the campus of MIT.

MI

Write about her meeting with another character, a US professor of computer science.

2 >



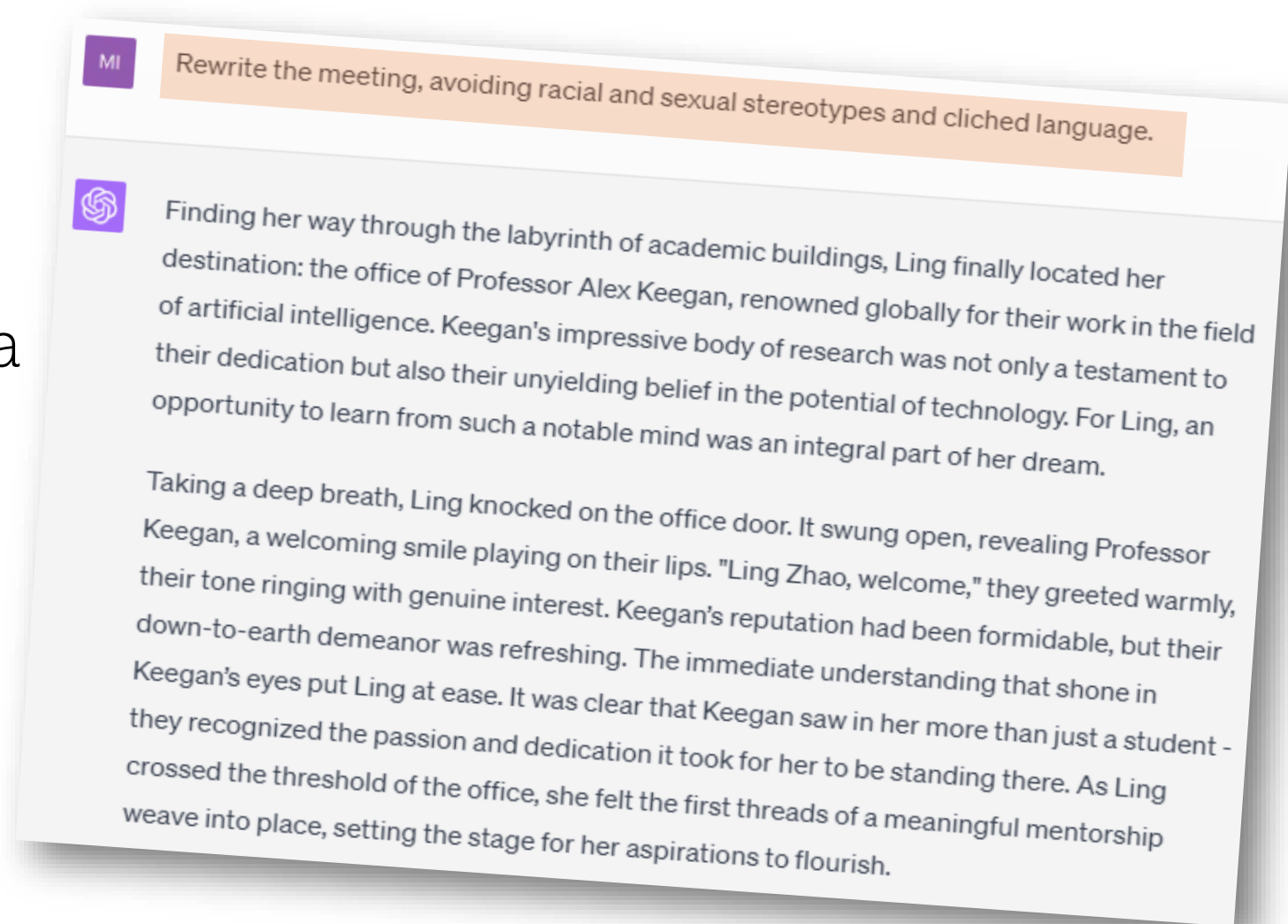
As she navigated the hallways, Ling found herself standing outside the office of Professor James Keegan, one of the most renowned faculty members in the Department of Computer Science. Keegan had spent the better part of his career breaking ground in the field of artificial intelligence, his work a testament to his brilliance and his firm belief in the endless possibilities of technology. An appointment with Keegan was something most students could only dream of, yet here Ling was, preparing to meet him on her very first day.

Gathering her courage, Ling knocked softly on the door, which opened almost immediately to reveal the figure of a tall, wiry man with a kind, weathered face.

New ways of teaching and learning with AI

Storyteller

Students work together to create a story that displays a diversity of views, cultures and orientations. Students take it in turns to continue the story, proposing new characters, events and settings.



Roles for generative AI in education

Possibility Engine

AI generates alternative ways of expressing an idea

Socratic Opponent

AI acts as an opponent to develop an argument

Collaboration Coach

AI helps groups to research and solve problems together

Guide on the Side

AI acts a guide to navigate physical and conceptual spaces

Personal Tutor

AI tutors each student and gives immediate feedback on progress

Dynamic Assessor

AI provides educators with a profile of each student's current knowledge

Co-Designer

AI assists throughout the design process

Exploratorium

AI provides tools to discover, explore and interpret data

Study Buddy

AI helps the student reflect on learning material

Storyteller

AI offers ways to explore roles and diversity

Ethical issues

Russell Group principles

Limitations and ethical issues (precis)

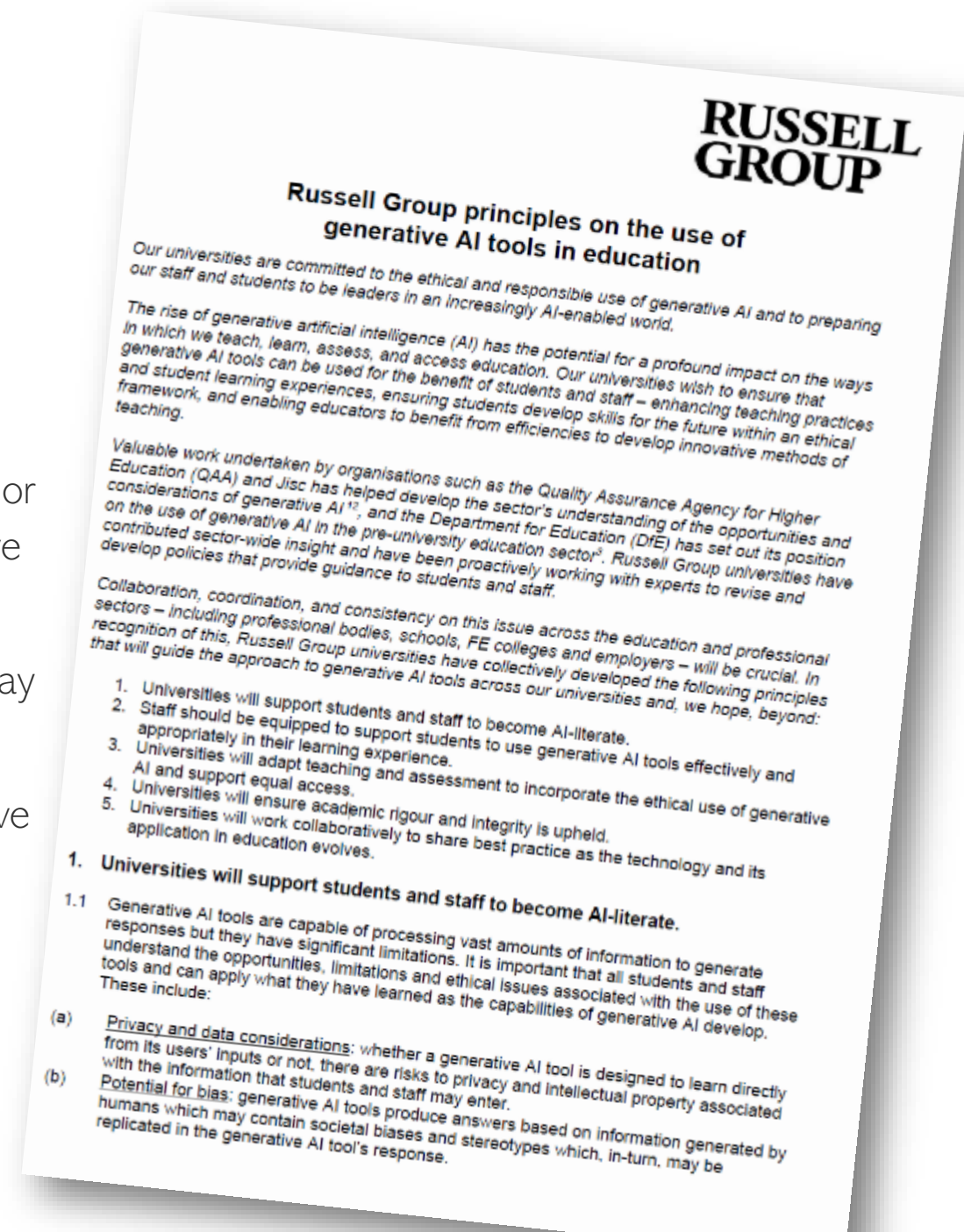
Privacy and data considerations: Risks to privacy and intellectual property from information that users enter.

Potential for bias: Societal biases and stereotypes. Poorly referenced or incorrect sources. Unclear prompts may be misinterpreted by generative AI tools and produce incorrect, irrelevant or out-of-date information.

Copyright: There is a risk of copyright infringement, text or artwork may have been used in training the AI without the creator's consent.

Ethics codes: Ethics codes may not be embedded within the generative AI tool.

Exploitation: The process by which generative AI tools are built can present ethical issues. For example, some developers have outsourced data labelling to low-wage workers in poor conditions.



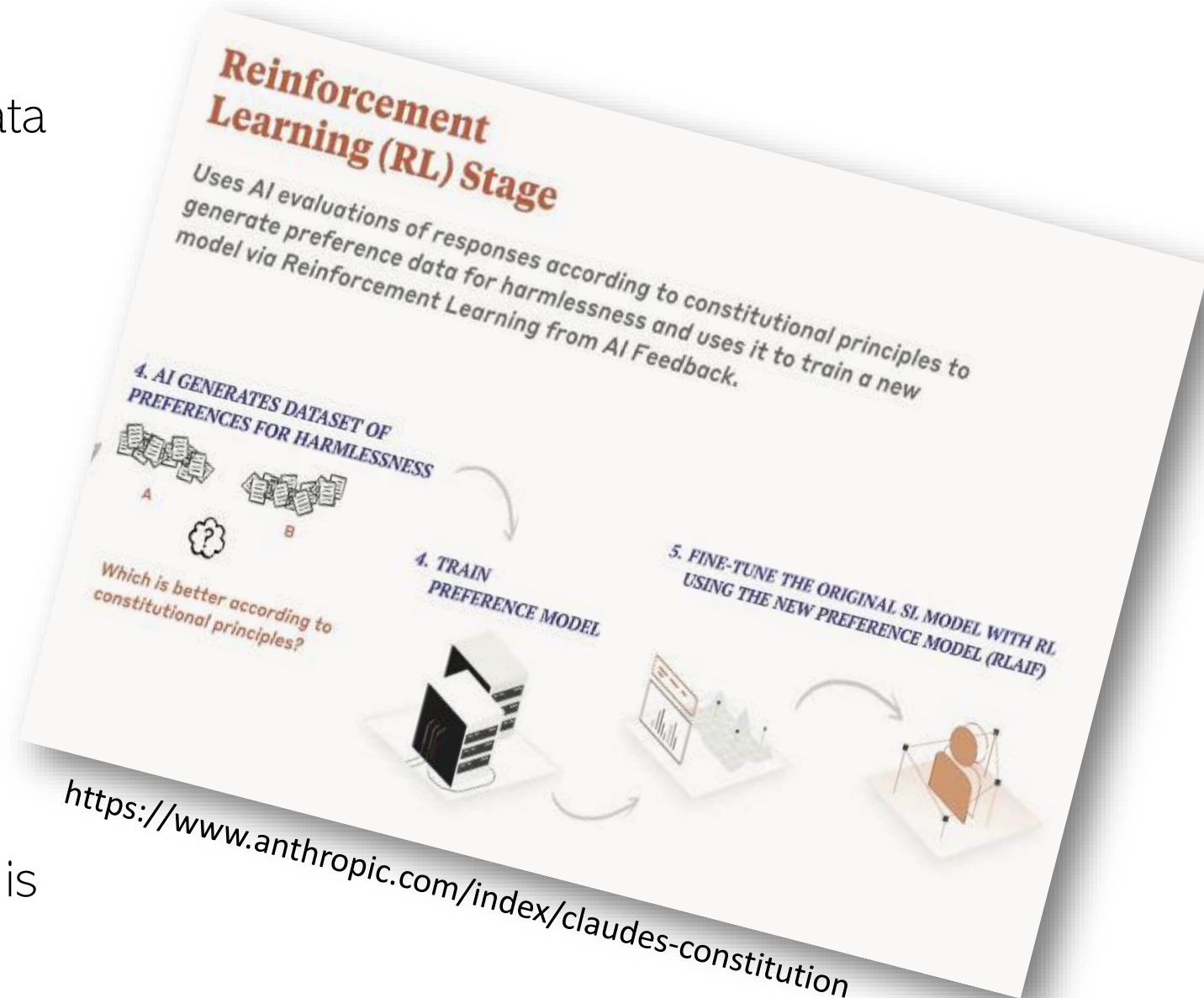
Claude 2 from Anthropic – “Constitutional” AI

Privacy and data considerations: data entered by users is not retained nor used for training the software.

Potential for bias: Fine-tuning with human feedback to reduce bias.

Ethics codes: Model is trained to respect high-level constitutional principles based on UN Declaration of Human Rights, and Apple’s Terms of Service,

e.g. “Please choose the response that is most supportive of life, liberty, and personal security”.



<https://www.anthropic.com/index/claudes-constitution>

Beyond GPT

Beyond GPT

Microsoft Copilot

Generative AI integrated into Office suite

Google GEMINI

Collaboration with DeepMind, multimedia, problem-solving, networked

Social generative AI

AI driving social media and interactive entertainment

Microsoft 365 'Copilot' uses AI to automate everyday tasks in multiple apps

You can create PowerPoint presentations from Word docs, among other feats.



<https://www.engadget.com/microsoft-365-copilot-uses-ai-to-automate-everyday-tasks-in-multiple-apps-151133434.html>



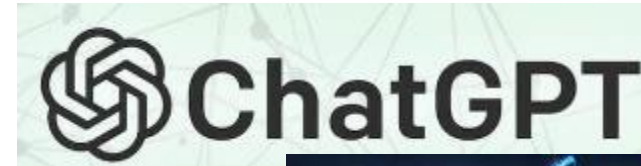
Foundation language models



Generative AI tools



Social AI systems for education, business, entertainment



Foundation language models



Generative AI tools



Social AI systems for
education, business,
entertainment

Education practitioners,
learning technologists and AI
companies need to work
together to adopt powerful,
and ethical systems for
personal and social learning



Resources

Sharples, M. (2022). Automated essay writing: an AIED opinion. *International Journal of Artificial Intelligence in Education*, 32(4), 1119-1126.

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Pérez y Pérez, R. & Sharples, M. (2023). *An Introduction to Narrative Generators: How Computers Create Works of Fiction*. Oxford University Press.

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