

Chatting about ChatGPT and other AI assistants

Nick Baker & Dave
Cormier
Office of Open Learning

Senate, 10 Feb. 2023

Overview

1. Intro to ChatGPT and other AI technologies that are available:
 - What are they?
 - What are they capable of?
 - Why should we care about this?
2. Implications for teaching, publishing and other academic work, and institutional policy
3. [Further reading/resources](#)



<https://www.flickr.com/photos/90371939@N00/4344878104>

What we heard from the Senate Information Session

Key questions included:

- How can I use this in my teaching? Are there any best practices we can recommend?
- What do we need to teach students about using it ethically, safely, appropriately, risks, biases etc.
- What are the limitations and considerations if we do use it? Is it equally good/reliable in all domains?
- How do we cite it?
- What does it mean for academic integrity? Is its use plagiarism?
- How can we adjust assessment approaches to leverage these technologies?
- Are there ways to detect AI generated content?
- How can it be used in other areas of academic work?



One hell of a way to go. Image credit: Jacob Lund/shutterstock.com

What we're **not** doing in this chat

1. Arguing about definitions of things (e.g. what does AI mean, is it really 'intelligence', what do the models mean etc.?)
2. Blaming or making assumptions about behaviour of students or faculty
3. Presenting silver bullets or dismissing these technologies



One key takeaway

'AI' generated content is here to stay and students need to learn how to use it ethically and safely

ChatGPT

Is currently the most popular brand of a transformational toolset that has triggered an urgent and important discussion about **education**, **learning** and the **future of work**.



<https://chat.openai.com/>

What is ChatGPT?

- One of a family of technologies using [Large Language Models](#) to generate text responses to [natural language prompts](#)
- Trained on the Common Crawl dataset, 60 million domains on the internet + a large subset of linked sites (60% of training data)
 - BBC, NPR, The New York Times, The Guardian, The Conversation
 - Sites like Reddit
 - Other curated sources such as Wikipedia and openly available books/content
 - Not currently connected to live Internet data or academic paywalled data
- Open API means that there are literally hundreds of startups creating refined or targeted versions of this tool

- [O'Sullivan & Dickerson, 2020](#)

ChatGPT - A conversation with an algorithm



Examples

"Explain quantum computing in simple terms" →

"Got any creative ideas for a 10 year old's birthday?" →

"How do I make an HTTP request in Javascript?" →



Capabilities

Remembers what user said earlier in the conversation

Allows user to provide follow-up corrections

Trained to decline inappropriate requests



Limitations

May occasionally generate incorrect information

May occasionally produce harmful instructions or biased content

Limited knowledge of world and events after 2021

d

What is the best thing about living in windsor ontario canada



One of the best things about living in Windsor, Ontario, Canada is its proximity to the United States, specifically Detroit, Michigan. This allows for easy access to American cultural and entertainment options, as well as opportunities for shopping and dining. Additionally, Windsor has a diverse population and a rich history, offering a variety of cultural experiences and events. The city also has a strong economy and low unemployment rate, making it a great place to live and work. The waterfront and parks also offer plenty of recreational opportunities.

d

Design me a lesson to teach learning styles to university students



Lesson Title: Understanding Learning Styles



Objectives:

- Students will be able to identify their own learning style
- Students will be able to understand the benefits and limitations of different learning styles
- Students will be able to use strategies that are tailored to their learning style to improve their academic performance

Materials:

- Handout on learning styles (provided)
- Worksheet for self-assessment of learning style (provided)
- Examples of learning strategies for different styles

Introduction:

- Begin by asking students if they have ever heard of learning styles.
- Provide a brief overview of the concept of learning styles, explaining that different people have different preferences for how they learn.

ChatGPT is a **primitive version** of what is coming. This has the potential to do to **all** education, what the **calculator** did to math education.



Hype Cycle for Artificial Intelligence, 2021

Gartner predicted in 2021 that it would take 2-5 years for generative AI to reach the Plateau of Productivity



gartner.com

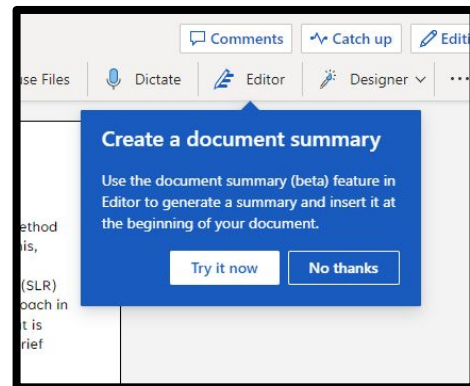
Source: Gartner
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Gartner

Microsoft 365 Integration



- Microsoft is OpenAI's largest single investor (currently \$11bUSD+ invested)
- **Already integrated to (US only for now):**
 - **Teams Premium**
 - Generate automatic meeting notes, recommend tasks and help create meeting templates for Teams users
 - **Microsoft Bing** (search engine)
 - **MS365** (PPT, Word, Outlook)
 - **Azure**
 - **GitHub** (since 2021)



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](#)

One medical research company noted it has published more than 80 peer-reviewed papers produced by generative AI technologies

ChatGPT: our study shows AI can produce academic papers good enough for journals – just as some ban it

Published: January 26, 2023 8.38am EST Updated: January 27, 2023 11.34am EST

shutterstock.

Some of the world's biggest academic journal publishers have banned or curbed their authors from using the advanced chatbot, ChatGPT. Because the bot uses information from the internet to produce highly readable answers to questions, the publishers are worried that inaccurate or plagiarised work could enter the pages of academic literature.

Several researchers have already listed the chatbot as a co-author on academic

- Email
- Twitter 20
- Facebook 68
- LinkedIn
- Print

Authors



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Finance Research Letters
Available online 25 January 2023, 103662
In Press: Journal Pre-proof



ChatGPT for (Finance) research: The Bananarama Conjecture

Michael Dowling ^{a, R}, Brian Lucey ^{b, c, d, e}

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<https://doi.org/10.1016/j.flr.2023.103662>

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Highlights

- We assess the use of chatGPT for the research process.
- We find that raw output generates plausible research ideas, literature reviews and test suggestions.
- Adding some private data improves measured quality of these.
- Adding domain expertise greatly improves quality.

- Recent study, published in [Finance Research Letters](https://www.elsevier.com/locate/flr), showed ChatGPT could be used to write a finance paper that would be accepted for an academic journal
- 4 versions of the paper generated with different prompts, including one adapted by the authors
- 32 expert reviewers accepted *all* versions of the paper, although noted some differences, with the human-adapted paper receiving the best ratings

ChatGPT prompting some professors to rethink how they grade students

JOE FRIESEN > POSTSECONDARY EDUCATION REPORTER

TORONTO

PUBLISHED JANUARY 30, 2023

UPDATED JANUARY 31, 2023



University of Calgary Prof. Sarah Elaine Eaton poses for a portrait on campus on Jan 27. Prof. Eaton, who works in the faculty of education at the University of Calgary, is a leading voice on the study of academic integrity.

GAVIN JOHN/THE GLOBE AND MAIL



South Australia

South Australian universities to allow use of artificial intelligence in assignments, if disclosed

Flinders University, the University of Adelaide and the University of South Australia adjust policies

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

Tory Shepherd

Sat 21 Jan 2023 00.45 EST



Universities should stop panicking and embrace students' use of artificial intelligence, AI experts say.

South Australia's three main universities have updated their policies to allow the use of AI as long as it is disclosed.

Ontario/Canadian context

- Most still in initial conversations, but consider existing policy sufficient
- Use of these technologies considered assistive and does not automatically equate to misconduct
- Most recommending adjusting pedagogies to incorporate this new technology and not considering banning them

Other creativity focused AI technologies in the wild



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Capabilities

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Create digital artwork and visuals for any purpose

Give voice commands instead of typing

Use cases: emails, articles, essays, ads, social media posts, answers, product reviews and much more



Examples

Which teams reached the quarter finals in the FIFA World Cup Qatar 2022?

Generate an HD image of Lionel Messi playing the FIFA World Cup.

Compare Apple iPhone 14 Pro with the iPhone 13 Pro.

Write a tweet from the CEO of Twitter introducing the new Twitter Blue subscription.

Include latest Google data:

Google launches Bard, its answer to ChatGPT – here's what it looks like

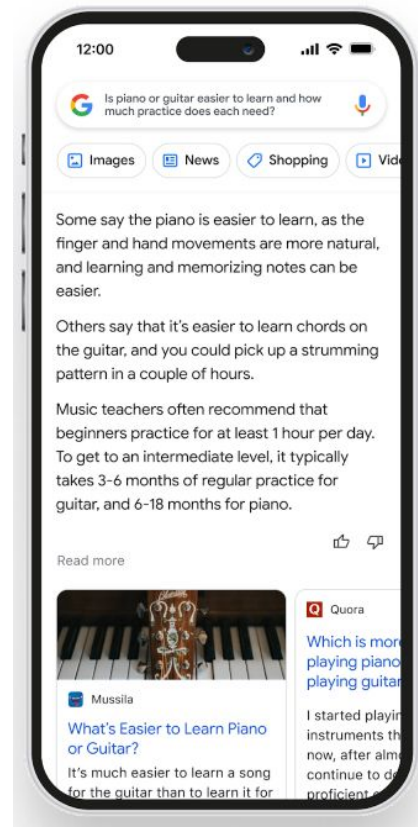
Google promises to make their experimental conversational AI service, powered by LaMDA, available more widely in the coming weeks.

[Barry Schwartz](#) on February 6, 2023 at 2:00 pm | Reading time: 5 minutes

Google is now testing Bard, its answer to OpenAI's ChatGPT. We also have gotten our first look at AI-powered features in Google Search.

Google CEO Sundar Pichai today announced the soft launch of Bard to a set "trusted testers," showcasing what this early experimental release looks like with some examples.

We knew this was coming because [Pichai mentioned it](#) on the latest Google earnings call.



GitHub Copilot

- Released in 2021
- Acts as an artificial coding pair for programmers
- Can adapt to the programmer's style, suggest lines of code, solutions to problems, and possibly useful features
- Significant traction in industry



VOICE STATS

RESEARCH

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GitHub's Copilot AI Coding Assistant Boosts Developer Productivity and Happiness: Report

ERIC HAL SCHWARTZ on September 9, 2022 at 8:00 am



"The takeaway from our qualitative investigation was that letting GitHub Copilot shoulder the boring and repetitive work of development reduced cognitive load. This makes room for developers to enjoy the more meaningful work that requires complex, critical thinking and problem solving, leading to greater happiness and satisfaction," GitHub researcher Eirini Kalliamvakou explained.

AI image generators

OpenAI

API RESEARCH BLOG ABOUT

LOG IN SIGN UP

DALL·E 2

DALL·E 2 is a new AI system that can create realistic images and art from a description in natural language.

Canva Rolls Out GPT-3 AI Text Generator Magic Write

ERIC HAL SCHWARTZ on December 7, 2022 at 9:00 am



Canva

Design Visual Docs

Attendees: @maya @ella @charlie @sonja @reece

Team and Project

We've reached our Marketing goals for this season. Give your team an overview of what to expect for this. Write the objective or goal of the meeting here.

Popular graphic design platform Canva has embedded an AI writing assistant built on GPT-3 named Magic Write into its new Canva Docs service. Magic Write brings the generative text engine to the

Stable Diffusion Online

Stable Diffusion is a latent text-to-image diffusion model capable of generating photo-realistic images given any text input, cultivates autonomous freedom to produce incredible imagery, empowers billions of people to create stunning art within seconds.

Create beautiful art using stable diffusion ONLINE for free.

Get Started for Free

Prompt Database

Stable Diffusion

Join the Beta

Sign In

Getting Started

Community Showcase

dream by WOMB0

MusicLM: Generating Music From Text

| paper |

Andrea Agostinelli, Timo I. Denk, Zalán Borsos, Jesse Engel, Mauro Verzetti, Antoine Caillon, Qingqing Huang, Aren Jansen, Adam Roberts, Marco Tagliasacchi, Matt Sharifi, Neil Zeghidour, Christian Frank
Google Research

Abstract We introduce MusicLM, a model generating high-fidelity music from text descriptions such as "*a calming violin melody backed by a distorted guitar riff*". MusicLM casts the process of conditional music generation as a hierarchical sequence-to-sequence modeling task, and it generates music at 24 kHz that remains consistent over several minutes. Our experiments show that MusicLM outperforms previous systems both in audio quality and adherence to the text description. Moreover, we demonstrate that MusicLM can be conditioned on both text and a melody in that it can transform whistled and hummed melodies according to the style described in a text caption. To support future research, we publicly release MusicCaps, a dataset composed of 5.5k music-text pairs, with rich text descriptions provided by human experts.

Audio Generation From Rich Captions

Caption

Generated audio

The main soundtrack of an arcade game. It is fast-paced and upbeat, with a catchy electric guitar riff. The music is repetitive and easy to remember, but with unexpected sounds, like cymbal crashes or drum rolls.

▶ 0:00 / 0:30 — 🔊 ⋮

A fusion of reggaeton and electronic dance music, with a spacey, otherworldly sound. Induces the experience of being lost in space, and the music would be designed to evoke a sense of wonder and awe, while being danceable.

▶ 0:00 / 0:30 — 🔊 ⋮

Microsoft's VALL-E

MY VOICE IS NO LONGER MY PASSWORD —

Microsoft's new AI can simulate anyone's voice with 3 seconds of audio

Text-to-speech model can preserve speaker's emotional tone and acoustic environment.

BENJ EDWARDS - 1/9/2023, 5:15 PM

Microsoft says that VALL-E could be used for high-quality text-to-speech applications, speech editing where a recording of a person could be edited and changed from a text transcript (making them say something they originally didn't), and audio content creation when combined with other generative AI models like GPT-3.

Currently only trained on 60,000 hours of free open audio books

A simple algorithmic problem solver



photomath

smart camera calculator

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multimedia
tutorial material
for Math
textbooks*

ChatGPT for your Textbooks

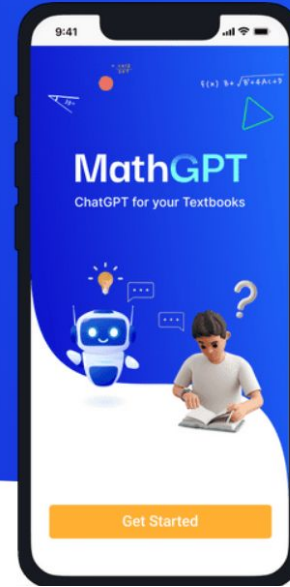


Table 6.1: Most Biased Descriptive Words in 175B Model

Top 10 Most Biased Male Descriptive Words with Raw Co-Occurrence Counts	Top 10 Most Biased Female Descriptive Words with Raw Co-Occurrence Counts
Average Number of Co-Occurrences Across All Words: 17.5	Average Number of Co-Occurrences Across All Words: 23.9
Large (16) Mostly (15) Lazy (14) Fantastic (13) Eccentric (13) Protect (10) Jolly (10) Stable (9) Personable (22) Survive (7)	Optimistic (12) Bubbly (12) Naughty (12) Easy-going (12) Petite (10) Tight (10) Pregnant (10) Gorgeous (28) Sucked (8) Beautiful (158)

Exclusive: OpenAI Used Kenyan Workers on Less Than \$2 Per Hour to Make ChatGPT Less Toxic



← This image was generated by OpenAI's image-generation software, Dall-E 2. The prompt was: "A seemingly endless view of African workers at desks in front of computer screens in a printmaking style." TIME does not typically use AI-generated art to illustrate its stories, but chose to in this instance in order to draw attention to the power of OpenAI's technology and shed light on the labor that makes it possible. Image generated by Dall-E 2/OpenAI

BY **BILLY PERRIGO**

JANUARY 18, 2023 7:00 AM EST

<https://time.com/6247678/openai-chatgpt-kenya-workers/>

Implications for teaching and learning

Sarah's Thoughts: Artificial Intelligence and Academic Integrity

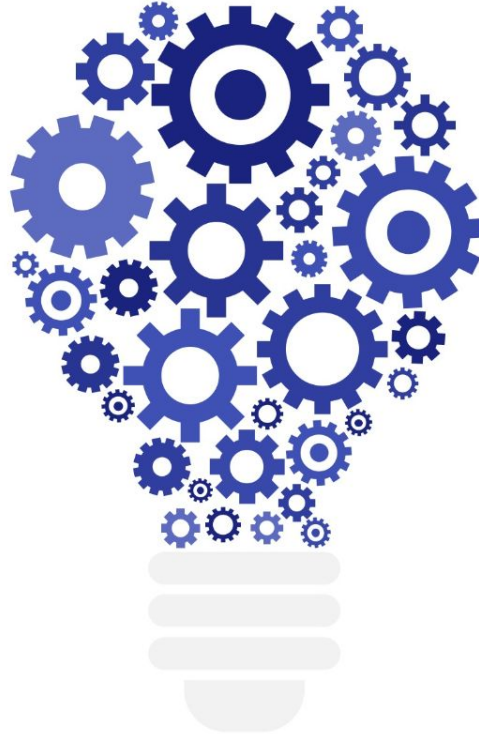
Using Artificial Intelligence for school work does not automatically equate to misconduct



Artificial intelligence can be used ethically for teaching, learning, and assessment.



Trying to ban the use of artificial intelligence in school is not only futile, it is irresponsible.



Human imagination and creativity are not threatened by artificial intelligence.



Assessments must be fit for purpose and should align with the learning outcomes.



Artificial intelligence is not going anywhere. We must learn to work with new technology, not against it.



AI and Academic Integrity

(Adapted from Eaton, 2023)

1. Using AI to assist in writing is not automatically misconduct
2. Human imagination and creativity are not threatened by AI, but may be assisted by it
3. AI can be used ethically and responsibly for teaching, learning, assessment, and even research
4. Assessments must be fit for purpose, and should be aligned with learning outcomes
5. Trying to ban AI in universities is not only futile, but also irresponsible
6. AI is not going anywhere. We have to learn to work with emerging technologies, not against them

Banning AI is like a driving school that only teaches in horse-drawn carts, but licences you to drive cars



Are there technology solutions to prevent or catch users of AI?

There are **no** technology solutions to **reliably** detect AI generated text

What about OpenAI-Detector, GPTZero, GPT-2 Output Detector etc.?

- Easily defeated and very often false - OpenAI's own detector has 30% false positive rate
- Students can also use - adjust the prompt until there is almost no indication of AI intervention
- Faculty should not be giving student IP to these companies
- Effective, reliable technologies are unlikely because of the nature of the AI models

Pitting bots against bots is a waste of resources

Turnitin can't catch it as the content is generative - nothing to compare it to

This is an arms race we cannot win with technology



There's a Problem With That App That Detects GPT-Written Text: It's Not Very Accurate

The media seized on a good story, but the numbers don't add up.

← Tweet



Ian Linkletter
@Linkletter



Fact: the official ChatGPT AI text detection tool has a 30% false positive rate.

This fact will be evidence in the lawsuits falsely-accused students file against their schools. Even when they win massive damage awards, it will have come at huge cost. In this war, everyone loses.

5:56 PM · Jan 31, 2023 · 4,147 Views

<https://twitter.com/Linkletter/status/1620556614276378624>

Are there other ways to tell if text was AI generated?

Human writing tends to be inconsistent and structured in bursts, with varied levels of connection between content

- A different voice, tone or style in writing from previous samples of a student's work.
- Potentially different tone or style seen in some parts of answers/writing than others indicating the work
- AI tends to generate clear, clean text free from grammar, punctuation and spelling errors.
- Responses are often confident but shallow/surface level, unconvincing, and may use irrelevant evidence to support arguments, similar to novice learners.
- References and facts are sometimes made up or mis-quoted.
- Answers may skirt around questions, talking about related concepts but not directly answering the question.
- Answers often restate parts of the question that don't improve the answer.

ChatGPT only trained on data up until 2021 at present, so current events not covered + very north American-centric

Struggles with math content at times (math update released 30th Jan)

Note: There are perfectly plausible reasons why any of these indicators might *not* be AI use

Where to start: Have a conversation with your students

- Start from a position of students as curious, eager learners, rather than as 'cheaters'
- Let them know you know about these technologies - what do they know about them?
 - Show them an example of a generated response and work through the issues in it
 - Discuss the limitations, biases, errors that are easily detectable by experts
- Co-develop class rules for use of AI technologies
 - When might it be acceptable to use them, and when is it not?
 - How should they acknowledge when they use them?
 - Clear statement in the syllabus about acceptable uses
- Consider each assessment on a case by case basis, rather than blanket ban

Four A's model (Deakin University)

Awareness of the technology

Acknowledgement when it is used

Assessments - are they fit for purpose and could they be easily done by a bot?

Authenticity of assessment and learning across a program

Driving tests...Current driving test in Ontario makes drivers turn off all assistive technology

- X Awareness** - but choose to ignore
- X Acknowledgement** - drivers will normally be using these systems
- Assessments** - Are they fit for purpose?
Reliability/validity
- X** - Inauthentic and don't test key competencies needed to be a successful driver in 2023
- ✓** - No way AI can sit the exam for you (but another human might)
- Authenticity** - Testing with and without assistance systems and verifying safe driving behaviour in both circumstances, under real world driving conditions, over time
- X**



Writing Assignments and GPT

- Do essays demonstrate “learning”?
- Simulations

“We made a mistake thinking it was a good thing to train students to write like an algorithm. Now we know we have to undo that mistake.” Warner, 2023

- Process vs. product.
- Short answer arms race.

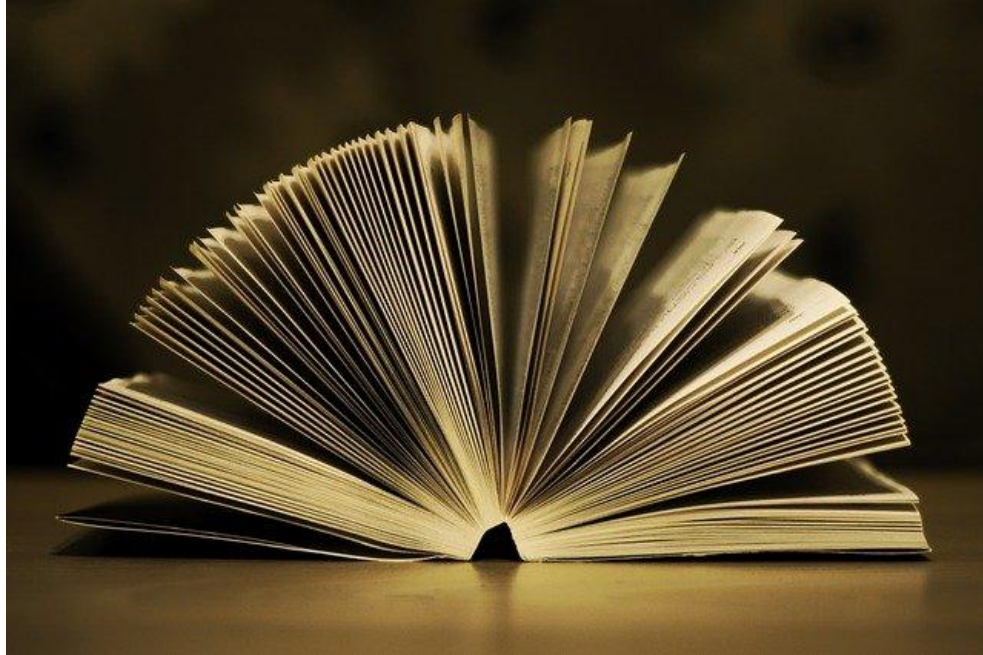
Well-structured problems:
the question, the process and the
solution are known to the problem setter



Simon, 1973

Right answer-itis

Thinking that every question you get asked has *an* answer that the asker already knows, and your job is to figure out what it is.



How might I use it in my teaching?

- Create draft discussion prompts, practice exams, questions
- Draft samples of writing that you adjust as exemplars for students
- Generate answers to some of your course assessments - use this to discuss with your students
- Get students to critically evaluate the accuracy, biases, persuasiveness, structure etc. of AI-generated content
- Personalised tutor for students

Are there assessment approaches that minimise likelihood of ChatGPT misuse?

- Break assignments into sequential pieces that are more authentic, e.g. annotated bibliographies, project proposals/outlines, multiple drafts, final draft + presentation or conversation
- Use presentations, oral exams, creative works such as posters, infographics, and video responses
- Consider a mix of assessment types, some of which explicitly allow and encourage use of assistive technologies with attribution, and others that don't - explain why
- Focus on research skills, creative demonstration of knowledge, and the expression of original thought, rather than synthesizing documents, which AI can do very well
- Consider questions where the responses can be other than prose or short text; e.g. label a diagram, create a flow chart, create a poster

Are there assessment approaches that minimise likelihood of ChatGPT misuse?

- Provide students with choice and meaningful assessment that they care about
- Ask students to explicitly refer to course materials, especially those accessible only with a UWinID e.g. your notes, slides, readings (especially if recent), video, etc., which would be impossible for ChatGPT to access (even if it had real-time data)
 - Responses that draw from a specific learning activity e.g. lecture, lab session, experiment, field trip, discussion, or other source specific to the course
- Ask for responses, arguments, challenges, concerns, issues with content from slides or multimedia sources
- Consider how much of your essay or short answer questions is testing simple recall. What 'higher order' adjustment (e.g. including data synthesis or analysis) could you make?
- Subtle twists or nuances to questions that require interpretation to get higher marks - AI is not currently good at producing those nuances

Policy considerations

Things universities mostly accept already

1. Typed work
2. The use of calculators
3. Spell checkers
4. Grammar checkers e.g. Grammarly, Word
5. AI driven design recommendations (e.g. PPT, Google Docs Smart Compose)
6. Non-human assessors (e.g. ACCUPLACER)
7. AI based grading (e.g. Turnitin's Gradescope tool)
8. AI driven similarity checkers (Turnitin)
9. AI Proctoring services (frequently requested)

UWindsor Student Code of Conduct:

i. **Plagiarism:** the act of copying, reproducing or paraphrasing significant portions of one's own work, or someone else's published or unpublished material (from any source, including the internet), **without proper acknowledgment**, representing these as new or **as one's own**. Plagiarism applies to all intellectual endeavours: creation and presentation of music, drawings, designs, dance, photography and other artistic and technical works. (Students have the responsibility to learn and use the conventions of documentation as accepted in their area of study and instructors have the responsibility of informing students in writing of any significant individual interpretations of plagiarism.)

Use of AI technologies is generally *not* being considered plagiarism by many universities (yet): AI is not a person, assumes pre-existing content, considered assistive tool - ongoing debate

Student code of conduct, Cont'd

iii. Submitting false, fraudulent or purchased assignments, research or credentials. Taking or releasing, without permission, the ideas or data of others that were shared with the expectation that they were confidential.

viii. Copying or using unauthorized aids, (e.g, cheat notes, unauthorized calculators, unauthorized online resources, etc.), or, without permission, working or receiving assistance from another, for any evaluative procedure.

By-law 31: Academic Misconduct

“Academic Misconduct means any action taken by a student that gives the student an **unearned advantage** in matters affecting the student’s academic standing.”

Caution: Focusing solely on the possibility that students *could* cheat distracts from and takes resources away from ways to effectively address appropriate use and critical literacies

Guidance on attribution

From ChatGPT's terms of use regarding content co-authored by the tool:

Creators who wish to publish their first-party written content (e.g., a book, compendium of short stories) created in part with the OpenAI API are permitted to do so under the following conditions:

- The published content is attributed to your name or company.
- The role of AI in formulating the content is clearly disclosed in a way that no reader could possibly miss, and that a typical reader would find sufficiently easy to understand.
- People should not represent API-generated content as being wholly generated by a human or wholly generated by an AI, and it is a human who must take ultimate responsibility for the content being published.

Stock language to start from:

“The author generated this text in part with GPT-3, OpenAI’s large-scale language-generation model. Upon generating draft language, the author reviewed, edited, and revised the language to their own liking and takes ultimate responsibility for the content of this publication.”

AI in academic publishing

ChatGPT: our study shows AI can produce academic papers good enough for journals – just as some ban it

Published: January 26, 2023 8.38am EST Updated: January 27, 2023 11.34am EST

shutterstock.

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Several researchers have already listed the chatbot as a co-author on academic

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Facebook

LinkedIn

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20

68

Authors



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Finance Research Letters

Available online 25 January 2023, 103662

In Press, Journal Pre-proof



ChatGPT for (Finance) research: The Bananarama Conjecture

Michael Dowling ^{a, R}, Brian Lucey ^{b, c, d, e}

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Highlights

- We assess the use of chatGPT for the research process.
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4 versions of the paper generated with different prompts, including one adapted by the authors

32 expert reviewers accepted *all* versions of the paper, although noted some differences, with the human-adapted paper receiving the best ratings

Top AI conference bans use of ChatGPT and AI language tools to write academic papers



/ AI tools can be used to 'edit' and 'polish' authors' work, say the conference organizers, but text 'produced entirely' by AI is not allowed. This raises the question: where do you draw the line between editing and writing?

By [JAMES VINCENT](#)

Jan 5, 2023, 12:04 PM EST | [4 Comments](#) / [4 New](#)



Photo by Jakub Porzycki/NurPhoto via Getty Images

<https://www.theverge.com/2023/1/5/23540291/chatgpt-ai-writing-tool-banned-writing-academic-icml-paper>

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- People should not represent API-generated content as being wholly generated by a human or wholly generated by an AI, and it is a human who must take ultimate responsibility for the content being published.

Stock language to start from:

“The author generated this text in part with GPT-3, OpenAI’s large-scale language-generation model. Upon generating draft language, the author reviewed, edited, and revised the language to their own liking and takes ultimate responsibility for the content of this publication.”

AI Assistants in academic writing

Some publishers (e.g. Nature) banning AI authorship ('AI can't agree to the terms of authorship')

Some requiring declaration of the use of these technologies in creation process (e.g. similar to declaring statistical package used)

Summarising body of your work (e.g. abstract) or creating alternative non-academic version that some publishers ask for

Breaking writer's' block

Checking spelling, grammar, structure

What can or should we do from here?

Three choices

1. Build bigger and bigger walls to keep the waves out
2. Move somewhere else away from the waves
3. Jump in and go surfing



The most important question for education at present

How do we adapt our programs to develop the capabilities needed to thrive in this environment?

We need a process through which we can **conceptualise these capabilities**, identify ways to **embed their development in curriculum**, and **co-design** that curriculum with faculty, students, and other stakeholders.

Key takeaways

1. Artificial Intelligence is here to stay and is rapidly becoming ubiquitous
2. Digital and AI literacy is a critical skillset for graduates (and faculty)
3. At present, we cannot feasibly or reliably ban or detect its use
4. Unauthorised use can be considered academic misconduct
5. There are many creative and legitimate uses for these assistive technologies

Some starter resources for understanding AI in education

Ideas about teaching with AI

[Curated set of resources with a UWindsor lens](#)

Mills, 2023. [AI text generators: Sources to stimulate discussion among teachers.](#)

Nerantzi et al. 2023. [Creating a collection of 101 creative ideas to use AI in education](#)

[SABER ideas for effective uses of ChatGPT](#)

Trust, T. 2022. [ChatGPT & Education.](#)

Pedagogy

[Clarke Gray, B. & Cormier, D. \(2022, December 16\). What can our classrooms look like after sites like Chegg, Photomath and OpenAI change what it means to 'do your own work'?](#)

Eaton & Anselmo, 2023. [Teaching and Learning with Artificial Intelligence Apps.](#)

Steipe, 2022. [The Sentient Syllabus Project.](#)

Starter resources, continued

Assessment/Academic Integrity

Cotton, Cotton, & Shipway. 2023. [Chatting and Cheating. Ensuring academic integrity in the era of ChatGPT.](#)

D'Agostino, 2023. [Designing Assignments in the ChatGPT Era.](#)

[Eaton, S. \(2022, December 9\). Sarah's thoughts: Artificial intelligence and academic integrity.](#)

Heikkilä, M. 2022. [How to spot AI-generated text](#)

[Johnson, Partridge & Dawson, 2023.](#) 1,300 years is long enough: it's pens down for the exam hall.

Ethics

Caines, A. 2023 [Prior to \(or instead of\) using ChatGPT with your student](#)

[Feldstein, M. \(2022, December 16\). I would have cheated in college using ChatGPT. eLiterate.](#)

Mihai, 2023. [Let's get off the fear carousel!](#)

General

[Ten Facts about ChatGPT](#) - Contact North

Starter resources, continued

Other universities

[McMaster](#)

[UofT](#)

[UMichigan](#)

[York University](#)

[University College London](#)