Session 2: AI and English Language Teaching
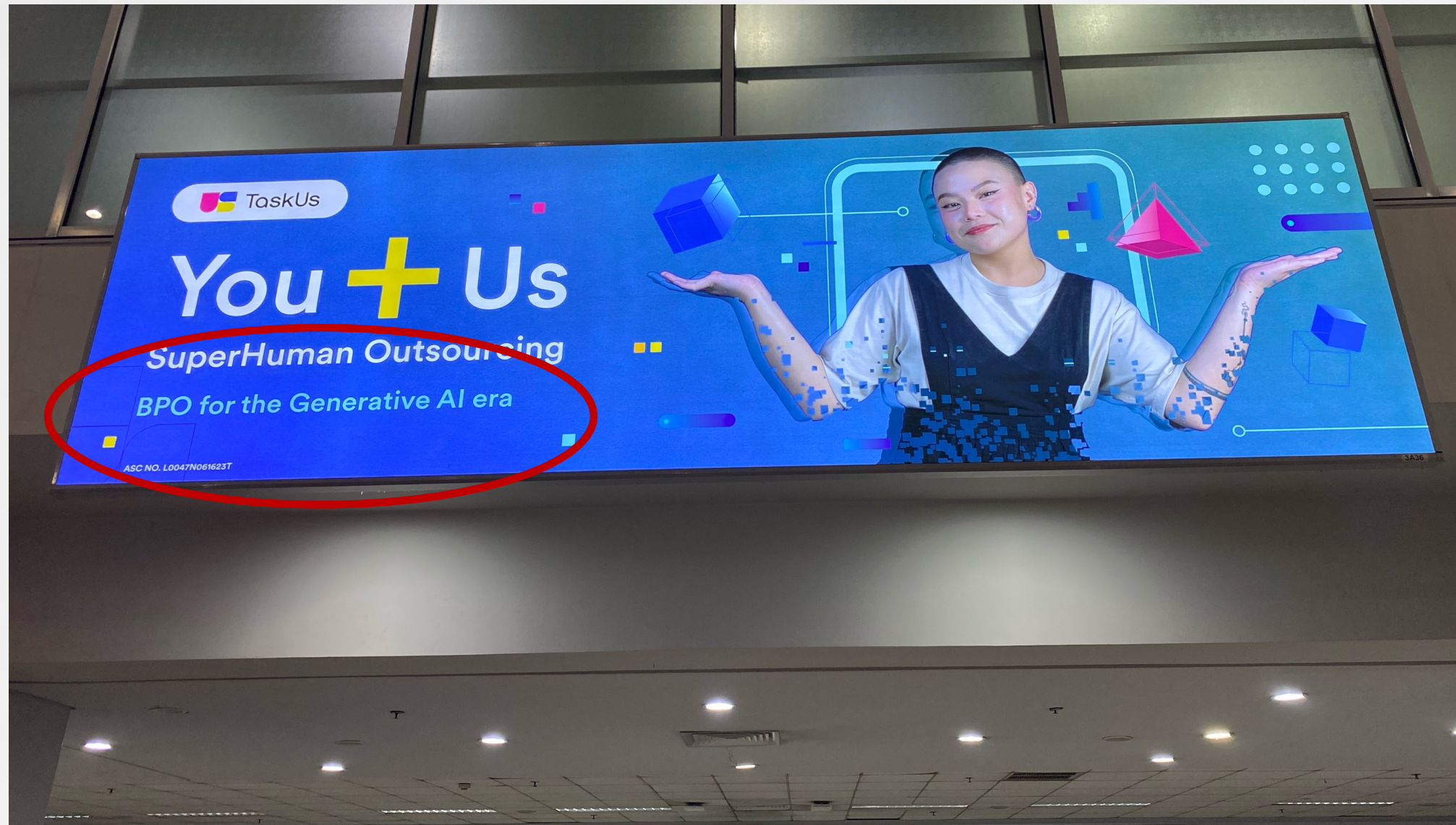
Dr. Peter Sayer, Ohio State University

Far Eastern University, Institute of Education
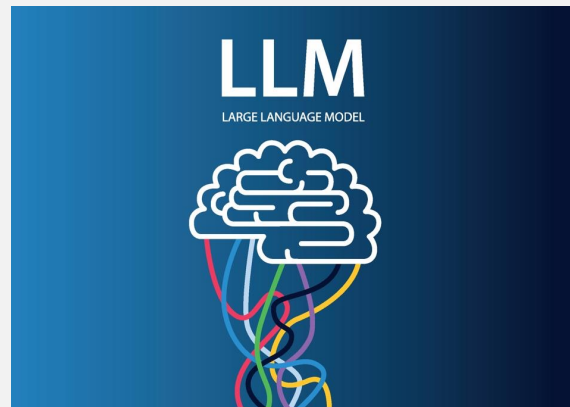**December 5, 2023 – Manila, PH**

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AI and Language Teaching | Sayer

Session 2: AI and English Language Teaching

- Brief overview of AI/ChatGPT

- Prompt engineering

- AI as a pedagogical tool for language teaching
  - ChatGPT tasks
  - Diffit

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Using AI in Teaching: Three issues

1

Teaching Resource: ChatGPT as a resource for helping me create lessons and materials

2

Pedagogical Tool: Use interactively with students to harness the power of AI to enrich teaching

3

Policy: Clear guidelines for how students (and teachers) should use ChatGPT responsibly. and learning.

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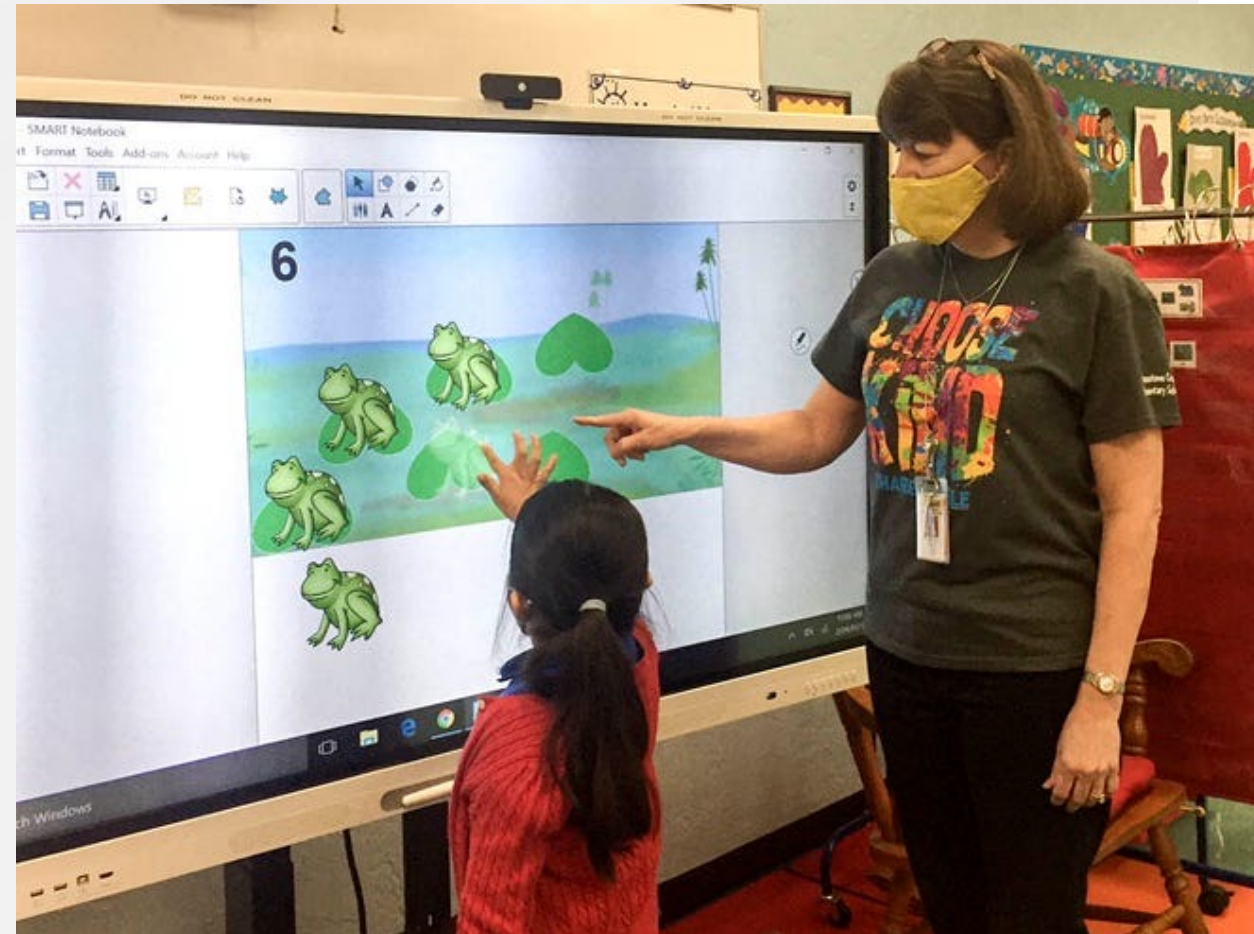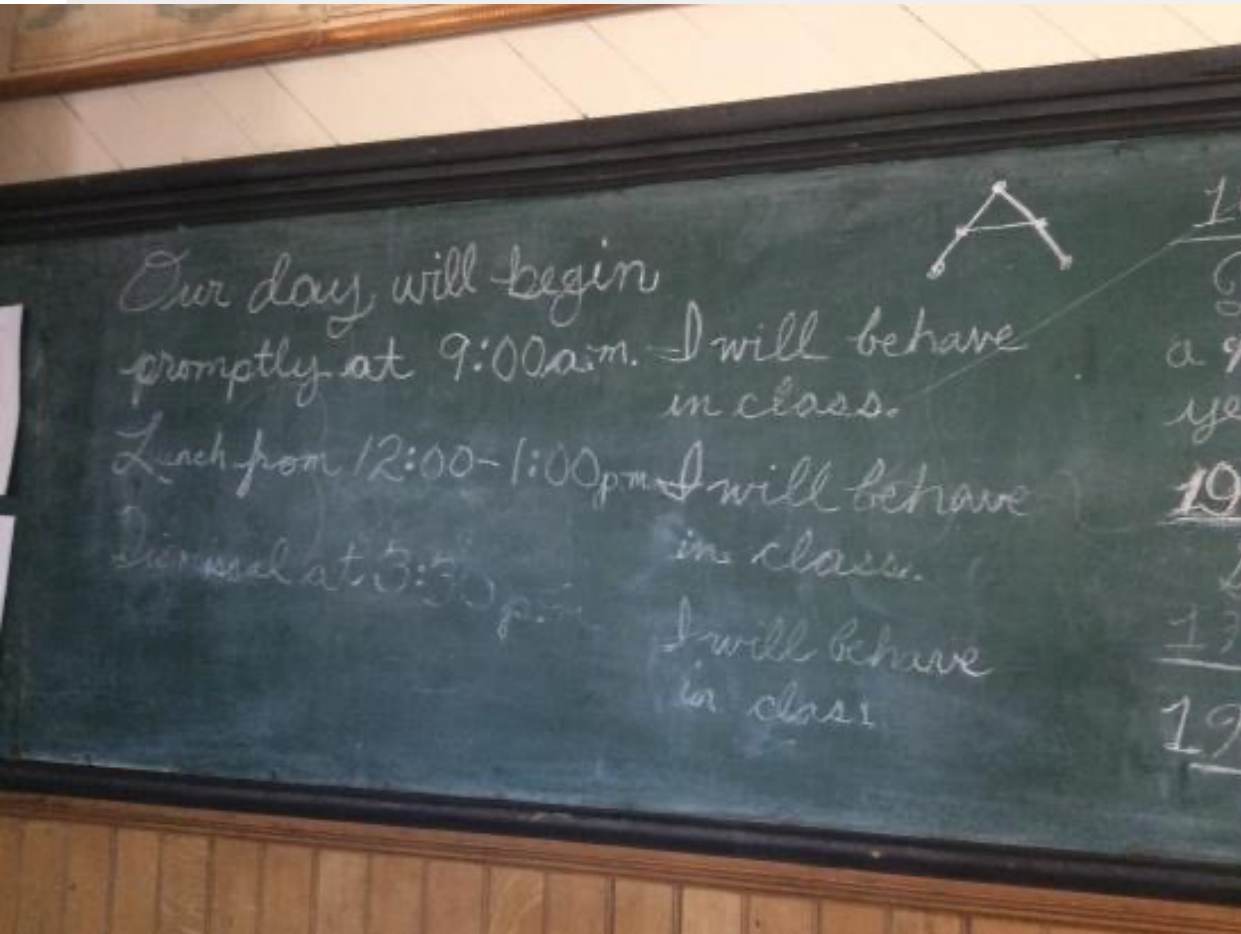COLLEGE OF
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AI for English Language Educators

- Quick overview of AI/ChatGPT

- Prompt engineering

- AI as a pedagogical tool for language teaching
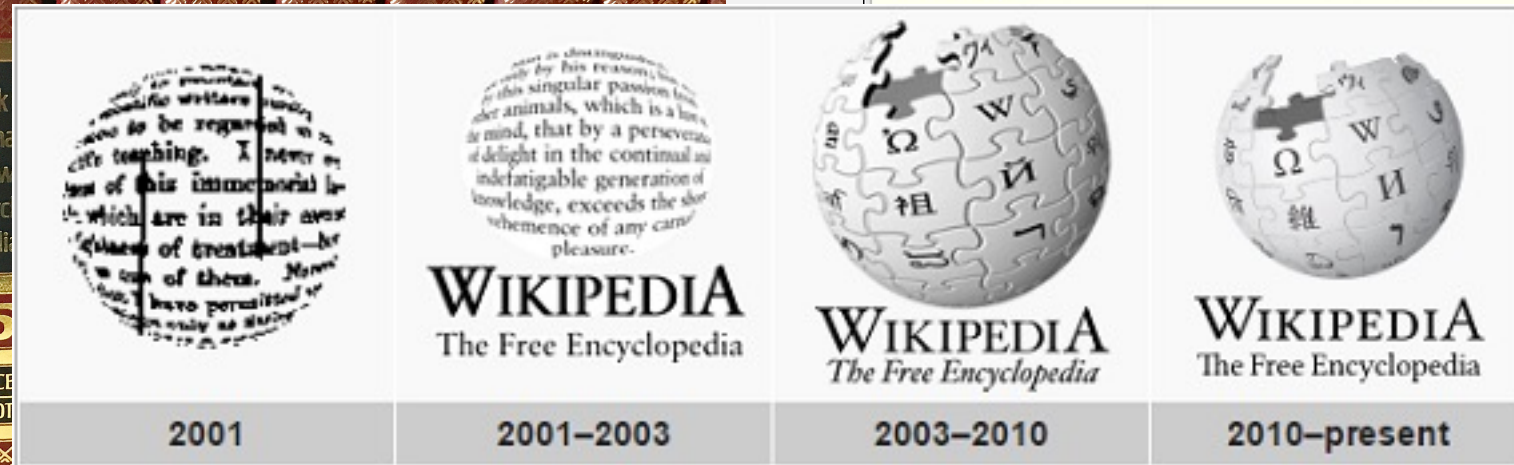 - ChatGPT tasks
  - Diffit

Technology and education

Technology and education

Paul Pimsleur, Professor of Foreign Languages at Ohio State University, pioneered the development of language learning labs in the 1950-60s, and established one of the first graduate programs in the U.S. in foreign language teaching and research at OSU.
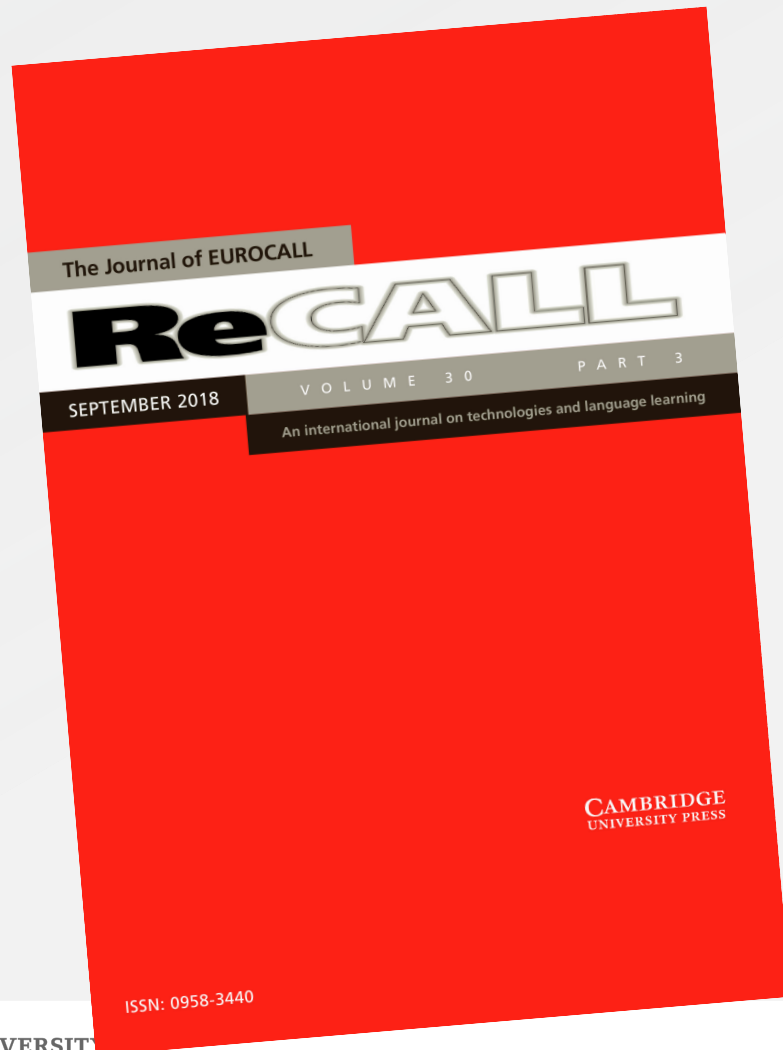
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Technology and language learning

Technology and language learning

An L2 English learning project in Second Life hosted by the British Council in 2007

How does social media change the possibilities for language learners?

Technology and language learning

Quick overview: How ChatGPT Works

- ChatGPT is a type of advanced "chatbot"

- **Chatbots are a type of "Generative AI"**

- An AI can "think": it can generate novel content based on a limited input

- **It is powered by a "brain" called a large language model**

- AIs now exist to create text, images, music, voices, videos

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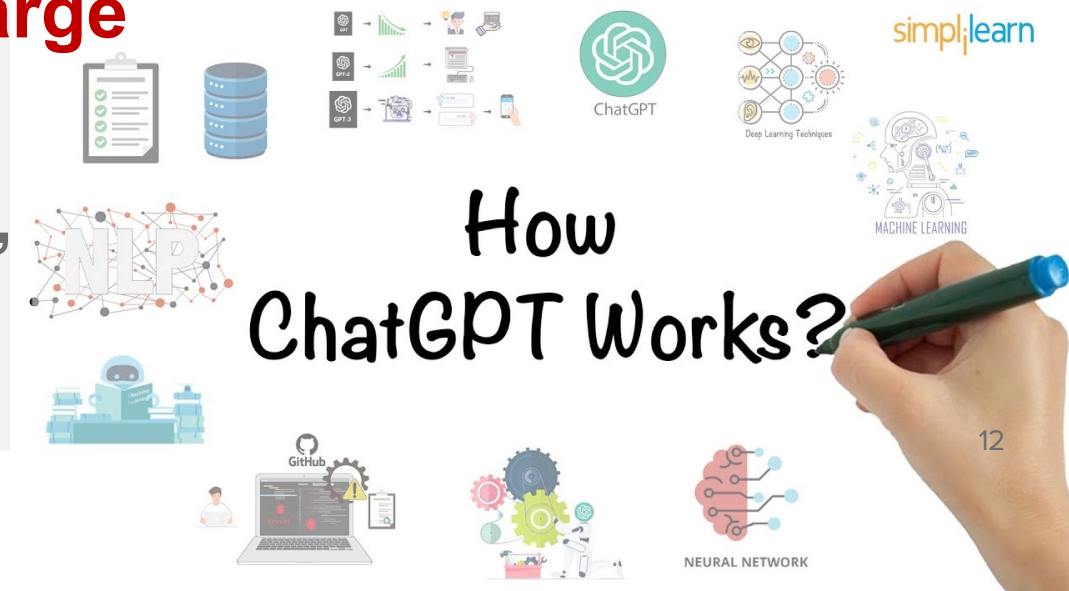
Corpus linguistics
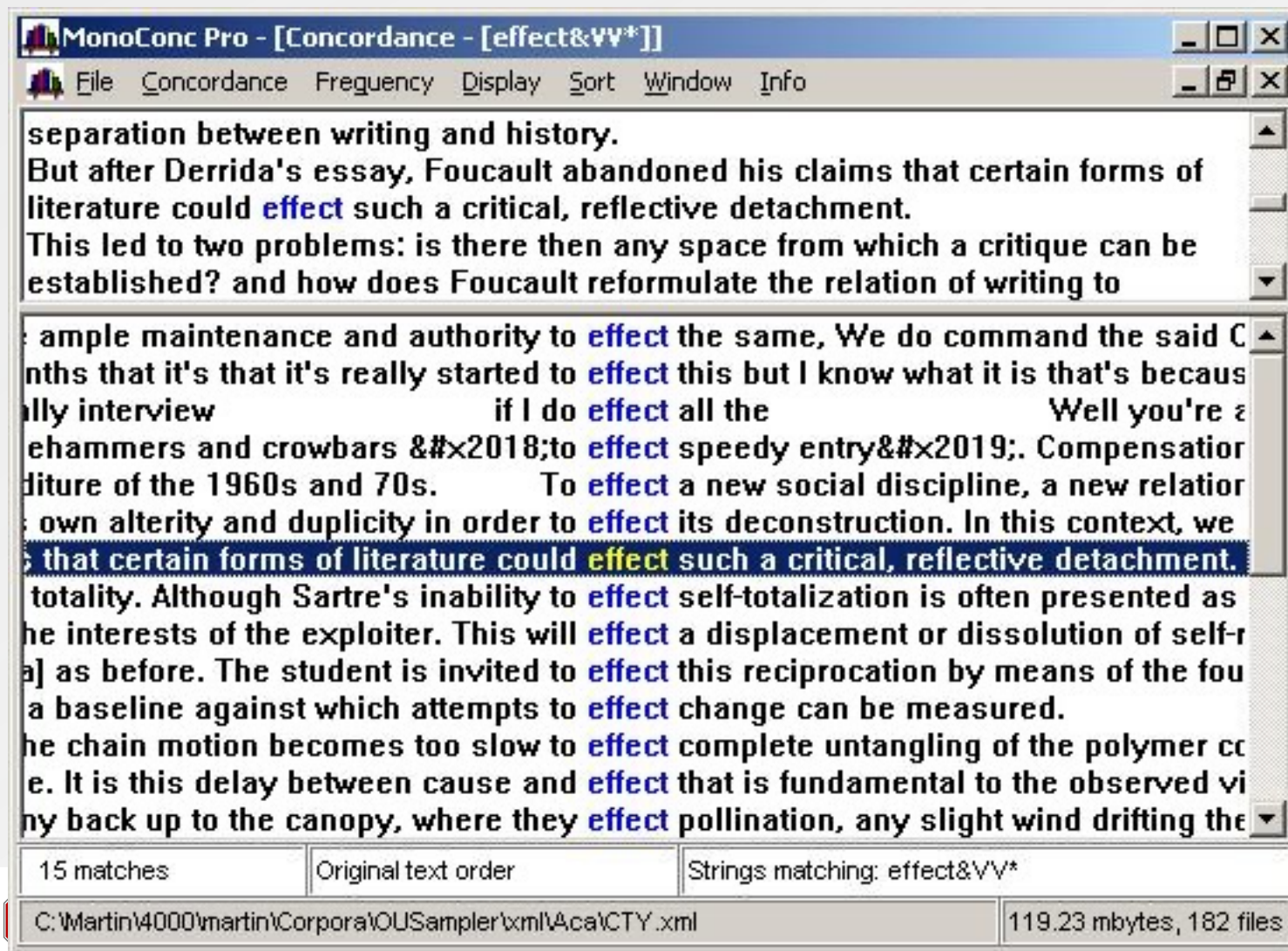
Generative Pre-training Transformer

- **Next-word predictor algorithm**

- **Predicts % likelihood of given word based on its "large language model" = giant dataset of billions of co-occurrences of words**

  - *Mary had a little ____*

  87% • *Mary had a little lamb.*

  12% • *Mary had a little lamb, its fleece was white as snow.*

  1% • *Mary had a little piece of lettuce stuck in her teeth.*

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Large language model as AI brain

Does AI "understand" language?

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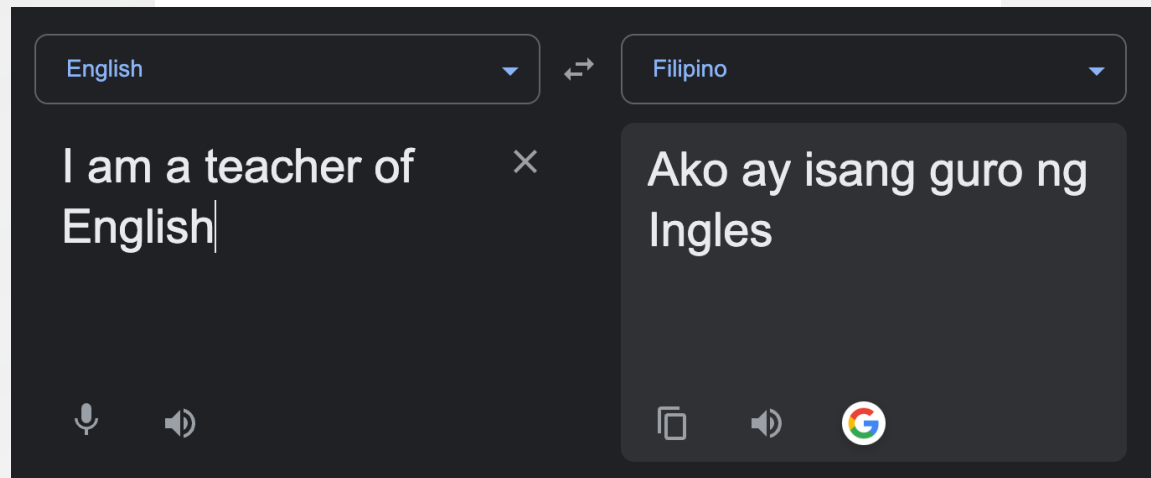
The Turing Test
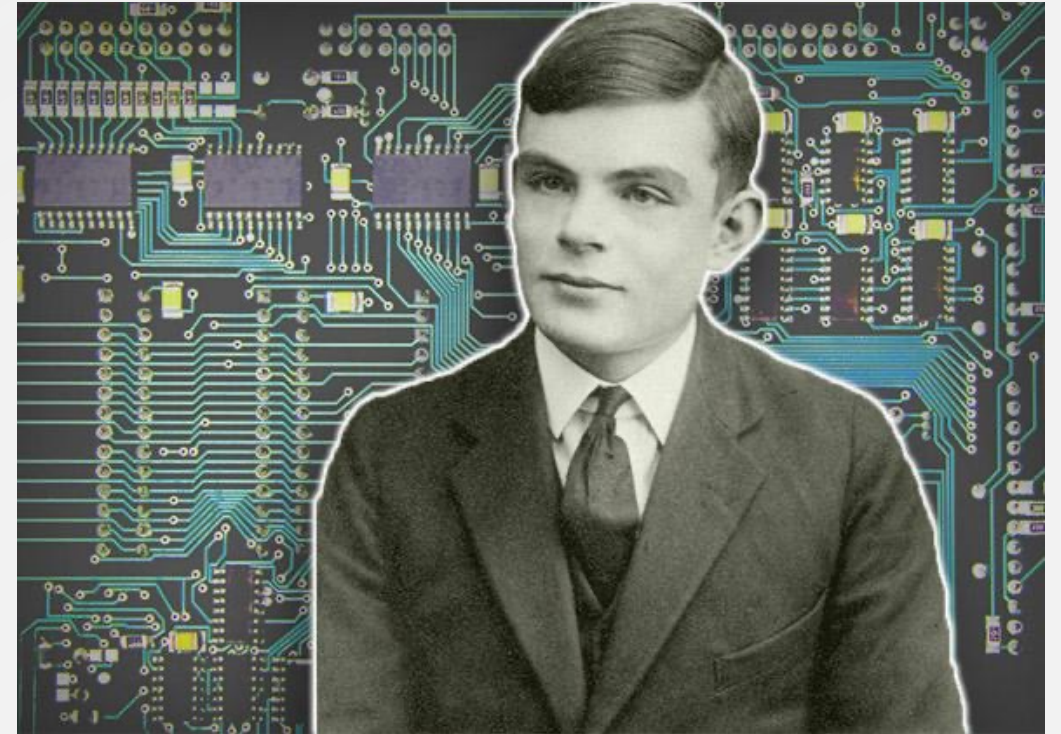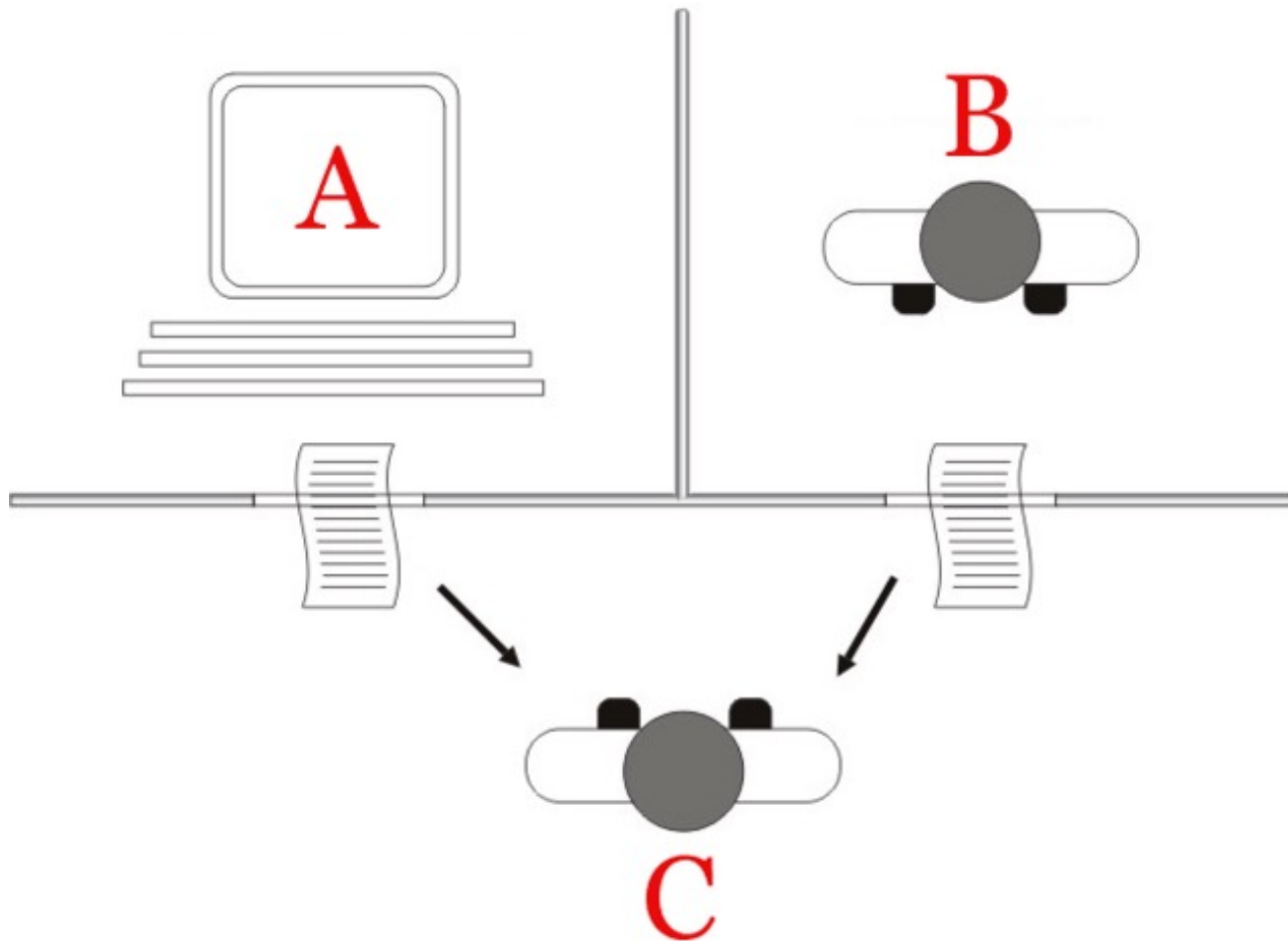
Alan Turing (1912-1954)
Inventor of the idea of artificial intelligence

The "he picked it up and took it" problem

Bill saw John's wallet on the table.
He picked it up and took it.

Which is the correct interpretation?

   a. John took the table.
   b. John took the wallet.
   c. Bill took the table.
   d. Bill took the wallet.

Implied meaning:

   a. Bill stole the wallet.
   b. Bill is a thief.

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Can ChatGPT understand meaning in context?

PS Use the following sentences to create a very short story about John and Bill: Bill saw John's wallet on the table. He picked it up and took it.

Other AI tools

Text-to-image generators

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Dezgo: "a teacher and a group of students in a classroom in a post-apocalyptic classroom"

The Beatles - Bad Boy (deepfake)

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PS I am a university professor named Peter Sayer. I work at the Ohio State University and I teach courses and do research in Education and Linguistics. Write a short introduction for a video script in Korean.

안녕하세요 여러분! 저는 피터 세이어라고 합니다. 오하이오 주립대학교에서 교수로 재직하고 있으며, 교육과 언어학 분야에서 강의와 연구를 진행하고 있습니다. 오늘은 여러분께 저의 연구 분야와 교수 경력에 대해 소개해 드리려고 합니다. 교육과 언어학은 매우 흥미로운 분야로, 어떻게 언어가 학습과 교육에 영향을 미치는지에 대해 깊이 있는 연구를 진행하고 있습니다. 또한, 학생들이 언어 능력을 향상시키고 성공적인 학습 경험을 할 수 있도록 다양한 교수법을 개발하고 적용하는 것에 관심을 가지고 있습니다. 저의 연구 결과와 강의 경험을 바탕으로, 여러분과 함께 언어와 교육에 관한 중요한 주제에 대해 살펴보고자 합니다. 많은 관심과 참여 부탁드립니다. 감사합니다!

PS Make it more concise.

안녕하세요! 저는 피터 세이어입니다. 오하이오 주립대학교에서 교수로 연구와 강의를 하고 있습니다. 교육과 언어학을 연구하는데 관심이 많으며, 오늘은 제 연구 분야와 경력에 대해 간단히 소개하려고 합니다. 많은 참여 부탁드립니다! 감사합니다.

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Made with synthesia

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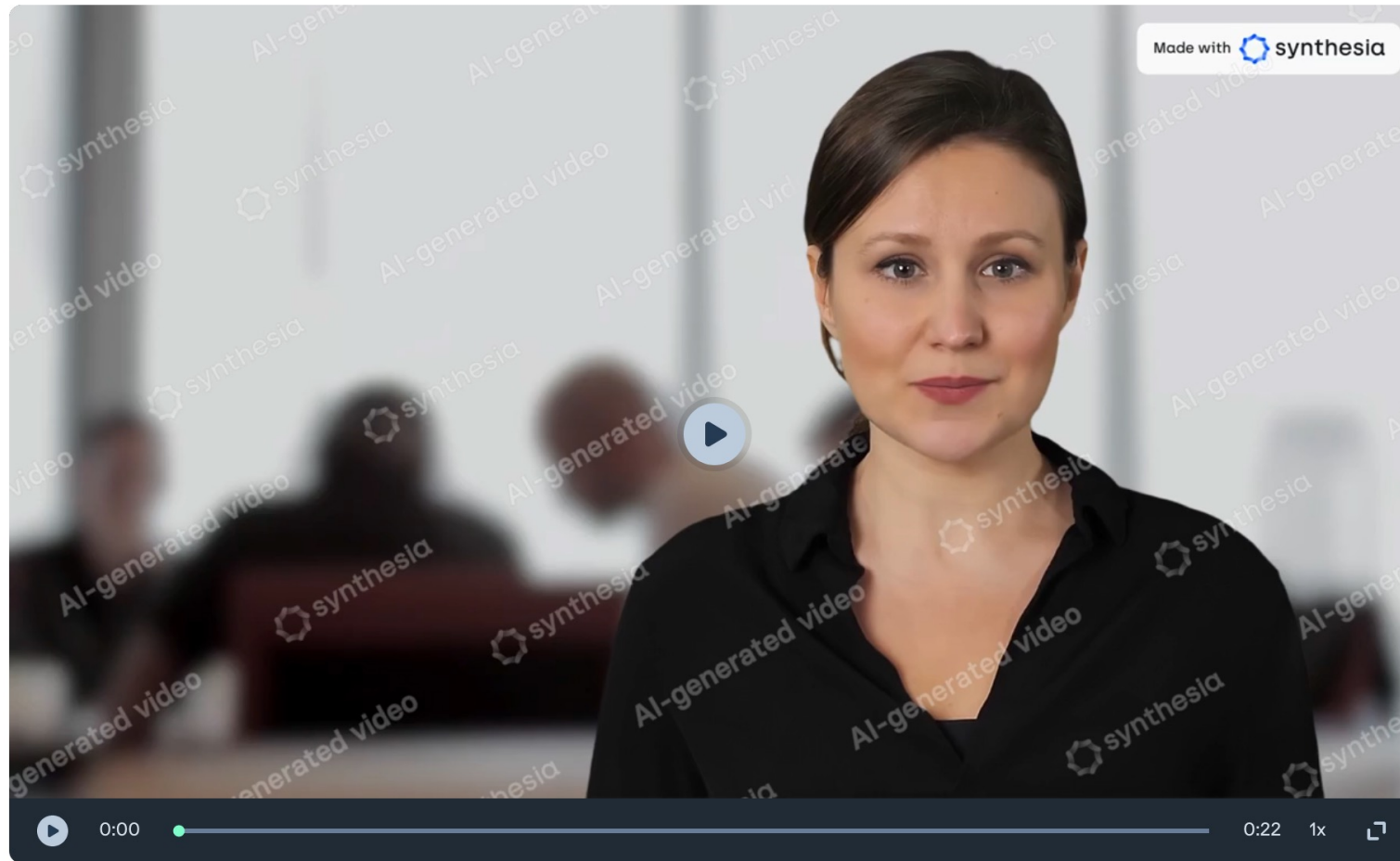
Your AI video

Hi Peter - check out your AI video.

Create Synthesia account

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What ChatGPT does well and not well

✓

✗

- Summarize and synthesize ideas
- Present something in voice X
- Take the point of view of Expert X

- Math
- Source-based writing

ChatGPT writes pretty good term papers but either doesn't use citations or just makes them up.

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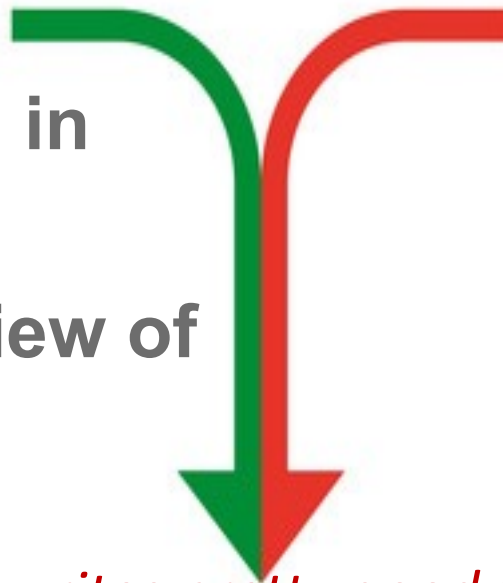
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Prompt Engineering

- **Prompt Engineering: Giving ChatGPT good input (prompt) in order to generate high-quality output**
- **Prompt engineering techniques are "patterns"**

PS You are a physical therapist. I hurt my shoulder playing pickleball and have a condition called "frozen shoulder." Ask me questions one at a time until you have a PT plan for me that I can do at home.

I'm sorry to hear about your shoulder injury and the frozen shoulder condition. To create a personalized home physical therapy plan, I'll need some information from you. Let's start with the basics:

1. Can you describe the level of pain you're experiencing in your shoulder on a scale of 1 to 10, with 1 being minimal pain and 10 being severe pain?

Please provide your pain level, and we can proceed from there.

PS It's about a 3, but if I do a sudden jerking or lunging movement, I get a sharp jolt of pain from my shoulder to my elbow that is a 9

Thank you for sharing that information. It's important to avoid sudden jerking or lunging movements that cause such severe pain. Now, let's work on a home physical therapy plan to help improve your frozen shoulder.

1. Can you tell me how long you've had this condition, and have you received any medical advice or treatment for it before?

Understanding your history will help in tailoring the plan effectively.

↺ Regenerate

Send a message   ➤

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Persona Pattern

- **Act as Persona X**
- **Perform Task Y**

- **Important: Use [+New chat] box in upper left to create a new task**

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PS Write a review of the book "Children of Blood and Bone" by Tomi Adeyemi

"Children of Blood and Bone" by Tomi Adeyemi is an enthralling and powerful fantasy novel that captivates readers from beginning to end. Set in a beautifully crafted West African-inspired world, the story follows Zélie, a young girl with a fiery spirit, as she embarks on a quest to restore magic to her kingdom.

Adeyemi's writing is vivid and immersive, effortlessly transporting readers into a world filled with rich cultural detail and breathtaking magic. The depth of the world-building is truly impressive, and the way Adeyemi weaves in themes of identity, oppression, and the struggle for justice adds an important layer of depth to the story.

The characters in "Children of Blood and Bone" are compelling and multi-dimensional. Zélie, in particular, is a fierce and relatable

Persona Pattern

PS — Act as a 7th grader. Write a review of the book "Children of Blood and Bone" by Tomi Adeyemi.

🟢 — OMG, you guys, "Children of Blood and Bone" by Tomi Adeyemi is like the most epic fantasy book EVER! I mean, seriously, it's got everything you could want - magic, adventure, and a super cool heroine.

First of all, the world-building is off the charts! Adeyemi creates this amazing West African-inspired world that is so vibrant and colorful. You can totally picture yourself walking through the dusty streets and feeling the magic in the air. It's like being transported to a whole new universe!

And let me tell you about the characters! Zélie is the main character, and she's fierce and strong. She's got this amazing connection to magic and is on a mission to bring it back to her people. I was rooting for her the whole way, and she never disappoints. Plus, there's this swoon-worthy romance going on, and I couldn't help but ship it so hard!

Persona Pattern

Pattern refinement:

- **Act as a 7th grader.**

- **Act as a smart, serious 7th grader.**

- **Act as a serious 7th grader.**

- **Act as a 7th grader … using straight-forward language.**

Persona Pattern

PS

Act as a 7th grader. Write a review of the book "Children of Blood and Bone" by Tomi Adeyemi using straight-forward language.

"Children of Blood and Bone" by Tomi Adeyemi is an awesome fantasy book. It's about a girl named Zélie who has to bring back magic to her kingdom. The world in the book is really cool, with a lot of African-inspired stuff that makes it different from other fantasy stories.

The characters are interesting, especially Zélie. She's brave and strong, and you can't help but root for her. There's also some romance in the book, which adds an extra layer of excitement.

The story is packed with action and surprises. There are intense battles and moments where you just can't put the book down. Sometimes you can kind of predict what's going to happen, but there are also some twists that catch you off guard.

"Children of Blood and Bone" also makes you think about important

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Persona Pattern

Can ChatGPT speak Taglish?

Persona Pattern

- **Act as Persona X**
- **Perform Task Y**

You are a non-native speaker of English with low intermediate proficiency in English.

Write an email to your boss explaining why you deserve a raise.

Include linguistic features, problems, and errors that a low intermediate level non-native speaker of English would make.

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Subject: Request for Salary Increase

Dear [Boss's Name],

I hope this email finds you in good health and high spirits. I am writing to you today to humbly request a salary increase. I believe that I have been working diligently and have made significant contributions to the company over the past year.

Firstly, I have been working hardly on improving my skills and abilities since I joined the company. I have attended various training sessions and workshops to enhance my knowledge in my field of expertise. Moreover, I always take on additional responsibilities and projects whenever they are assigned to me. I have also taken the initiative to learn new software programs and tools that are essential for our work. All of these efforts have resulted in an increased efficiency and productivity in my work.

Furthermore, I have been receiving positive feedback from both

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PS Act as an English as a second language teacher. Give critical feedback to the previous non-native speaker's email about ways to improve their English.

Subject: Feedback on Your Salary Increase Request

Dear [Employee's Name],

I hope this email finds you well. I have reviewed your email requesting a salary increase, and I appreciate your efforts to communicate your accomplishments. However, I would like to offer some feedback to help you improve your English skills and make your message more effective.

1. Greeting and Opening:
   - It would be more appropriate to use "I hope this email finds you well" instead of "I hope this email finds you in good health and high spirits."
   - Instead of "I am writing to you today to humbly request," you can simply say "I am writing to request."
2. Language and Word Choice:
   - Instead of "working hardly," you can use "working hard" to indicate your strong efforts.
   - Instead of "enhance my knowledge in my field of expertise," you

<u>Act</u> as an ESL teacher...

- **Greeting and Opening**

- **Language and Word Choice**

- **Grammar and Sentence Structure**

- **Clarity and Conciseness**

- **Politeness and Closing**

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Audience Persona Pattern

PS Explain translanguaging to a linguist.

Translanguaging is a theoretical and pedagogical concept that has gained prominence in the field of sociolinguistics and language education. It challenges traditional notions of language boundaries and promotes a more fluid and dynamic understanding of language use.

In its essence, translanguaging recognizes that multilingual individuals and communities do not strictly separate languages but instead draw on their entire linguistic repertoire to communicate and make meaning. It goes beyond the traditional view of languages as discrete and isolated systems and embraces the idea that language is a social practice that is intertwined with culture, identity, and communication.

Translanguaging acknowledges that individuals are not limited to using a single language at a time but rather employ a continuum of linguistic resources, which may include words, phrases, grammatical structures, and even non-verbal elements, to express themselves. It emphasizes the idea that language is a flexible and creative tool that can be used

Audience Persona Pattern

PS | Explain translanguaging to a layperson

Translanguaging is an idea that challenges the traditional view of languages as separate and distinct entities. Instead, it recognizes that people who speak more than one language often mix and blend their languages together in their everyday communication.

Imagine you have a friend who speaks both English and Spanish. When they talk, they may use words and phrases from both languages, switching back and forth depending on what feels most natural or appropriate at the moment. They might even use a combination of both languages in a single sentence. This mixing and blending of languages is what we call translanguaging.

Translanguaging is not a mistake or a sign of confusion; it is a natural and creative way of using language. It allows people to fully express themselves and connect with others, drawing on the different languages they know. It's like having a toolbox of languages and using the right tool for the job.

Translanguaging is particularly common in bilingual or multilingual communities, where

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Audience Persona Pattern

PS   Explain translanguaging. Assume I am a third grader who loves Pokeman.

Hey there, Pokeman fan! Let's talk about translanguaging in a way that relates to your favorite Pokémon world.

Translanguaging is like having a special power that lets you use different languages together, just like different Pokémon powers! You know how Pokémon have different moves that they can use in battles, right? Well, think of languages as different moves, and translanguaging lets you use those moves together to communicate.

Imagine you're talking to a friend who speaks a different language, let's say Spanish. You might know some words in Spanish and some in English. With translanguaging, you can mix those words together and have a fun conversation using both languages. It's like having a Pokémon that can use a combination of fire and water moves at the same time!

Just like in the Pokémon world, where trainers and their Pokémon work together to win battles, translanguaging allows people who speak different languages to work together and understand each other better. It's like having a powerful team of Pokémon that can

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hing | Sayer

Flipped Interaction Pattern

- **I am teacher. I have an immigrant student who is struggling with English. Ask me questions one at a time until you can suggest a tailored plan to help my student learn English.**

- **Ask me the first question.**

Flipped Interaction Pattern

- I would like you to ask me questions to achieve X

- You should ask questions until condition Y is met or to achieve this goal (alternatively, forever)

- (Optional) ask me the questions one at a time, two at a time, ask me the first question, etc.
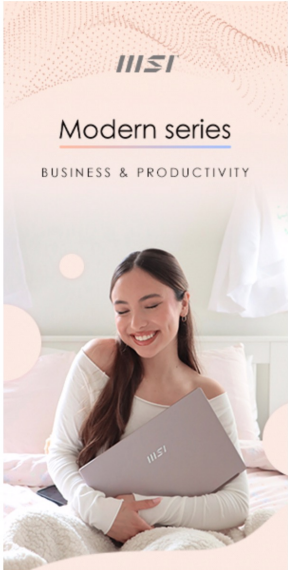
What to do about student use of ChatGPT

HOME > BUSINESS INSIDER

Studies show ChatGPT cheating is on the rise among students — young and old — as teachers remain divided on bans

Aaron McDade Feb 8, 2023, 5:18 PM EST

Getty

- Over one in four teachers in a recent Study.com survey say they have caught students cheating by using ChatGPT.

- Some educators say it can be easy to detect AI-written work, but they understand the concern many others have.

- Others also believe it can be used to help students learn, and could make teachers' jobs easier.

ONCE A CHEAT

89 PERCENT OF COLLEGE STUDENTS ADMIT TO USING CHATGPT FOR HOMEWORK, STUDY CLAIMS

WAIT, WHAT!?

GETTY IMAGES/FUTURISM

TAIcher's Pet

Educators are battling a new reality: easily accessible AI that allows students to take immense shortcuts in their education — and as it turns out, many appear to already be cheating with abandon.

Online course provider Study.com asked 1,000 students over the age of 18 about the use of ChatGPT, OpenAI's blockbuster chatbot, in the classroom.

The responses were surprising. A full 89 percent said they'd used it on homework. Some 48 percent confessed they'd already made use of it to complete an at-home test or quiz. Over 50 percent said they used ChatGPT to write an essay, while 22 percent admitted to having asked ChatGPT for a paper outline.

Can we detect AI-generated texts?

🔊 pla·gia·rism

noun

noun: **plagiarism**; plural noun: **plagiarisms**

the practice of taking someone else's work or ideas and passing them off as one's own.
"there were accusations of plagiarism"

Similar: copying | infringement of copyright | piracy | theft | stealing | poaching | ⌄

Origin

GREEK | LATIN | LATIN

plagion → plagium → plagiarius
              a   kidnapper
          kidnapping   ENGLISH → plagiarism
                         -ism   *early 17th century*

early 17th century: from Latin *plagiarius* 'kidnapper' (from *plagium* 'a kidnapping', from Greek *plagion*) + -ism.

GPTZero

The World's #1 AI Detector with over 1 Million Users

ChatGPT Killer

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Ethics and Policy

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Categories

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Archives

The Ethics of Colleg

April 17, 2023

By Sierra President, Spring 2023 Office of

As AI technology continues to advance,
looking for ways to incorporate it into t
that has gained attention in recent yea
developed by OpenAI that can generat
user input. While ChatGPT has potenti
raises important ethical consideration

Great opening, right? Well, how woulc
instead it is a product of ChatGPT's hu
you, then you may be a part of the es
since its release in November 2022.[1]

AI is changing the way that the worlc
technology for almost every aspect c
assignments, and writing papers. Wi
information, the ethical dilemmas o
wonder if we should even be using

What are the ethical c

When users log into the ChatGPT si
importantly outlines the limitation:
incorrect information" and "may o
parent company for ChatGPT, also
may reinforce biases over time, ar

Knowing how unreliable this can k
know how to feel about its usage.

Can we use AI to detect AI?

Educators should not fear though, because AI detection tools are available. AI detectors were created to decide if text was AI-generated or human-generated. The AI detectors use a combination of data that compares human text to AI text and notices any patterns that can determine the text's origin. However, anyone using these detection tools should be cautious because the tools' levels of accuracy fluctuate depending on which AI detector is used and the length of text the tool is asked to evaluate. I decided to put these online AI detectors to the test by inputting my introductory paragraph, which was completely written by ChatGPT, in three different websites to see if any could detect the AI.

- **GPTZero**, claims to be the world's #1 AI detector, but determined that my input was "likely to be written entirely by a human," which we know to be untrue. The site does say that if educators plan to use GPTZero's conclusions, the educators should include GPTZero's information as only part of their assessment and should maintain a holistic view of each case.

- **Content at Scale** provides a human content score percentage. This site determined that there was a combination of AI and human generated information. More specifically, this detector gave the paragraph a 72 percent human content score, specifying that the first sentence was robotic and possibly artificially generated. This detector did not appear to identify the other sentences to be anything other than human-produced.

- **Writefull** is used to determine the presence of GPT-3, GPT-4 or ChatGPT in a text. This site concluded that there was only a 30 percent chance that the sample paragraph came from one of these AI platforms.

It is important to note that the length of sample text impacts the accuracy of the results. For example, OpenAI's AI Text Classifier was not able to scan the sample paragraph because it did not reach a character minimum. OpenAI has publicly stated that this detector is only 26 percent accurate even when text does meet the minimum number of characters required.[11]

Dilemma: There is currently no way to know with certainty what text has been generated by your student and what is generated by AI.

EDUCATION AND HUMAN ECOLOGY

Rethinking pedagogy and teacher education with AI
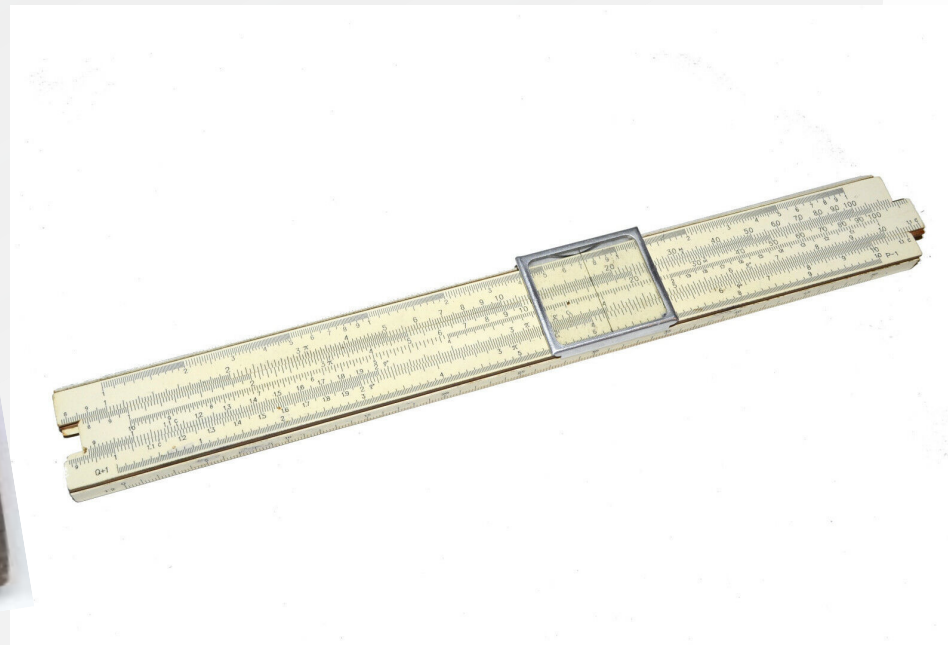
Using AI in Teaching: Three issues

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Teaching Resource: ChatGPT as a resource for helping me create lessons and materials

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Pedagogical Tool: Use interactively with students to harness the power of AI to enrich teaching

3

Policy: Clear guidelines for how students (and teachers) should use ChatGPT responsibly. and learning.

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Default (GPT-3.5)

PS You are president John F. Kennedy. It is October 1962, during the height of the Cuban Missile Crisis. Please answer the following questions.

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AI and Language Teaching | Sayer

← Start new

2nd Grade ⇕   English ⇕   Export ⌄   Share ⌄

⬆ Add image

Causes of the Civil War

___

Adapted Reading Passage   🔖 Show Sources   ✏ Edit   📋 Copy

The Civil War was a big war in America a long time ago. People had different reasons for why they fought in the war. Some people say that the main reason was slavery. Slavery was when some people owned other people and made them work for free. The Southern states wanted to keep slavery, but the Northern states wanted to get rid of it. They argued about it a lot and couldn't agree. This made the Southern states decide to leave the United States and start their own country called the Confederate States of America. The president at the time, Abraham Lincoln, didn't want the Southern states to leave, so he tried to stop them. This made the war start.

The war was very bad and a lot of people died. Over 600,000 soldiers died in the war. The North and the South fought against each other for a long time. The North wanted to keep the United States together, but the South wanted to be their own country. They fought in many battles all across the country. The North eventually won the war and the United States stayed together. Slavery was also ended after the war, which was a good thing because it was not fair to own people. The Civil War was a very important event in American history because it decided what kind of country the United States would be.

49

Summary

Edit   Copy

• The Civil War was a big war in America a long time ago.

• The North and the South fought against each other for a long time.

• The North won the war, slavery ended, and the United States stayed together.

Key Vocabulary Words

Add Vocab Words   Edit   Copy

slavery (noun)
Definition: when some people own other people and make them work for free
Example: Slavery was when some people owned other people and made them work for free.

Confederate States of America (proper noun)
Definition: the country formed by the Southern states that seceded from the United States during the Civil War
Example: The Confederate States of America was a new country formed by the Southern states during the Civil War.

president (noun)
Definition: the leader of a country
Example: Abraham Lincoln was the president of the United States during the Civil War.

soldiers (noun)
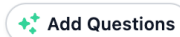Definition: people who fight in a war
Example: Over 600,000 soldiers died in the Civil War.

historians (noun)
Definition: people who study and write about history
Example: Most historians agree that slavery was the main cause of the Civil War.

Multiple Choice Questions

Add Questions   Show Answers   Edit   Copy

1. Why did the Southern states decide to leave the United States?

A) Because they wanted to keep slavery.
B) Because they wanted to start their own country.
C) Because they didn't like Abraham Lincoln.
D) Because they wanted to fight against the North.

2. What was the main reason for the Civil War according to most historians?

A) States' rights
B) Cultural differences

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Ethical Concerns of Using AI in Education

1. **AI may dilute student critical thinking and learning**

2. **AI is potentially dangerous for minors**

3. **AI apps require 'click-though agreements' that takes user data**

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AI and Language Teaching | Sayer

Summary of Main Points

- **ChatGPT and other generative AI apps can be powerful tools for language teachers**

- **Basic prompt engineering skills will help you generate high quality activities, the only limit is your own creativity!**

- **ChatGPT can be an excellent tool for students to use for language learning activities such as role playing, but…**

- **There are some serious ethical concerns and teachers should ensure the technology is being used reponsibly**

Q&A and discussion

Session 2: AI and English Language Teaching

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