

Ilka Kostka, PhD Teaching Professor March 13, 2024 Northeastern University

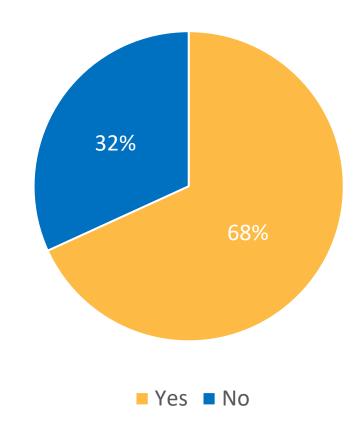
Early December 2022

"Have you heard about ChatGPT?"



Spring 2023

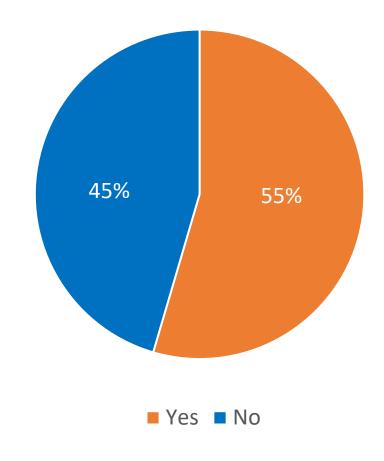
Two sections: Listening and Speaking N=22 Have you ever used ChatGPT?



Spring 2023

Two sections:
Listening and
Speaking
N=22

Do you have a ChatGPT account?



Fall 2023: Grad & undergrad use

N= 101 students

- 100% heard of ChatGPT before September 2023
- 74% used it
- 73% have their own accounts

Same but different?



Google Classroom



ChatGPT

- Available to the public
- Requires little technical expertise
- Versatile
- Quality output
- Customized output
- Fast
- Free (GPT3.5)



Exploring implications for language teaching



Why is there so much hype about AI?

I think AI is unethical, so why should I learn about it?

What do I do if I think a student has cheated with AI?

Should I just ban AI in my classes?

Can't I just use detection programs to identify AI-based writing?

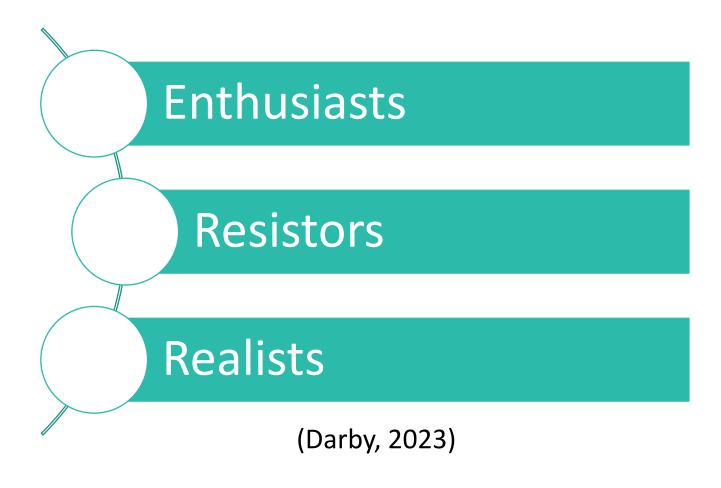
I'm not techie and don't have time. Can't I just keep teaching without it?

I'm overwhelmed, and this is all scary. How do I begin to understand all this?

Possible explanations

- Stirs up emotions (Lo, 2023)
 - Fear (Edmett et al., 2023)
 - "...dread of seeing a profession that's **deeply rooted in human connection and interaction** being taken over by machines" (Lo, 2023, p. 3)

Three main groups



slido



What is one word that describes your feelings towards GenAl in language education?

Today

Explore and critically examine the role of generative AI in language education



Focus

Implications
Pressing questions
Applications to teaching

Polls, discussion breaks, and Padlet



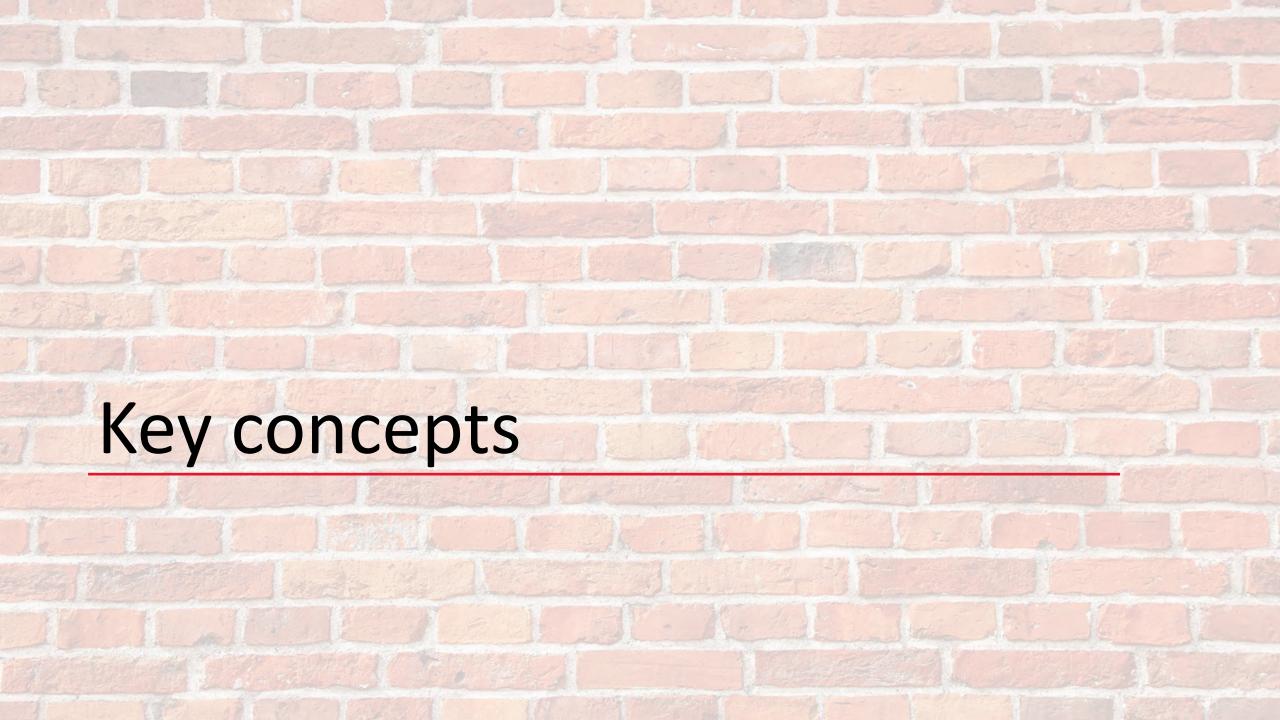
Padlet

• Three takeaways

• **Two** questions

 One topic you'd like to continue exploring





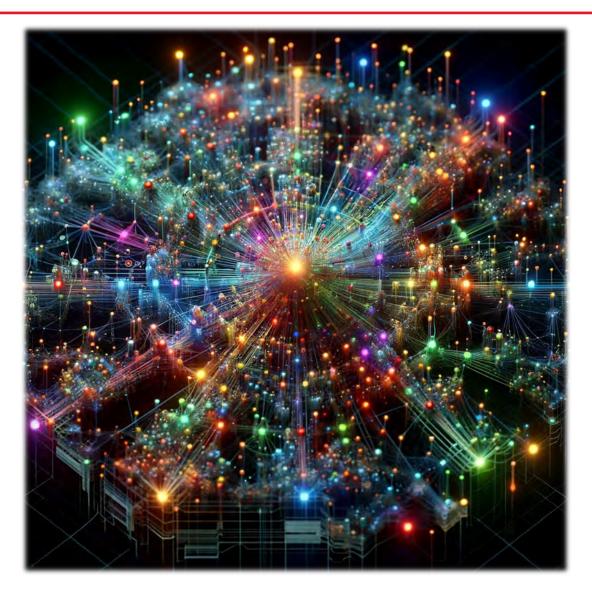
Al

"when machines or software can perform tasks which usually require human intelligence, e.g. problem solving." (University of Sydney, n.d.)

"stochastic parrot" (Bender et al., 2021)



Large language model (LLM)



Generative AI (GenAI)

Creates new content in response to prompts

 Images, text, videos, slides, poetry, art, computer code, and music

Prompt

t

You

Is generative Al disruptive to higher education?

ChatGPT

Yes, generative AI is considered disruptive to higher education for several reasons, impacting how education is delivered, consumed, and valued. This disruption is not limited to language learning but extends across various disciplines and aspects of the educational ecosystem. Here's why:

1. Changing the Nature of Assignments and Assessments

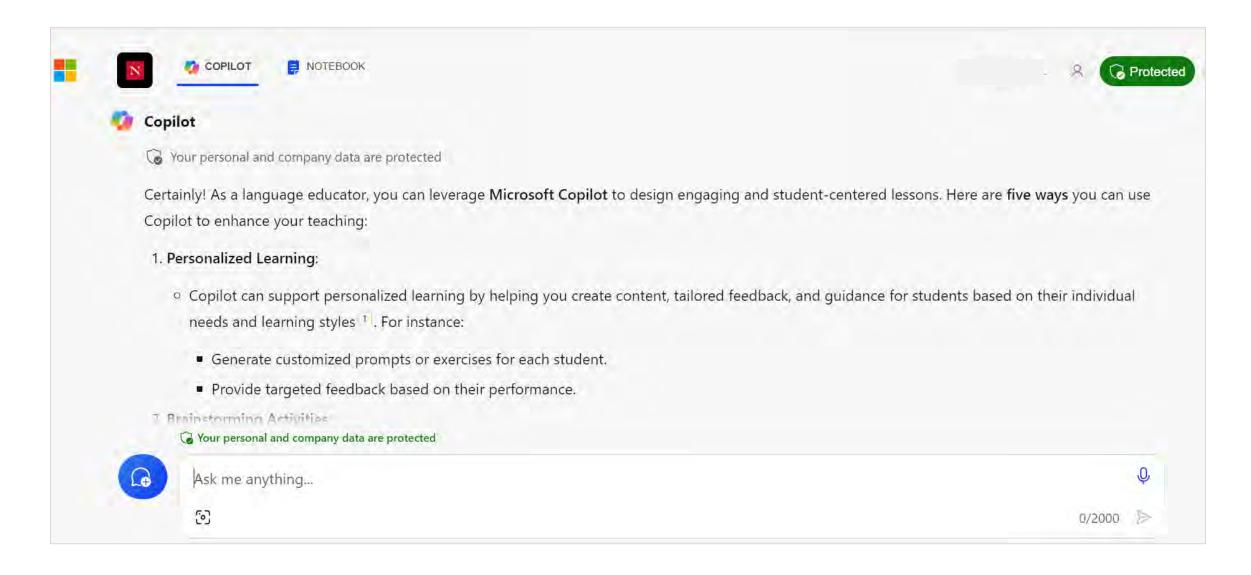
Generative AI, like ChatGPT, can produce sophisticated written content, solve complex problems, and generate code, among other tasks. This capability challenges traditional methods of assessing student knowledge and skills, as it becomes difficult to determine whether work submitted is the student's own or generated by AI. Educators are thus prompted to rethink assignment and assessment formats, possibly shifting towards more project-based learning, oral examinations, and assessments that evaluate critical thinking and problem-solving skills in real-time contexts.

2. Facilitating Personalized Learning

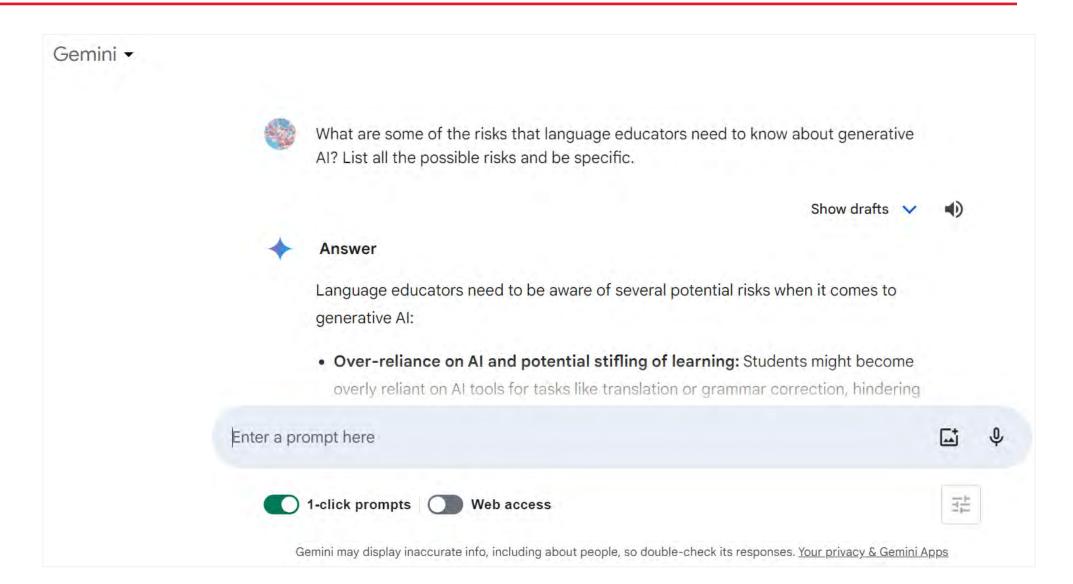
Generative AI can tailor educational content to the needs of individual learners, adapting in realtime to their progress, strengths, and areas for improvement. This personalization can significantly enhance the learning experience but also disrupts traditional one-size-fits-all teaching approaches, necessitating a reevaluation of curricular designs and teaching methodologies.

Response

GenAI: Bing Copilot



GenAI: Gemini (Google)



GenAl: Image creation

DALL-E ~



GenAl: Image creation





Discussion break

 How much technical expertise about GenAI do you think language instructors need?



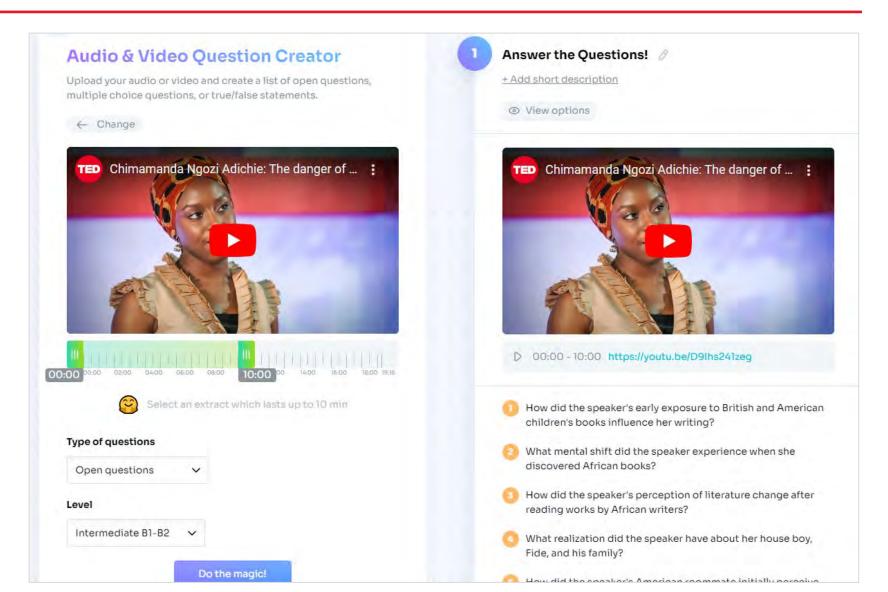
Rewards

- Increase efficiency and personalized feedback (e.g., Farrokhnia et al., 2023)
- Minimize workload (e.g., Banerji, 2023; Herft, 2023)
- Customize content for language development (e.g., Warner, 2023; 2024)
- Develop L2 skills (e.g., Kohnke et al., 2023)
- Innovate & enhance current practices (Kostka & Toncelli, 2023)
- Position us as collaborators with students (Paiz et al., forthcoming)

Support not replace

Content development





Vocabulary study (ChatGPT-4)



You

List the most common adjectives that come before the word "evidence."





ChatGPT

The adjectives that frequently come before the word "evidence" can vary depending on the context in which "evidence" is used, such as legal, scientific, or general discourse. However, here is a list of common adjectives that are often found preceding "evidence":

- Strong suggesting that the evidence is compelling and likely to persuade.
- Compelling indicating that the evidence is convincing and powerful.
- Sufficient meaning that there is enough evidence to support a conclusion or decision.
- Circumstantial referring to evidence that implies a fact but doesn't prove it directly.
- Physical indicating evidence that is tangible, such as objects or material things.
- 6. Conclusive suggesting that the evidence definitively proves something.
- 7. Anecdotal referring to evidence based on personal accounts rather than hard facts.
- 8. Direct indicating evidence that straightforwardly supports a fact without needing inference.
- Substantial suggesting that the evidence is of considerable importance, size, or worth.
- 10. Incontrovertible meaning the evidence is undeniable and not open to question.
- 11. Empirical referring to evidence based on observation or experience rather than theory or logic.
- 12. Forensic relating to scientific methods used to investigate crimes.
- 13. Hard often used interchangeably with strong or compelling, indicating very reliable evidence.
- 14. Weak suggesting that the evidence is not very convincing or is insufficient.
- 15. Indirect referring to evidence that suggests but does not directly prove something.

These adjectives can be applied in various fields, such as law, science, and everyday argumentation, to qualify how evidence is perceived in terms of its strength, reliability, and relevance.

Collocations (Gemini)



List the most common adjectives that come before the word "evidence."



Show drafts





Here are some of the most common adjectives that come before the word "evidence":

- · Strength:
 - Strong, compelling, overwhelming, substantial, clear, definitive
- . Source:
 - Physical, circumstantial, historical, scientific, documentary, eyewitness
- Validity:
 - Credible, reliable, convincing, valid, sound, concrete
- · Impact:
 - Damning, incriminating, exonerating, supporting, conflicting, contradictory
- · Quantity:
- Limited scent emple abundant significant overwindmine.

Vocabulary (German)

Vocabulary (English)	Definition in English	Cognate in German (Similar Form)
Carnival	A festive season that occurs before Lent, featuring parades and public street parties.	Karneval
Costumes	Outfits worn during celebrations or parties to adopt a particular theme.	Kostüme
Parades	Public processions, often celebratory, featuring music, floats, and performers.	Paraden
Festivals	Celebrations or events focusing on a specific theme, often including music and entertainment.	Feste
Traditions	Customs or beliefs passed down from generation to generation.	Traditionen
Lent	A period of fasting and religious observance in Christianity leading up to Easter.	Fastenzeit
Humor	The quality of being amusing or comical.	Humor
Satire	The use of humor, irony, exaggeration, or ridicule to expose and criticize people's stupidity or vices.	Satire
Freedom	The power or right to act, $\sqrt{}$ k, or think as one wants.	Freiheit

Customized dialogues

Small talk: weekend

A: Hi, how are you?

B: I'm good, thanks! How about you?

A: I'm doing well. Did you have a nice weekend?

B: Yes, I went for a walk outside. What about you?

A: I stayed home and watched a movie. It was relaxing.

B: Sounds nice!

Language explanations



I'm learning German and have a hard time understanding word order. In you explain it to me?

Sure! German word order can indeed be tricky for learners due to its flexibility and the rules that govern it. Here are some key points to help you understand German sentence structure:

1. Basic Sentence Structure: Subject-Verb-Object (SVO)

In simple sentences, German follows the SVO order, similar to English. For example:

- •"Ich lese ein Buch." (I read a book.)
- 2. Verb Position in Main Clauses
- •The conjugated verb is always in the second position in a statement.
- •If the sentence starts with an adverbial phrase or object, the subject comes after the verb. For example:
 - "Morgen gehe ich ins Kino." (Tomorrow, I am going to the cinema.)
- 3. Verb Position in Subordinate Clauses
- •In **subordinate clauses**, the **conjugated verb** moves to the **end of the clause**. Subordinate clauses are usually introduced by conjunctions like dass (that), weil (because), wenn (if), etc. For example:

Reading (German)



PROMPT:

The attached document contains a short article written in German about the leap year. Translate this article into simpler German that beginner learners can understand. Use as many appropriate English cognates as possible.



ChatGPT

Um den Artikel über das Schaltjahr in einfacherem Deutsch für Anfänger zu übersetzen, werde ich den Text vereinfachen und dabei möglichst viele englische Kognaten verwenden:

In den USA gibt es einen Film namens "Leap Year" aus 2010. Dieser Film erzählt von einer Tradition. Eine Frau, Anna, reist von Boston nach Dublin, um ihrem Freund einen Heiratsantrag zu machen. Es gibt eine Idee, dass Frauen am 29. Februar einen Antrag machen können. Diese Tradition gibt es auch in Dänemark und Finnland. In Dänemark muss ein Mann, der "Nein" sagt, der Frau zwölf Paar Handschuhe geben. In Finnland muss er Stoff für einen Rock geben. In Deutschland stellen Männer am 1. Mai ihren Liebsten einen Maibaum auf. In einem Schaltiahr dürfen das die Frauen machen.

In einigen Ländern denken Menschen, dass Schaltjahre Unglück bringen. In Deutschland gibt es ein Sprichwort: "Schaltjahr - Kaltjahr". Das bedeutet, es könnte ein kühles Jahr werden. In Taiwan glauben viele, dass Schaltjahre Unglück bringen, und verheiratete Töchter bringen ihren Eltern Nudeln, um ihnen Glück zu wünschen. In Anthony, USA, gibt es ein Schaltjahr-Festival, wo sich Menschen treffen. Aber das passiert nur alle vier Jahre. Bei diesem Festival gewinnen alle, es gibt kein Pech.

Dieser Text vereinfacht die Informationen über Schaltjahre und behält dabei wichtige Details bei, um Anfänger im Deutschen das Verständnis zu erleichtern.







Discussion break

What is a teaching-related issue that AI could help you address?

Risks

Al risks & concerns

- Mis/dis-information (Klepper, 2023; Sinatra & Wang, 2023)
- Hallucinations (Walczak & Celery, 2023)
- Bias & toxic content (Edmett et al., 2023; Torrey, 2023)
 - False detection in L2 writing (Liang et al., 2023)
- Unreliability of detection programs (Dalalah & Dalalah, 2023)
- Perpetuation of stereotypes and discrimination (Farrokhnia et al., 2023)
- Deepfakes (Elgersma, 2024)

Faculty concerns

- Academic integrity (e.g., Sullivan et al., 2023)
- Ethical use (Holmes et al., 2021)
- Data privacy (Hockly, 2023)
- Teacher readiness (Edmett et al., 2023)
- Students' overreliance (Gao et al., 2024)
- Equity and access (Pelletier et al., 2023)
- Impact on writing process and critical thinking (e.g., Baron, 2023)

Faculty concerns: Academic integrity

I've been ChatGPT'd!

Faculty concerns: Writing & assessment



ChatGPT

Je suis né à New York et j'ai grandi là-bas. C'était un endroit amusant pour grandir parce qu'il y avait toujours quelque chose à faire. Quand j'avais sept ans, j'ai commencé à apprendre à jouer du violon. J'ai joué tout au long de l'école et du collège et j'ai joué dans un orchestre en Allemagne pendant mes études là-bas. Mes hobbies sont la lecture, les promenades et passer du temps aved des amis.









Copilot



Your personal and company data are protected

Je suis né à New York City et j'y ai grandi. C'était un endroit amusant pour grandir car il y avait toujours quelque chose à faire. Quand j'avais sept ans, j'ai commencé à apprendre à jouer du violon. J'ai joué tout au long de l'école et de l'université, et j'ai joué dans un orchestre en Allemagne pendant que j'y étudiais. Mes passe-temps sont la lecture, les promenades et passer du temps avec mes amis.

Faculty concerns: Critical thinking

- Give me a summary of this document
- **♥** Overview

The document discusses strategies for promoting sustainable behavior among consumers, focusing on the challenges faced by businesses in encouraging ecofriendly choices. It highlights the importance of behavioral science in bridging the gap between positive attitudes towards sustainability and actual consumer actions.

Key points

- Consumers express interest in sustainable products but often do not follow through with purchases.
- Behavioral science insights suggest using social influence, shaping good habits, leveraging the domino effect, appealing to emotions, and favoring experiences over ownership.
- Encouraging sustainable consumption is crucial for meeting corporate sustainability goals and benefiting the planet.



Faculty concerns: Critical thinking

Is any information missing from the article? If yes, why would this missing information be important?



Research Methods:

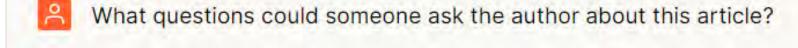
The article lacks details on the specific research methods used to gather data and draw conclusions. Understanding the methodology is crucial as it provides transparency and allows for the replication of the study by other researchers.

Demographic Information:

Information about the demographics of the participants involved in the studies is missing. Knowing the demographic characteristics such as age, gender, location, and socioeconomic status is essential to assess the generalizability of the findings.



Faculty concerns: Critical thinking



- Possible Questions for the Author:
 - 1. Clarification on Consumer Behavior:
 - Can you explain why consumers often don't follow through with purchasing sustainable products despite expressing positive attitudes towards them?
 - 2. Impact of Social Influence:
 - How does social influence play a role in encouraging sustainable behaviors among consumers, as seen in the grasscycling program in Calgary?

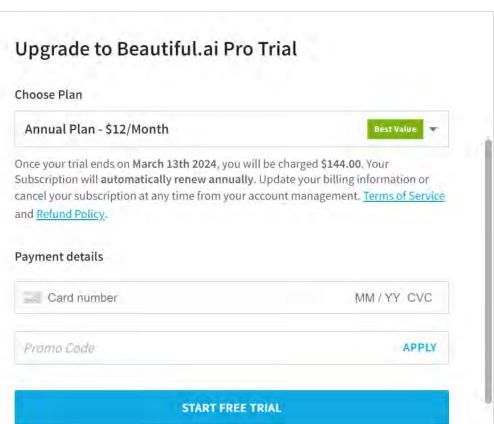


Stereotypes (DALL-E)



Faculty concerns: Equity





Begs the question...

If this is all unethical and risky, why should we use it?

- Workforce preparation (e.g., IBM, 2023)
- Inevitability (e.g., Hié, 2023; Schroeder, 2023)
- Need for Al literacy skills (UNESCO, 2023; U.S. Department of Education, 2023)

Pressing questions

- What does learning mean today?
- What's new, and what stays the same?
- What is the role of homework in learning?
- What kinds of policies are needed regarding AI use?
- How does assessment change? How do assignments change?
- Do we ban tools, wait for guidance, or start adopting them?
- Where is the line between getting help and AI doing the work for you?

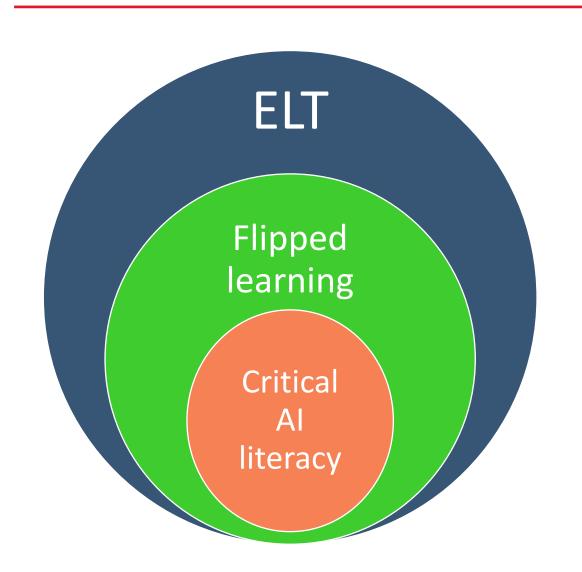
Discussion break

 What other questions are raised for you in terms of your teaching, learning, and/or research?





Sweet spot



"Pedagogy drives technology use; not the other way around."

(Bergmann & Sams, 2012, p. 21)

The setting

Undergraduate & graduate pathways programs

Conditional admission to international students

- ESL & content courses
- 1-2 semesters



Boston, Massachusetts, USA

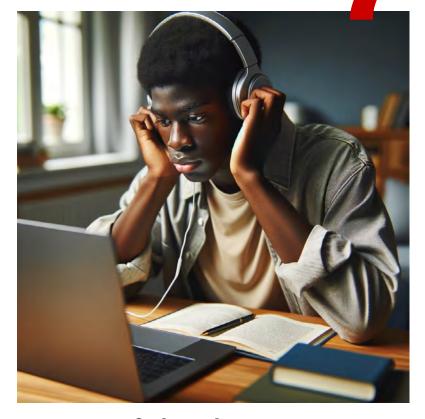


Flipped learning

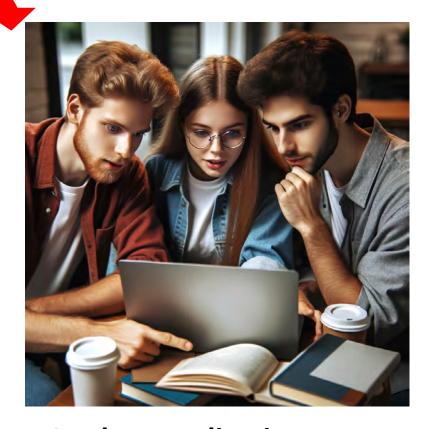
"...inverts the traditional classroom model by introducing course concepts before class, allowing educators to use class time to guide each student through active, practical, innovative applications of the course principles."

Academy of Active Learning and Sciences (n.d.)

Student-centered learning

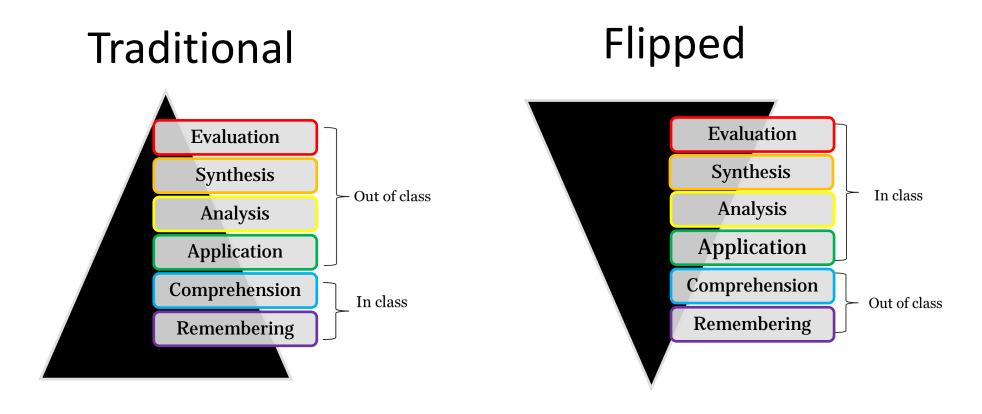


Out of class learning
Print materials
Videos
Interactive videos



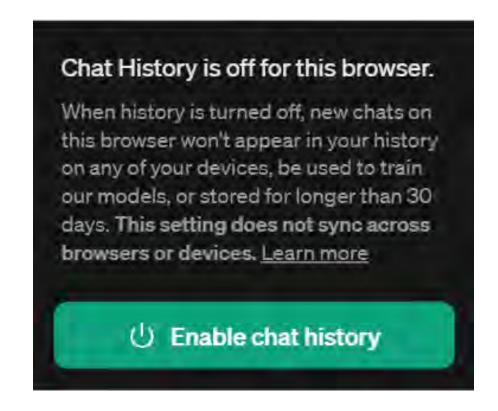
In-class application
Projects, case studies, group
work, collaborative writing,
analyses, debates

Flipping Bloom's taxonomy



Transparent & ethical use

- 1. Give overview & purpose of education
- 2. Discuss privacy & PII
- 3. Allow opting out
- 4. Turn off chat history (ChatGPT)
- 5. Collect feedback
- 6. Emphasize critical analysis of output



Sample lessons

- 1. Delivery skills (Spring '23)
- 2. Email etiquette (Fall '23)
- 3. Impromptu speaking (Spring '24)

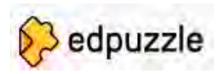


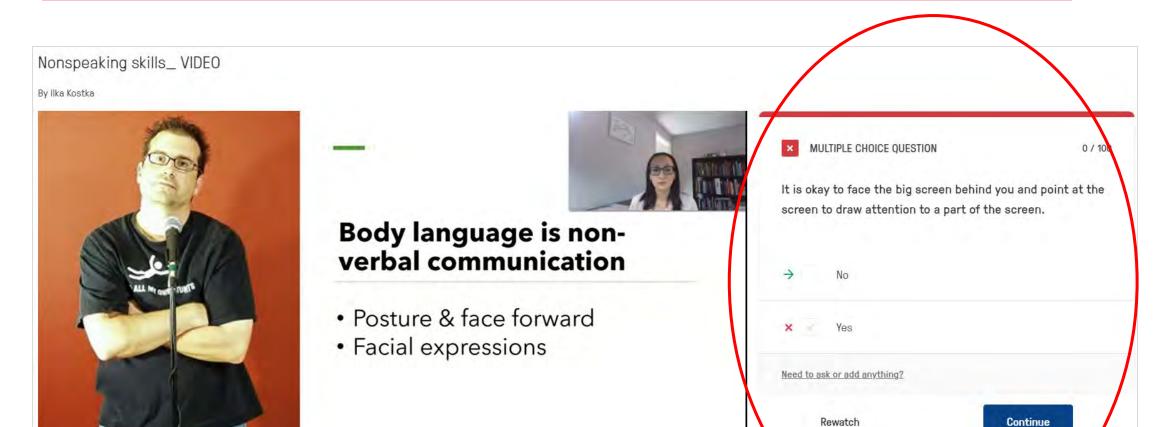
Objectives & rationale

- Identify elements of effective delivery skills
- Evaluate ChatGPT output
- Compare and contrast output to prior knowledge

- Signature assignment: impromptu speech
- Presentations are common

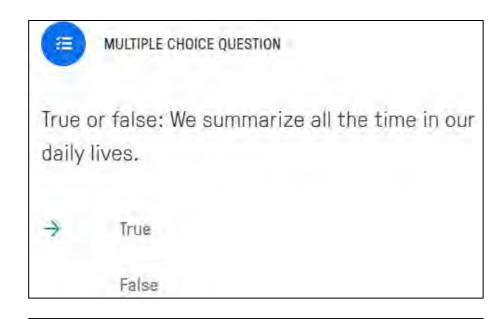
Out of class

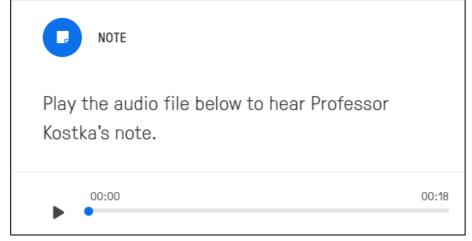


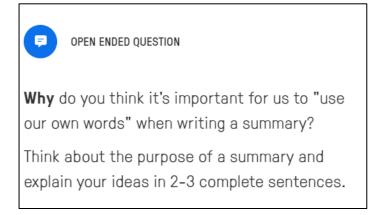


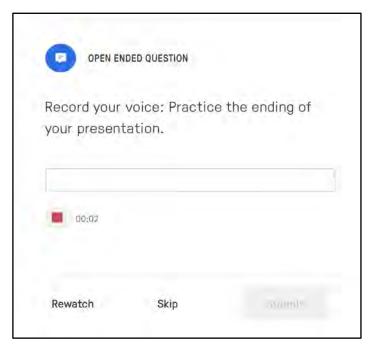
Interactions



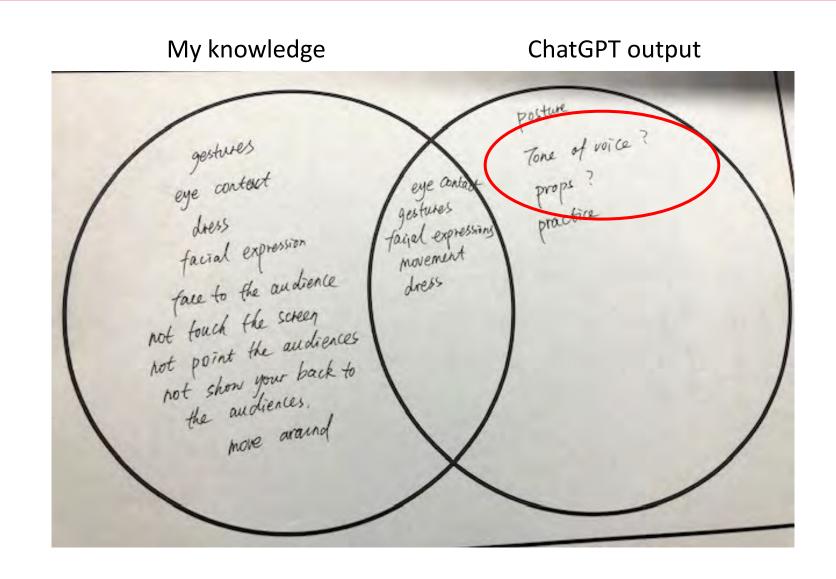








In class



Email etiquette

Fall 2023

Objectives & rationale

- Identify parts of appropriate emails
- Apply skills to write an email

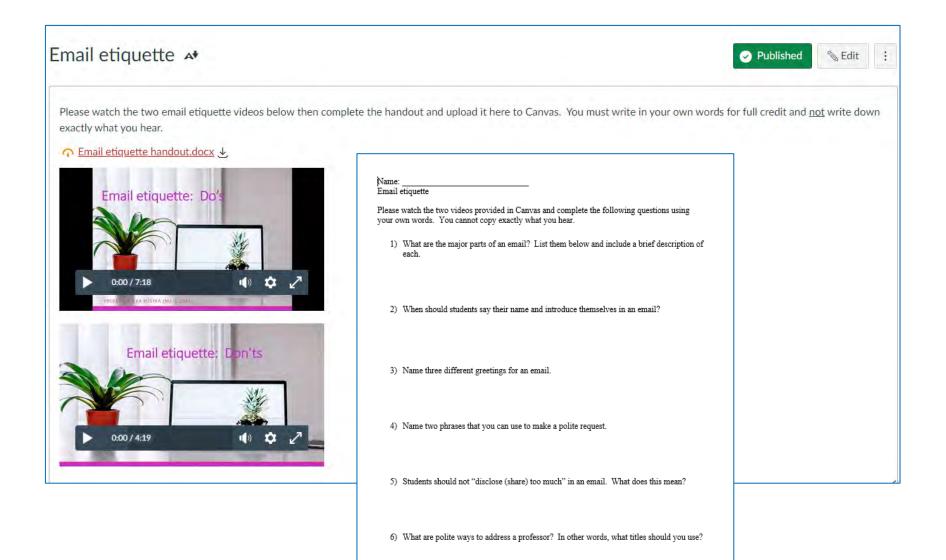


- Strengthen critical thinking
- Build critical AI literacy skills

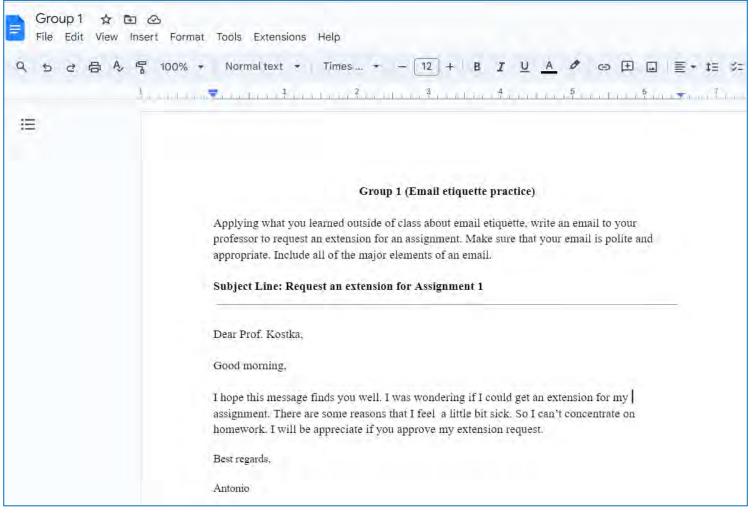
- Draw from schema about the topic
- Develop students':
 - Creativity
 - Critical thinking

Outside of class

- 1. Watch two videos
- 2. Take notes
- 3. Complete handout



In class: collaborative writing



Scenarios

- Request an extension
- Ask for a recommendation letter
- Request an excused absence due to illness

Analysis of ChatGPT output

Sardinha (2024): significant differences between Al-generated and human-authored texts Subject: Request for Extension on C&C Assignment Due Date

Dear Professor Kostka

I hope this email finds you well. I am writing to respectfully request a three-hour extension for the upcoming C&C assignment due on [Assignment Due Date]. I deeply appreciate your understanding and flexibility in considering my request.

As much as I value meeting assignment deadlines promptly, unforeseen challenges have arisen that are impacting my ability to complete the assignment on time. I have encountered unexpected technical difficulties that have significantly hindered my progress. Additionally, the complexity of the assignment has required more time than initially anticipated.

In light of these challenges, I kindly request your indulgence in granting me a brief extension of three hours to ensure that I can deliver an assignment that meets the high standards of our course. I am committed to producing quality work and understand the importance of adhering to academic deadlines.

To assure you of my dedication, I have already sought assistance from our course materials and made arrangements to overcome the technical issues I am facing. I am confident that with the extra time, I can provide a more comprehensive and well-thought-out submission.

I am grateful for your understanding and support in this matter and would greatly appreciate any guidance or recommendations you may have concerning the assignment. If you are able to grant this extension, I will ensure that the revised deadline is met and that the quality of my work is not compromised.

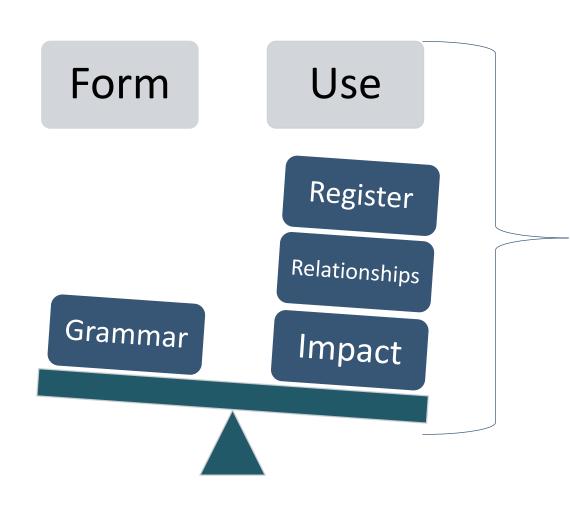
Thank you for considering my request. I eagerly await your response and am available to provide any additional information or clarification if necessary.

Sincerely.

[Your Full Name] [Your Student ID] [Your Contact Information]



This is necessary in the mail



Class discussions

What do students say? Fall 2023

Student feedback

"It can help us get some answers faster and make the class more efficient."

"ChatGPT provides detailed and clear answers to the students, which enhance students' understanding on the class content."

Student feedback

"I feel like it should be used as a tool instead of seen as a threat. It does not work for personal, critical thinking responses but it is a quick way of research and idea organization."

Student feedback

It's efficient enough to give us quick answers, but it's up to us to judge its accuracy. Its answers are not 100% valid."

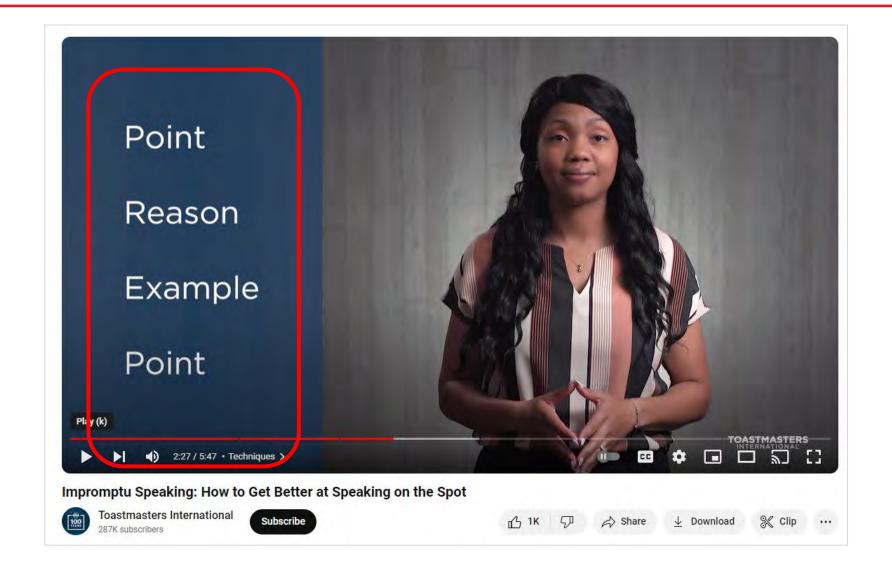


Objectives & rationale

- Identify principles of PREP method
- Apply PREP method to deliver an impromptu speech in class

- Not draw from schema about the topic
- Enhance students':
 - Creativity
 - Critical thinking

Outside of class



In class

Short quiz

lame:					
A 10 10 10 10 10 10 10 10 10 10 10 10 10	100 100		-		

Quiz (Impromptu speaking)

Please clearly circle the correct answer.

In what order should you address the pros and cons of an issue when using the pros vs. cons method?

- a. Cons first, then pros
- b. Pros first, then cons
- c. Cons only
- d. Pros only

What is recommended if you find yourself rambling during an impromptu speech?

- a. Keep talking until you find your point
- b. Ignore the audience's reactions
- c. Pause and take a moment to draft an outline
- d. Change the topic quickly

What is the purpose of the "Action" part in the STAR format during an interview scenario?

- a. To provide a brief summary of the situation.
- b. To emphasize the result you achieved.
- c. To showcase thought process and actions taken.
- d. To list all the people involved in the task.

In class: Review slide

Review: PREP technique

- P (point)
- R (reason for your point)
- E (examples)
- P (point again to conclude)

- Prevent rambling
- Help you organize ideas
- Increase the coherence of your speech

In-class application

To do

- Come to the front
- Look at the image and plan your speech (30 seconds)
- Describe your image using the PREP method

In class



Key words:

flamingo pancakes

In class

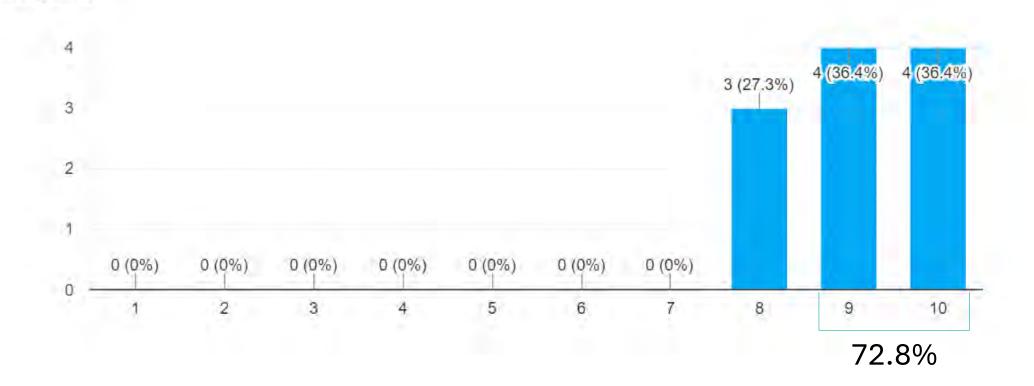


Key words:

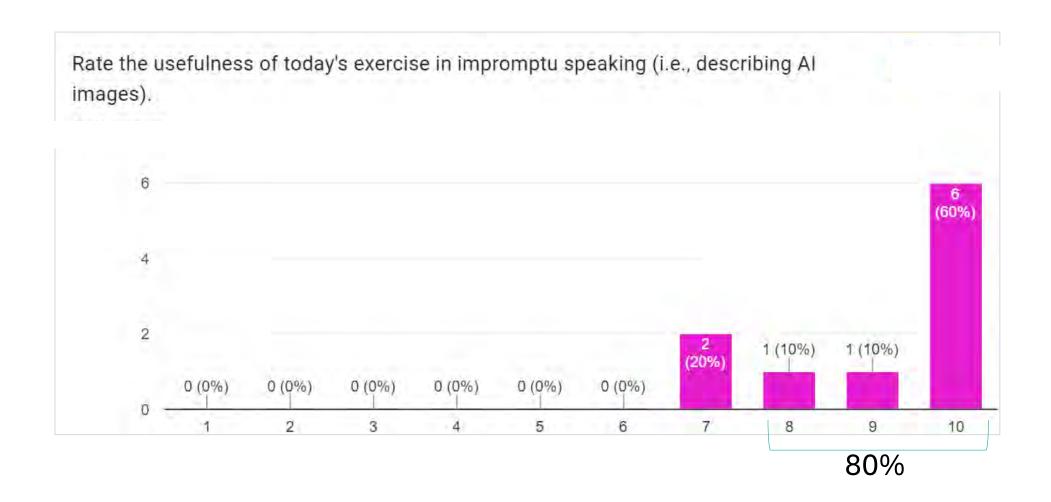
karaoke microphone

Student feedback

Rate the usefulness of today's exercise in impromptu speaking (i.e., describing AI images).



Student feedback



My reflections

What worked well

- Co-planning
- DALL-E
 - Customizing images
- Scaffolds
 - Timer
 - "Cheat sheet"
- Audience participation
 - Think while listening
- Students had fun
 - Effective for critical thinking and quick decision making

What could be improved

Practice an image together

Discussion break

- Which of these activities could work in your teaching setting?
- What are some adaptations you could make?

Now what?



Recommendations

#1: Learn and upskill

- Online resources
- Webinars
- Literature
- Blogs
- Scholarship
- YouTube videos
- LinkedIn



Al in the classroom (interview series)

Stanford University



#2: Collaborate and share

Research

Teaching ideas

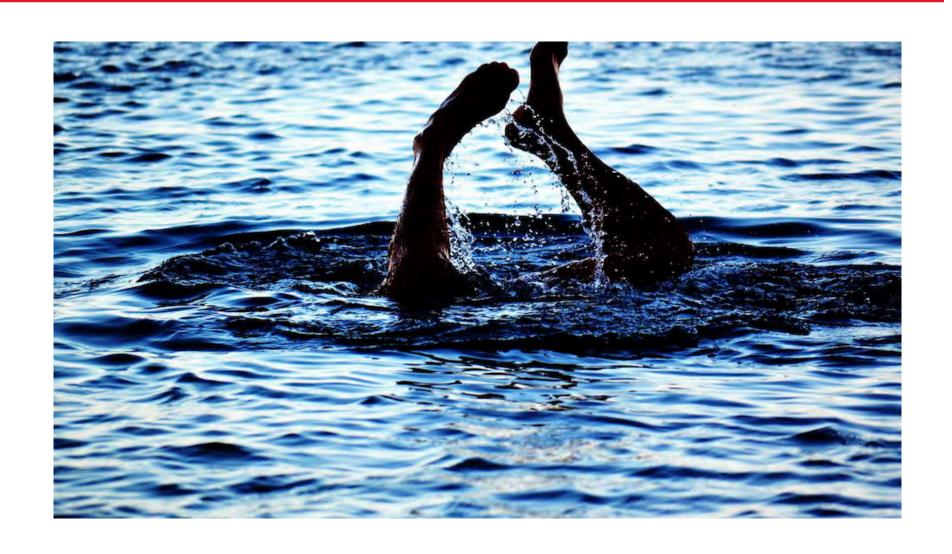
Activities & lessons

Discussions

Exchanging resources

Presentations

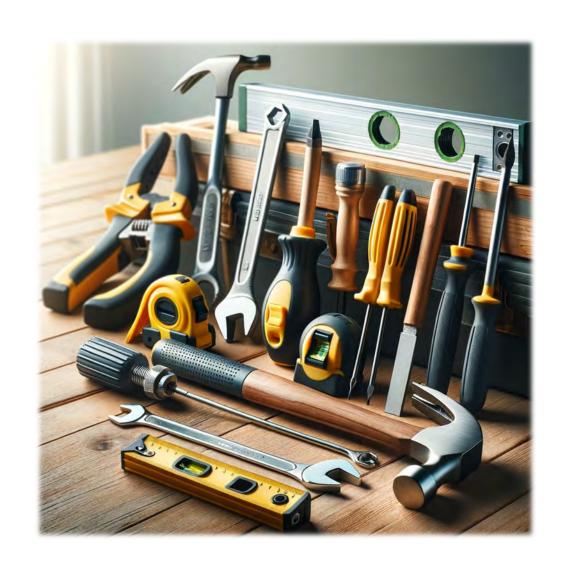
#3: Dive in



"The only bad way to react to Al is to pretend it doesn't change anything." (Prof. Ethan Mollick, UPenn)



Future of GenAI in language education?



slido



Think about the word you shared about your feelings towards AI in language education. Has your feeling changed? Why or why not?

i Start presenting to display the poll results on this slide.

Padlet

• Three takeaways

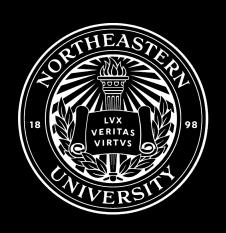
• **Two** questions

 One topic you'd like to continue exploring



Thank you

i.kostka@northeastern.edu



Northeastern University

