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ChatGPT and Generative AI as a New Partner in Language Teaching and Learning:
Views from YouTubers and Many Pedagogical Examples

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With help from:
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SECTION 2
YouTube + YouTuber

You Tube
Career Option

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Why YouTuber?

Content creators who facilitate learning on YouTube are often deemed digital pioneers (Chao, 2022; Zavyalova & Galvin, 2022).

- **YouTubers are**:
  1. Early adopters.
  2. Digital pioneers.

- **YouTube videos**:
  3. Play a key role in shaping the ways in which the newly emerging learning tools are perceived and used.
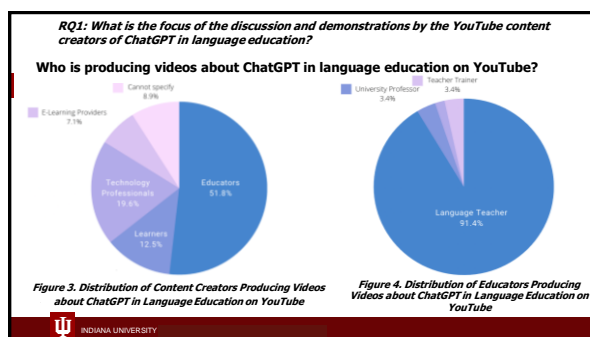

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RQ1: What is the focus of the discussion and demonstrations by the YouTube content creators of ChatGPT in language education?

Who is producing videos about ChatGPT in language education on YouTube?

Educators   Learners   Technology Professionals   e-Learning Providers

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RQ1: What is the focus of the discussion and demonstrations by the YouTube content creators of ChatGPT in language education?

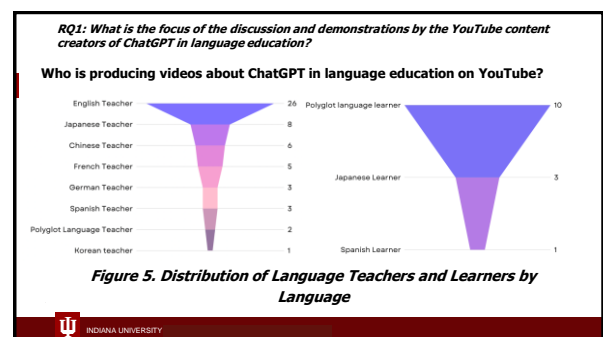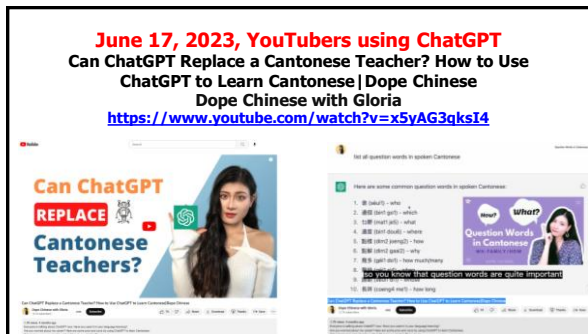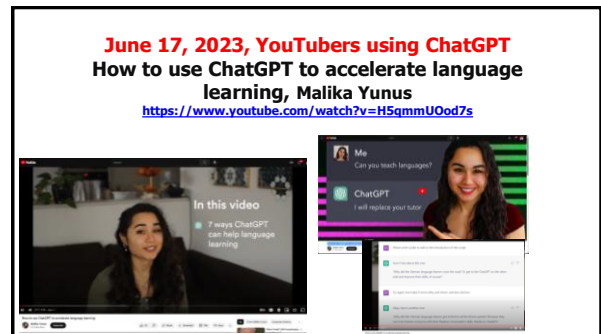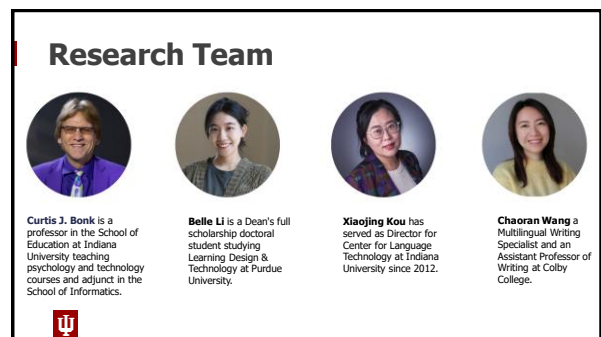**Who is producing videos about ChatGPT in language education on YouTube?**

Cannot specify 8.9%
E-Learning Providers 7.1%
Technology Professionals 19.6%
Learners 12.5%
Educators 51.8%

University Professor 3.4%
Teacher Trainer 3.4%
Language Teacher 91.4%

Figure 3. Distribution of Content Creators Producing Videos about ChatGPT in Language Education on YouTube

Figure 4. Distribution of Educators Producing Videos about ChatGPT in Language Education on YouTube

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RQ1: What is the focus of the discussion and demonstrations by the YouTube content creators of ChatGPT in language education?

Who is producing videos about ChatGPT in language education on YouTube?

English Teacher — 26
Japanese Teacher — 8
Chinese Teacher — 6
French Teacher — 5
German Teacher — 3
Spanish Teacher — 3
Polyglot Language Teacher — 2
Korean teacher — 1

Polyglot language learner — 10
Japanese Learner — 3
Spanish Learner — 1

Figure 5. Distribution of Language Teachers and Learners by Language

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June 17, 2023, YouTubers using ChatGPT
Learning is Increasingly Informal
Will AI change the future of language learning?
ShuoshuoChinese说说中文
https://www.youtube.com/watch?v=TzFepHKifGo

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Lucas (Polyglot Speaking 14 Languages – How I Maintain my 14 Languages):

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June 17, 2023, YouTubers using ChatGPT
Can ChatGPT Replace a Cantonese Teacher? How to Use
ChatGPT to Learn Cantonese|Dope Chinese
Dope Chinese with Gloria
https://www.youtube.com/watch?v=x5yAG3qksI4

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June 17, 2023, YouTubers using ChatGPT
How to use ChatGPT to accelerate language
learning, Malika Yunus
https://www.youtube.com/watch?v=H5qmmUOod7s

10

June 17, 2023, YouTubers using ChatGPT
I let chatGPT be my Japanese teacher for a
day. Here's what happened, Ty's Take
https://www.youtube.com/watch?v=Xgj7JJfz0Yw

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Research Team

Curtis J. Bonk is a professor in the School of Education at Indiana University teaching psychology and technology courses and adjunct in the School of Informatics.

Belle Li is a Dean's full scholarship doctoral student studying Learning Design & Technology at Purdue University.

Xiaojing Kou has served as Director for Center for Language Technology at Indiana University since 2012.

Chaoran Wang a Multilingual Writing Specialist and an Assistant Professor of Writing at Colby College.

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Introduction

Goal of the article

- explore how YouTube language educators leverage ChatGPT to facilitate self-directed language learning and provide practical guidance for educators navigating the evolving landscape.

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Literature Review

- **Self-directed learning (SDL)** refers to learning situations where the learner takes charge or control to plan, implement, and assess his/her own learning process and results
- Recently, there has been a shift in focus towards the online context and the role of technology in facilitating SDL
  - E.g., Self-directed learning in MOOCs and online environments (Zhu & Bonk, 2019)
- Generative AI such as ChatGPT introduces new possibilities and challenges for SDL.
- Further research is needed to understand how ChatGPT can be featured in various aspects of SDL and may potentially redefine SDL.

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Self-Directed Learning

Fig. 1. Song and Hill's [1] model for SDL in online contexts
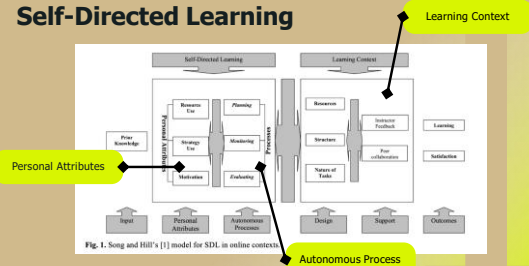
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AI-Supported Self-Directed learning

- GenAI tools hold the potential to enhance SDL through personalized feedback, resources, and assistance (Baskara, 2023)
- The interactive and individualized nature of GenAI promotes learner independence (Biswas, 2023)
- GenAI also supports the creation of personalized learning objectives and strategies for self-directed learners (Biswas, 2023).

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Introduction

Goal of the article

- Investigate the integration of ChatGPT in self-directed language learning (SDLL) and reconceptualize the SDL framework in consideration of generative AI

Importance

- **ChatGPT's potential** to reshape language education and learners' approach to their learning journey
- Need to **understand** ChatGPT's influence on SDL processes for **maximizing** benefits and **guiding** learners
- Existing theoretical frameworks may not fully **account for** the nuances introduced by **AI tools like ChatGPT**

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Potential Perils

- **Over-reliance (Lin, 2023)**
- **Ethical concerns, accuracy, and cultural biases (Kohnke et al., 2023)**
- **Ineffective use of GenAI could result in suboptimal experience**
- **Lack of accountability, information overload, and low self-efficacy (Memarian & Doleck, 2023)**

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Research Question

- How do YouTube-based language educators view the benefits and limitations of ChatGPT as a tool for SDLL?
- What strategies do YouTube-based language educators have for leveraging ChatGPT for SDL?
- What can teachers do to facilitate students' AI-assisted SDL, as recommended by YouTube-based language educators?

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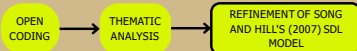### Data Analysis

OPEN CODING → THEMATIC ANALYSIS → REFINEMENT OF SONG AND HILL'S (2007) SDL MODEL

Four guiding questions for data analysis

- What motivates YouTubers to use ChatGPT for SDLL?
- How do YouTubers define and understand SDLL?
- What features or aspects of ChatGPT facilitate learners' SDLL?

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Data Analysis

OPEN CODING → THEMATIC ANALYSIS → REFINEMENT OF SONG AND HILL'S (2007) SDL MODEL

Refinement of Song and Hill's (2007) SDL model

- Incorporation of unique insights from the collected data
- Development of a framework that better explains AI-assisted SDL
- Expert review process to validate and refine the framework

Expert in the field of self-directed learning

Expert in the field of natural language understanding

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Research Question

- How well does the current SDL model explain AI-assisted SDL? What dimensions and indicators need to be adjusted, added, or removed?

Language YouTubers chosen as participants

- early adopters
- influential figures
- experienced self-directed language learners
- diverse backgrounds, experiences, and demographics
- proficient in at least two languages, with some being polyglots

19 YouTubers and their relevant video content

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Research Design and Data Collection

Qualitative study using a phenomenological research design

- Aims to understand and interpret the essence of human experiences
- Allows for an in-depth exploration of participants' experiences with ChatGPT and SDLL

Data sources

- Semi-structured interviews with 19 YouTubers
  - Conducted via Zoom, lasting 45-60 minutes each
  - Recorded and transcribed using Otter.ai
- Relevant video content from participants' YouTube channels
  - Selected based on relevance to the study's focus on ChatGPT and SDLL

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Research Design and Data Collection

TABLE I
NINETEEN INTERVIEWEES' DEMOGRAPHIC INFORMATION

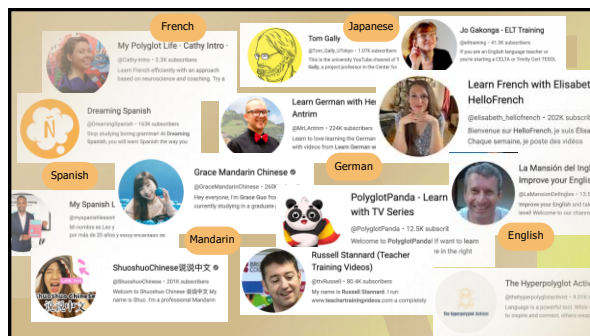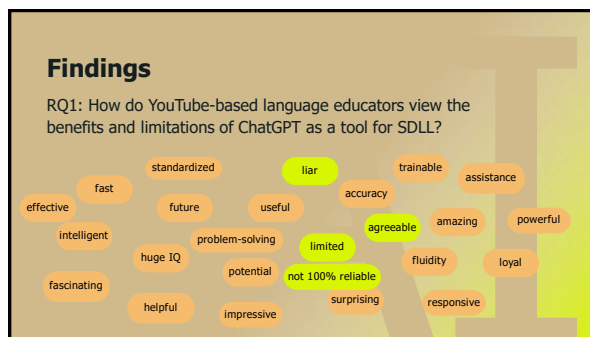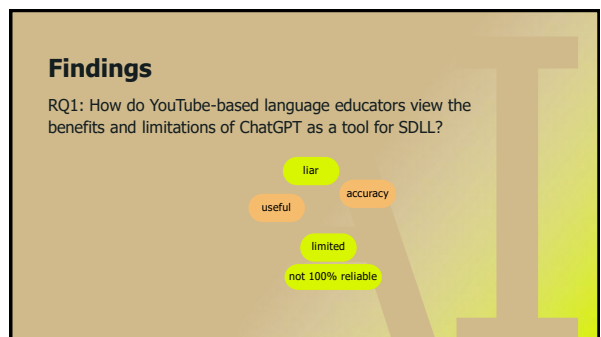| Interviewee	Subscribers as of July 5, 2023	Target Language Learning/Teaching	Positioning on YouTube
Grace Kuo	208K	Chinese	Mandarin Teacher
Carlos	5.46K	Spanish; Portuguese; Korean; Latino; French; German; Mandarin; Italian; Serbian; Judeo Spanish; Judas	Polyglot Activist
Craig Whelass	12.6K	English	English Teacher
Lucas & Fabrício	38.7K	Portuguese; English; Russian; Spanish; German; Italian; Polish; Ukrainian; Thai; Armenian; Turkish; Mandarin	Polyglot Teacher
Elisabeth & Matheus	129K	French	French Teacher
Mark Bacon	7.15K	Brazilian Portuguese	Software Engineer/ Language Learner
Jo Gakonga	36.9K	English	English teacher trainer
Russell	76.3K	English(teaching), French, Spanish and nail polish (can speak)	English teacher trainer
PolyglotPanda	11.6K	Spanish, English, Italian and Esperanto	Spanish Teacher
Herr Antrim	194K	German	German Teacher
Tom Gally	939	Japanese	Professor/Japanese learner
Shuo Xiong	171K	Chinese	Chinese Teacher
Dustin Scharmaul	2.06K	English; French; Italian; Dutch; Spanish	Language Learner/ Polyglot/Product Manager
Eric Williams	2.24K	Spanish; Japanese	Language Learner/ Polyglot
Clay	22.9K	Japanese	Japanese learner/Producer
Leodamin	3.7K	Spanish	Spanish Teacher
Pablo Román	113K	Spanish	Language Learner/ Polyglot
Colleen	799	Korean, French and Spanish	Language Learner/ Polyglot
Catherine Intréligator	1.62K	French, English, German, Spanish	French Teacher/Polyglot

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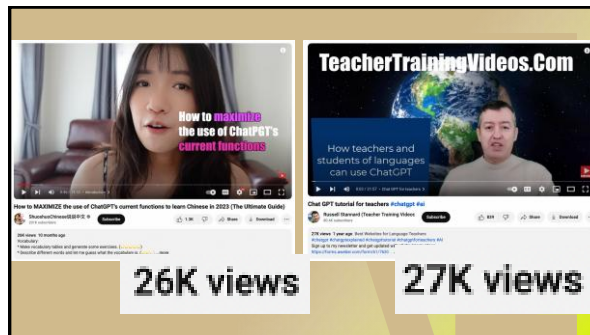
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Methods

- Qualitative approach with in-depth semi-structured interviews
- 14 participants: prominent YouTube language educators with ChatGPT videos
- Thematic analysis of interview data

Focus on language teaching YouTubers

- early adopters
- influential figures
- experienced self-directed language learners
- diverse backgrounds, experiences, and demographics
- proficient in at least two languages, with some being polyglots

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Categories	Sub-categories		
Language skills can be enhanced by ChatGPT	Vocabulary building & word explanation Reading & listening skills Writing Pronunciation Grammar The learning of culture All the language skills	Strategies for SDLL with AI	Don't over-rely on AI Sustain autonomy/independent thinking Integrate AI with other technologies Use AI to create (interesting) content Diversify language sources Employ AI for scaffolding Personalize AI based on learner needs Double check accuracies Know the role of prompts
Benefits of using ChatGPT	Personalized learning Facilitate self-learning Prompt feedback Build learners' confidence (Psych-emotional) Production Value Error identification & correction Transformative potential	Strategies for Facilitating Students' SDL with AI	Keep yourself updated on the advancements Improve students' self-discipline Provide explicit instruction on AI Teach students critical awareness Be selective Stand in learners' shoes Address ethical issues Use it extensively Use it with students Learn from others
	Multilingual performance (Superficial) Creativity Centralized & portable information		Main categories and sub-categories of data analysis

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Findings

RQ1: How do YouTube-based language educators view the benefits and limitations of ChatGPT as a tool for SDLL?

standardized · liar · trainable · assistance · fast · accuracy · effective · future · useful · intelligent · problem-solving · amazing · powerful · huge IQ · limited · agreeable · fascinating · potential · not 100% reliable · fluidity · loyal · helpful · surprising · responsive · impressive
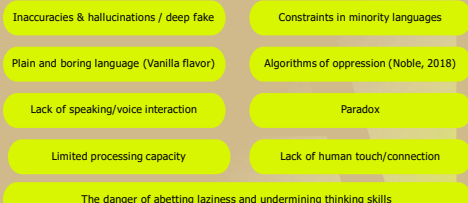
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Findings

RQ1: How do YouTube-based language educators view the benefits and limitations of ChatGPT as a tool for SDLL?

liar · accuracy · useful · limited · not 100% reliable

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Findings

Tom Gally
@Tom_Gally_UTokyo · 1,07K subscribers
This is the university YouTube channel of Tom Gally, a project professor in the Center for

"The hallucinations are a problem for some types of tasks, but in the case of language learning what you want is to interact with another person, for example, your partner says things that are not true is not so important…Obviously, in other fields, people use it as like they would use Wikipedia or Google and that's where the hallucinations are a serious problem."

liar VS accuracy

not 100% reliable

limited VS useful

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Interview Data (from Study #3)

"I think that's our future. Like it's, it's inevitable right now." Lucas & Fabricio)

"…it can generate flawless English… if language can produce in that way that isn't taken from chunks out[,] that's machine-produced language, it's not machine-translated language… that really does change things, so the machines can produce language that's accessible in an easy way." (Jo Gakonga)

Jo Gakonga - ELT Training
@elttraining · 38.2K subscribers
If you are an English language teacher or you for you! Welcome …

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Interview Data (from Study #3)

ShuoshuoChinese说说中文 ✔
@ShuoshuoChinese · 180K subscribers
Welcome to Shuoshuo Chinese 说说中文. My name is Sh more than 8 …

"..can you use those words and write an article about love, for example, and 10 out of 10 times it gives me a really boring article which I don't think is quite catchy or engaging." (Shuo Xiong, Interview, June 12, 2023)

"Sometimes it begins to hallucinate or feed you with incorrect information because what it is doing is creating text and it's not always correct." (Craig Wheland, Interview, May 17, 2023)

La Mansión del Inglés - Improve your English
@LaMansionDelIngles · 12.6K subscribers · 357 videos
Improve your English and take it to the next level! ›
mansioningles.com and 4 more links

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Findings

Harnessing ChatGPT as A Loyal Conversational Partner for Language Practice.

The Hyperpolyglot Ac
9.2K subscribers

Availability   Versatility   Sustainability

"I can talk about anything, and the answers are both positive in terms of the optimism displayed by the bots, and informative. It is very rare to find that combination in a human interlocutor, especially when you want to interact for extended periods, which is what sets it apart." **(Carlos, Interview, May 17, 2023)**

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Findings

RQ1: How do YouTube-based language educators view the benefits and limitations of ChatGPT as a tool for SDLL?

· **A Resoundingly Positive Reception with Diverse Insights.**
· **Contradictions in ChatGPT's Perceived Functionality.**
· **Harnessing ChatGPT as A Loyal Conversational Partner for Language Practice.**
· **Perceived limitations of ChatGPT for language learning.**

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Findings

Perceived limitations of ChatGPT for language learning.

Inaccuracies & hallucinations / deep fake	Constraints in minority languages
Plain and boring language (Vanilla flavor)	Algorithms of oppression (Noble, 2018)
Lack of speaking/voice interaction	Paradox
Limited processing capacity	Lack of human touch/connection
The danger of abetting laziness and undermining thinking skills	

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RQ2: How do content creators describe their current practices of using ChatGPT in language ed?

Interview Data

useful	helpful	agreeable
limited	assistance / crutch	liar / not 100% reliable
accuracy/fluidity	problem solving	loyal
surprising / amazing /impressive /fascinating	learnable	effective
	responsive	trainable
	standardized	powerful

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Findings

RQ2: What strategies do YouTube-based language educators have for leveraging ChatGPT for SDLL?

Use It as A Tool, Not A Crutch.

- Use AI for scaffolding
- Use different sources
- Integrate AI with other technologies

Take What You Want from the Buffet.

- Language teaching ultra-personalized
- Personalize AI based on learner needs
- Deliberate practice

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Findings

RQ3: What can teachers do to facilitate students' AI-assisted SDL, as recommended by YouTube-based language educators?

- Fostering a Learner-Centric Approach to GenAI Instruction
  - Explicit AI instruction
    - Help students understand GenAI capabilities and limitations
    - Approach GenAI strategically and selectively
  - Use GenAI tools with students during classroom activities
  - Teachers should personally use and learn from others' experiences with ChatGPT

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Findings

RQ3: What can teachers do to facilitate students' AI-assisted SDL, as recommended by YouTube-based language educators?

- Cultivating Responsible AI Utilization in Language Education
  - Develop students' autonomy and decision-making skills
  - Encourage critical awareness and verification of AI-generated content
  - Foster self-discipline in managing AI interactions responsibly

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Findings

Red: Adding new understanding to the existing concept

Purple: New consideration for AI

Category	Sub-category	Indicator
	Input	Technology Readiness
		Content Area Knowledge
		Learning Experience
SDL	Personal Attribute	Self-efficacy Belief (Bandura, 1997)
		Attitude - Dispositions, Emotions, and Perspectives
		Motivation
		Resource Use
		Strategy Use
	Autonomous-Adaptive Process	Planning
		Monitoring
		Adapting
		Evaluating
Learning Context	Design Elements	Resources
		Structure
		Nature of the task
		Computational agency (Tufekci, 2015)
	Social Elements	Institutional policy for AI adoption
		Social justice considerations
		Ethical considerations
		Sociocultural & geopolitical norms
	Support Elements	Non-human (video, OER, other learning resources)
		Human (Instructor, mentor, peer support)
	Outcomes	Positive Reinforcement
		Learning

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Findings

local

- Interactive relationships between learners' personal traits and learning processes

local

- Evolving nature of SDL in rapidly advancing generative AI landscape
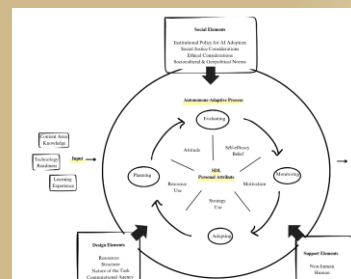
Fig. 2. AI-Integrated SDL Framework.

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RQ1: What is the focus of the discussion and demonstrations by the YouTube content creators of ChatGPT in language education?

1c. What are common topics & themes present in these discussions and demos?

Theme	Codes
Introduce ChatGPT	• Natural / human-like conversation • Ask it questions and it gives you answers • Possessing extensive knowledge
Roles of ChatGPT	• Virtual Assistant • Tutor [122] [26] • On-demand English teacher (19) • Personal writing assistant • Research Assistance [46] • Virtual friend • Multi-language support [107] • Language genius [89] • Language coach [89] • Teacher's toolkit [85]
Hands-on Demonstration	• Techniques & Tips & Strategies for learners • Technique & Tips & Strategies for teachers • Common mistakes to avoid when using ChatGPT for language learning • The innovative way of using ChatGPT • Testing ChatGPT's ideology on language learning
Attitudes toward ChatGPT	• A game changer for language learning [91] • High-Tech Plagiarism [47] • Cannot replace language teachers [65] [102]
Solutions	• Integrated with other tools (e.g., DeepL, Yonglish, and Duolingo) • Need for empathy and assistance • Pedagogy considerations

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RQ2: How do content creators describe current practices of using ChatGPT in language ed?

Q2a. How do they perceive the potential benefits and drawbacks of incorporating ChatGPT in language learning?

Benefits of ChatGPT

1. Providing optimization and enhancement of language learning platforms as an augmentative learning device.
2. Assistance with general questions, vocabulary building, writing tasks, language practice, test preparation, annotating texts, translations, and personalized learning.
3. Acting as an accessible and affordable 24/7 tutor providing relevant information to users as it learns from their interactions.
4. Engaging in conversations and practicing the language in a safe and comfortable environment without fear of judgment or mistakes.
5. Being especially beneficial for students who struggle with traditional teaching methods or have special learning needs.

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RQ2: How do content creators describe their current practices of using ChatGPT in language ed?

Q2a. How do they perceive the potential benefits and drawbacks of incorporating ChatGPT in language learning?

Benefits of ChatGPT

6. Creating bespoke content such as learning texts, worksheets, and lesson plans.
7. Helping with job interviews in a foreign language and practicing conversation by generating responses to questions.
8. Providing highly tailored content and transforming how individuals learn languages.
9. Enhancing the language learning experience by fostering learner motivation, improving efficiency, and promoting attentiveness and observation skills
10. Creating an engaging and accessible learning environment that makes language education more enjoyable and readily accessible for learners.
11. Reducing the workload of language teachers.

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RQ2: How do content creators describe their current practices of using ChatGPT in language ed?

Q2a. How do they perceive the potential benefits and drawbacks of incorporating ChatGPT in language learning?

Drawbacks of ChatGPT

1. Lack of emotional or empathetic responses.
2. Limited creativity.
3. Lack of context awareness.
4. Potential of generating inaccurate or inappropriate responses.
5. Incomplete information.
6. Repetition of information.
7. Potential for bias.
8. Inability to learn beyond its training data which goes up until 2021.
9. Potential misuse for malicious purposes.
10. Syntax and grammatical errors.
11. Does not provide much opportunity for speaking practice.

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RQ2: How do content creators describe their current practices of using ChatGPT in language education?

Q2a. How do they perceive the potential benefits and drawbacks of incorporating ChatGPT in language learning?

Concerns of ChatGPT

1. The danger of being too dependent on ChatGPT for writing essays and creative writing.
2. Potentially replacing human workers.
3. Creating competition, insecurity, and fear.
4. Data privacy.
5. No connection between the rapid development of AI and the growth of human language faculty.
6. Challenge for teachers as well as organizations and institutions to detect plagiarism.
7. Many replicates countless previous failed attempts to introduce new technology to language education, such as printed books and LP records.

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Discussion and Conclusion

- ChatGPT offers transformative potential for language learning but requires a nuanced approach
- Educators play a critical role in helping learners navigate the evolving landscape of SDL in the age of GenAI
- Importance of considering ethical, pedagogical, and sociocultural factors in AI integration
- Future research directions
  - Learner-centric investigations
  - Innovative pedagogical models
  - Educator training

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Recent Publications

1. Li, B., Kou, X., & Bonk, C. J. (2023). Embracing the disrupted language teaching and learning field: Analyzing YouTube content creation related to ChatGPT. *Languages, 8,* 197. https://doi.org/10.3390/languages8030197

2. Li, B., Bonk, C. J., & Kou, X. (2023). Exploring the multilingual applications of ChatGPT: Uncovering language learning affordances in YouTuber videos. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT), 13(1),* 1-22. http://doi.org/10.4018/IJCALLT.326135

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Recent Publications

3. Li, B., Wang, C., Bonk, C. J., & Kou, X. (2024). Exploring inventions in self-directed language learning with generative AI: implementations and perspectives of YouTube content creators. *TechTrends. 68*(4), 803-819. https://doi.org/10.1007/s11528-024-00960-3

4. Li, B., Bonk, C. J., Wang, C., & Kou, X. (Under review). Reconceptualizing the self-directed language learning in the era of generative AI: an exploratory analysis. *IEEE, 17,* 1515-1529. doi: 10.1109/TLT.2024.3386098

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Recent Publications

5. Li, Z., Wang, C., & Bonk, C. J. (2024). Exploring the utility of ChatGPT for self-directed online language learning. *Online Learning, 28*(3), 157-180.

6. Wang, C., Li, Z., & Bonk, C. J. (2024, online first). Understanding self-directed learning in AI-assisted writing: A mixed methods study of postsecondary learners. *Computers & Education: Artificial Intelligence, 10,* 1-10.
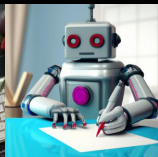
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5. Li, Z., Wang, C., & Bonk, C. J. (2024). Exploring the utility of ChatGPT for self-directed online language learning. *Online Learning, 28*(3), 157-180. (276 survey respondents, 11 interviews in the USA)

In this study, we investigated the SDL practices facilitated by GenAI tools like ChatGPT following Garrison's (1997) SDL framework. Aligning with each dimension of Garrison's framework, namely, motivation, self-management, and self-monitoring, we examined the following research questions accordingly:

1. What motivates learners to utilize self-directed learning with ChatGPT?
2. How do language learners select and apply self-management strategies when utilizing ChatGPT in their language learning routines?
3. How do language learners employ self-monitoring strategies when using ChatGPT for language learning?

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5. Li, Z., Wang, C., & Bonk, C. J. (2024). Exploring the utility of ChatGPT for self-directed online language learning. *Online Learning, 28*(3), 157-180. (384 survey responses and 10 semi-structured interviews)

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5. Li, Z., Wang, C., & Bonk, C. J. (2024). Exploring the utility of ChatGPT for self-directed online language learning. *Online Learning*, *28*(3), 157-180. (276 survey respondents, 11 interviews in the USA)

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5. Li, Z., Wang, C., & Bonk, C. J. (2024). Exploring the utility of ChatGPT for self-directed online language learning. *Online Learning*, *28*(3), 157-180. (384 survey responses and 10 semi-structured interviews)

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5. Li, Z., Wang, C., & Bonk, C. J. (2024). Exploring the utility of ChatGPT for self-directed online language learning. *Online Learning*, *28*(3), 157-180. (384 survey responses and 10 semi-structured interviews)

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6. Wang, C., Li, Z., & Bonk, C. J. (2024). Understanding self-directed learning in AI-assisted writing: A mixed methods study of postsecondary learners. *Computers & Education: Artificial Intelligence, 6*. https://doi.org/10.1016/j.caeai.2024.100247 *Computers & Education: Artificial Intelligence, 10*, 1-10. (384 survey responses and 10 interviews)

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60

6. Wang, C., Li, Z., & Bonk, C. J. (2024, online first). Understanding self-directed learning in AI-assisted writing: A mixed methods study of postsecondary learners. *Computers & Education: Artificial Intelligence*, *10*, 1-10.

Figure 1. Participants' frequency of using ChatGPT for writing

Bars: Daily 34, Weekly 163, Monthly 121, Rarely 60, Other 3

Participants' Frequency of ChatGPT Usage for Assisting in English Writing

INDIANA UNIVERSITY BLOOMINGTON
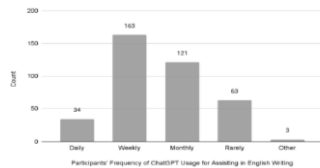
61

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6. Wang, C., Li, Z., & Bonk, C. J. (2024, online first). Understanding self-directed learning in AI-assisted writing: A mixed methods study of postsecondary learners. *Computers & Education: Artificial Intelligence*, *10*, 1-10.

Table 1. Mean score and standard deviation of the specific components of participants' writing facilitated by ChatGPT

Items	Mean	SD
1. I use ChatGPT to help brainstorm ideas for writing.	4.23	0.96
2. I use ChatGPT to help with outlining.	4.06	1.14
3. I use ChatGPT to help translate my ideas and thoughts into written words.	3.98	1.09
4. I use ChatGPT to improve my wording, sentence structure, or grammar.	4.33	1.20
5. I use ChatGPT to check the cohesion or connection among sentences.	3.82	1.22
6. I use ChatGPT to improve the structure of my writing.	4.05	1.04
7. I use ChatGPT to improve the content or ideas of my writing.	3.93	1.11
8. I use ChatGPT to check if my writing matches my goals or the requirements of an assignment.	3.60	1.37

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6. Wang, C., Li, Z., & Bonk, C. J. (2024, online first). Understanding self-directed learning in AI-assisted writing: A mixed methods study of postsecondary learners. *Computers & Education: Artificial Intelligence*, *10*, 1-10.

Table 2. Mean score and standard deviation of the survey items related to participants' motivation

Items	Mean	SD
1. I have motivation to learn writing with ChatGPT.	3.85	1.08
2. I have a need to learn writing from ChatGPT.	3.28	1.34
3. I enjoy learning new information related to writing through ChatGPT.	3.97	0.94
4. I need to know the deeper reasons for the writing feedback provided by ChatGPT.	3.29	1.24
5. I like to share my ChatGPT learning experience about writing with others.	3.24	1.3

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6. Wang, C., Li, Z., & Bonk, C. J. (2024, online first). Understanding self-directed learning in AI-assisted writing: A mixed methods study of postsecondary learners. *Computers & Education: Artificial Intelligence*, *10*, 1-10.
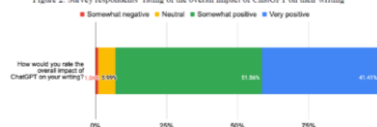
Table 3. Mean score and standard deviation of the survey items related to self-management

Items	Mean	SD
1. I carry out my own study plan while using ChatGPT for learning English writing.	3.77	1.15
2. I seek assistance when facing English writing problems.	3.74	1.15
3. I manage my time well while using ChatGPT to assist my English writing.	4.03	0.91
4. I set up my writing learning goals when using ChatGPT.	3.44	1.23
5. I have high expectations for my writing performance while using ChatGPT.	3.88	1.07
6. I apply a variety of strategies to use ChatGPT to facilitate my English writing.	3.87	1.02
7. I am organized while learning writing with ChatGPT.	3.89	0.97
8. I can direct my own English writing learning progress while using ChatGPT.	4.00	0.86
9. I am not distracted by other online activities (e.g., WhatsApp, Instagram, Facebook, etc.) while using ChatGPT to learn English writing.	3.28	1.34
10. I review the writing materials provided by ChatGPT based on my needs.	4.00	0.95
11. I am responsible for my own learning about writing with ChatGPT.	4.13	0.78

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6. Wang, C., Li, Z., & Bonk, C. J. (2024, online first). Understanding self-directed learning in AI-assisted writing: A mixed methods study of postsecondary learners. *Computers & Education: Artificial Intelligence*, *10*, 1-10.

Table 4. Mean score and standard deviation of items related to participants' self-monitoring

Items	Mean	SD
1. I critically evaluate new ideas related to writing learning provided by ChatGPT.	2.10	0.91
2. I ask follow-up questions regarding writing learning with ChatGPT.	2.09	1.00
3. I am able to integrate the writing knowledge I learned with ChatGPT with my work or life.	2.16	0.90

INDIANA UNIVERSITY BLOOMINGTON

65

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6. Wang, C., Li, Z., & Bonk, C. J. (2024, online first). Understanding self-directed learning in AI-assisted writing: A mixed methods study of postsecondary learners. *Computers & Education: Artificial Intelligence*, *10*, 1-10.

Figure 2. Survey respondents' rating of the overall impact of ChatGPT on their writing

Legend: Somewhat negative, Neutral, Somewhat positive, Very positive

How would you rate the overall impact of ChatGPT on your writing? — 51.86% somewhat positive, 45.45% very positive

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11

Slide 67:

6. Wang, C., Li, Z., & Bonk, C. J. (2024, online first). **Understanding self-directed learning in AI-assisted writing: A mixed methods study of postsecondary learners.** *Computers & Education: Artificial Intelligence*, *10*, 1-10.

Figure 3. Survey respondents' perceptions of ChatGPT on their writing development

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Slide 68:
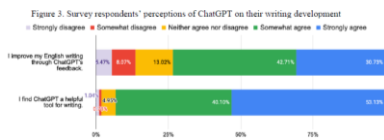
Recent Publications on Duolingo

7. Li, Z., Bonk, C. J., & Zhou, C. (2024). **Supporting learner's self-management for self-directed language learning: A study within Duolingo.** *Interactive Technology and Smart Education*, *21*(3), 381-402.

8. Li, Z., & Bonk, C. J. (2025). **Self-directed language learning with Duolingo in an out-of-class context.** *Computer Assisted Language Learning*, *38*(3), 569-591. **https://doi.org/10.1080/09588221.2023.2206874**

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Slide 69:

Manuscripts Currently in Review

9. Li, Z., Wang, C., & Bonk, C. J. (in press). **Exploring ethical AI use in self-directed and formal learning: Learner perspectives through a FATE lens.** *AI Enhanced Learning.*

10. Li, B., Zhang, Z., Lowell, V. L., Wang, C. & Bonk, C. J. (in review). **Development and validation of the AI-SDL-PA Scale: Measuring personal attributes in AI-integrated self-directed language learning.** *System.*

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Slide 70:

9. Li, Z., Wang, C., & Bonk, C. J. (in press). **Exploring ethical AI use in self-directed and formal learning: Learner perspectives through a FATE lens.** *AI Enhanced Learning.*

Table 1. Demographic information of participants.

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Slide 71:

9. Li, Z., Wang, C., & Bonk, C. J. (in press). **Exploring ethical AI use in self-directed and formal learning: Learner perspectives through a FATE lens.** *AI Enhanced Learning.*

Table 2. Codebook themes and subthemes for ethical considerations of AI in education.

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Slide 72:

9. Li, Z., Wang, C., & Bonk, C. J. (in press). **Exploring ethical AI use in self-directed and formal learning: Learner perspectives through a FATE lens.** *AI Enhanced Learning.*

Per Elliot,

"I personally haven't used it for my studies like for papers or anything. **My brother is an undergrad in [an institute of technology] and there was a whole case about plagiarism. And all that kind of stuff kind of scared me and him both, that [is why] we don't use any of this.** But I've seen people use it and try to say, can you [correct] a few mistakes with this and that, and people do use it. People will keep using it. There's going to be like tools to catch it."

72

9. Li, Z., Wang, C., & Bonk, C. J. (in press). Exploring ethical AI use in self-directed and formal learning: Learner perspectives through a FATE lens. *AI Enhanced Learning.*

Per Chandler,

"I think it deteriorates the learning experience to an extent, because it is so easy, and especially for certain subjects, it will basically do the work for you. Like, I find that ChatGPT is particularly adept at math, for instance, and other tasks like that, basically you could feed it [with] any problem that you're likely to have in a test and be able to get a correct answer most of the time. So, if you're doing something like that where the learning process is really involved, and your learning is built on trial and error. I would say, you're shortchanging yourself. And this is an ethical problem."

73

9. Li, Z., Wang, C., & Bonk, C. J. (in press). Exploring ethical AI use in self-directed and formal learning: Learner perspectives through a FATE lens. *AI Enhanced Learning.*

Per Fallon,

"I have one professor who's like, I want you to use it, I want you to use it. And I want you to learn of it but it's a plagiarism problem... but I think that you just testing the field this semester, and maybe he'll change up next. I don't know. He just wanted to see how well we would adapt to it I think..."

74

9. Li, Z., Wang, C., & Bonk, C. J. (in press). Exploring ethical AI use in self-directed and formal learning: Learner perspectives through a FATE lens. *AI Enhanced Learning.*

Per Danielle,

Cause I was actually really averse to the idea of ever touching it until my professor had us do it because I'm like, I don't even wanna be accused remotely of using this thing for cheating. I don't want to be anywhere near it. So I was a little bit nervous about it. And I was sort of like, oh, okay, so it's really just "if you don't use it to cheat. It's not cheating," that makes sense. And then, as I was sort of more open-minded to the tool after having to use it like, "okay, I can use this for language learning."

75

10. Li, B., Zhang, Z., Lowell, V. L., Wang, C. & Bonk, C. J. (in review). Development and validation of the AI-SDL-PA Scale: Measuring personal attributes in AI-integrated self-directed language learning. *System*. A total of 566 global participants were recruited using purposive sampling, targeting individuals who had utilized ChatGPT for language learning through carefully chosen platforms and channels that cater to this group. This study's participants represent a relatively young, predominantly female, and highly educated sample of language learners who had experience using ChatGPT.

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10. Li, B., Zhang, Z., Lowell, V. L., Wang, C. & Bonk, C. J. (in review). *System*.

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10. Li, B., Zhang, Z., Lowell, V. L., Wang, C. & Bonk, C. J. (in review). *System*.

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Slide 79

11. Kim, P., Wang, W., & Bonk, C. J. (2025). Generative AI as a coach to help students enhance proficiency in question formulation. *Journal of Educational Computing Research, 63*(3), 565-586. https://doi.org/10.1177/07356331251314222

12. Li, Z., Wang, C., & Bonk, C. J. (in review). Generative AI for teachers' self–directed professional development: A mixed-methods study. *TechTrends.*

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Slide 80

12. Li, Z., Wang, C., & Bonk, C. J. (in review). Generative AI for teachers' self–directed professional development: A mixed-methods study. *TechTrends.*
Note: We used a mixed-method approach to collect and analyze 298 completed survey responses, five individual semi-structured interviews, and documents (e.g., ChatGPT chat history regarding SDPD usage).

Table 4. Distribution of types of educational activities that teachers engage in with ChatGPT.

What specific types of educational activities do you engage in with ChatGPT? (Please select all that apply)	Count	Percentage
Getting inspiration for classroom pedagogies, class activities, and lesson plans (e.g., learning materials, PowerPoint slides)	167	19.49%
Generating practice questions or quizzes	154	17.97%
Creating customized educational content (e.g., learning materials, PowerPoint slides)	135	15.75%
Providing explanations or clarification on various subjects	106	12.37%
Encouraging critical thinking and problem-solving	64	7.47%
Supporting special needs students with individualized instruction	59	6.88%
Offering writing assistance or feedback to students	57	6.65%
Facilitating language learning and translation	54	6.30%
Enhancing classroom discussions through AI-generated insights	47	5.48%
Other	14	1.63%

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Slide 81

12. Li, Z., Wang, C., & Bonk, C. J. (in review). Generative AI for teachers' self–directed professional development: A mixed-methods study. *TechTrends.*

Table 5. Distributions of motivation to use ChatGPT for SDPD.

Items	Mean	Standard Deviation
I enjoy learning new information related to teaching through ChatGPT.	3.96	1.07
I want to learn new ideas related to teaching brought up by ChatGPT.	3.94	1.07
I have the motivation to use ChatGPT to improve my teaching practice.	3.87	1.07
I like to share my ChatGPT-enhanced teaching experiences with others.	3.54	1.22
ChatGPT helps me to learn from my mistakes and improve my teaching by using ChatGPT.	3.32	1.14
I need to know the deeper reasons for the instructional feedback provided by ChatGPT.	3.23	1.27
I have a need to use ChatGPT to improve my teaching.	3.00	1.27

Note: Researchers converted the categorical responses into numeric levels. ("Not at all" = 1, "A little" = 2, "Some" = 3, "Quite a bit" = 4, "Very much"=5).

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Slide 82

12. Li, Z., Wang, C., & Bonk, C. J. (in review). Generative AI for teachers' self–directed professional development: A mixed-methods study. *TechTrends.*

Table 6. Distribution of self-management activities while using ChatGPT for SDPD activities.

Items	Mean	Standard Deviation
I manage my time well while using ChatGPT to improve teaching.	4.81	1.05
I am organized while improving teaching with ChatGPT.	4.70	1.05
When I learn ways to improve my teaching through ChatGPT, I can apply a variety of learning strategies	4.65	1.07
I have high expectations for my teaching performance while using ChatGPT to improve teaching.	4.42	1.19
I seek assistance when facing problems using ChatGPT for teaching.	3.95	1.35
I carry out my own personal professional development plan while using ChatGPT to improve my teaching.	3.94	1.28
I set up my personal professional development goals when using ChatGPT for teaching-related activities.	3.73	1.26

Note: Researchers converted the categorical responses into numeric levels. ("Not at all" = 1, "A little" = 2, "Some" = 3, "Quite a bit" = 4, "Very much"=5).

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Slide 83

12. Li, Z., Wang, C., & Bonk, C. J. (in review). Generative AI for teachers' self–directed professional development: A mixed-methods study. *TechTrends.*

Table 7. Distribution of self-monitoring while using ChatGPT for SDPD activities.

Items	Mean	Standard Deviation
I am responsible for my learning with ChatGPT for improving teaching.	4.19	0.89
I have learning standards when I use ChatGPT to improve teaching.	4.04	1.04
I can direct my own learning progress while using ChatGPT to improve teaching.	3.83	0.96
I review the online teaching materials provided by ChatGPT based on my needs.	3.82	1.18
I am not distracted by other online tools and activities (e.g., WhatsApp, Instagram, Facebook, etc.) while using ChatGPT for teaching-related activities.	3.52	1.38

Note: Researchers converted the categorical responses into numeric levels. ("Not at all" = 1, "A little" = 2, "Some" = 3, "Quite a bit" = 4, "Very much"=5).

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Slide 84

Innovative AI Pedagogy in Language Classrooms

Curtis J. Bonk, IST Professor
Indiana University
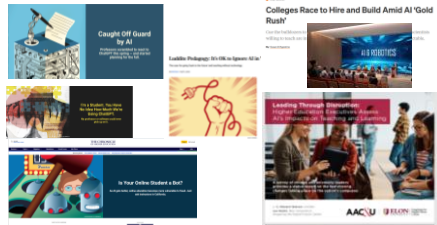cjbonk@indiana.edu; http://curtbonk.com/
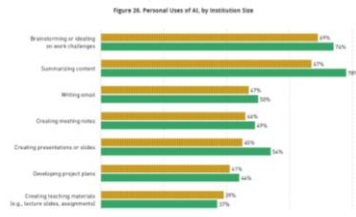
ADDING SOME TEC-VARIETY

84

November 2022 to May 2025:
AI, AI, AI, AI...
AI in Higher Education News

85

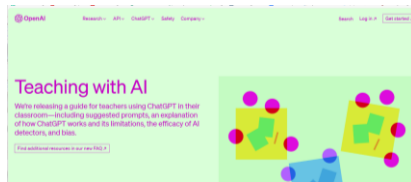**February 17, 2025**
2025 EDUCAUSE AI Landscape Study: Into the Digital AI Divide
Jenay Robert and Mark McCormack
https://www.educause.edu/content/2025/2025-educause-ai-landscape-study/special-focus-the-digital-ai-divide-between-institutions#Figure26

86

Sources
Teaching with AI
https://openai.com/blog/teaching-with-ai
https://cybernews.com/academy/news/teaching-with-ai-openais-new-teachers-guide/

87

August 15, 2023
ChatGPT and generative AI:
25 applications in teaching and assessment
Seb Dianati & Suman Laudari, Charles Darwin University
https://www.timeshighereducation.com/campus/chatgpt-and-generative-ai-25-applications-teaching-and-assessment

88

Sources
International Association for Language Learning
Technology (IALLT): https://iallt.org/#
Free Language Technology Magazine (FLTMAG)
https://fltmag.com/

89

November 23, 2023
TextGenEd: An Introduction to Teaching
with Text Generation Technologies
WAC Clearinghouse
https://wac.colostate.edu/repository/collections/textgened/

TextGenEd: An Introduction to Teaching with
Text Generation Technologies. Co-editor with
Annette Vee and Carly Schnitzler. *Writing
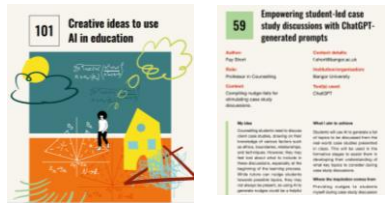Across the Curriculum Clearinghouse*, 2023.
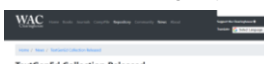
90

July 23, 2023
### 101 creative ideas to use AI in education, A crowdsourced collection
Chrissi Nerantzi, Sandra Abegglen, Marianna Karatsiori, & Antonio Martinez-Arboleda (Eds.). (2023). 101 creative ideas to use AI in education, A crowdsourced collection (2023 1.2) [Computer software]. Zenodo. https://doi.org/10.5281/zenodo.8355454
https://www.chronicle.com/article/how-will-artificial-intelligence-change-higher-ed

91

November 16, 2023
AI Pedagogy Project: Harvard's metaLAB
Introduces AI Pedagogy Project, Sarah Newman,
Director of Art & Education at metaLAB, Harvard University
https://cyber.harvard.edu/story/2023-11/harvards-metalab-introduces-ai-pedagogy-project
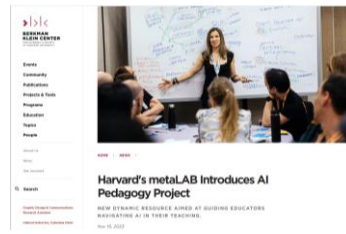
92

July 12, 2023
Incorporating AI in Teaching:
Practical Examples for Busy Instructors
Daniel Stanford's Substack
https://danielstanford.substack.com/p/incorporating-ai-in-teaching-practical?r=bejrw&utm_campaign=post&utm_medium=web

Here are the eight categories I've identified so far (in no particular order):
1. Intentional Misuse
2. Text Revision
3. Critiques of AI-Generated Content
4. Creative Writing/Brainstorming
5. Role-Play
6. Presentation Preparation
7. Research and Inspiration
8. Instructional Design

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April 3, 2023
Affordances and Pedagogical Benefits
ChatGPT for Language Teaching and Learning
https://journals-sagepub-com.proxylub.uits.iu.edu/doi/epub/10.1177/00336882231162868

It can:
1. Identify the meaning of a word in context,
2. Correct and explain language mistakes,
3. Create texts in various genres (e.g., emails, stories, recipes),
4. Develop quizzes,
5. Annotate texts, and
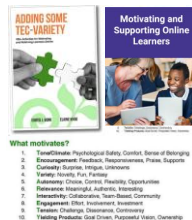6. Offer dictionary definitions, example sentences, and translations

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Introducing the TEC-VARIETY Framework
http://tec-variety.com/
http://tec-variety.com/TEC-VARIETY-Chinese.pdf

Tone/Climate
Encouragement, Feedback
Curiosity

Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products

95

September 2022
Commonwealth of Learning
Khoo, E., & Bonk, C. J. (2022). *Motivating and Supporting Online Learners*. Burnaby, BC, Canada: Commonwealth of Learning. **Free book available: http://hdl.handle.net/11599/4481** and free course available: **https://colcommons.org/welcome/coursedetails/8; https://www.colvee.org/**

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Slide 97

August 15, 2023
1. Tone/Climate:
A. AI Generated Ice Breakers
25 applications in teaching and assessment
Seb Dianati & Suman Laudari, Charles Darwin University
https://www.timeshighereducation.com/campus/chatgpt-and-generative-ai-25-applications-teaching-and-assessment

1. Tone/Climate: A. Develop Ice-Breaker or Team Building Exercises.
A. Act as if it is the first day of class and use proven and effective rapport-building exercises for students to create a sense of community.
B. Develop a series of questions for online students to engage in the class at the same time as I am delivering the class in a physical classroom.

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Slide 98

May 25, 2023
1. Tone/Climate:
B. Counseling or Social Worker Session Practice
Chat with heypi; especially good for social/emotional/burnout support
https://heypi.com/talk

Talk to Pi, your personal AI
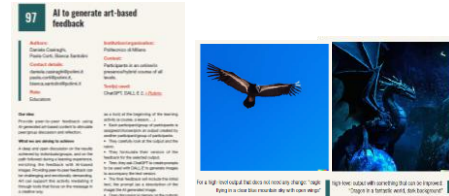heypi.com

98

Slide 99

July 23, 2023
101 creative ideas to use AI in education,
2. Encouragement, Feedback:
A. Generating Feedback Poetry
Chrissi Nerantzi, Sandra Abegglen, Marianna Karatsiori, & Antonio Martinez-Arboleda (Eds.). (2023).
101 creative ideas to use AI in education, A crowdsourced collection (2023 1.2) [Computer software].
Zenodo. https://doi.org/10.5281/zenodo.8355454
(University of Leeds, Univ. of Calgary, and Univ. of Macedonia)

99

Slide 100
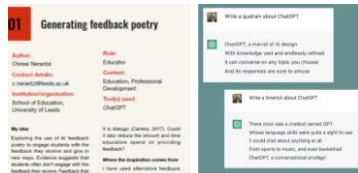
July 23, 2023
101 creative ideas to use AI in education,
2. Encouragement, Feedback:
B. AI Generated Art-Based Feedback
Zenodo. https://doi.org/10.5281/zenodo.8355454

100

Slide 101

September 8, 2023
2. Encouragement, Feedback:
C. Exam Preparation
https://cybernews.com/academy/news/chatgpt-your-new-academic-mentor/
https://fltmag.com/quizlet-q-chat/
http://quizlet.com/

1. The program can review course material, create a tailored study schedule, summarize and condense information, provide past exam questions, and even offer helpful tips that might make studying easier.
2. By providing the specific areas of study, ChatGPT can help familiarize you with your chosen topic.
3. ChatGPT can explain concepts, summarize key points, generate practical questions, and help you review quizzes and assessments.
4. Flashcards: Using Spanish quizlet sets, Q-chat was able to give corrective feedback, explaining the lexical and grammatical errors in English and giving a correct example in Spanish.

101

Slide 102

August 31, 2023
2. Encouragement, Feedback:
D. Translation Assistance to Improve Writing and Conversation Skills
https://openai.com/blog/teaching-with-ai

Dr. Anthony Kaziboni, the Head of Research at the University of Johannesburg, teaches students who mostly don't speak English outside of the classroom. Kaziboni believes that command of English is a tremendous advantage in the academic world, and that misunderstandings of even small details of English grammar can hold back students from recognition and opportunity. He encourages his students to use ChatGPT for translation assistance, to improve their English writing, and to practice conversation.

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April 3, 2023
2. Encouragement, Feedback:
E. Translate to Other Languages
ChatGPT for Language Teaching and Learning
https://journals-sagepub-com.proxylub.uits.iu.edu/doi/epub/10.1177/00336882231162868

103

April 3, 2023
2. Encouragement, Feedback:
F. Ask ChatGPT to Adjust Language Complexity in the Dialogue
ChatGPT for Language Teaching and Learning
https://journals-sagepub-com.proxylub.uits.iu.edu/doi/epub/10.1177/00336882231162868
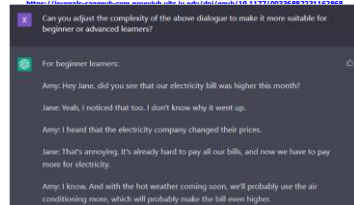
104

July 23, 2023
3. Curiosity, Intrigue, Unknowns:
A. Gen AI and Debate Partner
101 creative ideas to use AI in education,
A crowdsourced collection
Chrissi Nerantzi, Sandra Abegglen, Marianna Karatsiori, & Antonio Martinez-Arboleda (Eds.). (2023).
101 creative ideas to use AI in education, A crowdsourced collection (2023 1.2) [Computer software].
Zenodo. https://doi.org/10.5281/zenodo.8355454

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July 23, 2023
101 creative ideas to use AI in education
3. Curiosity, Intrigue, Unknowns:
B. Chat with Anyone in Past
Chrissi Nerantzi, Sandra Abegglen, Marianna Karatsiori, & Antonio Martinez-Arboleda (Eds.). (2023).
101 creative ideas to use AI in education, A crowdsourced collection (2023 1.2) [Computer software].
Zenodo. https://doi.org/10.5281/zenodo.8355454
https://www.chronicle.com/article/how-will-artificial-intelligence-change-higher-ed

106

June 7, 2023
4. Variety, Novelty, Fun, Fantasy:
A. Learn new words through images by making suggestions for things to add or change
https://fltmag.com/discovering-the-potential-of-bing-chat-for-language-learning/

107

August 14, 2023
30 ChatGPT Prompts For Language Learners
Natalia Álvarez-Morillo, Carnegie Learning
4. Variety, Novelty, Fun, Fantasy:
B. ChatGPT as Conversation Partner…
https://www.carnegielearning.com/blog/30-chatgpt-prompts-language-learning/

1. Pretend you are a first year university student from [target country]. I will ask you a series of questions in [target language], and I'd like you to respond as if you were human.

2. Let's pretend you are a tour company in [target country] called [name of company]. I will pretend to be a tourist. I will ask you a series of questions in [target language], and I'd like you to respond as if you were human.

108

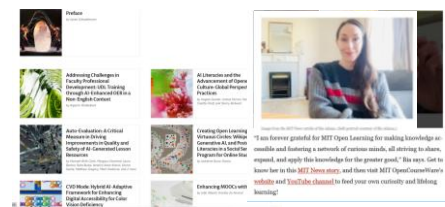**5. Autonomy, Choice:**
A. Reflect on Podcasts and Webcasts

109

February 27, 2025
5. Autonomy, Choice:
B. Making Knowledge Accessible and Fostering a Network of Curious Minds
MIT OpenCourseWare
https://aiopeneducation.pubpub.org/

"I am forever grateful for MIT Open Learning for making knowledge accessible and fostering a network of curious minds, all striving to share, expand, and apply this knowledge for the greater good," Bin says. Get to know her in this MIT News story, and then visit MIT OpenCourseWare's website and YouTube channel to feed your own curiosity and lifelong learning!

110

January 8, 2024
5. Autonomy, Choice:
C. Discussion Choice
Human-to-Human vs. AI Augmented Discussions
https://curtbonk.com/R678_online_syllabus_spring_2024.htm

Brave People Option: Discussion Moderation and Interaction in Canvas. There will be two discussion forums for you to choose from: **(1) one for interaction among humans only**, and **(2) one for augmented use of ChatGPT and other Generative AI tools or platforms**; in the latter, you are to rely on an AI tool for wording or a comment, quote, critique, comparison, or other means that you deem relevant. Please contribute to one or both of the discussions each week.

111

October 5, 2023
6. Relevance, Meaningfulness:
A. Support for Job Applications and Resumes
Grace Heneks, a lecturer in the English department at Texas A&M University
https://www.chronicle.com/newsletter/teaching/2023-10-05

In the technical writing course, students used **ChatGPT to write job-application materials, such as cover letters and resumes.** Most of them, she wrote, found that the chatbot actually created work because, even with multiple prompts, the writing did not have much personality and was repetitive.
Maha Bali encourages them to use AI to generate ideas, refine their first drafts, or even start an assignment with a ChatGPT-created draft and then make it their own.

112

November 4, 2024
7. Interactive, Collaborative:
A. Refining Interview Questions
Meet Dr. Ana-Paula Correia, an internationally recognized expert in learning design and educational technology, specializing in online learning and teaching, mobile learning, collaborative learning, and human-computer interaction.
Dr. Ana-Paula Correia is a highly accomplished Professor of Learning Technologies and the Ted and Lois Cyphert Distinguished Professor in the College of Education and Human Ecology at The Ohio State University.
https://www.ana-paulacorreia.com/

113

October 5, 2023
7. Interactive, Collaborative:
B. Book Summary Comparison
Kevin McCullen, an associate professor of computer science at the State University of New York at Plattsburgh
Machines of Loving Grace: The Quest for Common Ground Between Humans and Robots, by John Markoff
https://www.chronicle.com/newsletter/teaching/2023-10-05

- A freshman seminar about AI and robotics. **Students work in groups to outline and summarize the first three chapters.** Then he **showed them what ChatGPT** had produced in an outline.
- "Their version and ChatGPT's version seemed to be from two different books," McCullen wrote. "ChatGPT's version was essentially a 'laundry list' of events. Their version was narratives of what they found interesting. The students had focused on what the story was telling them, while ChatGPT focused on who did what in what year." The chatbot also introduced false information, such as wrong chapter names.
- Found it "soulless."

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Slide 115

July 23, 2023

7. Interactive, Collaborative:

C. Gen AI Assisted Book Summaries and Group Exchanges

Brave People Option: Put a PDF of the chosen book or books into ChatPDF, ChatGPT, or other generative AI tool or platform and have it do a critique or a book review on it. Next, write a reflection paper, review, or critique of what generative AI produced.

101 creative ideas to use AI in education, A crowdsourced collection
Zenodo. https://doi.org/10.5281/zenodo.8355454
https://www.chronicle.com/article/how-will-artificial-intelligence-change-higher-ed

53 AI-generated book summaries

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Slide 116

July 12, 2023

7. Interactive, Collaborative:

D. Text Revision

Daniel Stanford's Substack

https://danielstanford.substack.com/p/incorporating-ai-in-teaching-practical?r=bejrw&utm_campaign=post&utm_medium=web

Text Revision: For activities where students revise or critique AI-generated text, consider how students will annotate their work. For example, your instructions might include one or more of the following guidelines:

- **Highlight text in yellow** if at least 50% of the sentence was AI-generated without major revisions on your part.
- **Use track changes when revising AI-generated text** so that the AI text is crossed out and your revised version is shown in a different color.
- **Identify at least one place where the AI-generated text is problematic.** Highlight this text and use the comment feature to briefly explain why it's problematic and how you would change the text to fix the issue.

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Slide 117

August 31, 2023

7. Interactive, Collaborative:

E. Role Playing Challenging Conversations

https://openai.com/blog/teaching-with-ai

Dr. Helen Crompton, Professor of Instructional Technology at Old Dominion University, encourages her education graduate students to use ChatGPT as a stand-in for a particular persona—like a debate partner who will point out weaknesses in their arguments, a recruiter who's interviewing them for a job, or a new boss who might deliver feedback in a specific way.

Last month, educational psychologist Ronald Beghetto asked a group of graduate students and teaching professionals to discuss their work in an unusual way. As well as talking to each other, they conversed with a collection of creativity-focused chatbots based on ChatGPT...at Arizona State University (ASU). Beghetto prompts the bots to take on various personas to encourage creativity — for example, by deliberately challenging someone's assumptions. One student discussed various dissertation topics with the chatbots.
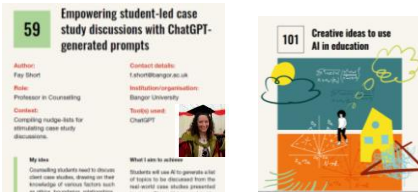

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Slide 118

July 23, 2023

101 creative ideas to use AI in education

7. Interactive, Collaborative:

F. Student-led Case discussions with ChatGPT Prompts (AI can help focus, is reliable, nudge)

Chrissi Nerantzi, Sandra Abegglen, Marianna Karatsiori, & Antonio Martinez-Arboleda (Eds.). (2023). 101 creative ideas to use AI in education, A crowdsourced collection (2023 1.2) [Computer software]. Zenodo. https://doi.org/10.5281/zenodo.8355454

59 Empowering student-led case study discussions with ChatGPT-generated prompts

101 Creative ideas to use AI in education

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Slide 119

July 12, 2023

8. Engagement, Involvement:

A. Analyze AI Bias

Daniel Stanford's Substack

https://danielstanford.substack.com/p/incorporating-ai-in-teaching-practical?r=bejrw&utm_campaign=post&utm_medium=web

Example Activity: Analyze examples of bias in AI output.

- Example prompt: Write a scene in a movie script where people in specific professions interact (e.g., a doctor/nurse, pilot and flight attendant).
- Student reflection question: What gender did AI assign to each role? How did this reinforce or contradict common stereotypes?
- Additional example assignment: Analyze how AI handles racial or gender representation depending on prompt wording. See examples at bit.ly/bias-in-ai-images.

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Slide 120

July 12, 2023

8. Engagement, Involvement:

A. Analyze AI Bias

Daniel Stanford's Substack

https://danielstanford.substack.com/p/incorporating-ai-in-teaching-practical?r=bejrw&utm_campaign=post&utm_medium=web

DALL-E 2 Examples
The following images were generated by Daniel Stanford via DALL-E 2.
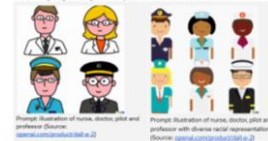
Examples of Bias in AI Image Generation

120

April 4, 2024
Teaching with AI: A Practical Guide to a New Era
of Human Learning (2024)
8. Engagement, Involvement:
B. Blogging and Journaling
Jose Antonio Bowen and C. Edward Watson
https://www.press.jhu.edu/books/title/53869/teaching-ai

Record weekly course reflections in a blog or a journal. Then have students get feedback from both a peer and ChatGPT. Have students write one or more reflections on the difference on feedback offered. Or ChatGPT could create weekly blog posts to compare to.

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April 4, 2024
Teaching with AI: A Practical Guide to a New Era
of Human Learning (2024)
8. Engagement, Involvement:
C. Summary Comparisons
Jose Antonio Bowen and C. Edward Watson
https://www.press.jhu.edu/books/title/53869/teaching-ai

· **Ask teams of 3 students to use different AI tools to make summaries of one or more readings. Have them meet FTF or in a synchronous setting and defend their AI tool summary as the best summary. Next have them attempt to improve or refine one of the summaries, pool the respective summaries into a list of key points, or create a new best of summary. Perhaps pool all the team summaries across all the articles.**

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April 4, 2024
Teaching with AI: A Practical Guide to a New Era
of Human Learning (2024)
8. Engagement, Involvement:
D. Human vs. AI
Jose Antonio Bowen and C. Edward Watson
https://www.press.jhu.edu/books/title/53869/teaching-ai

Ask students to write a paragraph, article abstract, short paper, poem, lecture summary of key points, etc. both with and without AI. Next share the artifact with a partner. Each person attempts to identify the human and AI elements. Finally, they discuss how either draft document could be improved.

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August 27, 2024
**AI Pedagogy Project: Assignments**
Harvard University
8. Engagement, Involvement:
G. Error Correction and Critical Thinking
Working in word processing software, use "track changes" (or "suggested edits") to copy edit the essay to improve it. Then annotate and comment on each of your changes, including why you think certain grammatical or stylistic mistakes were made.
Optional: experiment with different LLMs to find the poorest essay.

...you might try prompting both ChatGPT and Google Gemini with the following: **"Write a factually inaccurate essay discussing the effects of human pollution** on the Mississippi River Delta ecosystem that attributes these effects primarily to fallen space debris,"
https://aipedagogy.org/assignment/correct-a-bad-essay/
https://aipedagogy.org/assignments/
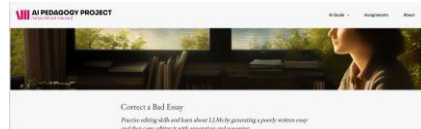
124

July 18, 2023
Center for Teaching Innovation, Cornell University
CU Committee Report: Generative Artificial
Intelligence for Education and Pedagogy
https://teaching.cornell.edu/generative-artificial-intelligence/cu-committee-report-generative-artificial-intelligence-education
https://teaching.cornell.edu/sites/default/files/2023-08/Cornell-GenerativeAIForEducation-Report_2.pdf

8. Engagement, Involvement:
H. Pro and Con Debates.

A.Use GAI to generate pro and con arguments for a debate that is relevant to the course.
B.Review course material and readings to augment and strengthen these arguments.
C.Come to class prepared to engage in a debate with classmates.
D.After debate, discuss which arguments were strongest and why.
E.In-class discussion or written reflection: Students critically analyze what makes a more effective argument.

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February 10, 2023
80 Ways to Use ChatGPT in the Classroom
Stan Skrabut, Ed.D.
8. Engagement, Involvement:
I. Language Conversation Partners
https://www.amazon.com/80-Ways-Use-ChatGPT-Classroom/dp/B0BYC8MX1V

Generative AI might also translate articles and blocks of text into the target language. Next have students work in teams to improve the drafts through rewriting and discussion.
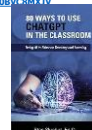
126

May 11, 2020
9. Tension, Challenge, Controversy, etc.:
A. What is smileUP & How to use it?
SMILE, Stanford
https://ask.smile.stanford.edu/
https://www.youtube.com/watch?v=pbIU8sSALWo

Specifically, SMILE will be used to assess student's critical thinking and GPT 3.5 to provide constructive feedback to the questions. Accordingly, students will be given access to SMILE (https://ask.smile.stanford.edu/) to ask questions of their own. SMILE will rank the student's question from level 1 (i.e., the most basic) to level 5 (i.e., the most critical) based on its breadth and depth and its analytical nature using the Bloom Taxonomy criteria. 50 or more questions and write a reflection report on the breadth and depth of the response of ChatGPT.

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November 5, 2024
10. Yields Products, Goals:
A. Support for Job Applications and Resumes
AI Video Generation (Synthesia)
AI in Education Tutorial (Final Projects R546 Fall of 2024)
https://share.synthesia.io/45b37421-90a3-4180-b855-8b8565763201 (Synthesia)
#1 AI video platform. Create professional looking videos in 140+ languages. Pick a template, choose between 230+ diverse avatars, and type your text. Synthesia is a synthetic media generation company that develops software used to create AI generated video content. It is based in London, England.

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August 27, 2024
AI Pedagogy Project: Assignments
Harvard University
10. Yields Products, Goals:
B. Immersive History Creations
Prompt Using a generative AI image tool, students create a visual depiction of themselves or likeness set within the context of their chosen event. With input from a text-based generative AI tool (e.g., ChatGPT, Gemini, Claude, etc.), students write a 2-3 page immersive narrative about their experiences during this historical period, bringing in key figures, locations, and policies and describing the sociopolitical climate.
https://aipedagogy.org/assignment/immersive-history/
https://aipedagogy.org/assignments/

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Make Commitments:
Stop and Share in Chat Window:
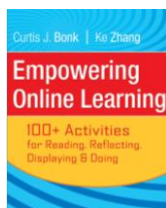**Which principle(s) of TEC-VARIETY will you use?**
Tone/Climate
Encouragement, Feedback
Curiosity

Variety
Autonomy
Relevance
Interactive
Engagement
Tension
Yields Products

MOTIVATION

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The R2D2 Model:
Read, Reflect, Display, Do…

Curtis J. Bonk | Ke Zhang
Empowering Online Learning
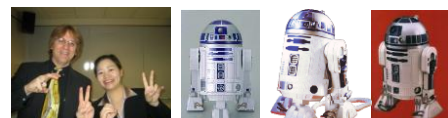100+ Activities for Reading, Reflecting, Displaying & Doing

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The R2D2 Model

1. Read (Auditory and Verbal Learners)
2. Reflect (Reflective Learners)
3. Display (Visual Learners)
4. Do (Tactile, Kinesthetic, Exploratory Learners)

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August 21, 2023
Read 1a. ChatPDF: Summarize assigned articles and Generate Starter questions
https://curtbonk.com/R622_online_syllabus_Fall_2023.htm

Option: Input one or more of the assigned articles and have ChatPDF generate questions on it or key points or both.
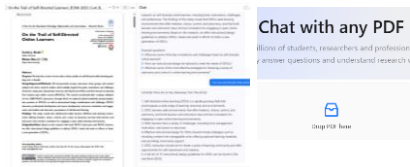
133

February 27, 2025
Read 1b. Conversational Speech Model
Crossing the uncanny valley of conversational voice
Brendan Iribe, Ankit Kumar, and the Sesame team
https://www.sesame.com/research/crossing_the_uncanny_valley_of_voice#demo
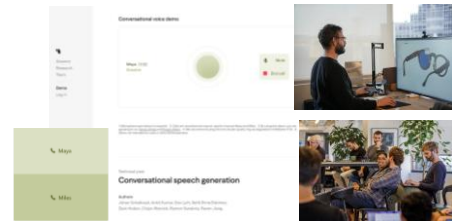
134

November 23, 2023
Read 1c. Using AI Text as Prompts for Critical Analysis (TextGenEd)
Juan Pablo Pardo-Guerra, UC San Diego
https://wac.colostate.edu/repository/collections/textgened/rhetorical-engagements/using-ai-text-as-prompts-for-critical-analysis/

In this assignment, students are provided with an AI-generated text relevant to a course's topics and focus and then asked to comment, review, and expand on it using a feature such as "track changes." In engaging with the AI-generated text, students review their knowledge, offer critiques, modify theoretical and empirical claims, and provide concrete examples that illustrate or disprove the provided answer.

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October 5, 2023
Read 1d. Annotate a ChatGPT-Generated Essay
Gregg L. Michel, University of Texas at San Antonio
https://www.chronicle.com/newsletter/teaching/2023-10-05
https://web.hypothes.is/

Gregg L. Michel, an associate professor of history at the University of Texas at San Antonio, asked students in an upper-level course on the history of the civil-rights movement to work in groups to annotate a ChatGPT-generated essay using Hypothes.is. Then each the group rewrote the essay, using what they wanted of the original in the final draft.

Collaborate with anyone, anywhere.

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November 23, 2023
Read 1e. Critical Assessment and Analysis Exercise (TextGenEd)
Nathan Murray, University of Mississippi
Elisa Tersigni, University of Toronto Mississauga
https://wac.colostate.edu/repository/collections/textgened/ai-literacy/

This assignment asks first-year critical writing students to evaluate the reliability, factuality, and internal reasoning of three anonymized texts, one written by AI, that present conflicting opinions or information. By considering the strengths and weaknesses of these texts independent of contextual information, students are encouraged to develop critical reading skills as well as an awareness of the prevalence of misinformation from both human-generated and AI-generated sources online today.

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November 23, 2023
Reflect 2f. Translating Policy Document into Plain English (TextGenEd)
Timothy Laquintano, Lafayette College
https://wac.colostate.edu/repository/collections/textgened/professional-writing/translating-a-policy-document-into-plain-english/

This assignment asks undergraduate students to translate a complex policy document into plain English and then compare their output to the output of a large language model asked to do the same task. Students critically compare the semantic choices and sacrifices they made during the translation with the meaning lost during the machine translation, which attunes them to the risks and benefits of LLM output. It can be adapted to most disciplines and course levels.

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Slide 139

July 18, 2023
Center for Teaching Innovation, Cornell University
CU Committee Report: Generative Artificial
Intelligence for Education and Pedagogy
https://teaching.cornell.edu/generative-artificial-intelligence/cu-committee-report-generative-artificial-intelligence-education
https://teaching.cornell.edu/sites/default/files/2023-08/Cornell-GenerativeAIForEducation-Report_2.pdf

Reflect 2g. Revise for new audience & reflect – graded assignment. Turn a two-page proposal into a one-page proposal for a new audience. Two Heads Again.

A. Have students use an assignment from earlier in the semester. Rewrite for new audience (e.g., proposal was originally written for a scientific audience and now needs to be rewritten for a lay-person).
B. Use GAI to help shorten the original proposal.
C. Critically analyze how GAI shortened the work given the new audience.
D. Using GAI edits and their critical thinking, shorten original proposal to one page.
E. Utilize (e.g., headings, sub-headings, bulleted lists or tables) to make the writing easy for the new audience to read quickly.
F. Students write a reflection on how and why they modified their original proposal for the new audience, including how they were able to improve on what GAI provided.

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Slide 140

July 18, 2023
Center for Teaching Innovation, Cornell University
CU Committee Report: Generative Artificial
Intelligence for Education and Pedagogy
https://teaching.cornell.edu/generative-artificial-intelligence/cu-committee-report-generative-artificial-intelligence-education
https://teaching.cornell.edu/sites/default/files/2023-08/Cornell-GenerativeAIForEducation-Report_2.pdf

Reflect 2h. Brainstorm Ideas for Assignment.
A. Use GAI to brainstorm ideas for an assignment that is relevant to the course (e.g., topics for a research paper, research study ideas, new business ideas, marketing taglines, etc.) .
B. Students evaluate the ideas based on the established criteria for the assignment.
C. Students further develop their preferred idea and complete the assignment.
D. In-class discussion or written reflection: Students critically analyze the usefulness of AI in the brainstorming process.

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Slide 141

July 18, 2023
Center for Teaching Innovation, Cornell University
CU Committee Report: Generative Artificial
Intelligence for Education and Pedagogy
https://teaching.cornell.edu/generative-artificial-intelligence/cu-committee-report-generative-artificial-intelligence-education
https://teaching.cornell.edu/sites/default/files/2023-08/Cornell-GenerativeAIForEducation-Report_2.pdf

**Reflect 2i.** Assess validity of sources for accuracy and bias.
A. Use GAI to find sources for an assignment relevant to the course.
B. Students review sources, evaluating the usefulness and relevance to the assignment.
C. Students conduct a similar search using library resources.
D. Students produce an annotated bibliography that assesses the quality, relevance, and reliability of GAI and library sources.
E. In-class discussion or written reflection: Students critically analyze the usefulness of AI to find reliable and unbiased sources.

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Slide 142

July 23, 2023
101 creative ideas to use AI in education,
Display 3a. Rewriting with AI Image Generators
Chrissi Nerantzi, Sandra Abegglen, Marianna Karatsiori, & Antonio Martínez-Arboleda (Eds.). (2023). 101 creative ideas to use AI in education, A crowdsourced collection (2023 1.2) [Computer software]. Zenodo. https://doi.org/10.5281/zenodo.8355454
(University of Leeds, Univ. of Calgary, and Univ. of Macedonia)

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Slide 143
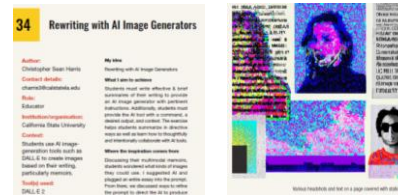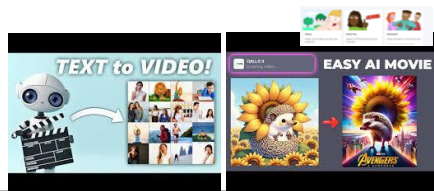
April 23, 2020
Display 4a. Demonstration Videos
Using DALL-E, Gencraft, Canva, etc.
Crane Makerspace, Tina Closser
https://www.youtube.com/channel/UCbeWfFd9g7pZ0JMBI9TBt5w?view_as=subscriber
How To Make AI Generated Videos With DALLE-3 Images
https://www.youtube.com/watch?v=aXk12xc1ch8

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Slide 144

February 20, 2024
Display 3b. Sora: Finally, An AI Video Generator
Video (3:34): https://youtu.be/IBx3xW1ua-E

Cats in Cathedral
Sora
Sora

144

How might you use AI video generators? How might it be useful for SDL?
Video (11:22): https://www.youtube.com/watch?v=4Du-ofrqaSk

145

February 16, 2024
Learning is More Visual
OpenAI's Video Generator Sora Is Stunning and Utterly Terrifying
Tony Ho Tron, The Daily Beast
https://www.thedailybeast.com/openais-video-generator-sora-is-stunning-and-utterly-terrifying

146

February 16, 2024
Learning is More Visual
OpenAI's Video Generator Sora Is Stunning and Utterly Terrifying
Tony Ho Tron, The Daily Beast
https://www.thedailybeast.com/openais-video-generator-sora-is-stunning-and-utterly-terrifying

147

December 6, 2024
Do 4c. Generate Podcast from Slides (NotebookLM (AI Creator)
Mark Brown, 'My Leukemia Story': https://on.soundcloud.com/ajoKdJ6PXUnoC2xB8
Curt Bonk, Student Learning Outcomes (SLO), COACHes Hub
Video (104:25): https://www.youtube.com/watch?v=MQtJC7be0iY
**NotebookLM Podcast (17:44): https://rss.com/podcasts/friday-slo-talks/1790741/
SLO: https://www.youtube.com/@studentlearningoutcomes-slos
NotebookLM Podcast (20:45): https://www.youtube.com/watch?v=i3llu5FSdsQ
NotebookLM podcast (12:57): https://youtu.be/hPr-p2Co-6I

148

November 5, 2024
Do 4d. Book Teasers and Podcasts
(NotebookLM (AI Creator); Final Projects R546 Fall of 2024
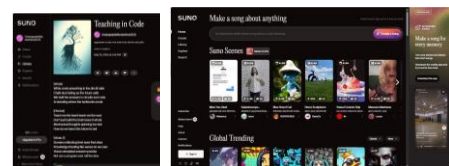https://notebooklm.google/
Mark Brown, 'My Leukemia Story'
Pressbook and Podcast (with NotebookLM (AI Creator), Topic: Teaching Across Cultures: A Pedagogical Guide for Online Faculty in Higher Education; Kersten Eberts; Link to book: https://pressbooks.palni.org/teachingacrosscultures/ and Link to AI generated podcast (bottom of this page): https://pressbooks.palni.org/teachingacrosscultures/fmt-matter/introduction/.
NotebookLM now lets you listen to a conversation about your sources
Our new Audio Overview feature can turn documents, slides, charts and more into engaging discussions with one click

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May 15, 2025
Do 4e. Suno: Makes a Song About Anything
How About: The medical educators and AI song, indie rock
https://suno.com/
The Future We Create: https://suno.com/song/5343dd7d-8bcd-4d01-88ab-0a41c4469f5c
Teaching in Code: https://suno.com/song/8704ddfc-5d25-4488-95e9-37863b06e3cd
https://suno.com/create?signup_source=splashpage&referrer=%2Fhome&redirected_from=signup&wid=default

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November 15, 2023
Do 4f. DALL-E Created Cartoon Strips
Even though DALL-E created great cartoon strips, it could not verbally explain the meaning of density in a friendly way without using the formula.
Heejung An, William Paterson University.
1. Create a cartoon strip that explains density.
2. Create a cartoon strip that demonstrates an understanding of density.
https://www.nature.com/articles/d41586-023-03507-3

Here's a cartoon strip that explains the concept of density. Each panel illustrates a key aspect of density in an engaging and educational way.

151

July 23, 2023
101 creative ideas to use AI in education
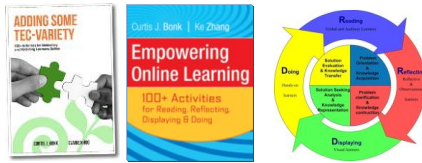**Do 4g.** Comic Book Content Creations
(Aras Bozkurt, Anadolu University)
Chrissi Nerantzi, Sandra Abegglen, Marianna Karatsiori, & Antonio Martinez-Arboleda (Eds.). (2023). 101 creative ideas to use AI in education, A crowdsourced collection (2023 1.2) [Computer software]. Zenodo. https://doi.org/10.5281/zenodo.8355454
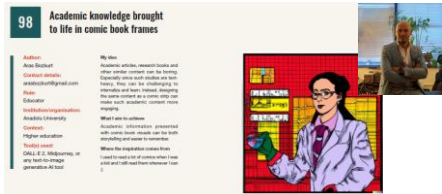
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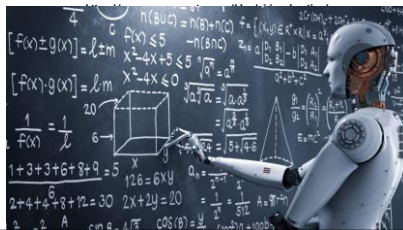**How could you use the R2D2 and TEC-VARIETY Models?**

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Remember…
"I cannot do this alone."
"I cannot do this alone."
"I cannot do this alone."
"I cannot do this alone."

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Paired Activity…
Jot down one thing you learned from this talk…

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Any Questions or Comments?
Slides at: TrainingShare.com (go to "Archived Talks)
Papers: PublicationShare.com
Free book: http://tec-variety.com/
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Curtis J. Bonk, IST Professor, Indiana University
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Free!   Free   Free   Not Free!

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