

What if students choose to use generative AI: 3-year teaching reflection

Dr. Daniel Chang

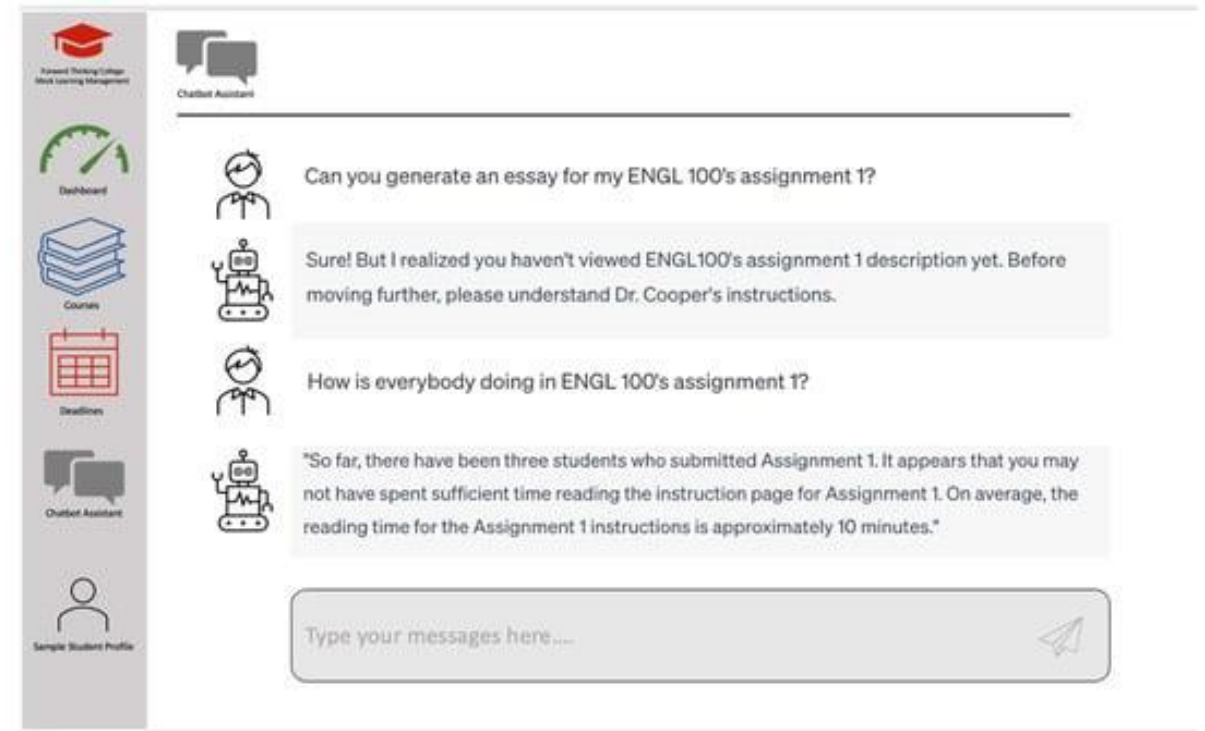
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About Daniel Chang...Areas of Expertise

- Explore how Emerging **AI Technologies** Effectively Facilitate Online Learning and Writing in Higher Education
- Develop Effective Online Learning Tools That Promote Learners' **Self-Regulation**
- **Support Multilingual Writers'** Writing Processes in a Computer-Assisted Learning Environment



(Chang et al., 2023)

Research Interests

How online chatbot promotes students' writing skills

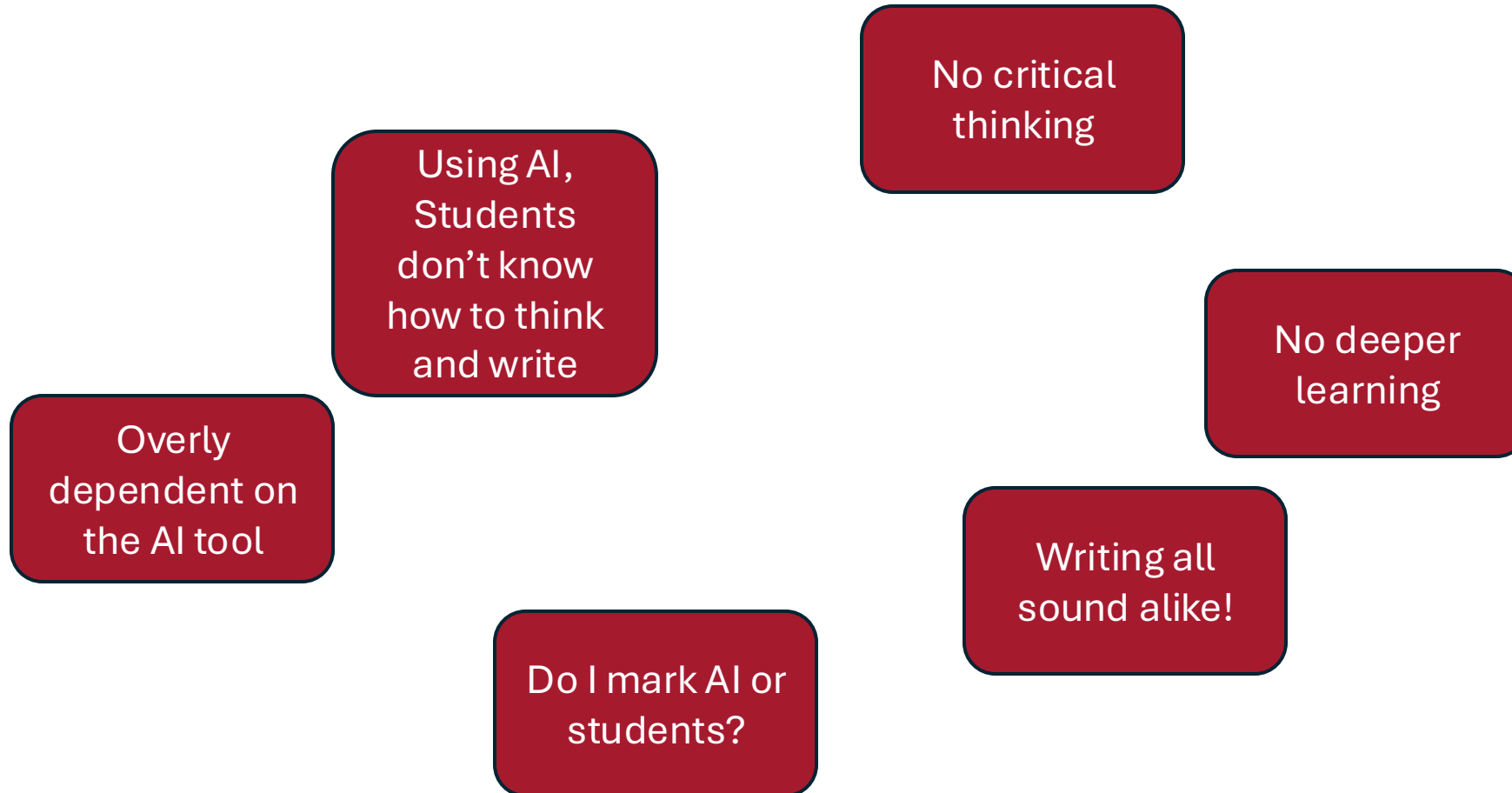
- Lin, M. P. C., & **Chang, D.** (2020). Enhancing post-secondary writers' writing skills with a chatbot. *Journal of Educational Technology & Society*, 23(1), 78-92.
- Lin, M. P. C., **Chang, D. H.**, & Winne, P. H. (2024). A proposed methodology for investigating student-chatbot interaction patterns in giving peer feedback. *Educational technology research and development*, 1-34.

Develop a conceptual framework for utilizing AI learning tools to support self regulation

- **Chang, D. H.**, Lin, M. P. C., Hajian, S., & Wang, Q. Q. (2023). Educational Design Principles of Using AI Chatbot That Supports Self-Regulated Learning in Education: Goal Setting, Feedback, and Personalization. *Sustainability*, 15(17), 12921.
- Lin, M. P. C., & **Chang, D.** (2023). CHAT-ACTS: A pedagogical framework for personalized chatbot to enhance active learning and self-regulated learning. *Computers and Education: Artificial Intelligence*, 5, 100167.

What's your biggest concern about students using AI in your classroom?

Type in chat



Chatbot? Pre-ChatGPT

A simple conversational agent that helps:

1. Generate strong thesis statements
2. Assist writers with peer review process

(Lin & Chang, 2020; Lin, Chang, Winne, 2024)

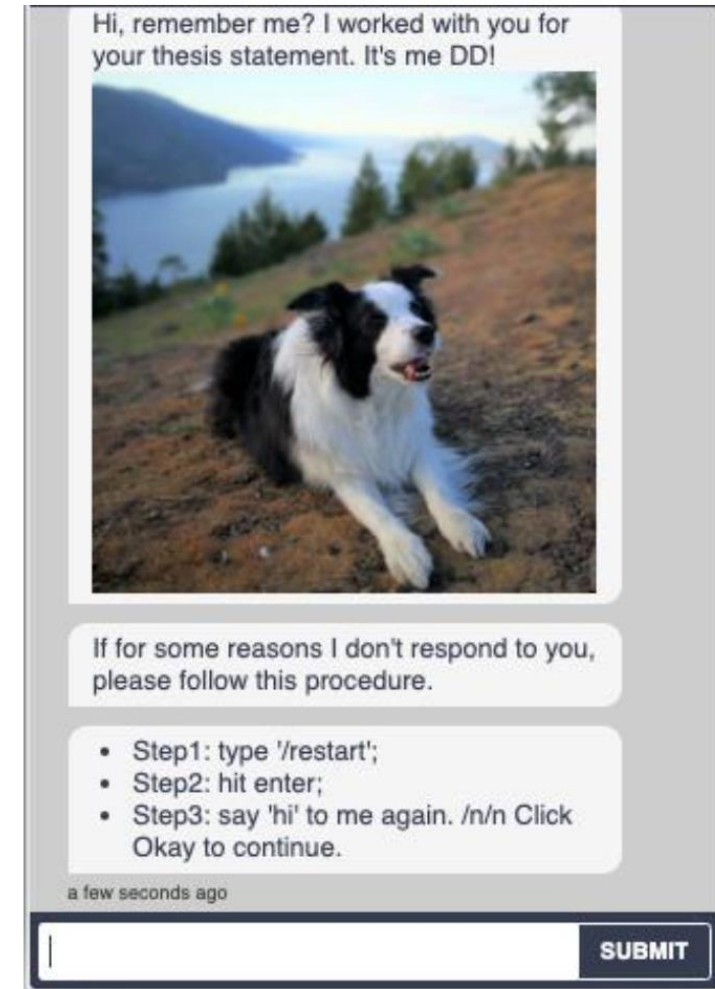


Figure 2. A web-based chatbot interface

Generative Artificial Intelligence - ChatGPT

- Just something new. It shouldn't be chaos.
- “Can you write an essay about dancing while dancing?”



ChatGPT

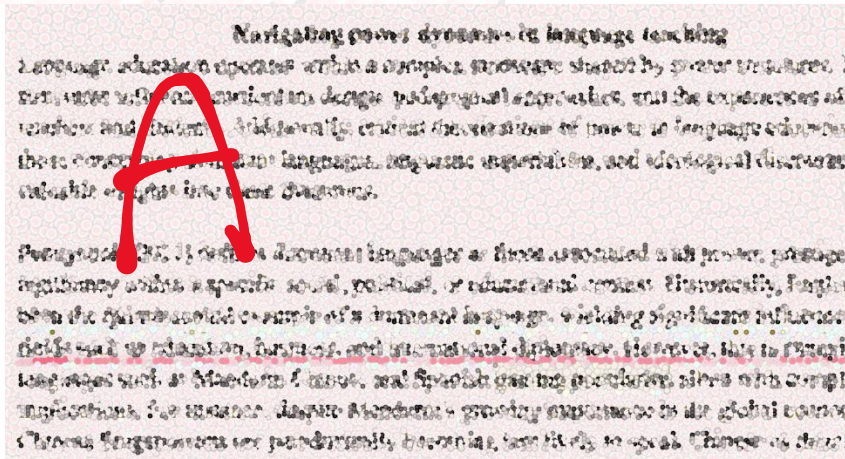
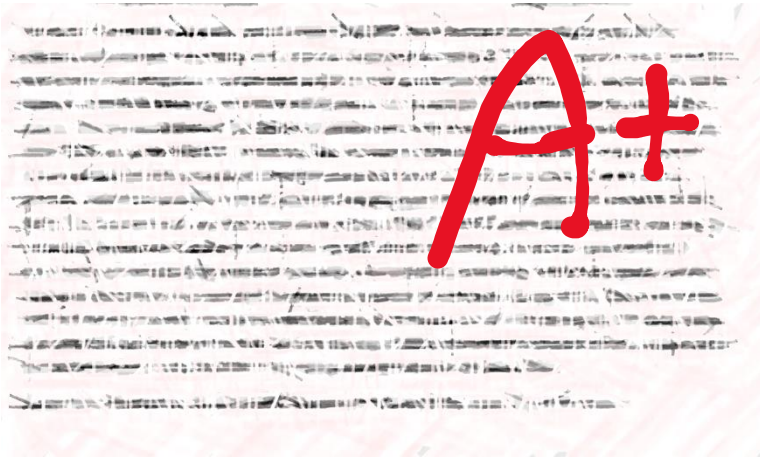


Artificial Intelligence & Classrooms

The Wake-Up Call



Artificial Intelligence & Classrooms



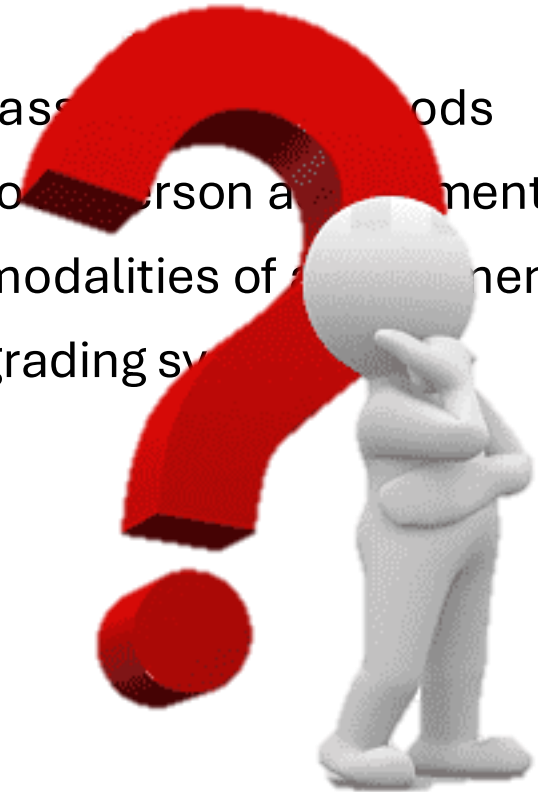
What can I help with?

Can you write a 750 word essay about the impact of learning technologies?



Responses from some educators & institutions

- Diversify assessment methods
- Change to person assessment
- Change modalities of assessments
- Change grading system



Multimodal AI in Education

- **Sound** – AI voice clone
- **Visuals** – AI image generation; AI video generation
- **Words** – AI text generations
- **Movement** – AI gestural generation (matching lip and sound)
- **Space** – AI 3D design and modelling

What is left? What is real?

Personal reflection

No longer the extreme questions – “How do we prevent AI?” or “How do we embrace AI?”

- What is educational integrity? How do we teach students in a way that we can co-construct meaning with AI?
- How do we define “meaning” in content teaching and assessment in the era of AI?
- What do we want students to learn in the end? Content knowledge? Use AI for their employment? Or...?

Exploring the idea of “meaning(ful)”

John Dewey’s perspective

- One’s “**lived experience** must be acknowledged as the heart of both the content and the process of education” (Splitter, 2009, p.143).
- “*Education is the constant interaction between the learner and the environment that fosters progress and growth via the reconstruction of experience...*” (Do, 2022, p. 24)

Exploring the idea of “meaning(ful)”

- Rooted in lived experience
- Meaning is co-constructed through interaction
- Re-construction of experience and knowledge for learning and growth
- Strong learner agency & self-regulated learning

Early years – student responses

- *“I used AI for Assignment X, but you said it is okay.”*
- *“I don’t know we need to let you know.”*
- *“It’s my writing. I don’t use AI. I don’t know why”*
- *“I admit I used AI and I copied it directly”*

My response –

No **penalty** but a **growing** opportunity

Research shows attribution is important in this post-plagiarism era (Eaton, 2023).

Is Attribution a sufficient practice?

Eaton (2023) states that **hybrid writing** will become the norm of literacy practice.

Three cases:

- A perfect case of hybrid writing
- Students with strong learning intentions and resist AI assistance
- Imperfect hybrid writing

Attribution seems insufficient?

Attribution Example for Students.

Full disclosure of using ChatGPT or other forms of generative AI is necessary for the assignment. If you are using ChatGPT, here's an example phrase to be put at the end of the assignment –

"Note: Portions of this assignment were generated with the assistance of ChatGPT, a generative AI language model. While the language generated by ChatGPT was reviewed and edited for clarity, accuracy, and originality, the ideas and content presented are solely my work, inserted your name: _____."

Please note that if you fail to disclose the use of ChatGPT (or other GAI tools in your work, portions of your assignment may be selected, copied, and pasted into AI detection software - ChatZero - (<https://gptzero.me/>) for originality checking by the marker or instructor. By submitting this assignment electronically, you have agreed to authorize part of your work to be checked by external third-party software not managed by the institution. It is important to acknowledge the use of ChatGPT or generative AI in your assignment to avoid any potential issues. Please retain a copy of your chat history or any work-in-progress files/artifacts, in case there are any questions regarding your work.

My response now

- Knowing the expected outcome and specifying the syllabus language (or assignment instructions)
- Textual materials (i.e. journal articles, textbook...) are now supplementary. Turn to audio-based materials (e.g., podcasts, and videos) that require learners to take extra steps to use AI.
- The key is to foster self-regulation, not dependence. Instructions encourage students to combine new ideas that are unlikely to be generated by GAI but can be supported by GAI. Ask students to reflect on the process and the prompt they used for GAI tools.

Perhaps teaching prompts to students to facilitate their self-regulated learning and hybrid writing skills (Chang et al., 2023).

Concluding remarks

In this digital age with AI:

- **Educational integrity** is important, and it requires ongoing conversations with colleagues and students, especially concerning the meaning of attribution and Hybrid Writing Practices (HWP).
- Debunk the deficit discourse about using AI but focus on how AI can **co-construct meaning** for/with students
 - Providing instructions that allow students to use AI while fostering their **self-regulation**.
- Facilitating **transparent and respectful dialogue** with students rather than deterrence or threats.

Thank you so much

The above content was, unfortunately, generated by real Daniel-GPT.

