

Talking with Your Students About Al



Rod McRae, Associate Provost – Academic Success Middle Georgia State University



Session Goals & Outcomes

What's your level of comfort with or understanding of GenAl?

Image source: DALL·E with the prompt, Create an abstract representation of generative AI and its effect on teaching and learning

GenAl: Briefest of Primers

Expert System Al

Programmers teach Al exactly how to solve specific problems by providing precise instructions and steps.

Common GenAl text platforms:

- ChatGPT (OpenAl)
- **Claude** (Anthropic)
- Copilot (Microsoft)
- Gemini (Google), formerly Bard
- Perplexity



Artificial Intelligence

The theory and methods to build machines that think and act like humans.

Machine Learning

The ability for computers to learn from experience or data without human programming.

Deep Learning

Mimics the human brain using artificial neural networks such as transformers to allow computers to perform complex tasks.

Generative Al

Generates new text, audio, images, video or code based on content it has been pre-trained on.







Academic Dishonesty

Al-based detection for Algenerated writing has yet to prove itself as reliable and accurate.

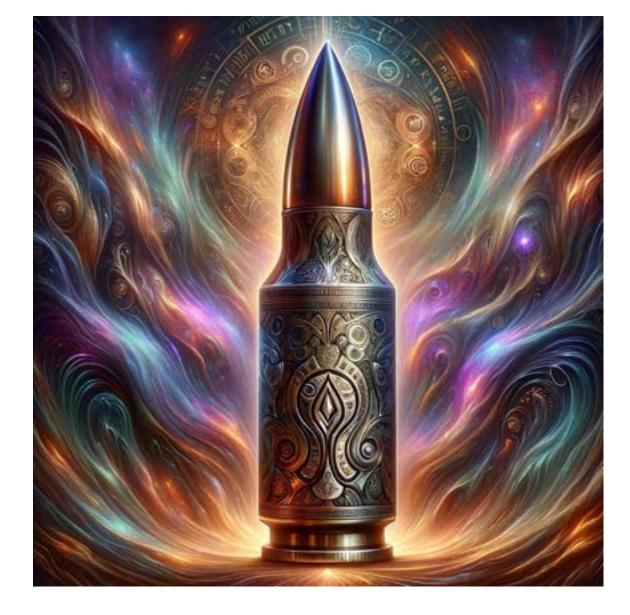


Image source: DALL·E with the prompt, "Create a visually appealing image of a magic bullet"

Academic Dishonesty

From OpenAI (creator of ChatGPT):

Do Al detectors work?

"In short, no, not in our experience.

Our research into detectors didn't show them to be reliable enough given that educators could be making judgments about students with potentially lasting consequences."



Image source: DALL·E with the prompt, "Create a visually appealing image of a magic bullet"



Image source: Adobe Firefly with the prompt, "Create a stylized image of a magic potion."

Aim to minimize cheating.

Some Methods to Consider & Combine

- Academic integrity pledges
- H.O.T.S. assignment (re)design, especially those supporting critical thinking and metacognitive skills
- Scaffolded assignments
- Iterative writing/drafting
- Authentic assessments
- Current/local assignment prompts
- Reflective writing
- Oral submissions (live/recorded)

GenAl: Student Guidance on Usage



Prohibit Students' Use



Allow Some Use with Attribution



Encourage / Model Use

Student Guidance

Early and often, tell students

- Whether or not they can use GenAl
- If use is permitted, how they should cite Al to avoid plagiarism
- About the limitations of Al (e.g., hallucinations, potential for bias, and misleading/deceptive data



Image source: DALL·E with the prompt, "Create an image of a college classroom with various kinds of cyborgs at students' desks"

Generative Al: Student Guidance

What GenAl Can and Can't Do Is Changing

"What the large language models are good at is saying what an answer should sound like, which is different from what an answer should be" (Brooks qtd. in Hale 2024).

Try these Experiments with a GPT of Your Choice

- Solo Submit each of your prompts for discussions, responses, reports, essays,
 etc. for a given course to a GPT, and scrutinize strengths and weaknesses.
- In-class or asynchronously Submit an assignment to a GPT to respond, and then
 explain where its response measures up to expectations and where it doesn't.
 Alternatively, before you demo/annotate the response, prompt students to
 compare the GPT response to knowledge/rubric.

Generative Al: Student Guidance

Al as a Study Buddy

Type this prompt into a GenAl platform of your choice:

"You are a skilled and encouraging tutor. I am a <u>sophomore</u> student in an <u>anatomy and physiology</u> course. Right now, we are learning about <u>veins</u>. Please explain <u>the [sub]topic</u> to me in detail. Use analogies, examples, stories, and other tactics that will make the concept easier for me to learn and remember. Start out by telling me a little about why learning this information might be important."

Then follow up with this prompt:

"Ask me ten multiple choice questions to see if I understand this information, and then give me feedback on my correct and incorrect answers."

(Replace underlined sections with the specifics of your course and students.)



Options for Faculty Use

Image source: DALL·E with the prompt, "Image of an ancient map of earth. The areas of oceans should include dragons and other mythical creatures."

Guidance for Faculty for Using Al

ACUE's Recommendations:

- 1. Set clear learning objectives.
- 2. Choose the right AI tool for the job.
- 3. Encourage experimentation and play.
- 4. Acknowledge and teach voice, representation, access, and data privacy.
- 5. Infuse collaboration and critical thinking.
- 6. Personalized and differentiated learning.
- 7. Integrate with existing curriculum...and start small.
- 8. Balance theory and practical application.
- 9. Connect to future careers and professional opportunities.
- 10. Emphasize human-Al interaction.

Content Creation

Drafting help with

- course outlines
- written materials:
 - o feedback on quiz responses
 - o case studies
 - o discussion prompts
 - scripting videos/podcasts
- assignments (disciplinary or framework; e.g., TiLT)
- rubrics
- images for communications:
 <u>DALL·E</u>, <u>Adobe Firefly</u>, <u>Craiyon</u>

Image source: DALL·E with the prompt, "Create a fun representation of an open mind. Use a variety of vibrant colors."



Generative AI: Options for Faculty





Image source: DALL·E with the prompt, "Create an image of a robot showing a printed essay to their college professor."

Generative AI: Options for Faculty

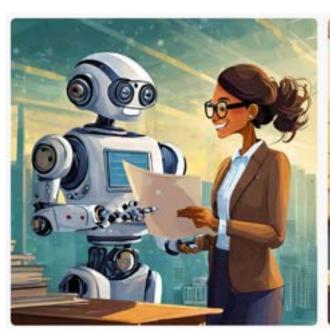








Image source: Adobe Firefly with the prompt, "Create an image of a robot showing a printed essay to their college professor."

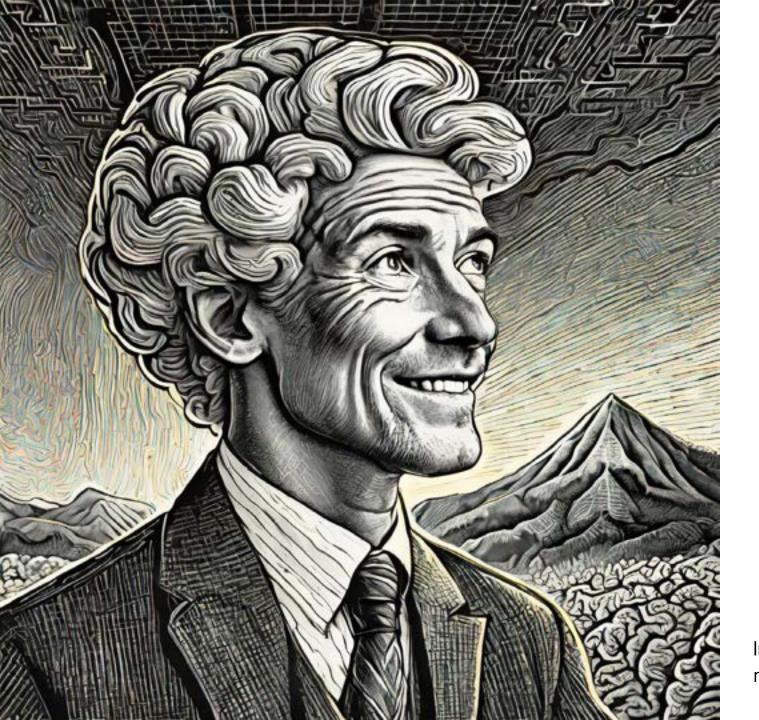
Notice Firefly's representations of faculty compared to DALL·E's version (previous slide), which leaned *heavily* into stereotyping/biases.



Your Research

- Idea Generation
- Proposal Drafts
- Literature Reviews (e.g., <u>Elicit</u>)
- Hypothesis Generation
- Experimental Designs
- Text Mining
- Data Interpretation
- Chatbots for Research Surveys
- Task Automation

Image source: Adobe Firefly with the prompt, "Create a fun representation of an open mind. Use a variety of vibrant colors."



Learning More About the Next

Podcasts:

Teaching Higher Ed
Tea for Teaching

Webinars:

USG Webinar with Cynthia Alby
(August 2023)
Online Learning Consortium
Webinar on Al Opportunities and
Threats (May 2023)

Image source: Adobe Firefly with the prompt, "Grey-scale representation of a professor's brain from the 1950s."



Microwave Model (vs. calculator)

- Proposed by Erin E. Kelly, director of the academic and technical writing program at the University of Victoria in British Columbia, Canada
- Early faulty assumptions of the microwave as replacement for all cooking appliances

Image source: Craiyon with the prompt, "Modern microwave."



References & Resources

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