



# AI in NURSING EDUCATION: Let's ChatGBT!

JANUARY 17, 2024

CCNW "LUNCH AND LEARN" SERIES

DR. SUSAN DEANE

ONLINE EDUCATION CONSULTANT

# Objectives

- Identify 2 fundamental concepts/principles of Artificial Intelligence (AI) and its potential applications in nursing education.
- Examine 2 benefits and 2 challenges of integrating AI in nursing education considering ethical considerations, data privacy, and intellectual property.

# “The Age of AI And Our Human Future”

“AI can understand anything, does not have a conscience or any sense of morality, and is a language model, not a reasoning machine”

Henry A. Kissinger  
Eric Schmidt  
Daniel Huttenlocher

# History: Technology and Skeptics

- ▶ 1970s: the use of the calculator questioned the impact of math instruction
- ▶ 1990's: "spell check" and "autocorrect" to proofread
- ▶ 2006: "Google Translate" vs Language Teachers
- ▶ 2022: AI: ChatGBT

# AI vs Generative AI

## ▶ AI

- ▶ system learns to identify the patterns in the data and use them to make predictions or generate outputs
- ▶ Follow specific rules; do not create anything new
- ▶ Examples:
  - ▶ Voice assistants like Siri or Alexa
  - ▶ Recommendation engines on Netflix or Amazon
  - ▶ Google's search algorithm

# AI vs Generative AI

## ▶ Generative AI

- ▶ operate on programs called large language models (LLM)
- ▶ produce text, video, images, and other types of content.
- ▶ Examples:
  - ▶ ChatGBT (Generative Pre-trained Transformer)
  - ▶ BARD (Google)
  - ▶ BING AI (Microsoft)
  - ▶ Others: Claude

# Advantages of AI

- ▶ Improve realism
- ▶ Increase engagement
- ▶ Provides more personalization
- ▶ Increase learner self-direction
- ▶ Opportunity for interprofessional collaborations

# AI Tools

- ▶ Firefly Adobe
  - ▶ Text to image
  - ▶ <https://firefly.adobe.com>
- ▶ Runway
  - ▶ Image and Text to Video
  - ▶ <https://app.runwayml.com>
- ▶ Eleven Labs
  - ▶ Speech
  - ▶ <https://elevenlabs.io/speech-synthesis>



# AI Tools

- ▶ DeepAI
  - ▶ AI image generator
  - ▶ <https://deepai.org/machine-learning-model/text2img>
- ▶ DALL:E2
  - ▶ [Create realistic images and art from a description in natural language](#)
  - ▶ <https://openai.com/dall-e-2>
- ▶ Koala
  - ▶ Free AI Stock Image Generator
  - ▶ <https://koala.sh/tools/free-ai-stock-image-generator>

# Koala Example: Matcha Latte



# Use of AI in Classroom (By Students)

- ▶ AI-generated text, image, audio or video material to help students explore health literacy
- ▶ Students could use a generative AI tool to create diverse customizable patient education about a health problem and how it might be managed through, for example, diet, exercise, medication and lifestyle changes
- ▶ Students could be asked to design and refine text prompts to ensure the content that is generated is appropriate, accurate and easy for patients to understand.

# Use of AI for Simulation (Example)

- ▶ **Context:** A two-hour laboratory session with first-year nursing students.
- ▶ **Objective:** To create opportunities for students to trial relational communication skills to which they have previously been exposed in lectures.
- ▶ **Simulation:** Nursing students were put into small groups and a chatbot was used as a simulated patient in a community health setting. Using relational communication techniques, each group interacted with the chatbot in a scenario it had randomly generated. The 'patient' responded based on what the students typed, with no predetermined storyline. The chatbot allowed several conversational turns, then provided students with a grade and constructive feedback.

# Use of AI for Simulation (Example cont)

- **Prompt used (GPT-4):** Let's simulate relational practice skills used by professional registered nurses:
  - I am a nursing student
  - You will act as my patient
  - Simulate scenarios in which I engage with the patient who has a health concern or need in a community setting
  - Begin each scenario with a single sentence about the patient's first name, age, appearance and demeanor
  - Wait for my response
  - After getting my response, give details on how the patient presents, what they do (non-verbal cues, such as body language), and what they say (verbal cues)
  - Wait for my response, then repeat for five responses
  - Grade my performance in the scenario (fail, ok, good, great) and give me constructive feedback about how to improve my relational practice skills

# Use of AI in Classroom (By Faculty)

- ▶ FB: “Teachers Transforming Nursing Education”
  - ▶ Create case studies
  - ▶ Medication dosage quizzes
  - ▶ Culture Projects
    - ▶ Upload the ChatGBT script and the students modified/revised copy with references

# Use of AI in Classroom (By Faculty)

- ▶ NCLEX questions
- ▶ Letters of Recommendations
- ▶ Create effective explanations, examples, analogies
  - ▶ Tell ChatGBT to explain “xyz” to a 7<sup>th</sup> or 8<sup>th</sup> grader
- ▶ Teaching plans for patients

# Use of AI in Classroom (By Faculty)

- ▶ Role Playing Difficult Conversations:
  - ▶ 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.



# College Website Resources

Yale *Poorvu Center for Teaching and Learning*

Search this site



FACULTY ▾

POSTDOCS ▾

GRADUATE STUDENTS ▾

UNDERGRADUATES ▾

INITIATIVES ▾

Home

Strategic Resources & Digital Publications

Strategies for Teaching

AI Guidance

## AI Guidance

New to Teaching at Yale

Syllabus Design

Academic Integrity Statements

Course Planning

Managing the Classroom

Office Hours

Accessibility Statements

Since OpenAI released ChatGPT in November 2022, the availability of generative AI tools that produce text, image, or code has expanded to include Microsoft's BingAI, Google's Bard, and OpenAI's more powerful GPT-4. The power of these tools to answer complex questions and generate coherent text continues to improve, and they've recently been integrated into widely used software like Google Docs and Microsoft Office. This has led to questions about how students are using these tools and how faculty can respond to best support their students' learning.

In consultation with instructors and technology experts at Yale and beyond, the Poorvu Center offers guidance on exploring [how Generative AI works](#) and suggestions about how to adapt [your current teaching](#). We also offer [advice for teaching fellows](#) and a list of [recommended reading](#). Additional resources include [examples for incorporating AI into teaching](#) from Yale instructors and [resources from Poorvu Center events](#) on teaching in the age of AI.

to #1%20Understanding%20AI%20Chatbots on this page

Click to add notes

# College Website Resources



COLORADO STATE UNIVERSITY

THE INSTITUTE FOR LEARNING AND TEACHING

[Home](#) [For Faculty](#) [For Undergraduate Students](#) [For Graduate Students](#) [About TILT](#) [Staff](#) [Calendar](#) [Login](#)

CSU A-Z: [a](#) [b](#) [c](#) [d](#) [e](#) [f](#) [g](#) [h](#) [i](#) [j](#) [k](#) [l](#) [m](#) [n](#) [o](#) [p](#) [q](#) [r](#) [s](#) [t](#) [u](#) [v](#) [w](#) [x](#) [y](#) [z](#)

search:



[Academic Honesty and Integrity](#) [CSU Honor Pledge](#) [Student Resources](#) [Faculty Resources](#) [Artificial Intelligence and Academic Integrity](#)

## Academic Honesty and Integrity

### Your Fall Semester AI Survival Toolkit

Fall semester is here. Tilt is providing a collection of guides, tips, articles, and resources to help you navigate the challenge that generative AI poses to courses this term. This page is expected to evolve as more becomes available (or as more are shared with the Academic Integrity Program). If you have an article, guide, etc that you believe others would find useful, please share at [joe.brown@colostate.edu](mailto:joe.brown@colostate.edu)

#### Preparing your Course for AI

- [What Should a Syllabus Statement on AI Look Like?](#)
- [Google Doc of Collected AI Syllabus Statements from Across Higher Ed](#)
- [Talking with Your Students about ChatGPT and AI](#)

#### Teaching & AI:

- [AI Text Generators and Teaching Writing: Starting Points for Inquiry](#)
- [4 Steps to Help You Plan for ChatGPT in Your Classroom](#)



Post Date: July 26, 2023



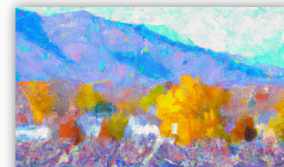
Categories: [Academic Integrity](#)



Tags: [artificial intelligence](#), [ChatGPT](#)



Joseph Brown



# College Website Resources



## Teaching in the Age of AI

by Michael Coley, Paige Snay, Joe Bandy, John Bradley, and Ole Molvig

[Print Version](#)

**Cite this guide:** Coley, M., Snay, P., Bandy, J., Bradley, J., Molvig, O. (2023). Teaching in the Age of AI. Vanderbilt University Center for Teaching. <https://cft.vanderbilt.edu/guides-sub-pages/>

***Much like the technologies it describes, this guide is always growing and changing.***



Across higher education, there is increasing concern about the implications of generative artificial intelligence (AI) for teaching and learning. What dilemmas does generative AI pose for our courses and assignments? How might it change how students learn to write

### All CFT Teaching Guides

- All CFT Teaching Guides
- Personal Devices in the Classroom
- Teaching International Students
- Teaching in the Age of AI
- First Day of Class
- Academic Advising
- International Instructor Guide
- Accommodating Student Athletes In the Classroom

# Bloom's Taxonomy Revisited

Use this table as a reference for evaluating and making changes to aligned course activities and assessments (or, where possible, learning outcomes) that account for generative Artificial Intelligence (AI) tool capabilities and distinctive human skills.

All course activities and assessments will benefit from **review** given the capabilities of AI tools; those at the **Remember** and **Analyze** levels may be more likely to need **amendment**.

	RECOMMENDATION	AI CAPABILITIES	DISTINCTIVE HUMAN SKILLS
<b>CREATE</b>	Review	Suggest a range of alternatives, enumerate potential drawbacks and advantages, describe successful real-world cases	Formulate original solutions incorporating human judgement, collaborate spontaneously
<b>EVALUATE</b>	Review	Identify pros and cons of various courses of action, develop rubrics	Engage in metacognitive reflection, holistically appraise ethical consequences of alternative courses of action
<b>ANALYZE</b>	Amend	Compare and contrast data, infer trends and themes, compute, predict	Critically think and reason within the cognitive and affective domains, interpret and relate to authentic problems, decisions, & choices
<b>APPLY</b>	Review	Make use of a process, model, or method to illustrate how to solve a quantitative inquiry	Operate, implement, conduct, execute, experiment, and test in the real world; apply creativity and imagination to idea & solution development
<b>UNDERSTAND</b>	Review	Describe a concept in different words, recognize a related example, translate	Contextualize answers within emotional, moral, or ethical considerations
<b>REMEMBER</b>	Amend	Recall factual information, list possible answers,	Recall information in situations where

# Limitations of AI

- ▶ Uses data up to 2021.
- ▶ Generate nonsensical or inaccurate responses to certain questions or situations. May contain errors or omissions.
- ▶ Cannot detect subtle emotional cues or respond appropriately to complex emotional situations.
- ▶ May not be entirely accurate in terms of context or relevance, providing incorrect, oversimplified, unsophisticated, biased, inappropriate, or irrelevant content.

# Issues of Privacy and Intellectual Property

- Material that you submit may then become part of the program's database—using the software contributes to its development.
- Review Terms of Service: Systems do have different policies and methods that allow you to remove your material.

# Ethical/Legal Issues

- ▶ AI algorithms may reinforce racial and gender stereotypes and inequalities
- ▶ Federal student-privacy legislation (FERPA)
- ▶ AI's "learn" by consuming data, then drawing observations and conclusions based on the data . . .  
Lacks self-reflection, and moral or philosophical needs
- ▶ Plagiarism

# Future of AI

“The applications of artificial intelligence technology will continue to evolve in ways that currently may not be clear, requiring ongoing conversations focused on ethics, instructional values, and effective pedagogy”.

- University of Texas at Austin



# References

AI Pedagogy Project metaLab (at) Harvard. <https://aipedagogy.org/guide/>

De Gagne, J.C. (2023). The state of artificial intelligence in nursing education: Past, present, and future directions. *International Journal of Environmental Research Public Health*. 20(6):4884.  
doi:10.3390/ijerph20064884

McMurtie, B.(2023). What will determine AI's impact on college teaching? 5 signs to watch. *Chronicle of Higher Education*.  
<https://www.chronicle.com/article/what-will-determine-ais-impact-on-college-teaching-5-signs-to-watch>

# References

O'Connor, S., Leonowicz, E., Allen, B., & Denis-Lalonde, D. (2023). Artificial intelligence in nursing education. 1: Strengths and weaknesses. *Nursing Times*, 119(10), 23–26.

Sunyoung Jung. (2023). Challenges for future directions for artificial intelligence integrated nursing simulation education. *Korean Journal of Women Health Nursing*, 29(3), 239–242. <https://doi.org/cosc.idm.oclc.org/10.4069/kjwhn.2023.09.06.1>

University of South Carolina, Center for Teaching Excellence.  
[https://sc.edu/about/offices\\_and\\_divisions/cte/teaching\\_resources/chatgpt/index.php](https://sc.edu/about/offices_and_divisions/cte/teaching_resources/chatgpt/index.php)

# Contact Information

For further inquiries, please contact:

Dr. Susan Deane

Online Education Consultant

[susandeane119@gmail.com](mailto:susandeane119@gmail.com)