

The Tech Triage: Implementing AI in Nursing Curricula

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Learning Outcomes

1

Identify ChatGPT's impact on health professions education.

2

Evaluate practical uses and ethical implications of AI in health professions education.

3

Integrate AI tools in teaching.



AI and ChatGPT

An Overview

Questions From Our Participants

Concerns about AI:
academic integrity,
reliability, & access

AI for healthcare:
**diagnoses, cases,
and care.**

Practical **teaching**
tips: making the
most of AI tools.

What should we do?
Where do we go from
here?



Using AI to draft responses to patients or students

A recent review of online responses found that an AI chatbot assistant could provide responses to patient questions of comparable quality and empathy to those written by physicians.

The results suggest that **ChatGPT outperformed physicians** both in terms of empathy and quality of responses.

The authors suggest that AI is useful for drafting responses to patient questions.

Ayers JW, Poliak A, Dredze M, et al. Comparing Physician and Artificial Intelligence Chatbot Responses to Patient Questions Posted to a Public Social Media Forum. *JAMA Intern Med*. Published online April 28, 2023. doi:10.1001/jamainternmed.2023.1838



Artificial Intelligence (AI)

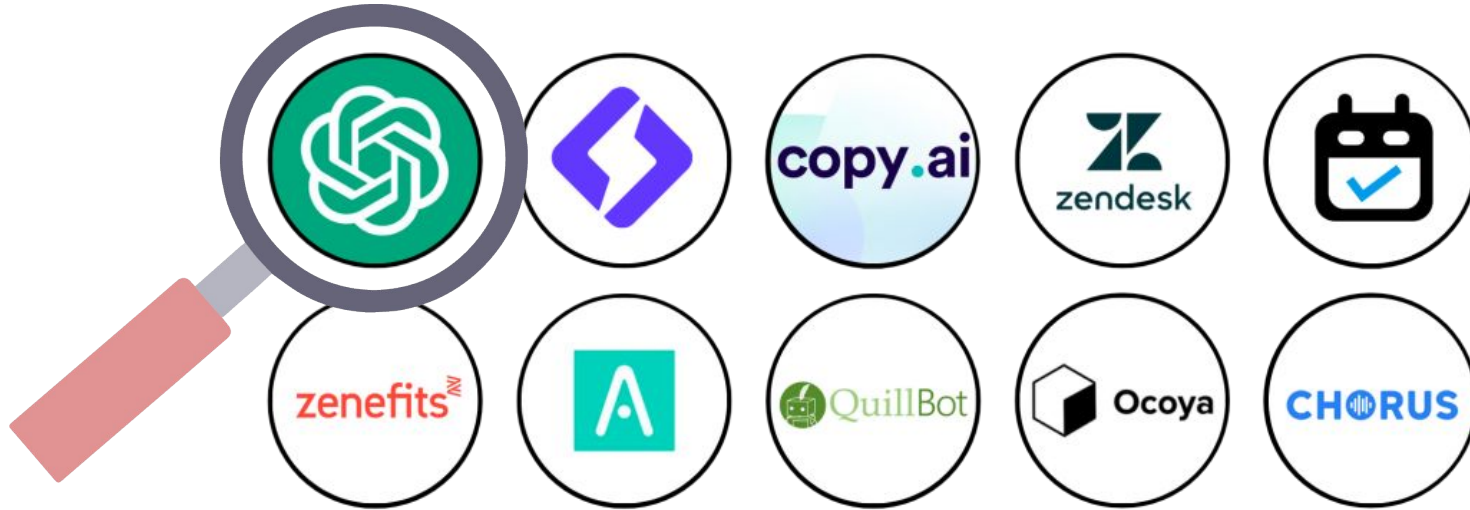
Definition

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines that are **programmed to think and learn** like humans.

It involves the development of algorithms and computer programs that can perform tasks that typically require human intelligence, such as visual perception, speech recognition, decision-making, and language translation.

1. IBM. What is Artificial Intelligence (AI)? [Internet]. IBM; [cited 2023 Apr 24]. Available from: <https://www.ibm.com/cloud/learn/what-is-artificial-intelligence>

A Few Examples of AI Tools



Or search [TheresAnAIforThat.com](https://theresanaiforthat.com)

3/24/2024 12,899 AIs for 16,566 tasks, and 4.847 jobs



ChatGPT: The Intelligent Chatbot

- ChatGPT is an Artificial Intelligence chatbot that is built to **comprehend human language** and **produce text** responses that closely mimic natural human language.
- It is **capable** of generating accurate and contextually appropriate responses to user input.

Criteria of An Artificial Intelligence

- 1 Learning:** The ability to learn from data and improve over time.
- 2 Reasoning:** The ability to analyze and interpret information to solve problems.
- 3 Perception:** The ability to perceive and understand the world through “senses”
- 4 Natural Language Processing:** The ability to perceive and respond to human language
- 5 Creativity:** The ability to generate novel ideas and solutions

1. NVIDIA. What is AI? [Internet]. NVIDIA; [cited 2023 Apr 24]. Available from: <https://www.nvidia.com/en-us/what-is-ai/>
2. Russell S, Norvig P. Artificial Intelligence: A Modern Approach. Upper Saddle River, NJ: Pearson; 2021.



How to Sign up for ChatGPT Yourself

1

You need to create an account on the OpenAI website to log in and access ChatGPT, but it is free.

2

Go to chat.openai.com and register

- Use an email address or a Google or Microsoft account to sign up.



Uses, Limitations, and Challenges

11 Challenges of AI as “Confessed” by ChatGPT

1

Lack of common sense

It generates responses based on patterns in its training data, so it can provide answers that are contextually incorrect or nonsensical.

2

Inconsistency

ChatGPT can produce different responses to the same question with slight variations in phrasing, which can be confusing for users.

3

Sensitive to input phrasing

Slight changes in wording can lead to different answers, making it sensitive to input.

4

Tendency to make things up

In an attempt to generate responses, ChatGPT can sometimes invent information or provide incorrect facts, which is problematic, especially when it comes to **medical or legal information**.

11 Challenges of AI as “Confessed” by ChatGPT

5

Bias and inappropriate content

can inadvertently produce biased or offensive content. Despite efforts to filter inappropriate responses, it may still generate politically biased, discriminatory, or offensive content.

6

Doesn't ask for clarification

When faced with an ambiguous or unclear query, ChatGPT often guesses what the user intended instead of asking for clarification.

7

Long winded responses

It can sometimes provide overly long or verbose answers when a concise response would be more appropriate.

8

Data dependency

ChatGPT's responses are based on the data it was trained on, and it might not be up-to-date with the latest information or developments.

11 Challenges of AI as “Confessed” by ChatGPT

9

Limited memory

ChatGPT has a short memory span and may forget the context of a conversation after a few turns. This can lead to disjointed or contextually inaccurate responses.

10

Security concerns

ChatGPT has been used to generate spam, misinformation, or even engage in malicious activities like phishing.

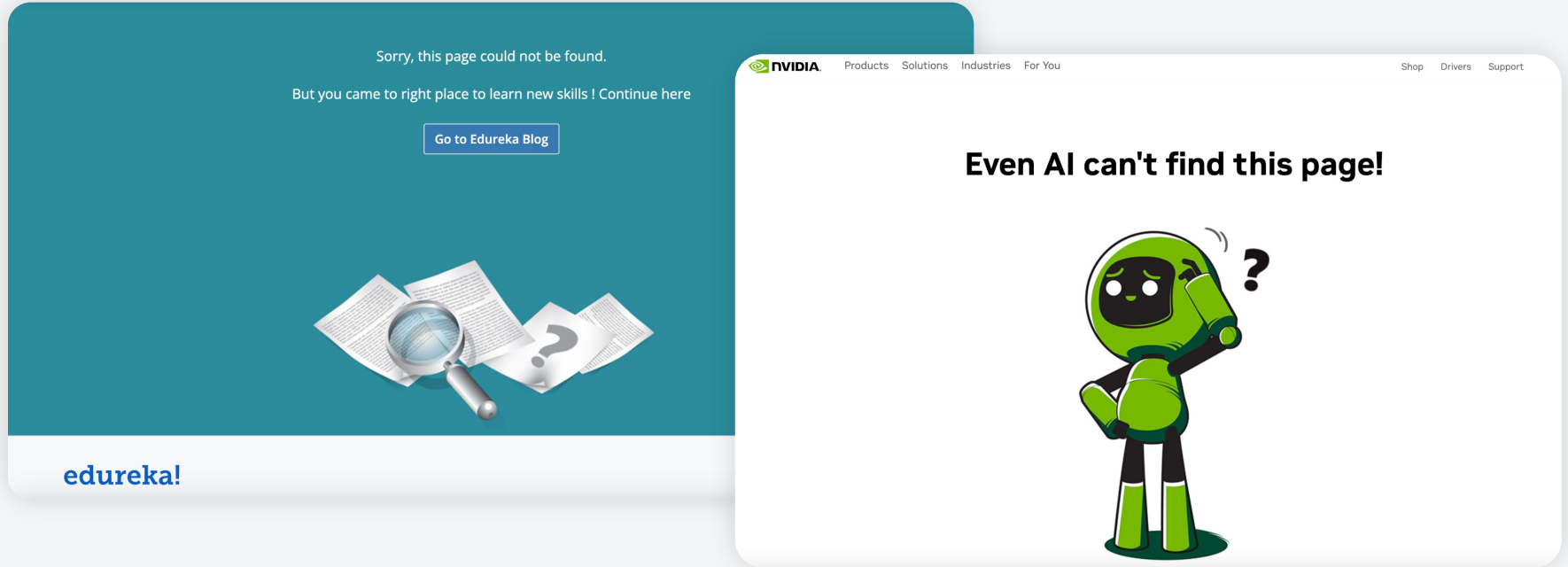
11

Not domain specific

While it can provide information on a wide range of topics, ChatGPT is not a substitute for domain-specific expertise. **It might not be accurate or comprehensive in specialized fields like medicine, law, or engineering.**

What Went Wrong With the AI Generated Slides

References: Some references cited led to empty pages and non-existent resources



Ethical Considerations of Artificial Intelligence



Privacy

The need to protect personal data and prevent unauthorized access.



Bias

The risk of perpetuating existing social biases through the training data used to develop AI models.



Safety

The potential for AI to cause harm to humans, either through accidents or malicious intent.



Accountability

The need to establish clear responsibilities for the actions of AI systems.

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1. World Economic Forum. Ethics and Artificial Intelligence. [Internet]. World Economic Forum; [cited 2023 Apr 24]. Available from: <https://www.weforum.org/projects/ethics-and-artificial-intelligence>
 2. Jobin A, Ienca M, Vayena E. The global landscape of AI ethics guidelines. Nat Mach Intell. 2019;1(9):389-399.



Practical Teaching Tips

Using ChatGPT With Caution



Accuracy & Plausability



Discuss & Debrief

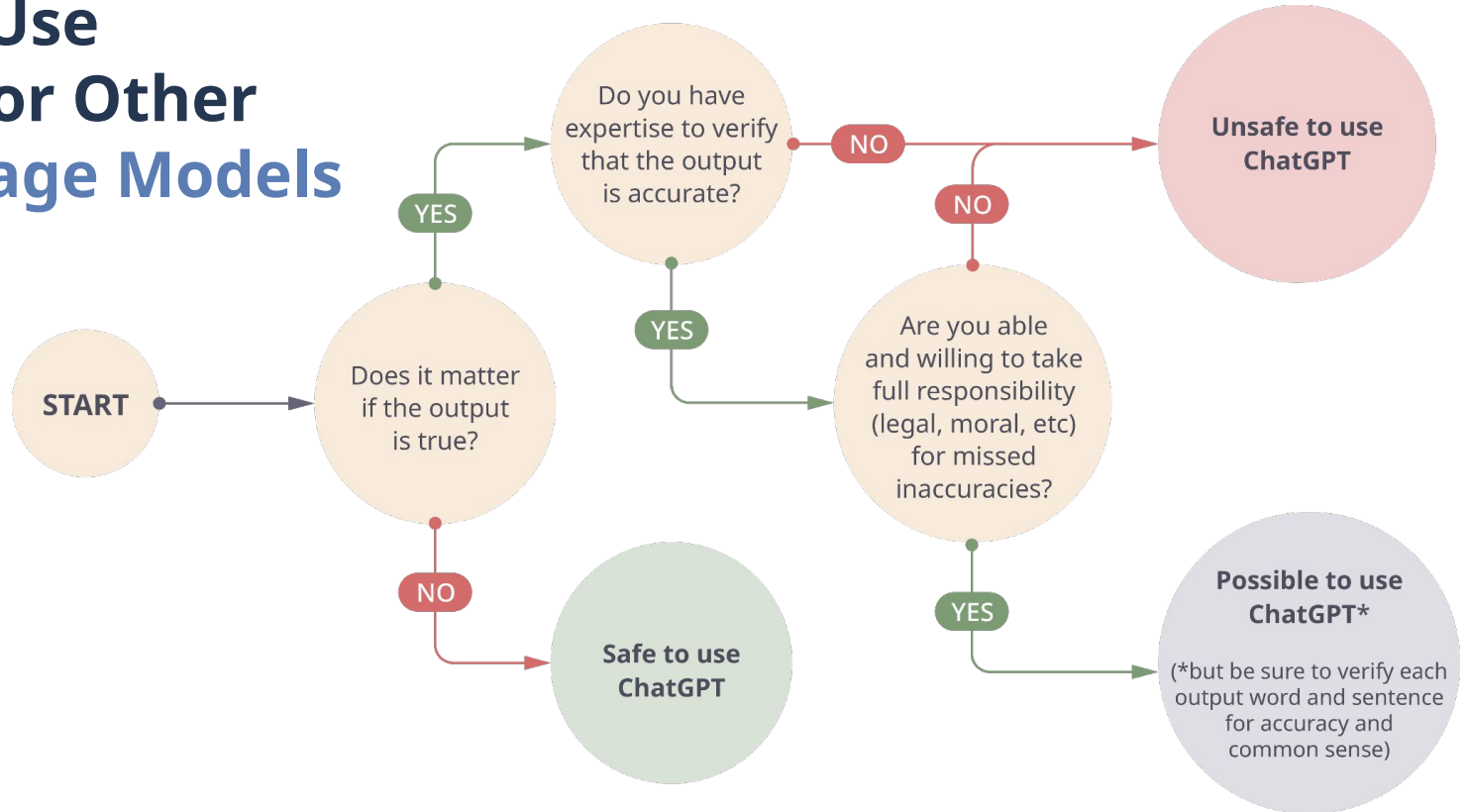


Recognize Limitations

Practical Tips for Cautious Use

- 1 Verify the **plausibility and accuracy** of any information you use from ChatGPT.
- 2 Follow assignments given using ChatGPT with a **discussion or debrief**.
- 3 Communication practice should be **limited to procedural skills**.
- 4 Search for the original sources and follow doi links provided to confirm as some references **might be fabricated**.
- 5 ChatGPT responses **may not be evidence-based**.

When to Use ChatGPT or Other AI Language Models





Academic Integrity

AI Engines, Plagiarism, and Writing

Ethical Considerations of Artificial Intelligence



Plagiarism

Students might use AI-generated content for assignments, papers, careplans, essays, case studies, or reports without proper attribution, passing it off as their own work. (sample policy available from Lecturio Nursing at no charge)



Fabricated Research

Students might use AI-generated content to fabricate research findings or citations.



Test or Quiz Answers

Students may attempt to use ChatGPT to generate answers for exams or quizzes, which is a direct violation of academic rules.



Personal Statements/ Resumes

When applying for nursing programs or scholarships, students might use AI to write personal statements or resumes that misrepresent their achievements and abilities.

How to Cite ChatGPT in APA

When prompted with “Is the left brain right brain divide real or a metaphor?” the ChatGPT-generated text indicated that although the two brain hemispheres are somewhat specialized, “the notation that people can be characterized as ‘left-brained’ or ‘right-brained’ is considered to be an oversimplification and a popular myth” (OpenAI, 2023).

Reference

OpenAI. (2023). *ChatGPT* (Mar 14 version) [Large language model].

<https://chat.openai.com/chat>

How Do I Detect Cheating or Plagiarism?

- If your institution has an office of Academic Integrity or similar, **ask them** about the kinds of resources that are available
- If you aren't using **test proctoring** (live or online), consider whether you may need to do so
- Services such as TurnItIn are already offering **AI language detection**
- Search online for the **latest tools**, such as GPTZero (and check regularly for updated information)



How Do I Encourage Academic Integrity in Students?

- **Model academic integrity** for students. Cite your slides, handouts, and online resources.
- Revisit your assignments, and ask yourself: **“How could students cheat on this?”**
- Rewrite tests or assignments to use **higher levels of Bloom’s taxonomy, critical judgment, or ethical decision-making.**
- **Ask your students** about academic integrity and ethical behavior.
- Demonstrate how to **use and cite AI effectively** (including the pitfalls and cautions).
- Incorporate active learning strategies such as **TBL, PBL, or a flipped classroom.**





Using AI to Avoid Academic Integrity Misconduct

Strategies and technologies to identify
academic dishonesty



Plagiarism Detection Software

- Many institutions use plagiarism detection software, such as Turnitin or Copyscape, to **compare students' work with a vast database of academic content.**
- These tools can identify similarities between the student's work and online sources, including AI-generated content.
- Colleagues have reported challenges with the accuracy of plagiarism software as ChatGPT is constantly evolving.



Careful Faculty Analysis

- **Pattern Analysis:** Instructors may notice inconsistencies in a student's work, such as sudden improvements in writing quality or a shift in writing style. This can raise suspicions and prompt further investigation.
- **Comparative Analysis:** Instructors may compare a student's work with their previous assignments to identify any significant discrepancies in writing style, knowledge, or skills.



Oral Knowledge Assessment

Oral Examination

- If an instructor suspects cheating, they may conduct an oral examination to evaluate a student's understanding of the content.
- If the student cannot demonstrate a deep understanding of the material, it may indicate dishonesty.



F2F Assessment

Request for Clarification

- Instructors might ask students to explain their work or the sources they used.
- In cases of academic misconduct, students may struggle to provide coherent explanations.



Requests for Clarification

Unusual References

- If a student uses references that are not typically found in their course materials or curriculum, it might raise suspicion.
- AI-generated content often include obscure or fabricated sources.

Interviews or Oral Defenses

- In the case of major projects or theses, students may be required to defend their work in an oral interview.
- This can help educators evaluate the depth of the student's knowledge.



AI in Healthcare Education

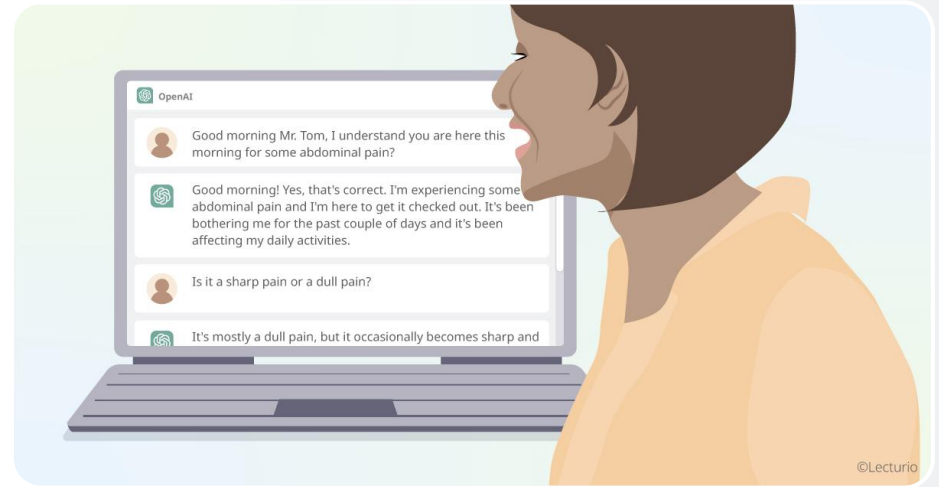


3 Key Questions~ Does this _____:

1. Enhance the learning experience for students,
2. Improve critical thinking
3. Provide valuable resources for their education and clinical practice.

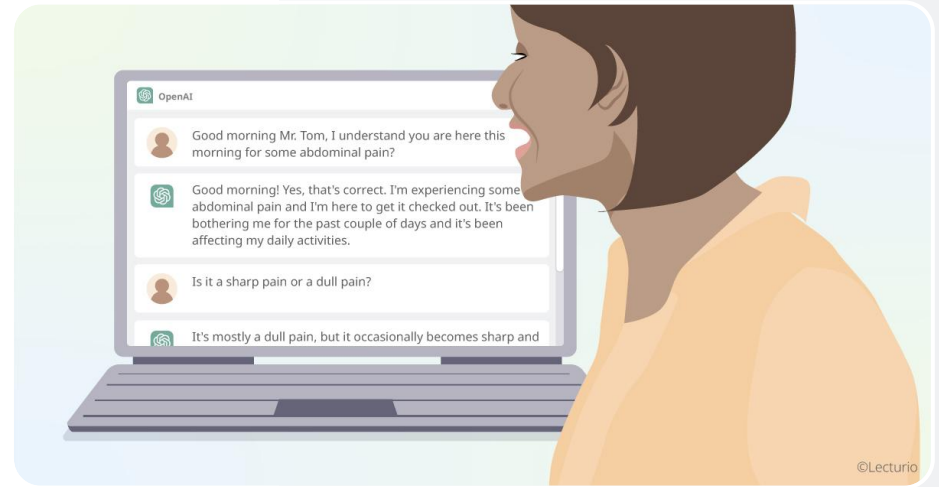
Prompt Tips for Best Results

ChatGPT and similar models are rapidly changing; **what works once might work differently another time**. If you find prompts are not giving the results you expect, try some of the following tips.



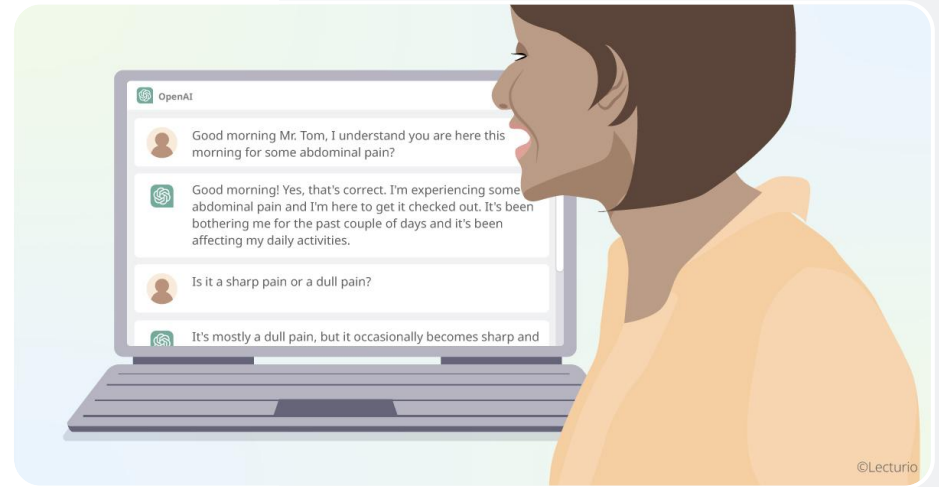
Prompt Tips for Best Results

- Determine in advance what your **objectives** are and what type of output you want.
- Be **concise**. Tell ChatGPT exactly what you want.
- **Avoid jargon**. Use clear, unambiguous language.
- **Provide context** and relevant key words.
- **Break complicated requests** into smaller step-wise tasks.
- Tell ChatGPT to **adjust its responses** if you don't get the desired response.
- **Test** your prompts thoroughly before using them in the classroom.



Prompt Tips for Best Results

- Tell the AI about **the “role”** you want it to play
- Tell the AI about **the “audience”** the output is intended for
- Tell AI about **the “reading level”** you want the response to be generated in
- Tell AI **the “format”** of the response that you want (Outline, bulleted point, script, etc)
- Tell AI **the “style and tone”** of the response you want (formal, professional, casual, approachable, friendly etc)
- Tell AI the length that you need for the output
- Ask AI **“what questions do you have for me in order for you to better understand my request?”**





What ChatGPT “Says” It Can Do



Personalized Study Guides

ChatGPT can create comprehensive study materials, complete with key concepts, summaries, and practice questions.

Instructions

Request a personalized study guide by providing specific topics or learning objectives.

Prompt example

"Generate a study guide for the cardiovascular system focusing on anatomy, diseases, and treatment."



Patient Case Simulations

- **ChatGPT** can help generate a detailed case history, vital signs, and potential nursing interventions.
- Faculty can input patient scenarios with relevant details, and **ChatGPT** can generate comprehensive case simulations that students can use for learning and practicing critical thinking and decision-making.



Evidence-Based Practice Guidance

ChatGPT can assist in finding and evaluating evidence-based practice guidelines.

Prompt:

Students can ask ChatGPT for evidence-based guidelines on a particular nursing practice, and the AI can provide links to reputable sources and offer guidance on evaluating the quality of the evidence.



Drug Interaction Check

Input a list of medications, and ChatGPT can highlight potential interactions and side effects.

Instructions

Nursing students can input a list of medications they are studying or working with, and ChatGPT can provide information on potential drug interactions and adverse effects to be aware of.



Patho Explanations

Prompt

Ask ChatGPT to explain the pathophysiology of specific diseases or conditions, and the AI can provide clear and concise explanations with diagrams if needed.



Medical Terminology

Prompt

Students can request medical terminology practice materials from ChatGPT, including flashcards or quizzes on specific topics or prefixes, suffixes, and root words.



Cultural Competence Training

Prompt

Nursing students can use ChatGPT to role-play scenarios involving patients from diverse cultural backgrounds, allowing them to practice culturally sensitive communication and care.



Patient Education Materials

Request brochures, pamphlets, or handouts in multiple languages to educate patients on various health topics.

Prompt

Nursing students can specify a topic and language preference, and ChatGPT can generate patient education materials that are easy to understand and culturally appropriate.



Summary

ChatGPT and other AI tools have a great impact on healthcare education. If used with caution, AI can serve as a great **tool and assistant**.



Key Takeaways



- Using AI tools in education can be very **beneficial** but educators need to be aware of the **challenges** and **limitations** that come with it.
- AI tools' output and performance is highly dependent on the **prompts** it is receiving.
- Educators should use ChatGPT and other AI tools with **caution** by following a **set of guidelines** and **writing clear prompts** and **using the flow-chart to help discern if AI use is appropriate.**



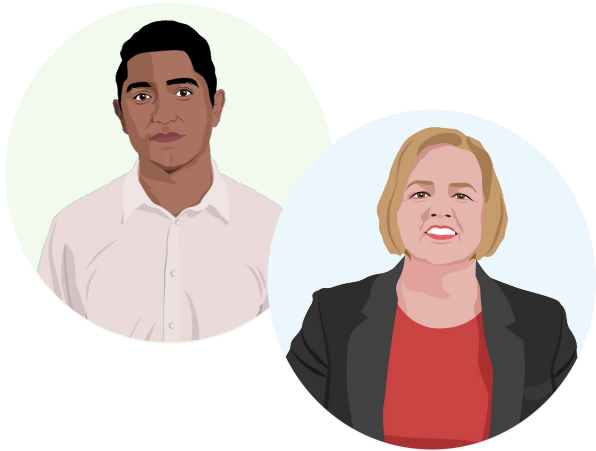
Q&A Session

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Let's talk about having this presentation live with Rhonda for your faculty!

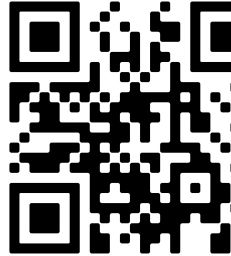


Would You Like to Stay up to Date on Future Events?



Durable Learning Seminar
**Classroom to Care: Essential Strategies
Boost Clinical Reasoning**

May 16, 2023,
09:00 PDT | 12:00 EDT | 18:00 CEST





Contact us!

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