



Harnessing Artificial Intelligence to Enhance Student Competencies in Community-Based Program Development

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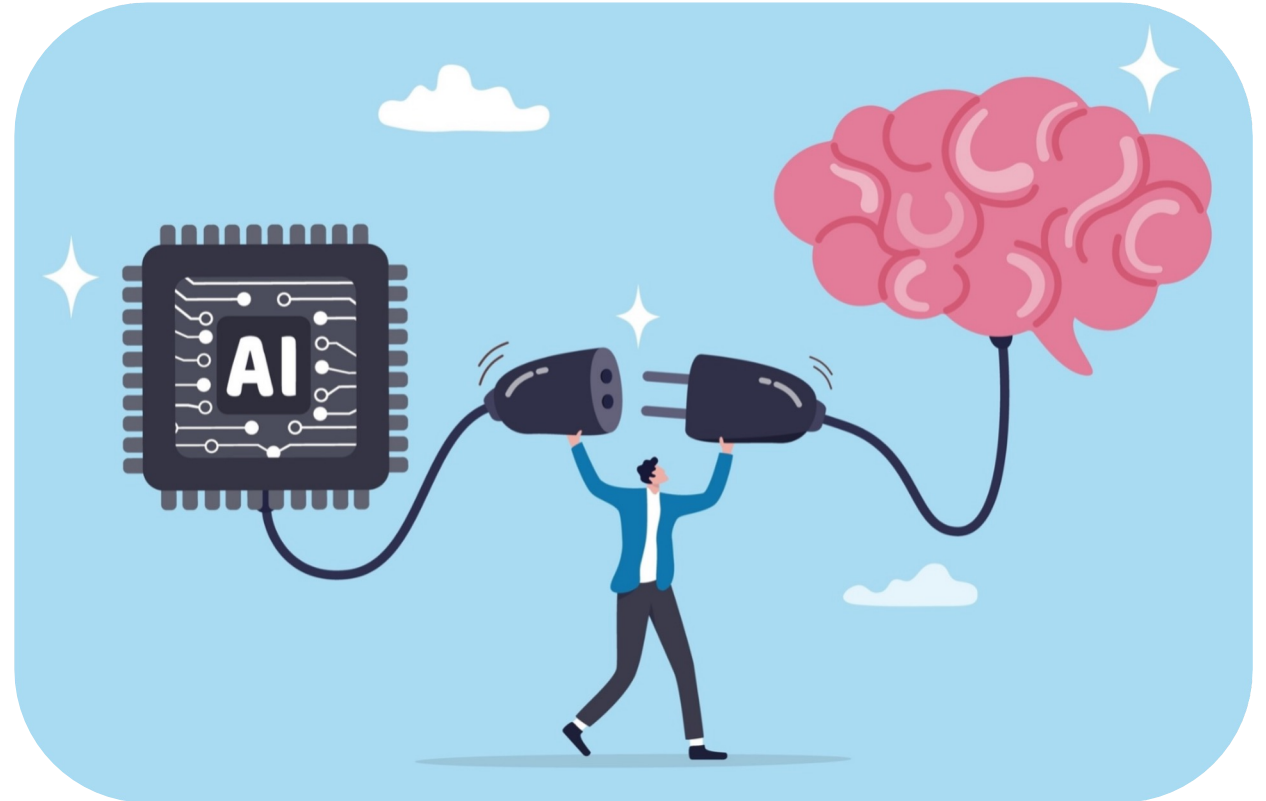
WFOT 2025

Objectives

- Describe the **role of generative AI tools** in supporting educational and professional practices for students, faculty, and practitioners.
- Apply **best practices for the ethical and effective integration of AI** in OT education and practice to support knowledge translation.
- Identify **instructional strategies for introducing AI tools** through guided exploration, structured reflection, and iterative refinement within OT curricula.

Disclaimer

This presentation was **developed with the assistance of generative AI tools**, including ChatGPT and Gemini. These tools were employed to **support idea generation, improve clarity, and assist with editing**; however, all final content, analysis, and decisions were the sole responsibility of the research team.



What is Artificial Intelligence (AI)?



- **Artificial Intelligence (AI)** - Computer system that **mimics human cognitive, including learning, problem-solving and problem recognition** (Bajwa et al., 2021)
 - **Machine learning:** Learns from data and improves experience
 - **Deep learning:** Uses multiple layers of algorithm (neural network) to analyze complex data

Examples in U.S.: ChatGPT, Scribe, Socratic, Perplexity, Grammarly



Key Findings from Existing Research

- **Education:** Can be effective in **creating a foundational base** for exams & stimulation designs (Vaughn et al., 2024)
 - **Students:**
 - Growing **familiarity** (Al-Roomi et al., 2024)
 - Custom/individualized **study tool** (Chaudhry & Kazim 2022)
 - **Faculty**
 - Grading **consistency; lower workload** (Gonzalez et al., 2024)
 - **Shifting faculty role's** from knowledge providers to facilitators, with concerns related to job security (Aad et al., 2025)
- **Practitioners:** (Teng et al., 2022; Paranjape et al., 2019):
 - Improving **efficiency** in administrative tasks
 - **Personalizing care** and **enhancing** diagnostic accuracy
 - **Managing** medical records and **analyzing** patient data

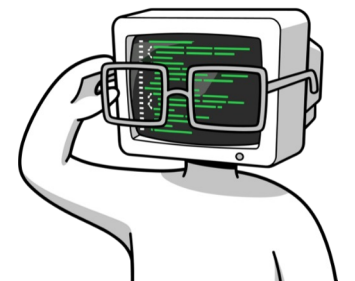
AI's role in Healthcare & Education

- **Call for ethical guidelines** to ensure AI in education enhances learning while **preserving critical thinking, academic integrity, and equity** (Gülhan et al., 2024; Dave & Patel 2023).



Research Design

- **Objective:** Explore OTD **students' perspectives** on AI in occupational therapy and examine how these perspectives change **following structured opportunities to learn about and use AI within a graduate-level course.**
- **Participants:** **75 entry-level OTD students** enrolled in a Program Development course at Rush University.
- **Procedures:** Students partnered with community-based organizations to 1) conduct a **needs assessment**, 2) develop a **program evaluation and development proposal**, and 3) develop a program **sustainability and grant writing proposal.**



AI Integration

- **Teaching**

- a. Review, auditing, and editing** of assignment descriptions and lecture for clarity and succinctness
- b. Summary** and editing of whole class **assignment feedback**
- c. Summary** and **content analysis** of **discussion board posts**

- **Learning**

- a. Guided Exploration:** Brainstorming and research support.
- b. Structured Reflection:** Ethics, accuracy, and authorship.
- c. Iterative Refinement:** AI-assisted revision of proposals and evaluation tools

AI Integration

- **Editing** (e.g., Grammarly)
- **Brainstorming** (e.g., ChatGPT, Gemini)
- **Meeting documentation** (e.g., Teams, CoPilot)
- **Research** (e.g., OpenEvidence, Consensus, Elicit)
- **Content development** (e.g., NotebookLM)



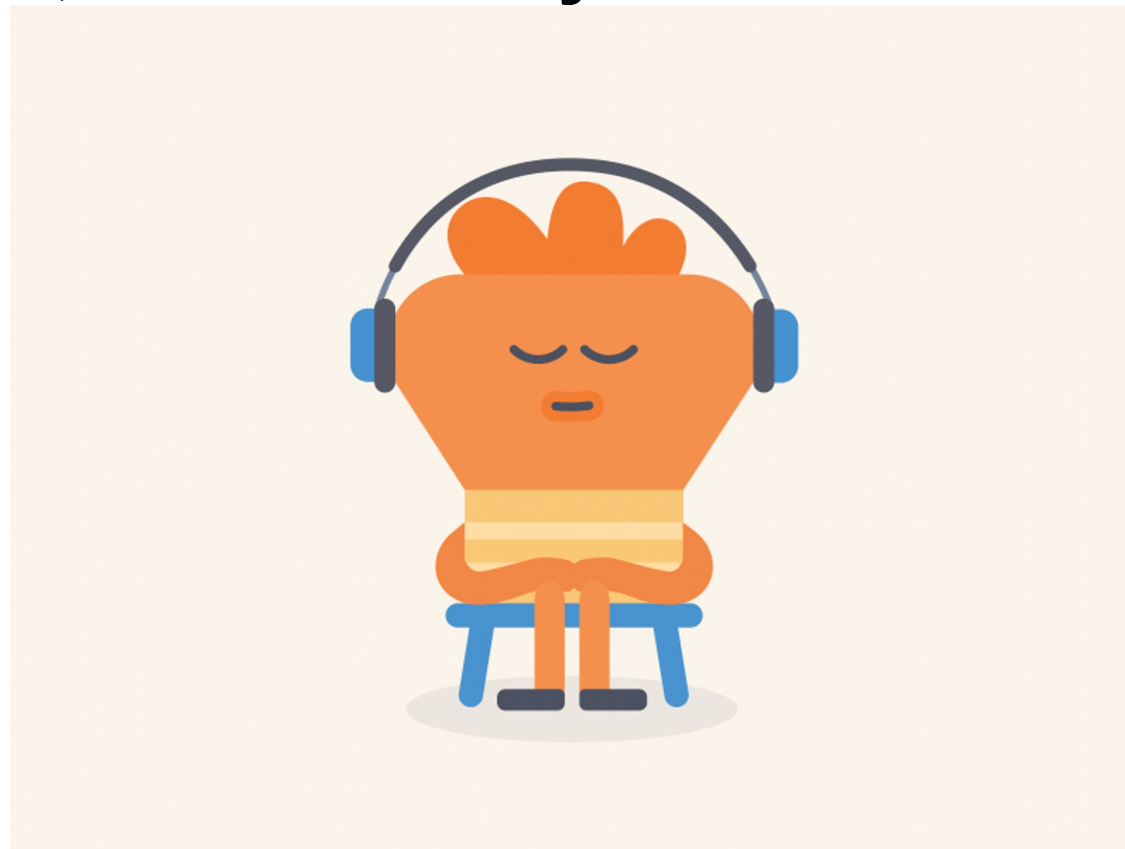
AI for Assessment Tool Development
[How to Make an Assessment Using AI: Complete Step-by-Step Guide for 2025](#)

Results

- **No Change:** AI is **helpful for research** but has difficulty in handling complex tasks, **lacks empathy**, and can generate output that **lacks context, is inaccurate or biased**
- **Decreased Perception of AI as Harmful:** AI was perceived as **less likely to decrease collaboration, promote helplessness, or decrease creativity and problem-solving**
- **Increased Perception of AI as Helpful:** AI was perceived as more likely to **provide feedback, improve digital competency, support problem-solving** through guided questions and new insights, and **save time (especially in synthesizing information and editing writing)**

Mindful Break

If you had a personal AI assistant who handled all your hard work, what would your life look like?



AI-Guided Mindful Break

ChatGPT Prompt:

“Create a 1-minute guided meditation that explores what my life could look like if I had a personal AI assistant handling all of my hardest work.”



A Calm Start

Close your eyes and take a deep breath in... and out. Imagine waking up to a day where your mind feels light. Your to-do list is already organized, your tasks taken care of by a trusted assistant who knows exactly what you need.

Feel the ease in your body as you move through your day—not rushed, not overwhelmed, just steady and supported.

Picture yourself with extra time—to laugh, to breathe, to create, to be fully present.

You're free to focus on what truly matters: your joy, your passions, your purpose. With each breath, feel the weight of life's demands lifting. You're more peaceful, more centered, more alive.

Stay here for a moment... breathing in calm, breathing out gratitude. When you're ready, softly open your eyes. You're supported. You're enough. You can do this.



**Since we are
not robots, we
can't always
perform well.**

Son Heung-min

Q

&

A





Our Survey

We'd love to hear your thoughts on AI in OT! Please take our short survey to share your perspective on AI as an OT student, educator, or clinician.

Scan the QR code to participate.

References

- Aad, S., & Hardey, M. (2025). Generative AI: Hopes, controversies and the future of faculty roles in education. *Quality Assurance in Education*, 33(2), 267–282. <https://doi.org/10.1108/QAE-02-2024-0043>
- Al-Roomi, K., Alzayani, S., Almarabheh, A., Alqahtani, M., Aldosari, F., Aladwani, M., Aldeyouli, N., Alhobail, R., Atwa, H., & Deifalla, A. (2024). Familiarity and applications of artificial intelligence in health professions education: Perspectives of students in a community-oriented medical school. *Cureus*, 16(11), e73425. <https://doi.org/10.7759/cureus.73425>
- Başaran, M., & Duman, C. (2024). Dialogues with artificial intelligence: Exploring medical students' perspectives on ChatGPT. *Medical Teacher*, 1–10. <https://doi.org/10.1080/0142159X.2024.2438766>
- Bajwa, J., Munir, U., Nori, A., & Williams, B. (2021). Artificial intelligence in healthcare: Transforming the practice of medicine. *Future Healthcare Journal*, 8(2), e188–e194. <https://doi.org/10.7861/fhj.2021-0095>
- Chaudhry, M. A., & Kazim, E. (2022). Artificial intelligence in education (AIEd): A high-level academic and industry note 2021. *AI and Ethics*, 2, 157–165. <https://doi.org/10.1007/s43681-021-00074-z>

References

- Dave, M., & Patel, N. (2023). Artificial intelligence in healthcare and education. *British Dental Journal*, 234, 761–764. <https://doi.org/10.1038/s41415-023-5845-2>
- Gonzalez, V. H., Mattingly, S., Wilhelm, J., & Hemingson, D. (2024). Using artificial intelligence to grade practical laboratory examinations: Sacrificing students' learning experiences for saving time? *Anatomical Sciences Education*, 17(5), 932–936.
- Google LLC. (2023). *Google Gemini* (Version 1.0) [Large language model]. <https://gemini.google.com>
- Graham, I. D., Logan, J., Harrison, M. B., Straus, S. E., Tetroe, J., Caswell, W., & Robinson, N. (2006). Lost in knowledge translation: Time for a map? *Journal of Continuing Education in the Health Professions*, 26(1), 13–24. <https://doi.org/10.1002/chp.47>
- Gülhan G., S., Yiğit, S., Berşe, S., & Dirgar, E. (2024). Perspectives and experiences of health sciences academics regarding ChatGPT: A qualitative study. *Medical Teacher*, 1–10. <https://doi.org/10.1080/0142159X.2024.2413425>

References

- Moran, K. (2024, May 24). CARE: Structure for crafting AI prompts. *Nielsen Norman Group*.
<https://www.nngroup.com/articles/careful-prompts/>
- OpenAI. (2023). *ChatGPT* (Version July 2023) [Large language model]. <https://chat.openai.com>
- Paranjape, K., Schinkel, M., Nannan Panday, R., Car, J., & Nanayakkara, P. (2019). Introducing artificial intelligence training in medical education. *JMIR Medical Education*, 5(2), e16048.
<https://doi.org/10.2196/16048>
- Teng, M., Singla, R., Yau, O., Lamoureux, D., Gupta, A., Hu, Z., Hu, R., Aissiou, A., Eaton, S., Hamm, C., Hu, S., Kelly, D., MacMillan, K., Malik, S., Mazzoli, V., Teng, Y., Laricheva, M., Jarus, T., & Field, T. (2022). Health care students' perspectives on artificial intelligence: Countrywide survey in Canada. *JMIR Medical Education*, 8(1), e33390. <https://doi.org/10.2196/33390>
- Vaughn, J., Ford, S. H., Scott, M., Jones, C., & Lewinski, A. (2024). Enhancing healthcare education: Leveraging ChatGPT for innovative simulation scenarios. *Clinical Simulation in Nursing*, 87, 101487.
<https://doi.org/10.1016/j.ecns.2023.101487>