

Training Nursing Students in Difficult Conversations Using AI Chatbots

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Research Team (continued)

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Disclosures

Lindsay Iverson has a financial relationship with Laerdal Medical. However, Laerdal did not sponsor, influence, or contribute to the development of this project/presentation, and no Laerdal products or content will be discussed.

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Objectives



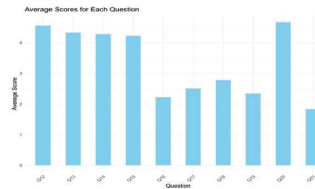
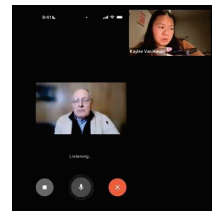
1. Describe an AI-based communication tool that was developed for training nursing students in difficult conversations.



2. Discuss the impact of the AI-based communication tool on enhancing nursing students' communication skills.

Background

- Verbal communication as a fundamental competency ^{1, 2, 4}
- AI is used in higher education
- AI chatbots have been used in nursing curriculum with positive outcomes ^{3, 5}
- Lack of AI chatbots being used to train nursing students in difficult conversations



Pilot Outcomes

- **Benefits of AI Chatbot Simulation**
 - Students appreciated depth of AI feedback
- **Opportunities for Improvement**
 - Naturalness of speech pattern
 - Preference for standardized patients
- **Conclusion**
 - Tiered approach
 - Best for simulation preparation as homework or prework before live interactions

Purpose & Aims

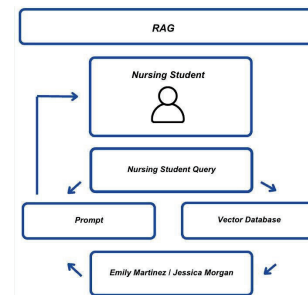


To develop a tiered experiential approach to preparing graduate and undergraduate nursing students for difficult conversations prior to interacting with standardized patients.



To adapt, pilot, and evaluate an AI-based communication tool for student engagement in practicing difficult conversations.

Chatbot Development



Methods

Phase 1:

Students were provided with a scenario and recorded themselves navigating a difficult conversation with the AI chatbot.

Phase 2:

Students engaged in a simulation with a standardized patient.

Evaluation:

Rubric used in Phase 1.

Evaluation tool used in Phase 2.

Students completed a survey between phases.



Sample

Engaged with chatbot (required)

- 70 undergrad nursing students (2 campuses)
- 12 grad nursing students (2 programs)
- Total engagement = 82 students
- 100% of students enrolled in courses

Completed survey (optional)

- 41 undergraduate & 3 graduate
- Total sample = 44 students
- 53.6% response rate

Rubrics

Undergraduate



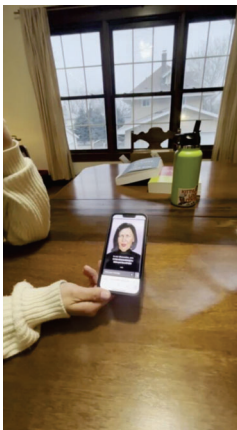
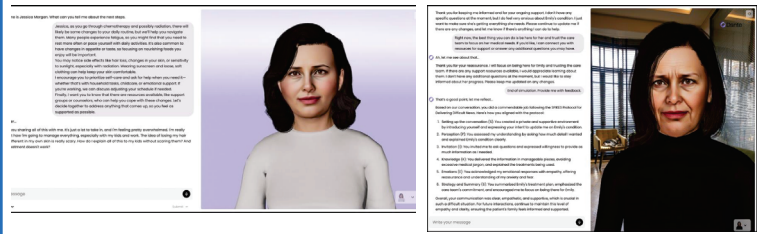
Both

Empathy	Clarity
Overall Effectiveness	Camera On

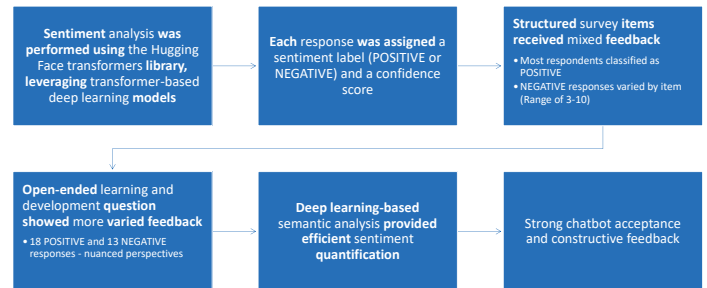
Graduate



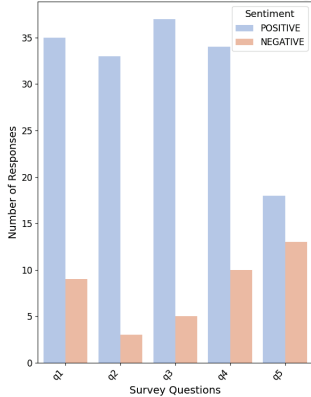
Undergraduate & Graduate Chatbots



Quantitative Analysis



Sentiment Distribution Analyzed Using AI



Quantitative Results

- q1: I felt more confident in having difficult conversations after interacting with the AI chatbot
- q2: The feedback received from the AI chatbot was valuable for improving my performance in difficult conversations
- q3: Engaging with the AI chatbot prepared me for real-world encounters involving difficult conversations in healthcare settings:
- q4: Overall, I enjoyed engaging with the AI chatbot to practice difficult conversations.
- q5: Please share what specific aspects of the activity with the AI chatbot contributed the most to your learning and development in engaging with or delivering difficult news

Qualitative Themes

Practice and Preparedness

- "Helpful as a first interaction"
- "...a good way to improve and try new ways to deliver sensitive information"
- "It gave me a different perspective being the one to give education and support"

Realism and Emotional Awareness

- Many students noted how the chatbot portrayed "desperation" and emotional realism
- "I realized how often parents might say 'I'm anxious, worried, scared'"

Qualitative Themes (continued)

Feedback and Self-Reflection

- Immediate and specific feedback from the chatbot was a major strength
- "...the feedback that I received from the chatbot was the most impactful part of my learning"
- "I think receiving feedback allowed me to reflect on what I did and how I can better improve"

Engagement and Critical Thinking

- Cognitively engaging, prompting students to think on their feet
- "...asking me for resources by name forced me to critically think"
- One student noted the benefit of "thinking on the spot and responding to patient questions"

Qualitative Themes (continued)

Technical Challenges

- Students reported frequent technical issues
 - Slow responses
 - Audio recognition errors
 - Full system crashes
- For some, these problems interfered with the flow and realism of the simulation

Limitations of the Study



Low Response Rate



Data Analysis Method



Limited Pilot Data

Implications for Healthcare Education

- Transforming Communication Training
- Bridging Classroom and Practice
- Expanding Access and Scalability
- Alignment with AACN Essentials (2021)



Next Steps

- Address Technical Challenges
- Scalability and Expansion
- New Scenario Development
- Interprofessional Integration
- Sustained Intervention



References

1. American Association of Colleges of Nursing. (2021). The Essentials: Core competencies for professional nursing education. Accessible online at <https://www.aacnnursing.org/Portals/0/PDFs/Publications/Essentials-2021.pdf>.
2. Broeckelman-Post, M. A., & Mazer, J. P. (2022). Editors' introduction: Online teaching: challenge or opportunity for Communication Education scholars. *Communication Education*, 71(2), 145. <https://doi.org/10.1080/03634523.2021.2022735>
3. Chang, C., Hwang, G., & Gau, M. (2021). Promoting students' learning achievement and self-efficacy: A mobile chatbot approach for nursing training. *British Journal of Educational Technology*, 53(1), 171–188. <https://doi.org/10.1111/bjet.13158>.
4. McGunagle, D., & Zizka, L. (2020). Employability Skills for 21st Century STEM Students: The Employers' Perspective. *Higher Education, Skills and Work-Based Learning*. <https://doi.org/10.1108/HESWBL-10-2019-0148>
5. Srinivasan, M., Venugopal, A., Venkatesan, L., & Kumar, R. (2024). Navigating the Pedagogical landscape: Exploring the implications of AI and chatbots in nursing education. *JMIR Nursing*, 7, e52105. <https://doi.org/10.2196/52105>.



Thank you.

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