Exploring the Opportunities and Mitigating the Challenges of Artificial Intelligence in Nursing Education

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The recent and rapid advances in artificial intelligence (AI) have generated both excitement and concern in higher education. Opportunities for AI in nursing education can be transformative, including simulation, accessibility, and personalized learning. Just as the opportunities can be transformative, concerns such as bias, privacy, security, and ethics must be given due consideration. Nurse educators must understand enough about AI to effectively maximize its benefits and mitigate the challenges when preparing future nurses.

In simple terms, AI is a type of technology that enables computers to perform specific tasks that resemble human capabilities, such as decision-making, visual perception, and speech recognition (Glauberman et al., 2023). To learn, computers analyze extensive data sets and identify patterns using algorithms. Generative AI is used to describe machine-learning that can create new content based on user prompts (Sætra, 2023). In November 2022, ChatGPT was released by OpenAI and has become the most well-known generative AI platform. It generates text responses to questions or prompts and has been quickly embraced by technologically adept students to not only supplement learning but, unfortunately, to engage in academic dishonesty (Dorin & Atkinson, 2024).

Recognizing the need to provide guidance on the use of AI, the American Nurses Association released its position statement for the ethical use of AI in nursing practice in 2022. They clearly express that the use of AI should not replace nursing skills or judgment, yet recognize the ability of AI to enhance and support the core values of the profession. The use of AI can support optimal health outcomes when nurses are informed about how AI impacts the nursing processes *(The Ethical Use of Artificial Intelligence in Nursing Practice, 2022*). Nursing education must include information on advancing technologies, including AI, and best practices in these areas to help students understand how they impact patient care.

As faculty enhance their knowledge and understanding of AI, they are more likely to accept its advantages and incorporate it into their course design and materials (Dorin & Atkinson, 2024). Simulation and virtual learning are a particularly exciting application for which nurse educators can explore AI integration. AI can be used to customize student learning and to address issues that students may not have meaningful exposure to in the clinical setting, such as end-of-life care, culture and diversity, critical care, and social determinants of health. AI-enhanced communication tools can provide a realistic and immersive experience for students to practice communication and patient teaching as they develop their clinical reasoning skills (Glauberman et al., 2023). Creating these opportunities for students in prelicensure nursing programs aligns with the guidance of the ANA by ensuring that AI does not compromise but rather enhances the human relationship.

The benefits of AI extend beyond student learning. AI can be used by nurse educators to increase productivity by maximizing time. Assessment Technologies Institute (ATI) is a National Council Licensure Examination (NCLEX) preparation program that is used by prelicensure nursing programs throughout the state of Delaware. This resource not only provides learning resources for students but also has launched a generative AI tool to help nurse educators optimize their time. The resource allows nurse educators to use a simple prompt to generate an exam question. Faculty have the ability to modify the question to meet their needs, which is an example of how generative AI can be used by nursing faculty to efficiently use their time while improving the quality of exams to better assess a student's clinical judgment skills (*ATI Nursing Education Launches Claire AITM, the First-of-Its-Kind Technology to Help Save Nurse Educators Time, 2024*).

Nursing students are utilizing generative AI to supplement their learning. Websites like ChatGPT are used by nursing students to rewrite notes, create practice questions, and simplify complex concepts. In a study exploring student views regarding AI, students acknowledged the ability of AI to increase productivity and efficiency but also expressed concerns regarding the reliability of content and overreliance on technology, impacting their interpersonal relationships with patients (Summers et al., 2024).

While there are many opportunities for the use of generative AI in education, the technology must be leveraged to mitigate the challenges that also emerge. The release of generative AI websites like ChatGPT has sparked concerns regarding the responsible use of AI and its impact on academic integrity in higher education. Nurse educators are particularly feeling this burden since the nursing profession is continuously rated the most trusted profession, according to the Gallup annual Honesty and Ethics poll (Brenan & Jones, 2024). In a world where AI is freely available, forbidding all AI is not a practical approach to the issue. Nurse educators can look to a college's academic integrity policy for guidelines in addressing the use of AI by students. In addition, educators can use course-specific guidelines on the use of AI to establish what is ethically appropriate to incorporate or not incorporate

into academic work. Nursing faculty can also review and adapt their assessment methods to be less vulnerable to the use of generative AI by students. Assignments such as group work, podcasts, oral presentations, and handwritten, in-person work can minimize the use of AI and foster critical thinking (Sullivan et al., 2023). Modifying assignments to reduce a student's ability to utilize AI allows faculty to assess the student's critical thinking and decision-making abilities.

As previously mentioned, generative AI analyzes large data sets to construct a response. When that data is biased or incomplete, the AI responses are skewed and therefore not reliable. An experienced nurse and educator may be able to recognize this; however, a nursing student most likely will not. In addition to bias, privacy and security concerns present another dilemma. Educators can combat these issues by incorporating AI guidelines for data privacy and bias discrimination into their instructional strategies (Srinivasan et al., 2024).

Nurse educators must educate themselves on this ever-evolving technology to be able to develop strategies to mitigate the challenges of AI. The misuse of AI can negatively impact patient outcomes and the profession. While there is plenty of controversy surrounding AI and the release of generative AI, there are positive implications for nursing education. Nurse educators have the responsibility to teach students how to use AI to augment their learning and further develop their clinical judgment. The responsible and ethical use of AI can enhance learning, maximize time for students and educators, and improve patient outcomes. ■

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