Contemporary issues

What is ChatGPT and what do we do with it? Implications of the age of AI for nursing and midwifery practice and education: An editorial

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1. Introduction

The world is currently grappling with the implications of the release of ChatGPT (Generative Pretrained Transformer) a natural language processing (NLP) model (OpenAI, 2023). Models such as ChatGPT are trained on large amounts of text data and can generate human-like content in response to user prompts with high levels of accuracy. The development and public release of ChatGPT has sparked significant debate as people consider the implications of living in an age of Artificial Intelligence (AI) (Azeem Akbar and Khan, 2023). Discourse ranges from fears of Hollywood-inspired AI dystopias to hopeful visions of using the technology to improve life within society. Whilst there is no denying that this technology requires a cautious approach as the implications are being realised, there has been intense conversation around the integration of AI for higher education (Secinaro et al., 2021). Consideration of the potential benefits to student learning, however, must be weighed against the challenges and consequences of adopting a disruptive educational technology for students who will ultimately practice in a hands-on profession.

Technology has significantly transformed the health care industry, altering medical and nursing practices, optimising workforce safety and efficiencies as well as improving patient outcomes (Secinaro et al., 2021). The use of AI and advanced technologies in health care has created ongoing ethical, moral, and legal debates. With some perceiving that machine learning will replace student learning, it is logical that proposing to integrate similar technologies into higher education has created comparable discourse (Secinaro et al., 2021). Concerns raised relevant to nursing and midwifery programs relate to potentiating the existing theory practice gap and amplifying the high tech/high touch conundrum.

The higher education landscape has previously, judiciously responded to advances in technology. Indeed, the integration of new technology in education is not a novel phenomenon with the field adopting to previous disruptions from the times of the introduction of slate, paper, chalk, internet, and mobile smartphone tablet application technology, social media and extended reality (Swiecki et al., 2022). The implementation of ChatGPT and other advanced technologies in higher education should not be viewed as the death knell for traditional learning. With discriminate use, and albeit with its own set of challenges, by adopting ChatGPT, higher education has an opportunity to deliver content that is more evolved and learner-centred than ever before (Chee, 2022; Neumann et al., 2023).

2. Integrating artificial intelligence with traditional teaching methods

2.1. The opportunities

Using artificial intelligence to heighten learner centredness may seem like an oxymoron, however ChatGPT presents an opportunity for educators to create individualised materials allowing for more time to build and strengthen meaningful relationships with students (Swiecki...
In the same way that Chatbots are typically used in customer service roles, more advanced language models such as ChatGPT can be utilised as teaching assistants for the creation of assessments, building blocks of multiple choice or open-ended questions, developing case studies, and moderation of marking. These once burdensome tasks would become feasible (Swiecki et al., 2022).

ChatGPT and AI can assist to deliver authentic assessments and track students’ performances. Additionally, simulation scenarios can be built by educators quickly and affordably with ChatGPT. No longer needing to search the internet for clinical cases or align curriculum to pre-built texts, educators will have greater freedom and help to design the case, allocate roles, patient observations, including mannequin, or actor responses (Secinaro et al., 2021). AI-powered virtual patients can be used to simulate real-life scenarios, allowing students to practise their clinical skills in a safe and controlled environment as much as they need to without the burden of staff costs (Secinaro et al., 2021).

With learner centred at the fore and by harnessing the synchronous and artificial omnipotence of ChatGPT, students can receive personalised feedback and remote support. AI-powered tutors can essentially offer automated assessment of students’ writing, leading to improved writing motivation and personal learning skills, increasing self-efficacy with learning (Swiecki et al., 2022). Important for nursing graduates, AI can assist in developing research tasks, and can contribute to the development of critical thinking and problem-solving skills (Baashar et al., 2022; Swiecki et al., 2022).

AI enabled plagiarism detection software is closely aligned with developing student’s writing by enhancing their academic literacy capacity. By comparing a student’s work against an extensive and relevant catalogue of documents, a generated report can highlight existing, matched text (Baashar et al., 2022; Swiecki et al., 2022). Learner centred environments encourage students to read the similarity reports, providing opportunity to correctly attribute the original authors of the text and adopt correct paraphrasing techniques (Baashar et al., 2022; Swiecki et al., 2022). Students can use NLP models including ChatGPT to develop their writing skills however, the software does pose significant threats to the integrity of traditional written assessments.

2.2. The challenges

Academic integrity, specifically plagiarism is most likely the biggest challenge facing education institutions in relation to ChatGPT (Kasneci et al., 2023). Natural language processing can develop text in many forms including traditional essay format and scientific writing styles, providing well considered answers to imputed user prompts (Cotton et al., 2023). The reality is that students can use these technologies to cheat, developing high quality written work that can avoid detection by plagiarism software, undermining many traditional assessments within higher education (Cotton et al., 2023). Assessment methods that rely solely or largely on text-based responses prepared and uploaded individually by the student, may compound academic integrity concerns.

It is common practice for first year higher education students to learn the importance of ensuring that literature they source is credible, reliable, appropriate, and written from an authority. Hesitation to address the ‘proverbial elephant in the room’ regarding the use of ChatGPT applications could potentially increase student misuse, unaware of their ethical and moral responsibility that comes with using these types of technologies or the strengths and weaknesses of the text being generated (Kasneci et al., 2023). Beyond claims of plagiarism, a student or novice nurse could compromise patient safety if ChatGPT was inappropriately utilised within clinical practice without knowledge of the limitations such as production of unverified or misleading information. Not only does this technology come with an inherent algorithmic bias, but it is also only as good as the data it is trained on (Azeeem Akbar and Khan, 2023; Kasneci et al., 2023).

Copyright laws are complex and the use of ChatGPT amplifies concerns of breaches for students and educators. Copying and pasting text from textbooks or journal articles into these models for the purposes of paraphrasing the content could see the user inadvertently compromising copyright by using author material in the training of their text and language outputs (Kasneci et al., 2023). In addition, text being generated such as citations provided within ChatGPT may be non-existent, and there also may be a lack of quality nursing specific information used to train the system limiting its effectiveness as a teaching and learning tool (Bozkurt et al., 2021; Kasneci et al., 2023).

The rate of adoption of AI is relatively slow in higher education compared to other industries including medicine, potentially increasing the theory practice gap (Kasneci et al., 2023). Realistically, some education institutions do not have the necessary funding for hardware, software, technical staff, or educational expertise to support student learning through the integration of NLP models (Neumann et al., 2023). A lack of consensus on the use and application of NLP models within higher education may serve to widen the distance between industry and education as well as further social inequities.

For example, universities with a priority focus on maintaining academic integrity have developed assessment policies that prohibit the use of ChatGPT by students for academic assessment purposes. Other institutions have chosen to embrace the technology allowing unrestricted use with others developing alternative assessments integrating ChatGPT into teaching, learning and assessment practices. Predictably, for those universities who can financially support the infrastructure required to support the full integration of advanced technologies, they will promote programs that are contemporary and industry relevant ( Chee, 2022). As such they will graduate students who are at minimum work-ready, and given their leading, authentic education, will also be the nurse and midwifery leaders of tomorrow (Neumann et al., 2023).

3. Future proofing the nursing and midwifery workforce

To best prepare students who are workforce ready and considering the burgeoning use of AI in health, it is time to consider the expansion of the curriculum (Swiecki et al., 2022). Just as AI is increasingly being utilised to deliver patient care, it is reasonable to expect that data analytics and machine learning should be incorporated into undergraduate learning and be considered business as usual (Secinaro et al., 2021). AI-powered applications can help student nurses and midwives to analyse complex medical data, identify health related patterns, and make more informed decisions, which may lead to better patient outcomes and a more efficient healthcare system overall. Ethical and moral responsibilities will indeed alter the scope of practice and clinical responsibilities for registered nurses and midwives in the age of AI.

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