

Experiential Use of Generative AI in a Synchronous Graduate Nursing Course

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Article

Abstract

Generative AI can generate new subject matter that is constructed from relationships it has learned from already established information. Five graduate nursing students in a synchronous course completed an experiential pilot assignment using Generative AI tools to create customized patient education materials on a specified health condition. Assessment of this Generative AI tool explored if fabricated or falsified outputs were provided as well as biases that reflect stereotypes and inequities in society. Institutional review board waiver approval for this retrospective qualitative analysis of students' submissions was conducted using thematic analysis. Five themes emerged: vigorous validation and verification; subtle bias; accessibility; personalized patient education and innovative relevant learning experience. Students reported that the tools provided valuable support in developing patient education but frequently generated biased or inaccurate information requiring rigorous fact-checking. The pilot assignment was described as innovative, relevant, and challenging, highlighting the importance of AI literacy for advanced practice nurses. Integrating Generative AI in nursing curricula can strengthen students' digital literacy and clinical judgement skills.

Key Words: Artificial intelligence, generative AI, experiential learning, digital literacy, nursing practice, nursing education, machine learning, healthcare technology, andragogy, innovation

The rapid evolution of artificial intelligence (AI), particularly probabilistic models such as Generative AI (GenAI), is transforming healthcare and education worldwide through significant intellectual and practical applications. In nursing education, the integration of these technologies presents both promising opportunities and significant challenges (DeGagne, 2023a). GenAI tools, such as ChatGPT, Google Gemini, and Microsoft Copilot, can generate coherent text, analyze data, and simulate realistic clinical case scenarios (DeGagne, 2023a; O'Connor et al., 2023c; Topaz et al., 2025). These tools have the potential to support clinical reasoning and judgment, assist with scholarly writing, and promote evidence-based practice among nursing students (Hobensack et al., 2024; Ng et al., 2022; Shin, et al., 2023).

Nursing and other healthcare professionals are utilizing GenAI to support their writing, patient education development, and clinical decision-making skills, while also identifying limitations such as bias, misinformation, and inaccuracies (Jallad et al., 2024; Sommer et al., 2024). For GenAI integration to be beneficial, faculty development, intentional curricula inclusion, and clear ethical guidelines are necessary to ensure safe and responsible use, with an understanding of its' legitimacy and accuracy of the content. Nurse educators should have the competence and confidence to educate students on the benefits and challenges of utilizing AI tools (Dorin & Atkinson, 2024; Rony et al, 2025).

As nurse educators prepare practitioners for complex healthcare situations, balancing GenAI integration aligned with the American Association of Colleges of Nursing (AACN, 2021) *Essentials* may enhance learning outcomes and promote digital competencies. The inclusion of GenAI in a structured educational format can positively impact student confidence and patient care (Chang & Su, 2025). Integrating GenAI can foster students' abilities to evaluate AI outputs, address ethical concerns, and meet emerging practice expectations in rapidly evolving, technology-driven healthcare and academic settings.

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Development and Implementation of an Experiential GenAI Assignment

Graduate nursing programs are designed to cultivate advanced critical thinking, leadership, and translational research skills. Building students’ technological competence and confidence in using GenAI is therefore an essential responsibility for educators. Integrating GenAI requires faculty to develop the knowledge, skills, and confidence to apply these tools effectively, while also addressing ethical and andragogical considerations. Issues related to academic integrity, bias, data privacy, and dependence on computerized outputs must be leveraged with potential benefits of increased student engagement, individualized learning, and enhanced decision-making (U.S. Department of Education, 2023).

In response to this need, the author developed the course *Instructional Strategies and Technology* as part of a newly approved fully online Master’s in Nursing Education program in our school of nursing (SON). The primary objective of this course was to apply diverse instructional modalities within nursing education. The course was first offered as an elective in Spring 2024. However, the author recognized that the digital technological competencies expected of students were not fully met.

An educator’s ability to use a new educational tool is closely linked to confidence in implementing it effectively for students to fully benefit from its use (Dorin & Atkinson, 2024; Rony et al, 2025). To integrate a digital competency assignment appropriately and successfully, I self-identified my own foundational AI knowledge gap. To address this erudition deficit, I undertook an intensive professional development process by attending multiple webinars, participating in a two-day AI Bootcamp, and reviewing extensive scholarly literature. This process strengthened my AI knowledge, technical skills, and confidence in applying GenAI in nursing education. Gaining insight, educational resources and pedagogical strategies helped me to develop the experiential GenAI assignment and provide a learning opportunity for students to engage in health information technology analysis, planning, implementation, and evaluation regarding a patient education.

An experiential GenAI pilot assignment was developed and integrated into the Spring 2025 course offering. This assignment enhanced course learning outcomes and strengthened students’ digital competencies. Designed for registered nurses, the assignment focused on using GenAI tools, evaluating the validity of generated information, and verifying content through reputable evidence-based nursing journals and databases. Students were required to fact-check and cross-reference AI-generated outputs to build clinical and judgment skills. Nurses should be able to assess the legitimacy and accuracy of such information as more patients are using GenAI for health information (Topaz, et al., 2025).

Students were required to fact-check and cross-reference AI-generated outputs to build clinical and judgment skills.

The GenAI assignment and its evaluation were adapted from multiple published resources and best practices (Jallad et al., 2024; O’Connor et al., 2023a; O’Connor et al., 2023b; Sommer et al., 2024). To ensure that nurses remain at the forefront of the AI era in healthcare and education, understanding and integrating GenAI into nursing curricula is imperative. As the largest segment of the healthcare workforce, nurses must be prepared to apply AI tools competently and ethically (DeGagne, 2023b; DeGagne et al., 2024; Watson, 2024). Nurse educators play an integral part in fostering the skills, knowledge, and confidence needed for students to become competent practitioners in a technologically advancing healthcare environment. AI integration can provide unique learning opportunities, promote educational efficacy, and strengthen the nurse-patient relationship to promote improved patient outcomes (DeGagne, 2023b). The Figure describes the experiential use of GenAI assignment.

Issues related to academic integrity, bias, data privacy, and dependence on computerized outputs must be leveraged with potential benefits...

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Figure. Experiential Use of Generative AI (GenAI) Assignment

Context – an individual assignment in graduate nursing course *Instructional Strategies and Technology*. Your knowledge base will need to be sufficiently advanced to spot bias or incorrect information when it does occur. You must understand that, although GenAI tools may impress, they are not infallible or all-knowing and, consequently, their output must be scrutinized.

Objective: a) examine best evidence to integrate generative AI (GenAI) tools to assist patients/families in understanding a medical condition, treatment options and nursing care and interventions; b) examine whether GenAI tools contain errors in their outputs and biases that reflect stereotypes and inequities in society.

Assignment: Explore health literacy by using a generative AI tool to create diverse customizable patient education about a health problem and how it might be managed through, for example, but not limited to diet, exercise, medications, treatment options, nursing care and interventions and lifestyle modifications.

You are to design and refine text prompts to ensure the content that is generated is appropriate and accurate (see suggested Prompts provided).

It is essential to remember that these tools are designed to generate text based on patterns in existing data; they do not possess original thought, critical judgment, or personal experience.

The primary goal of this assignment is for you to use GenAI as an advanced nurse practitioner, feel comfortable with the technology, understand when the information GenAI providing is fabricated, biased and reflects stereotypes and inequities in society.

Important Aspects to Keep in Mind:

- Prompts: review the prompts as you progress through the process. It's very important to be very detailed; very specific. You can provide a step by step process as to what information you want to glean. Try different prompts to glean more information and reword the prompts. Understand that GenAI has limitations so provide as much detailed information as possible. Remember to use your own critical thinking and expertise! PROMPTS ARE KEY!
- Can ask GenAI to incorporate APA 7th Edition standards. Need to make certain it is correctly done for the final product you submit.
- Persona – initial prompt is essential. Be as detailed as possible, can provide objective and assignment information.
- Can ask to check for grammar, spelling errors, APA citations, etc....
- GenAI will always give suggestions/tweaks to improve. When you feel you have saturated your information, tell GenAI that you want to move on and direct it to where you might want to go or that you are satisfied with the content.
- Remember GenAI is a tool, so you need to provide citations for GenAI & any additional resources you use. Otherwise, it is considered plagiarism by tutor (for using GenAI without citations). Need to 'quote' or paraphrase with citation when using GenAI, just like you would with any other referenced work.
- You need to Share the GenAI Link to Conversation if available in that digital tool. If unavailable, then provide several screenshots. Place this at the end of your paper. This is not included in the page limit.

Suggestions:

Develop a Persona: such as - You are an advanced nurse practitioner and will be teaching a patient (must include age, gender and ethnicity) about CHOOSE A CONDITION. Can you provide suggestions about patient education on this condition?

Prompt 1 – ask Generative AI tool to explore CONDITION, treatment options, nursing care and interventions related to condition, including but not limited to diet, exercise, medications lifestyle modifications. Remember to include age, gender and ethnicity and any other relevant fictitious patient information.

You should separate these prompts out in your GenAI conversation. Be specific to ask about patient education related to your chosen condition and patient characteristics.

Prompt 2 – Can you provide additional information that would be useful for the patient and family to know.

Prompts 3, 4, 5, 6, etc.... – Decide on prompts you will use.

Assignment adapted from [O'Connor et al., 2023a; 2023b](#).

Evaluation for Experiential Use of Generative AI (GenAI)

Write a 2-3 page paper based on your findings. There are two (2) aspects to the written part, each worth 50%.

a) Write up the patient education information obtained using GenAI

- Provide a brief description of the fictitious patient, condition and patient education plan. Provide examples of GenAI correct vs inaccurate information. Show the validated citations you used to clarify inaccurate information.
- Include correct content with additional citations for validation as well as inaccurate/fabricated material provided and provide correct information with citations.
- APA 7th Edition Professional Format. Remember to cite GenAI tool and to include link to conversation and/or screenshots.

b) Evaluation of utilizing GenAI

- Have you used Generative AI prior to this assignment?
- What GenAI tool(s) did you use? Provide a rationale as to why you choose that tool(s)?
- Did you note signs of bias, shallow knowledge, misunderstanding with the GenAI tool? How did you rectify this?
- Did you use the Persona provided or develop your own? If you developed your own, what did you use and share why you developed your own.

- What prompts did you use? How many interactions did you have?
- Was GenAI responses generally correct regarding the patient education of the condition you choose? Did GenAI provide uncited or incorrectly cited material? How often did you have to validate the outputs? Did you feel the GenAI tool fabricated information, providing inaccurate information; did you find the outputs credible? Did you feel you were doing 'double the amount of work' having to validate the output?
- What were the strengths and weaknesses of using GenAI tool? Highlight the issues you identified and how GenAI outputs changed as you tried various prompts.
- Analyze and reflect on your experience using the GenAI tool. Did you feel comfortable using it? Did you learn more or less information on the specific condition and patient education related to it using GenAI?
- Do you currently use GenAI in your workplace setting? If so, how?
- Did you like this assignment? How might it be improved? What enhanced or hindered your learning process of using GenAI?

Resources:

<https://platform.openai.com/docs/overview>

<https://huit.harvard.edu/news/ai-prompts>

<https://genai.umich.edu/resources/prompt-literacy>

<https://www.promptingguide.ai/>

<https://huntercollege68.padlet.org/skung/prompt-engineering-patterns-sgh5o753t4vm7ncn/slideshow>

How to cite Generative AI in APA: <https://apastyle.apa.org/blog/how-to-cite-chatgpt>

<https://www.unesco.org/en/artificial-intelligence?hub=32618>

Methodology

Aims and Objectives of Experiential Use of GenAI Assignment

The pilot assignment objectives were to a) examine best evidence to integrate GenAI tools to assist patients/families in understanding a medical condition, treatment options and nursing care and interventions; b) examine whether GenAI tools contain errors in their outputs and biases that reflect stereotypes and inequities in society. To address these aims, students explored health literacy by using a GenAI tool of their choice to create customizable patient education materials about a self-selected health condition and its management. The materials included, but were not limited to, lifestyle modifications, diet, exercise, medications, treatments, and nursing interventions.

Design

A primary goal of the assignment was to help graduate nursing students develop technological confidence and appreciation of GenAI capabilities and limitations. Students were expected to verify the accuracy of GenAI-generated content, identify potential biases, fabricated and falsified information, and assess whether the material reflected any stereotypes or inequities. They were also required to cross-check AI outputs against credible, evidence-based nursing and appropriate databases.

Students were expected to verify the accuracy of GenAI-generated content, identify potential biases, fabricated and falsified information...

A retrospective data review institutional review board (IRB) waiver was granted for this required written assignment. Students received assignment criteria at the beginning of the Spring 2025 semester and were instructed to submit this assignment via the course learning platform.

To evaluate the effectiveness of this first-time implemented assignment, data were analyzed to explore: (1) student engagement with GenAI tools; (2) perceived usefulness and usability of GenAI for patient education; and (3) evidence of competence in digital and health literacy, and clinical judgement skills.

Theoretical and Conceptual Frameworks

The design of this graduate nursing course was grounded in Knowles' Adult Learning Theory, which emphasizes that adult learners are self-directed, internally motivated, and ready to apply new knowledge to real-life problems ([Knowles, 1975, 1978](#)). Knowles' andragogical model frames adult learners as autonomous and problem-oriented, with prior experience serving as a valuable resource for learning ([Knowles, 1975, 1978](#)).

In alignment with this perspective, Kolb's Experiential Learning Theory (ELT) further informed the development and implementation of the GenAI assignment. Kolb's model theorizes that learning is a cyclical process involving concrete experience, reflective observation, abstract conceptualization, and active experimentation ([Kolb, 1984](#)). The experiential GenAI assignment was intentionally structured to provide students with a learning experience that required them to engage with AI tools, analytically reflect on outputs, integrate scholarly evidence, and apply insights to real-world nursing education and clinical practice. By combining principles of andragogy with experiential learning, this assignment aimed to promote digital literacy, decisive thinking, and ethical understanding, which are essential competencies for advanced nurse practitioners.

Sample and Setting

The course was delivered within a diverse, urban SON at a large academic institution. During the Spring 2025 semester, five graduate students self-enrolled in the synchronous elective. All participants were registered nurses with varied clinical backgrounds and professional experiences, providing a rich context to apply adult learning and experiential approaches to the integration of GenAI.

Data Collection and Analysis

Following IRB waiver approval and the submission of final course grades to the registrar, the author retrieved the submitted GenAI assignments for retrospective analysis. Qualitative data was based on the students’ experiential use of the GenAI assignment.

A thematic analysis approach was employed to examine and gain data familiarity. An inductive coding process was used to identify patterns and recurrent concepts in students’ interpretations, capturing salient features without imposing preconceived categories. Codes were iteratively refined and grouped into preliminary clusters, with attention paid to both recurring patterns and outlier perspectives. Through this process, broader themes were constructed to represent the underlying coded data meaning. Themes were then reviewed, refined, and defined to ensure internal coherence and distinctiveness. The resulting themes captured students’ perceptions of the assignment’s educational value, their engagement with GenAI tools, and their critical appraisal of AI-generated content. This systematic and interpretive process supported the development of data-driven suppositions about the assignment’s effectiveness in fostering digital literacy, ethical awareness, and evidence-based evaluation skills among graduate nursing students.

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Ethical Considerations

A retrospective review of deidentified student coursework posed no greater than minimal risk. No personal identifiable or contact information was collected. All GenAI assignments had been graded, with final grades submitted to the university registrar prior to the initiation of data analysis.

Results

Participants

All participants were female registered nurses with 3-10 years of professional nursing experience (mean = 7.8 years, SD = 2.86). Four participants were practicing nurse practitioners with 2-3 years’ experience (mean = 2.75 years; SD = 0.5). Four students were enrolled in the Doctor of Nursing Practice (DNP) program, while one student was pursuing a Master of Science in Nursing (MSN) degree with a concentration in Adult-Gerontology Primary Care Nurse Practitioner.

Experiential GenAI Assignment

All submitted assignments focused on fictitious adult patient scenarios. Four of the five students chose to develop educational materials for patients diagnosed with Type 2 Diabetes Mellitus (T2DM): one scenario described a Hispanic male, one a Hispanic female, one an Asian female, and one patient’s ethnicity was not specified. A fifth paper centered on an African American male patient diagnosed with hypertension.

Each student used a GenAI tool to generate patient education materials addressing key aspects of disease management, including diet, lifestyle modifications, exercise recommendations, and pharmacologic therapy. One student incorporated broader social determinants of health by highlighting financial stressors, language barriers, culturally influenced dietary habits, and limited access to reliable health education resources.

Each student used a GenAI tool to generate patient education materials addressing key aspects of disease management...

Table 1 provides an overview of each fictitious patient profile, the primary goal of the patient education content, and key findings regarding the accuracy and appropriateness of the GenAI-generated outputs.

Table 1. Results of Fictious Patient Education Information Obtained Using GenAI

Fictitious Patient	Primary Goal of the Patient Education	GenAI Findings

Mr. Doe, 52-year-old male, new diagnosis T2DM	Basic understanding of T2DM, glucose monitoring, dietary modifications, exercise, medication adherence, and long-term risks. Plan: educational materials on diet, physical activity, medication adherence, and the long-term risks associated with untreated diabetes.	• Google Gemini provided information on description of T2DM, highlighting connection to insulin resistance and the risk factors, including obesity, sedentary lifestyle, and genetics. Correct information on the importance of monitoring carbohydrate intake and the role of the glycemic index in managing blood sugar levels. Both recommendations were consistent with the guidelines provided by the American Diabetes Association. • Suggested that Mr. Doe could engage in “high intensity training” - for a newly diagnosed patient who may be sedentary or overweight, this could pose an unnecessary risk. Instead, moderate aerobic exercises such as walking, or cycling are often recommended after a safer and more manageable starting point. • Provided a list of first line medications and mentioned insulin therapy as a first line treatment, which is incorrect. Insulin is generally used only after oral medications fail. • All recommendations from AI were fact checked against the American Diabetes Association guidelines.
54 year old Hispanic Female, Fluent Spanish, limited English proficiency. New diagnosis of Type 2 Diabetes Mellitus (T2DM). PMHx of Hypertension (diagnosed 5 years ago; managed with lifestyle modification, no current pharmacologic therapy), hyperlipidemia (borderline, not on medications), no prior history of cardiovascular disease with no known diabetic complications (e.g., neuropathy, retinopathy). PSH of cesarean section (age 30) and cholecystectomy (age 48).	Patient education: lifestyle modifications, blood glucose monitoring, and pharmacologic therapy.	• ChatGPT was instructed to address language and cultural considerations. Upon validation, much of the content accurately reflected guidelines from the American Diabetes Association and the Centers for Disease Control and Prevention. • Some inaccuracies and omissions were noted. GenAI output made assumptions about the extent of Hispanic family involvement, potentially reinforcing cultural stereotypes. • Initially omitted newer medication options, such as GLP-1 receptor agonists like Semaglutide, which offer significant cardiovascular and weight management benefits. Initial GenAI response did not emphasize the importance of individualized blood glucose targets based on patient-specific factors.

60-year-old Asian female with newly diagnosed diabetes.	Educate patient on basic disease process of Type 2 diabetes mellitus, diet modifications, exercise recommendations, and medication options.	• ChatGPT; prompts used: can you provide teaching for a 60-year-old Asian female with newly diagnosed type 2 diabetes?" and "can you provide a weekly exercise regimen that is simple and elderly friendly?". First prompt generated a concise summary of steps for managing type 2 diabetes including an explanation of the general pathophysiology of the disease, blood glucose monitoring, diet, exercise, medication adherence, and preventing complications. • There were some Asian stereotypes that were reflected in the meal plan and exercise recommendations, such as the incorporation of miso soup and kimchi or tai chi as a suggestion for exercise. Overall, the lifestyle modifications were clear and easy to follow with specific measurements for ingredients and time recommendations for each exercise. • Discrepancy in hypoglycemia values, ChatGPT identifies hypoglycemia as a blood glucose level <70, whereas validation stated a hypoglycemic state is a blood glucose level <60 mg/dL. • Analysis of different oral and injectable medications, such as sulfonylureas, DDP-4 inhibitors, and GLP-1 receptor agonists were particularly impressive. Information was not only accurate, but condensed in a way that would be easy for someone without medical knowledge to understand. • Information generally lacked depth, therefore a user with a medical background may not necessarily learn more about type 2 diabetes management.
Mr. Rodriguez, a 50-year-old Spanish-speaking Hispanic man with limited English proficiency. He is low-income, works long hours in a physically demanding job, and lives in a five-member household with his spouse, two children, and an elderly parent. Mr. Rodriguez has a history of Type 2 Diabetes Mellitus, obesity, and hypertension.	Primary education: financial stress, language barriers, culturally influenced eating habits, and may have limited access to health education.	• ChatGPT provided a summary background, significance, prevalence, risk factors, barriers to management, and culturally sensitive interventions for this population. • Provided a comprehensive overview of care tailored to Hispanic patients. The third was middle-aged and low-income, as well as obesity, hypertension, and a five-member household. Adding extra medical comorbidity and family members created a realistic, complex case scenario. • Language barriers and health literacy concerns were added to enhance cultural and linguistic sensitivity in the patient education plan. • Provided several accurate, culturally appropriate recommendations, including the use of Spanish-language materials, involvement of family members in care, and encouraging low-cost, home-based physical activity. • Not all AI-generated information was accurate. Incorrectly recommends that people with diabetes should avoid all carbohydrates to prevent spikes in blood sugar. ADA states individuals with diabetes should have healthy carbohydrates in their diets as eliminating all carbs can result in nutrient deficiencies.

45-year-old African American male, with family history of hypertension. PMH: smokes cigarettes, drinks alcohol and eats fast food two to three times a week. Blood pressure on his recent visit to clinic was 150/90 mm Hg and repeat 146/88 mm Hg.	Nursing care and interventions for an advanced nurse practitioner: medications, dietary recommendations, physical activities and lifestyle modifications to educate the patient regarding hypertension.	• ChatGPT classified patient’s blood pressure readings as “Stage 2 Hypertension” • African American males are at risk for complications related to hypertension such as stroke, renal failure and heart disease. • Introduced patient education as the primary step with goals such as educating patients about blood pressure guidelines, risk factors, compliance to treatments and changes in lifestyle. • Modify diet by reducing sodium and saturated fat intake by introducing Dietary Approaches to Stop Hypertension (DASH) diet; more plant-based food, reduced fat dairy and lean protein; avoid red meat, sugar and alcohol from the diet. Regular physical activity, smoking Cessation and reducing alcohol intake are the next steps in managing hypertension by ChatGPT. • Pharmacologic management of hypertension for African American patients included Thiazide diuretics and Calcium Channel Blockers as first line therapies. • No bias in the information provided; basic educational materials in simple terms that can be used for patient education. All information provided validated.
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Evaluation of GenAI Assignment

Of the five students, four used ChatGPT as their primary GenAI tool, while one student used Google Gemini. The four students who used ChatGPT reported encountering bias in the AI-generated responses, whereas the student using Google Gemini did not report similar concerns.

Overall, four students agreed that the GenAI platforms generally produced accurate information about the chosen health conditions and appropriate recommendations for patient education plans. However, the same four students noted that the GenAI tools occasionally fabricated and falsified content, produced inaccurate or misleading information, and provided outputs with incorrectly cited or unverifiable sources. Students emphasized that rigorous fact-checking, validation, and cross-referencing with credible, evidence-based resources were necessary to ensure the accuracy of the AI-generated content. This additional step effectively doubled the workload but was seen as a valuable exercise in developing digital literacy and clinical judgement skills.

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Despite these challenges, all students agreed that the assignment deepened their understanding of how emerging technologies are influencing patient education and healthcare delivery. They described the activity as innovative, relevant, timely, and valuable for their future roles. [Table 2](#) summarizes students’ evaluations of the GenAI tools and their reflections on the assignment experience.

The four students who used ChatGPT reported encountering bias in the AI-generated responses...

Table 2. Student Evaluation of Generative AI Assignment

GenAI Evaluation Questions	Total n=5		Comments
Have you used Generative AI prior to this assignment?	Yes n=2 No n=3		Personal use only; never for work or healthcare related
What GenAI tool(s) did you use?	ChatGPT n=4 Google Gemini n=1		

Did you note signs of bias, shallow knowledge, misunderstanding with the GenAI tool?	ChatGPT Yes n=4 Google Gemini No n=1	Validation required with current research and guidelines Not aligned with clinical guidelines Lack of citations provided Redundancy of information Some medications provided outdated Doubled amount of work – validation necessary
Did you use the Persona provided or develop your own?	Yes n= 4 No n= 1	Caretaker Minority population individual Used prompt provided (n=2)
How many prompts and interactions did you have?	5-10 Mean = 8 SD = 1.48	Important to use clear, detailed and focused prompts
Was GenAI responses generally correct regarding the patient education of the condition you choose?	Yes n=4 No n=1	Validation required with current research and guidelines Not aligned with clinical guidelines Lack of citations provided
Did you feel the GenAI tool fabricated information, providing inaccurate information. Did you find the outputs credible?	Yes n=4 No n=1	Vigorous validation and verification of information required
Did GenAI provide uncited or incorrectly cited material? How often did you have to validate the outputs? Did you feel you were doing ‘double the amount of work’ having to validate the output?	Yes n=4 No n=1	Not always culturally sensitive Doubled amount of work = required vigorous validation verification
Did you feel comfortable using it? Did you learn more or less information on the specific condition and patient education related to it using GenAI?	Yes n=5	Not in beginning. Felt more comfortable with each prompt Valuable learning experience
Do you currently use GenAI in your workplace setting? If so, how?	No n=5	
Did you like this assignment?	Yes n=5	Innovative, fun, challenging, timely, relevant, valuable Better understanding of how technology is changing how healthcare is provided
How might assignment be improved?	Further clarity of expectations Explicitly ask to construct a brief HPI (History of Present Illness) or clinical overview of the patient persona Integrate GenAI to analyze and solve clinical problems to improve patient care or enhance clinical decision-making More detailed brief rubric or checklist outlining required elements: citing the GenAI tool, including screenshots or chat links, showing both accurate and inaccurate AI output, and reflecting on the experience	

Discussion

The findings of the experiential use of GenAI in a self-enrolled graduate nursing course demonstrated that GenAI integration can support adult learners in developing digital competence, clinical reasoning and judgement skills, and confidence in navigating emerging technologies. This assignment confirmed that GenAI tools can promote student confidence and support the development of patient education materials through ethical decision-making and clinical reasoning ([Chang & Su, 2025](#); [Kim et al., 2025](#); [Shin et al., 2023](#)). The challenges of output accuracy, citation reliability, and embedded bias were noted ambiguities. This coincides with the broader concerns that GenAI tools may generate convincing but inaccurate or fabricated information and can unintentionally perpetuate social biases if their outputs are not thoroughly evaluated ([Dorin & Atkinson, 2024](#); [Jallad et al., 2024](#); [Srinivasan et al., 2024](#)).

Student evaluations of GenAI tools highlighted potential benefits and challenges when utilized for patient education. While the platforms produced generally accurate information on the medical conditions explored, students frequently encountered biased phrasing, fabricated

The challenges of output accuracy, citation reliability, and embedded bias were noted ambiguities.

citations, and incomplete or no citations. This reinforces the need for vigorous validation of GenAI content for accurate interpretation and clarification when applying this content in clinical and educational settings (Srinivasan et al., 2024).

The assignment design required students to be self-directed, autonomous learners, characteristics central to effective graduate level education. This assignment actively fostered analytical thinking, digital literacy, and ethical clinical judgment by requiring students to validate the AI-generated patient education information. As more patients independently use AI tools for health information, healthcare professionals should be prepared to evaluate the validity of AI-generated content and educate patients about its limitations. Developing these competencies in nursing students will ensure that these practitioners are prepared to support safe, equitable, and evidence-based care in a digital healthcare culture (DeGagne, 2023a; DeGagne et al., 2024; Dorin & Atkinson, 2024). These outcomes are vital given the expanding presence of AI in patient care.

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More patients are likely to use GenAI tools for health information, so nurses should be confident in evaluating the accuracy of this information and supporting patients in its interpretation and use (Chang & Su, 2025; Martinez-Ortigosa et al., 2023; Ng et al., 2022). Participants shared how this assignment helped develop their digital literacy skills and develop a deeper appreciation for the importance of accurate evidence-based practice and patient education. Nurses must have a strong understanding of potential risks and limitations of GenAI content to ensure patient safety and uphold professional standards.

When GenAI tools are introduced without adequate training or safeguards, the risk of fabricated or falsified information, bias stereotyping, and academic integrity violations increases (DeGagne et al., 2024). While students appreciated the innovative design of this assignment, they also noted the increased workload required to verify GenAI outputs, emphasizing that these tools should augment, and not replace, nurse practitioners' professional reasoning and judgment. The content verification process can be labor intensive yet valuable, demonstrating contradictory efficiencies of GenAI use. This necessitates that organizational leaders in the profession of nursing adopt clear frameworks, policies, and ethical standards for the inclusion of AI use in all settings (Dorin & Atkinson, 2024; Kim et al., 2025; Srinivasan et al., 2024; Watson, 2024).

The content verification process can be labor intensive...

My own journey to gain knowledge of GenAI and skills before integrating this assignment illustrated the importance of faculty development and readiness in AI literacy. Without sufficient educator confidence and competence, even well-designed AI-integrated activities may fail to meet learning objectives or adequately address ethical challenges (Dorin & Atkinson, 2024; Kim et al., 2025). Educators must be confident and competent in using AI tools to design learning experiences that challenge students to question machine-generated content, address bias, and uphold ethical principles (Kim et al., 2025). My learning journey highlights the need for the faculty development that is so foundational to meaningful integration of GenAI, or any new technology, into nursing curricula. These insights contribute to the growing dialogue about how nurse educators can responsibly incorporate generative AI tools to better prepare graduates for the rapidly evolving technological workplace and academic settings. Future research could build on this assignment of GenAI integration with larger student cohorts, comparing different AI tools, or exploring long-term effects on clinical reasoning and judgement with patient care.

As more patients independently use AI tools for health information, healthcare professionals should be prepared to evaluate the validity of AI-generated content and educate patients about its limitations.

Strengths and Limitations

A key strength of this study was its timely focus on the experiential integration of generative AI in graduate nursing education, which addresses an emerging area of nursing informatics. This practice-oriented assignment strengthens both the relevance and applicability of the findings. The project assessment contributes practical insights into how advanced nurse practitioners can appraise and validate AI-generated content, highlighting essential digital literacy skills that nurse educators must foster.

Without sufficient educator confidence and competence, even well-designed AI-integrated activities may fail...

The small sample size (n=5) and lack of triangulation are significant limitations to generalizability. All participants self-enrolled in the course, which could introduce selection bias and reflect students who were already motivated to engage with emerging technologies. The retrospective design relied solely on student-submitted assignments; no direct follow-up interviews or surveys were conducted to triangulate or deepen the qualitative insights. Finally, as this was the first implementation of this pilot GenAI assignment, results may differ with a larger cohort or refinements to the assignment design. Future work with a larger, more diverse cohort would strengthen the evidence and broaden its impact.

Conclusion

This discussion has addressed the timely and relevant topic of integrating generative AI into graduate nursing education through an experiential assignment. The goal of this assignment was to inform best practices and contribute to the evolving discourse on technology-enhanced nursing education, while preparing graduate nursing students to understand, evaluate, and apply GenAI tools in the clinical and educational setting. Generative AI can be an effective tool to foster digital

literacy while highlighting the importance of rigorous validation when using such technologies. Student knowledge, skills and confidence should be appropriately developed to detect bias, inaccuracies, falsified or fabricated content within AI-generated outputs.

Generative AI can be an effective tool to foster digital literacy while highlighting the importance of rigorous validation when using such technologies.

Evidence-based integration of GenAI in nursing curricula represents a timely area for continued research and scholarly inquiry to ensure that future nurses are prepared to integrate emerging technologies safely, ethically, and effectively in patient care. The findings of this small-scale experiential pilot assignment contribute to the emerging literature on integrating generative artificial intelligence into nursing education. The evaluation of the student experiences offers an early look into useful insights about benefits and challenges of the use of AI for patient education.

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