Brief Report

Enhancing Interactive Teaching for the Next Generation of Nurses: Generative-AI–Assisted Design of a Full-Day Professional Development Workshop

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Posted Date: 17 December 2025

doi: 10.20944/preprints202512.1504.v1

Keywords: interactive teaching; generational learning; nursing education; generative AI; professional development

 doi:10.20944/preprints202512.1504.v1

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Enhancing Interactive Teaching for the Next Generation of Nurses: Generative-AI–Assisted Design of a Full-Day Professional Development Workshop

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Abstract

Introduction: Nursing educators and clinical leaders face persistent challenges in engaging the next generation of nurses, often characterized by short attention spans, frequent phone use, and underdeveloped communication skills. This article describes the design and delivery of a full-day interactive teaching workshop for nursing faculty, senior clinical nurses, and nurse leaders, developed using a design-thinking approach supported by generative AI. **Methods:** The workshop comprised three thematic sessions: (1) Learning styles across generations, (2) Interactive teaching methods, and (3) Application of interactive teaching strategies. Generative AI was used during planning to create icebreakers, discussion prompts, clinical teaching scenarios, and application templates. Design decisions emphasized low-tech, low-prep strategies suitable for spontaneous clinical teaching, thereby reducing barriers to adoption. Activities included emoji-card introductions, quick generational polls, color-paper reflections, portable whiteboard brainstorming, role plays, fishbowl discussions, gallery walks, and movement-based group exercises. **Results:** Analysis of 59 participant reflections revealed six interconnected themes, grouped into three categories: engagement and experiential learning, practical applicability and generational awareness, and facilitation, environment, and motivation. Participants emphasized the workshop's lively pace and hands-on design, noting "It was impossible to fall asleep; we were always talking, sharing, writing, or moving." Experiencing strategies firsthand built confidence for application, while generational awareness encouraged reflection on adapting methods for younger learners. The facilitator's passion, personable approach, and structured use of peer learning created a psychologically safe and motivating climate, leaving participants recharged and inspired to integrate interactive methods. **Discussion:** The workshop illustrates how AI-assisted, design-thinking-driven professional development can model effective strategies for next-generation learners. When paired with skilled facilitation, AI-supported planning enhances engagement, fosters reflective practice, and promotes immediate transfer of interactive strategies into diverse teaching settings.

Keywords: interactive teaching; generational learning; nursing education; generative AI; professional development

1. Introduction

Engaging the next generation of nurses presents a critical challenge for nursing educators and clinical leaders, as learners today often exhibit shortened attention spans, extensive mobile phone use, and limited interpersonal communication skills (Sancha, 2025). These trends have been associated with decreased sustained attention and memory consolidation, particularly among individuals who frequently engage with short-form digital media, underscoring the need for

 doi:10.20944/preprints202512.1504.v1

instructional approaches that sustain situational interest while managing cognitive load (Hart, 2017; Sancha, 2025).

Within today's nursing classrooms and clinical education settings, multiple generations—Generation X, Millennials (Generation Y), Generation Z, and Alpha —converge, each bringing unique values, technological fluency, and preferred learning modalities (Bliss, 2024; Hart, 2017;

Sancha, 2025; Shatto & Erwin, 2017). Generation Z learners, in particular, are highly connected, visually oriented, and accustomed to rapid access to information, yet they often require structured opportunities to strengthen interpersonal communication and critical thinking (Hampton et al., 2020). Tailoring instruction to meet the learning preferences of these cohorts can bridge generational gaps and promote deeper engagement, relational learning, and professional socialization (Bliss, 2024; Shatto & Erwin, 2017).

In response to these needs, active and collaborative teaching strategies have gained prominence as effective methods to cultivate learner engagement and higher-order reasoning skills.

Approaches such as think–pair–share (TPS), role-playing, and gallery walks provide opportunities for social construction of knowledge, peer feedback, and experiential reflection (Freeman et al., 2014; Guenther & Abbott, 2024; Tan & Perrault, 2025). These learner-centered techniques have repeatedly demonstrated stronger learning outcomes than passive lecture methods, particularly in domains requiring real-time application, empathy, and communication—skills essential to clinical nursing practice.

Concurrently, generative artificial intelligence (AI) is emerging as a promising tool in educational design, capable of accelerating the creation of teaching materials, discussion prompts, and case scenarios tailored to diverse learning contexts (Glauberman, et al., 2023; Simms, 2025). When integrated thoughtfully, AI can augment instructors' creativity and planning efficiency, supporting rapid prototyping and customization of interactive activities while preserving the relational, human elements central to effective facilitation (Glauberman, et al., 2023; Simms, 2025). Rather than replacing educator expertise, AI serves as a co-designer—enhancing adaptability, creativity, and learner engagement (Vanderlaan et al., 2025; Yee, et al., 2024).

This paper presents the design, execution, and participant outcomes of a full-day interactive teaching workshop for nursing faculty, senior clinical nurses, and nurse leaders. Grounded in design-thinking principles and supported by generative AI during the planning phase, the workshop emphasized low-tech, high-engagement methods—such as emoji introductions, think-share-pair, Socratic questioning, fishbowl observations, role plays, and gallery walks—to foster an inclusive, dynamic, and reflective learning environment. The subsequent sections outline the pedagogical design and methods, report participant feedback and thematic analysis findings, and discuss the implications for nursing and health professions education in the era of AI-enhanced professional learning.

2. Methods

Workshop Objectives

A full-day interactive teaching workshop was conducted for an audience consisted of nursing faculty, senior clinical nurses, and nurse leaders tasked with educating next-generation nurses. The workshop aimed to develop participants' ability to: (1) recognize generational differences in learning styles, (2) engage in and practice interactive teaching methods, and (3) apply these strategies to their instructional contexts. The curriculum was structured into three sequential sessions: "Learning Styles Across Generations," "Interactive Teaching Methods," and "Application of Interactive Strategies."

Workshop Design

Informed by design thinking and adult learning theory, all activities were intentionally designed to be low-tech and low-preparation to facilitate rapid adoption, particularly in clinical and time-constrained teaching scenarios. Materials included emoji cards for icebreakers, colored papers and

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hard cardboards for individual reflection, color markers for creative stimulation, portable whiteboards for small-group brainstorming, sticky notes for gallery walk feedback, and small incentives to encourage participation.

The design-thinking process emphasized whole-class interactivity, with frequent short activities every 8 -12 minutes to sustain energy and attention. Activities followed an experiential - reflective cycle, with each exercise linked to participants' own teaching challenges and followed by structured reflection and group debriefing. Sequencing followed a progressive risk structure, beginning with low-stakes openers to ensure early engagement from all participants and building toward activities requiring public sharing and peer feedback. Visual and tactile engagement was incorporated throughout to enhance memory and stimulate creative thinking. All activities directly addressed the workshop's central theme of overcoming teaching and learning challenges with next-generation learners.

Pedagogical Underpinnings

The pedagogical design of the workshop was grounded in several complementary learning theories and frameworks that collectively supported its experiential, interactive, and inclusive approach: Kolb's Experiential Learning Cycle (1984), the Interactive, Constructive, Active, and Passive (ICAP) framework (Chi & Wylie, 2014), Universal Design for Learning (UDL) (CAST, 2018; Meyer, et al., 2014), Keller's ARCS Model of Motivation (2010), and Cognitive Load Theory (Sweller, 2011; van Merriënboer & Sweller, 2010). These complementary frameworks were integrated through a design-thinking process to support experiential, inclusive, and cognitively efficient learning for busy clinical educators.

Kolb's Experiential Learning Cycle (1984) provided the overarching structure for the workshop's flow and sequencing. Each activity followed a cyclical pattern of *experience–reflection–conceptualization–application*, where participants first engaged in immersive experiences—such as think–pair–share discussions, Socratic questioning, fishbowl discussion, role plays, and gallery walks - followed by individual reflection, small-group debriefing, and collective synthesis. This iterative approach mirrored how nurses learn in practice—through doing, reflecting, and adapting - and reinforced the transferability of interactive strategies to real-world teaching situations.

The *ICAP framework* (Chi & Wylie, 2014) further guided the design of activities to deepen cognitive engagement. ICAP—an acronym for *Interactive, Constructive, Active,* and *Passive* modes of learning—proposes that learning outcomes improve as learners move from passive reception (listening) to active participation (doing), constructive processing (generating new ideas), and interactive co-construction (collaborative meaning-making). Activities were therefore designed to maximize interaction and co-construction of meaning, such as through collaborative generational group discussion polls, brainstorming on portable whiteboards, and role play reflections and group debriefings. These formats required participants to not only share but also build upon one another's contributions, reinforcing deeper learning and empathy across generational perspectives.

To address the diversity of learners' preferences and ensure accessibility, *Universal Design for Learning (UDL)* (CAST, 2018; Meyer, et al., 2014) informed the use of multimodal engagement strategies. Participants interacted with colorful tactile materials—emoji cards, color papers, color markers, and sticky notes—that stimulated visual and kinesthetic learning while encouraging creative expression. Multiple modalities of participation (writing, speaking, moving, observing, and reflecting) provided equitable avenues for engagement regardless of comfort level or communication style.

Sustained motivation was supported through *Keller's ARCS Model* (2010), which guided the incorporation of elements that captured *Attention* (via creative openers and movement-based activities), ensured *Relevance* (through clinical examples), built *Confidence* (through scaffolded, low-stakes practice), and fostered *Satisfaction* (through reflection, peer and instructor feedback, and small participation incentives). This motivational design was particularly critical for participants

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accustomed to hierarchical or lecture-based teaching models, promoting a psychologically safe and energizing learning climate.

Finally, *Cognitive Load Theory* (Sweller, 2011; van Merriënboer & Sweller, 2010) informed the chunking of activities into succinct, focused segments to optimize working memory and minimize extraneous demands. The deliberate use of low-tech, low-preparation, and visually supported activities helped maintain attention and reduce cognitive overload- ensuring that participants could focus on interaction and reflection rather than logistics or technology management.

These frameworks were purposefully integrated through a *design-thinking lens*, emphasizing empathy with learners' needs, iterative reflection, and user-centered design (Interaction Design Foundation, 2024; Shanks, 2018). Sequencing followed a progressive risk structure, from low-stakes openers to peer discussion, to gradually build trust and engagement. The resulting design fostered a whole-class interactive environment that blended theory-informed pedagogy with practical applicability. Collectively, they provided a coherent pedagogical foundation that balanced motivation, engagement, inclusivity, and cognitive efficiency—ensuring that each element of the workshop contributed to an active, reflective, and transferable learning experience for nursing educators and clinical leaders.

Interactive Teaching Activities

Generative artificial intelligence (AI) tools such as ChatGPT were strategically employed in the planning stages of the workshop to augment instructional creativity and efficiency. AI was used to develop the *Emoji Introduction* icebreaker, generate prompts for generational discussion, design questions for *Think–Pair–Share* and *Socratic questioning*, and draft realistic *fishbowl* and *role-play* scenarios situated in clinical teaching contexts. Additionally, AI assisted in creating structured instructions for the *Gallery Walk* activity and an *Application Template* to guide participants in designing interactive lessons. The integration of AI in this process substantially accelerated preparation time, broadened the range of pedagogical examples, and ensured contextual alignment with nursing education and clinical teaching environments (Glauberman , et al, 2023; Guenther & Abbott, 2024; Tan & Perrault, 2025). Used as a generative partner rather than a replacement for instructor expertise, AI supported design thinking by enabling iterative idea generation and customization while preserving the human relational and reflective elements essential to effective facilitation (Holmes et al., 2019; Glauberman, et al, 2023; Simms, 2025).

Session 1, *Learning Styles Across Generations*, opened with the *Emoji Introduction* and a quick generational poll (X, Y, Z), designed to establish psychological safety and early engagement through humor and self-expression. Participants discussed prompts addressing how they were taught growing up, what helps them stay engaged when learning something new, and one learning habit characteristic of their generation. These small-group dialogues, followed by large-group share-backs and individual reflections, fostered cross-generational empathy and set the stage for recognizing diverse learner preferences (Shatto & Erwin, 2017; Bliss, 2024).

Session 2, *Interactive Teaching Methods*, guided participants through a series of progressively complex active-learning techniques. *Think–Pair–Share* and *Socratic questioning* encouraged critical reflection on challenges faced by next-generation learners and effective engagement approaches. Participants then experienced *fishbowl discussions* and *role plays* simulating brief clinical teaching encounters without slides, promoting spontaneous interaction and immediate peer feedback. Each activity was followed by structured debriefing to support reflective learning, consistent with Kolb's (1984) experiential learning cycle and Chi and Wylie's (2014) ICAP model emphasizing interactive and constructive engagement.

Following a lunch break, **Session 3**, *Application of Interactive Teaching Strategies*, began with a synthesis discussion revisiting morning takeaway. Participants then engaged in a *Gallery Walk*, posting draft teaching strategies addressing common instructional challenges and offering sticky-note feedback to peers. The visual, movement-based structure re-energized the group, stimulated idea exchange, and reinforced collaborative learning (Freeman et al., 2014; Tan & Perrault, 2025). The

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concluding *Application Template* activity guided participants in developing an interactive lesson plan tailored to their own teaching context. Small group sharing and collective reflection concluded the day, with each participant identifying "one small new step to try" to promote post-workshop transfer.

A detailed outline of the three-session workshop is presented in Table 1, which maps each phase to its corresponding learning objectives, theoretical rationale, and interactive techniques.

Table 1. Workshop Lesson Plan: Interactive Teaching Across Generations

Learning Objectives	Interactive Activities	Materials / Tools	Theoretical / Pedagogical Alignment
Session 1 – Learning Styles Across Generations			
• Recognize generational differences in learning preferences and communication styles. • Promote empathy across Generation X, Y, and Z learners.	• **Icebreaker – Emoji Introduction:** Participants introduce themselves (name, department) and select emojis representing their teaching style and challenge. • **Small group discussion:** Quick poll to group participants by generation (X, Y, Z) & discuss prompts on learning experiences, engagement strategies, and generational learning habits. • **Large-group share-back** • **Mini-presentation:** Overview of generational learning characteristics and preferences. • **Reflection prompt:** "One way I can connect better with learners from different generations is…"	Emoji cards, projector/slides, Portable whiteboards, markers, color papers, small rewards.	Kolb's Experiential Learning Cycle (1984): experience–reflect–conceptualize–apply. ICAP Framework (Chi & Wylie, 2014): constructive and interactive engagement. UDL (CAST, 2018): multiple means of expression.
Session 2 – Interactive Teaching Methods			
• Explore and practice evidence-based interactive teaching strategies applicable to clinical and classroom contexts.	• **Think–Pair–Share:** Identify challenges next-generation learners face in traditional classrooms. • **Socratic Questioning:** Discuss	Portable whiteboards, markers, color cards, projector/slides, movable chairs, AI-generated prompts and teaching scenarios, small rewards.	Kolb's Experiential Learning (1984): learning through active experimentation. ICAP: interactive co-construction of knowledge.

Learning Objectives	Interactive Activities	Materials / Tools	Theoretical / Pedagogical Alignment
	what makes learning engaging and how teacher roles evolve. • **Fishbowl Discussion:** Model short (5-min) clinical teaching scenarios without slides. • **Role Play:** Practice engagement strategies using participant-generated clinical or classroom examples. • **Reflection & Q&A:** Debrief insights and applications.		ARCS (Keller, 2010): attention and confidence building. Cognitive Load Theory (Sweller, 2011): chunked short activities.
Session 3 – Application of Interactive Teaching Strategies			
• Apply interactive strategies to participants' own instructional contexts. Reinforce creativity, reflection, and peer learning.	• **Recap:** Review morning sessions and collective insights. • **Gallery Walk:** Post and review peers' strategies for overcoming teaching challenges; add sticky-note feedback. • **Application Template:** Participants design an interactive lesson using AI-generated structure and prompts. • **Small Group Sharing:** Present designs, receive peer feedback, and wrap-up discussion. • "**One small new step to try**" commitment reflection.	Snacks & music for gallery walk activity, large posters or hard cardboards, sticky notes, AI-generated application templates, color papers, color markers, small incentives.	Kolb's Experiential Learning (1984): reflective observation → active application. UDL: multiple modalities and visual engagement. ARCS: relevance and satisfaction. Design Thinking: iterative refinement and empathy-driven design.

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3. Results

Participant responses and facilitator observations indicated that the full-day interactive teaching workshop achieved high levels of engagement, relevance, and perceived value. Engagement was consistently strong throughout the morning and afternoon sessions. The warm, low-stakes openers, such as emoji introductions and generational quick polls, effectively involved all participants early and set the tone for active participation. Facilitator observations noted visible increases in energy during movement-based activities, including rotating small-group discussions, portable whiteboard brainstorming, fishbowl observations, role play, and the gallery walk. The use of colorful, tactile materials such as hard cardboards, markers, and sticky notes contributed to a playful yet professional atmosphere that sustained attention and stimulated creativity. One participant summarized the experience succinctly: *"It was impossible to fall asleep; we were always talking, sharing, writing, or moving."*

Thematic analysis of 59 mid- and end-workshop reflections revealed six interconnected themes, which can be organized into three overarching categories: (1) engagement and experiential learning, (2) practical applicability and generational awareness, and (3) facilitation, environment, and motivation (Table 2).

Table 2. Interactive Teaching Workshop Result Table

Theme	Weight (%)	Brief Note	Representative Quotes
1. Engagement and Active Participation	26%	Participants consistently emphasized the workshop's high interactivity, energy, and focus. Frequent activity shifts, movement, and inclusive design prevented disengagement.	"It was impossible to fall asleep; we were always talking, sharing, writing, or moving." "Everyone had to talk, stand up, and interact - I really enjoyed it."
2. Experiential Learning and Confidence-Building	22%	Experiencing strategies such as role play, fishbowl, gallery walk and think–pair–share deepened understanding and boosted confidence to apply them in teaching.	"We didn't just learn the concepts; we experienced and reflected on them." "Role play made scenarios feel real and gave me confidence to try them myself."
3. Applicability and Practical Transfer	18%	Activities were praised for being low-tech, low-prep, and directly transferable to both classroom and clinical teaching settings.	"I will use these strategies with my college students and new nurses." "Low-tech methods mean I can adopt them quickly in clinical teaching."
4. Generational Awareness and Adaptation	14%	Recognizing generational differences in learning styles encouraged reflection on adjusting teaching approaches for younger learners.	"Older generations read books, new generations stick to phones—we must teach differently." "I need to stop comparing them to us and adapt my teaching."
5. Facilitation, Environment, and Peer Learning	12%	The professor's calm and encouraging facilitation, combined with peer reflection and feedback, created a psychologically safe, collaborative, and inspiring environment.	"The icebreaker opened everyone up to speak." "Gallery walk feedback improved my ideas immediately."
6. Motivation, Focus, and Inspiration	8%	Participants described being recharged, motivated, and inspired by the workshop. Many highlighted the importance of focused learning ("less is more") and joyful, positive engagement.	"Less is more powerful—focused learning keeps attention." "I felt recharged and motivated to try something new."

Total quotes analyzed: 59

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The first category, ***engagement and experiential learning***, emerged as the most salient. Participants consistently valued the experiential nature of the workshop, noting that directly practicing strategies such as role play, fishbowl discussions, think–pair–share, and gallery walks deepened understanding and built confidence for application. As one participant explained, *"We didn't just learn the concepts; we experienced and reflected on them, which gave me confidence to try them myself."* Another elaborated, "*Everyone had to talk, stand up, and interact - I really enjoyed it.*"

The second category, ***practical applicability and generational awareness***, highlighted the perceived transferability of workshop strategies to both classroom and clinical contexts.

Participants emphasized that the activities were low-tech, low-prep, and therefore realistic to implement in time-constrained teaching environments. One participant observed, *"Low-tech methods mean I can adopt them quickly in clinical teaching."* Reflections also revealed heightened awareness of generational differences, prompting reconsideration of teaching approaches for younger learners. As one participant stated, *"Older generations read books, but new generations stick to phones—we must use different teaching methods."* Another reflected, *"I need to stop comparing them to us and adapt my teaching."*

The third category, ***facilitation, environment, and motivation***, underscored the importance of the instructor's role and the broader learning climate. The professor's calm demeanor, passion for teaching, and personable approach created a psychologically safe environment where all participants felt encouraged to contribute. One participant shared, *"The icebreaker opened everyone up to speak."* Peer-to-peer exchange was also highlighted as impactful, with one participant noting, *"Gallery walk feedback improved my ideas immediately."* Finally, the workshop was consistently described as motivating and energizing. Several participants highlighted the principle that *"less is more powerful,"* emphasizing that focused, concise activities held their attention better than information-heavy lectures. Others described the day as *"recharging"* and "*reigniting their passion for teaching*."

In sum, the findings suggest that the combination of design-thinking principles, AI-assisted planning, and skilled, passionate facilitation produced a highly engaging, practical, and motivating professional development experience. The workshop not only provided participants with transferable strategies but also cultivated renewed confidence and commitment to applying interactive teaching methods in their own practice.

4. Discussion

Findings from this study demonstrate the effectiveness of integrating interactive, design-informed pedagogy with AI-assisted planning to address persistent challenges in next-generation nursing education. Participants' reflections confirmed that experiential and highly engaging strategies—such as *think–pair–share*, *fishbowl discussions*, *role play*, and *gallery walks*—were particularly effective in sustaining attention, stimulating critical thinking, and fostering confidence in applying interactive teaching methods. These results align with extensive evidence showing that active and collaborative learning enhances engagement and knowledge retention compared with traditional lectures (Freeman et al., 2014; Chi & Wylie, 2014).

Consistently high participation and the quality of participant-generated strategies illustrate the power of the experiential–reflective learning cycle (Kolb, 1984) and the deliberate use of progressive risk sequencing to build confidence and engagement. Low-stakes openers, frequent transitions, and visually stimulating materials sustained motivation, reflecting the motivational and engagement principles of the ARCS model (Keller, 2010) and Universal Design for Learning (UDL) (CAST, 2018; Meyer, et al., 2014). This structure effectively mitigated typical barriers to attention and focus often observed in adult learning, such as post-lunch disengagement or cognitive fatigue (Hart, 2017).

The results also directly address *generational learning challenges* in nursing education. Next-generation learners—particularly Gen Z and emerging Gen Alpha nurses—often exhibit shorter attention spans, multitasking behaviors, and reduced interpersonal communication skills linked to digital immersion (Bliss, 2024; Shatto & Erwin, 2017). Workshop discussions fostered empathy and reflection on how educators might adapt strategies to bridge these generational differences, promoting greater generational awareness and learner-centered adaptation.

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A major strength of this workshop model lies in its practicality and adaptability. Participants consistently valued the low-tech, low-preparation design, emphasizing its relevance to fast-paced clinical and academic environments where time and resources are limited. This finding aligns with literature emphasizing flexible, low-resource pedagogies as critical for nursing educators working in dynamic or resource-constrained contexts (Ghasemi et al., 2020).

The *facilitator's role* emerged as central to the workshop's success. The professor's passion, generosity, and personable approach fostered psychological safety and trust—conditions essential for active participation. This observation reinforces prior research emphasizing that effective facilitation depends not only on pedagogical skill but also on relational authenticity, active listening, and enthusiasm for student learning (Hou, 2021, 2022a, 2022b, 2025; Hou & Chou, 2025; Schön, 1983; van Dyk, et al., 2022). Participants' comments on the instructor's calm, encouraging demeanor and skillful orchestration of discussions illustrate how emotional tone and psychological safety enhance learning outcomes.

Finally, the *integration of AI-assisted design* served as a catalyst for innovation. Generative AI tools were used to create prompts, discussion questions, and structured templates that expanded creative variety and contextual relevance while reducing preparation barriers. This aligns with recent studies identifying AI as a *design accelerator* that enhances educators' creativity and efficiency (Labrague et al., 2025; Liu et al., 2025; Vanderlaan et al., 2025; Yee et al., 2024).

Importantly, the benefits of AI were maximized when combined with skilled human facilitation, echoing findings that AI can augment, but never replace, the reflective and relational dimensions of teaching (Holmes et al., 2019; Vanderlaan et al., 2025; Yee et al., 2024). Together, these results highlight the potential of AI-assisted, design-thinking-based workshops to offer *scalable, human-centered professional development* that bridges technological innovation with authentic connection in nursing education.

Implications, Conclusion, and Future Directions

This study offers a practical and replicable model for faculty and clinical educator development, integrating design-thinking pedagogy, generative AI–assisted planning, and interactive, low-tech teaching strategies. It exemplifies the theme of this special issue—*Next-Generation Programming Education: Integrating Generative AI and Collaborative Tools for Cutting-Edge Learning Experiences*, by uniting technological innovation with human facilitation.

First, the success of experiential, high-engagement activities reinforce a growing body of evidence that active, learner-centered methods are more effective than passive instruction for promoting reflection, skill transfer, and confidence (Freeman et al., 2014; Kolb, 1984).

Second, generative AI served as a design catalyst, enabling educators to rapidly produce tailored scenarios, prompts, and templates with minimal preparation time. This finding supports emerging perspectives that view instructors as AI-empowered co-designers, leveraging technology to enhance creativity and responsiveness in teaching (El Arab et al., 2025; Vanderlaan et al., 2025; Yee et al., 2024).

Third, the workshop underscored the continued necessity of skilled human facilitation. Participants' responses affirmed that warmth, enthusiasm, and authentic engagement remain irreplaceable components of effective teaching. This finding aligns with literature describing trust, psychological safety, and emotional connection as key mediators of learning in adult and professional contexts (Hou, 2021, 2022a, 2022b, 2025; Hou & Chou, 2025; Schön, 1983; van Dyk, et al., 2022).

6. Conclusion

This study illustrates a compelling synergy between AI-supported design, interactive pedagogy, and human-centered facilitation. It demonstrates how thoughtfully designed, low-tech, low-prep interactive strategies—when guided by purposeful planning and empathetic facilitation—can sustain engagement, enhance confidence, and promote application in both classroom and clinical teaching contexts. Beyond nursing, this model represents a transferable approach for educator development across health professions and disciplines.

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Future research should evaluate long-term impacts on teaching practices and learner outcomes, exploring how AI-augmented professional development influences instructional quality, confidence, and student engagement over time. The combination of experiential reflection, tactile and visual engagement, and AI-assisted design created a workshop environment that was both dynamic and practical. These findings support expanding AI-enhanced, interactive professional development initiatives as an evidence-informed response to the evolving learning needs of next-generation health professionals.

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