

Programmatic innovation description, title and outcomes achieved: Implemented in 2012, the **iCoN Initiative** creatively leverages the iPad as a tool to redefine how nursing students learn, interact and collaborate. The initiative is an ongoing partnership between the University of Cincinnati (UC) College of Nursing (CON) faculty, staff, instructional designers and the information technology department, who have worked together to transform nursing education in classrooms, simulation laboratories and clinical settings.

With the end goal of graduating nurses who are critical thinkers and competent in the latest technologies so they can provide the safest care possible, the initiative has steadily expanded with increased college-wide support and enhancements in its sustainability model.

Faculty – the subject-matter experts – have partnered with instructional designers to create digital instructional content that enable flipped learning and foster active learning strategies. PowerPoint class presentations were recreated as multi-touch iBooks that are accessible to students before lectures, so class time is used to deepen understanding facilitated by faculty. Entire courses were also rebuilt digitally and include iBooks, videos, reference materials, etc.

As faculty expertise using the iPad increased, technology expanded in the classroom and other teaching and clinical settings – for example, our nurse practitioner programs utilize iPad video features and AirPlay to teach advanced nursing skills, such as suturing and intubation. The iPad also allows for more robust simulation activities and gives students an opportunity to practice diagnostic strategies to enhance their differential diagnosis skills.

We have also collaborated with our major practice partner, the University of Cincinnati Medical Center, to create a new policy and educational program that allowed the piloting of student use of the iPad in the clinical setting in the 2018-2019 academic year. This will allow students the opportunity to not only have reference materials with them in the clinical setting but be able to use the iPad to teach patients and families about their treatment, their medications, and their discharge planning.

To date, about 2000 Bachelor of Science in Nursing, Accelerated Direct-Entry Master of Science in Nursing, and Doctor of Nursing Practice students have been impacted by the iCoN Initiative, resulting in higher engagement and increased proficiency with technology.

- 770 multi-touch iBooks were created and revised;
- 360 digital courses (14-weeks of content) built in iTunes U;
- Two faculty members and one staff member who are Apple Distinguished Educators;
- About 75% of full time undergraduate faculty and 67% of full time graduate faculty who are Apple Teacher Certified;
- 11 staff members who are Apple Teacher Certified;
- UC CON was three times designated as an Apple Distinguished School for our clear vision on how our technology-rich environments support learning goals.

Served as a catalyst for change within the curriculum and/or educational mission of the institution: There are several forces changing the face of health care, but nothing will impact the way nursing is practiced more than advances in technology. Patient care technology has become increasingly complex, transforming the way nursing care is conceptualized and

delivered. Consequently, the implementation of the iCoN Initiative has been a strong catalyst in our mission to “Develop nurse leaders who are empowered to generate, explore and apply nursing knowledge for evolving health care environments.”

The iCoN initiative also had a big impact on our curriculum, with faculty continuing to find innovative ways to flip the classroom and engaging students in active learning strategies, and students using the iPad to create capstone projects and receive real-time feedback on assignments and tests, among others.

Shows evidence of execution and subsequent sustainability for at least 12 months after a full execution cycle: The iCoN initiative has been in place for six years and keeps expanding far beyond what we could have imagined when faculty members first explored the potential of incorporating the iPad into the classroom. The “creative leveraging of technology and innovation” is part of the CON’s vision, and a technology-driven strategic plan was implemented to drive a culture of change. The long-term sustainability of the iCoN Initiative is supported by an organizational culture that embraces technology in learning settings, along with committed leadership and a partnership between information technology, instructional design and faculty as subject-matter experts.

Our annual review process with faculty now includes a rubric developed based on the Quality Matters™ criteria to assess how faculty are incorporating technology and active learning strategies in their classes. We have been pleased to see that they are routinely leveraging technology to engage students, and are innovative in the variety of technology applications they use. In addition, through the last three years, student data has been collected to evaluate how well technology is being leveraged; findings guide faculty development and identify trends and changes.

Has the potential for replication and dissemination: Within the UC CON, use of the iPad has successfully expanded from our BSN and DNP programs to our Accelerated Direct-Entry MSN program. It has also expanded from classrooms to our simulation laboratories and, most recently, to the clinical setting.

For the seventh year this July, we will host our iCoN Summer Institute –which started as an internal professional development opportunity for CON faculty, staff and students – and, in 2016, was open to other educators, health care providers and technology professionals across the country. The event has attracted over 100 attendees from institutions and organizations across the United States every year since then. We have had numerous nursing programs from around the country attend our iCoN Institute to learn how they too can learn to leverage technology to improve teaching and learning in the classroom and online.

CON’s Dean Greer Glazer and Assistant Dean for Technology Matt Rota presented and were panel participants at four Apple Higher Education Leadership Forums Leadership Summits; Dr. Rota and Dr. Kathleen Ballman, Associate Professor of Clinical Nursing, Coordinator of Adult-Gerontology Acute Care Programs, were invited to share the CON’s experience by presenting in two AACN Digital Innovation Bootcamps.

Has involved teams of faculty when possible: To continue to build momentum, community, sustainability and pedagogical context around the iCoN Initiative, our faculty gets together for professional development beyond the annual iCoN Summer Institute. Teams of faculty are taught how to use apps, web-based platforms and software in the classroom and receive countless hours of on-the-spot assistance and tools to ensure success. More experienced faculty share how they use the iPad and technology routinely in their courses and how they innovate in the variety of technology applications they use to help more novice faculty.

One example of interdisciplinary collaboration is our Paperless Lab project, which completely eliminated paper from our simulation labs. Documents, forms, assessments, quizzes and more are fully accessible and submitted electronically. Faculty teaching the Fundamentals in Nursing course worked with the college's instructional designers and simulation lab faculty to identify content and materials needed, implement processes and train faculty.

Is consistent with AACN's mission and vision: Continuous technological developments in health care will support patient-centered care, teamwork and collaboration, evidence-based practice and quality improvement and support a safer and more effective patient-care experience. Technology has the potential not only to change experiences for patients and their families, but also to have a far-reaching impact on health care processes and practices of health care professionals. It is recognized that the introduction of technology at the bedside is a daunting challenge for many large health care organizations and theUC CON is active in our pursuit to lead this important and inevitable change by ensuring that our students and future nurses have the knowledge, skills and attitudes to support the future of technology in health care.

Demonstrated advancement of professional nursing education: The iCoN Initiative has contributed to the advancement of professional nursing education as it has encouraged faculty to move out of their "comfort zone" and focus on learner-centered educational activities that have enhanced student learning.

In the classroom, the iPad allows our students to engage with content and discussions with real-time examples, such as videos, TED talks and information from industry leaders. The iCoN Initiative has helped the CON graduate nurses with the ability to access, assess, create and disseminate knowledge in our ever-changing health care reality. The resources available via iPads provide a wealth of tools that allow us to advance in the educational experience we provide.

In the simulation labs, students use the iPad to create videos of themselves performing multiple skills, which allows them to critique and re-record the activities as many times as needed to meet the requirements of the skill, building in the important aspect of muscle memory. Additionally, the students are able to view and critique their work in detail.

DNP capstone and research projects leveraging the iPad bring solutions to real-world issues, such as counseling at-risk teens in shelters, improving the prevention and treatment of opioid-use disorders or evaluating the nurse handoff process between the emergency department and intensive care unit (ICU) for efficiency.