

# Chapter 16

## Integrating Technology in Nurse Education: Tools for Professional Development, Teaching, and Clinical Experiences

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### ABSTRACT

*This chapter explores how nurse educators can better integrate technology in their professional development, teaching and learning, and clinical experiences in a purposeful and meaningful manner. The authors explore how and why nurse educators should be mindful of the intersection of technology, pedagogy, and content knowledge (TPACK) in developing teaching and learning plans. The authors contend that nurse educators should consider and employ TPACK on a routine basis, so that using technology purposefully becomes the traditional approach in one's teaching. Examples of how technology can become more meaningful in three areas that nurse educators routinely work within are: professional development, teaching, and clinical experiences.*

### INTRODUCTION

The evolving healthcare system demands that nurse education keep pace with rapid technological advances (Slaikeu, 2011), offer curricula that increases interaction with students, enhance critical thinking and decision-making skills, and encourage a flexible and collaborative learning environment (The National League for Nursing, 2003). Today's students (often referred to as digital natives or millennials) prefer interactive, hands-on, and collaborative activities (Prensky, 2001). For nurse educators, the *traditional* learning environment paradigm must become one that merges pedagogy, content, and technology to fa-

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*cilitate* learning in the classroom. While some would describe such a classroom as “innovative” (which it is), we must start viewing such processes as the “traditional” way we approach everyday teaching and learning to meet today’s students’ needs in nurse education.

Technological advances have impacted the way nursing content is taught, received, and disseminated in and out of the traditional classroom. Such advances have also changed the dynamic of the traditional learning environment, changing the focus in the classroom from teacher to student. Educators are transitioning from the role of teacher to the role of guide or facilitator, and students are becoming more actively involved in the learning process.

When a nurse educator considers a pedagogical approach to presenting content, pedagogy and content should not be viewed separately, but rather as working together to achieve mastery of knowledge. When a technology is introduced to enhance a pedagogical approach, the technology used should be purposeful and meaningful in the *how and why* of its use. This intersection is known as Technological Pedagogical Content And Knowledge (TPACK), and it is often used to design authentic activities and lessons in P-16 classrooms (Koehler & Mishra, 2008). TPACK represents the knowledge nurse educators need to effectively integrate technology in dynamic learning environments. TPACK brings together content knowledge (CK), pedagogical knowledge (PK), and technology knowledge (TK). Content knowledge consists of the concepts, theories, and processes of a given subject and/or discipline. Pedagogical knowledge is knowing the teaching practices and techniques to forward teaching and learning (e.g., student evaluation, engagement in content, lesson creation). Technology knowledge is understanding what tools exist to assist these two, and, conversely, to recognize the capabilities and limitations of the tools. The TPACK approach considers technology (TK), pedagogy (PK), and content (CK) as they converge. Rather than considering any one knowledge in isolation, the three kinds of knowledge come together to form an integrated whole. Being mindful of TPACK can help today’s 21<sup>st</sup> century nurse educators engage their students in meaningful instruction versus using a tool “for technology’s sake.” Thoughtful interweaving of the three types of knowledge consists of an educator’s purposeful use of a specific technological tool (TK) to improve student learning (PK) in a specific learning context (CK).

This chapter’s authors consist of one nurse educator who routinely uses technology in her pedagogy, and one instructional technology educator who trains nurse educators to use technology. Both authors have experienced the success of using technology in teaching and learning, and through such successes, have observed how *using technology* can become more of the *traditional* rather than the unique. In exploring the *why* of this, we realized that the difference was in the *how*: incorporating user-friendly and available technologies as a routine and complementary part of our pedagogy to present content. An example of this in nurse education is to engage students in developing an online, collaborative collection of evidence based practices through the use of Google docs or a wiki.

Technology has helped to evolve the traditional learning environment to one where the role of teacher changes from guide or facilitator, with students participating actively in the learning process. Additionally, new generations of students, who have different learning styles than the students from previous generations, are now pursuing nursing degrees. These students are routinely identified as *Millennials* or the *Net Generation*. Pardue and Morgan (2008) describe these students as “optimistic, assertive, positive, friendly, cooperative team players who gravitate toward group activities” (p. 74). These students were born after 1982 and are viewed as being technologically savvy. Integrating interactive technology helps to meet the learning needs of these students and promotes active and engaging learning experiences that these millennials prefer (Skiba & Barton, 2006).

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