Nursing Education: Our Iceberg Is Melting

Do you recall the 1995 *Newsweek* article “The Internet? Bah!”? The article was unapologetically dismissive of the Internet (Stall, 1995). It was simply incomprehensible that online shopping and networked communities could or would ever become a part of mainstream society. Nearly a quarter century later, use of the Internet for shopping, banking, social media, and other digital platforms has become an ever-increasing way of life, with new applications of various technologies emerging daily. The 2015 article “Google Cardboard’s New York Times Experiment Just Hooked a Generation on VR” demonstrated that virtual reality can create such true-to-life immersive experiences that the user is fooled to think he or she is present in that particular simulated situation (Wohlsen, 2015). Most interesting, what was formerly shunned and considered outrageous has become so integrated into the fabric of our daily lives that a day without Internet access would be not only troubling for many individuals, but downright paralyzing for most individuals. How difficult would it have been for us to conceive that IBM’s “Watson” advises the customers of the pharmaceutical company, CVS® on how to manage their chronic diseases (Kelly, 2016)? Now that most of us are outfitted with wireless activity trackers, it will come as no surprise that the macroscopic measurements recorded by watches, telephones, and other health tracking devices will be used to generate our personalized health plans. Many of these activities, once considered knowledge work and performed by nurses, are now performed by computer technology via artificial intelligence.

The nursing arts and skills laboratory, once the sine qua non for learning technical and psychomotor activities, has essentially been replaced by sophisticated high-fidelity manikins, standardized patients, virtual reality, and now the Holopatient (Pearson, 2017). The Holopatient can provide students with a true-to-life three-dimensional, immersive, clinical experience (Pearson, 2017). Many of our established ways of teaching will inevitably topple as advances are made in computer technology, virtual reality, and other forms of artificial intelligence (Kelly, 2016). Wohlsen (2015) predicted that individuals who have had a virtual reality experience will have a different set of expectations for teaching and learning and what it means to interact with a computer. The new technological advances will inevitably transform the way we teach nursing. How will the disruptive innovation of technology and artificial intelligence affect our longstanding pedagogical practices? How are we preparing for the seismic shift? The lecture format, where the instructor or “sage” spewed out knowledge and the student soaked it up and later regurgitated it at the appropriate time, whether in a testing situation or clinical practice, will have long passed. The continued emergence of new interactive and engaging technologies has created an inflection point in nursing education, demanding a change in the usual way of conducting the business of nursing education. This inflection point has created a window of opportunity to reflect on our past practices and transition toward newer ways of engaging students in the teaching–learning process. It gives us the opportunity to challenge our long-held mental models of teaching nursing and to embrace the emerging opportunities that will allow us to do things differently.

A world defined by technology requires literacies that are much more sophisticated than the basic skills of reading, writing, and arithmetic. In the book, *Robot-Proof: Higher Education in the Age of Artificial Intelligence*, Aoun (2017) suggested that today’s educational processes build on those foundational literacies with the addition of three new literacies (data, technological, and human) and four cognitive capacities (systems thinking, entrepreneurship, cultural agility, and critical thinking). Data literacy will provide the student with the ability to comprehend and analyze data for meaningful use (Aoun, 2017). Technological literacy will require a student to go beyond the astute use of the device, which we’ve all witnessed (how many of us have asked our children or grandchildren to help us figure out our devices?), but would provide the student with an understanding of the coding and engineering principles that enable the device to function (Aoun, 2017). Human literacy would equip the student with the capability to engage socially in meaningful interactions and relationships (Aoun, 2017). The cognitive capacities of systems thinking, entrepreneurship, cultural agility, and critical thinking are higher order mental skills and ways of thinking about the world (Aoun, 2017). Systems thinking is the ability to view things from a holistic perspective with integration of lateral and vertical views of operation. Entrepreneurship is the creative mindset that often provides value to something in a way that has not previously been done (Aoun, 2017). Consider Uber®, the world’s largest taxi company that owns...
not one vehicle; Facebook®, the world’s most popular media owner that creates no content; and Airbnb®, the world’s largest accommodation provider that owns no real estate (Kelly, 2016). Cultural agility goes beyond valuing diversity and diverse perspectives but is the ability to perceive situations through various cultural lenses and the ability to engage effectively in intercultural and multicultural situations with individuals who have dramatically different lives than their own. Critical thinking is the steadfast disciplined and rationality of thought that is necessary to form a judgment (Aoun, 2017). How do we make use of teaching–learning strategies that foster these literacies and capacities in nursing education?

Based on the book, The Inevitable: Understanding the 12 Technological Forces That Will Shape Our Future, Kim (2016) provided a series of statements, admonitions, and/or recommendations to shape the future of higher education and how we teach:

- Stop preparing tomorrow’s workforce for yesterday’s jobs; we are and will be in a state of unceasing change; thus, continuous learning and adaptation is needed.
- Understand that tomorrow’s graduates will require a strong liberal arts background and will contribute to society much more meaningfully through relationship building and creativity, leaving the mechanized tasks to the robots.
- Artificial intelligence represents a new societal era, and as with any new societal era, how we live and work changes over time. The established ways of operating will cease to exist and give way to the newest advances.
- The Uber-fication of society will take place, with the ability to access services outweighing the need for ownership; accessing anything and everything will be the norm.
- Screening, as the norm, will be as omnipresent as bandwidth; all information will become fluid, linked, and tagged.
- Virtual reality will become a stronghold in higher education pedagogy.
- Ubiquitous surveillance is an inescapable reality.

As I read more about the new and emerging technologies, I reflected on the tried and true pedagogy of nursing education. I concluded “my iceberg was melting,” as described by Kotter and Rathgeber a decade ago (2006) and recently revised and updated (2017). They tell a fable about a penguin colony that lived on an iceberg in Antarctica for many years. When troubling signs about the iceberg were identified, many of the penguins disregarded the signs. They saw no need to do anything differently. As the story goes, the penguins eventually realized the environment had changed and that a need to modify how they existed was in order. The story went on to reveal how the penguins followed Kotter’s eight-step process (Kotter & Rathgeber, 2006, 2017) that led to a successful change:

- Establish the sense of urgency for the need for change.
- Form a strong and powerful group of advocates who realize and understand the need for change.
- Create a compelling and inspirational vision for change.
- Communicate the vision broadly and often.
- Empower others to act on the vision.
- Create situations in which there are short-term wins.
- Continue with the momentum for change.
- Institutionalize the change into the culture.

Are you prepared for this technological slide into the future? How are you preparing students? Are you equipping students with the literacies and capacities needed to thrive in a world defined by technology, a world in which one can access just about anything on demand, anytime, and from anywhere? What different pedagogical approaches should we take to guide students who are ever so connect ed? We are at a strategic inflection point, a time in the life of nursing education when fundamental ways of operating or doing business are changing rapidly. The change can mean an opportunity to rise to new heights, or it could just as likely signal a drastic decrease in nursing education’s ways of operating and/or status.

We have known for some time there are unsustainable practices and common challenges across all levels of nursing education programs. Have we been ignoring the iceberg? If we continue to educate as we have done in the past, we will continue to struggle with the all too familiar infrastructure challenges of faculty shortages, classroom space, clinical sites, and resources. Points of inflection require new mindsets, mental models, capabilities, and behaviors. A strategic inflection point can be deadly to an organization, institution, or a profession when given inadequate attention. Let’s just face it—with the current model of teaching in nursing education, we will never have enough faculty, classroom space, or clinical sites. We as nurse educators and leaders should own our iceberg and decide actions we will take to respond proactively to our melting iceberg. What are we doing about the iceberg we share collectively and the iceberg each of us individually occupies?

References


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