Hot Issues in Nursing Education: Faculty Shortages & Technology

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Abstract

The American Association of Colleges of Nursing holds Hot Issue conferences which spotlight concerning issues in nursing education. Recent Hot Issue topics included technology in nursing education and nursing faculty shortages. This paper explores the reasons for the current nursing shortage including lack of nursing faculty and clinical sites. Educational facilities are struggling to keep nursing faculty due to salary discrepancies and undesirable hours and conditions. Short and long term strategies to resolve this shortage will be discussed. Technology is exploding in every discipline including nursing education. Implementing technology into Colleges of Nursing may help alleviate the nursing faculty shortage. This issue, along with the use of online classes, simulation, virtual worlds such as Second Life, and YouTube videos, will be explored as they relate to nursing education. Both students and instructors may find technology frustrating if they lack computer skills, thus universities must provide support for faculty and assistance for students if technology is to thrive in the academic setting. The role of Jean Watson’s Theory of Caring in a technology laden educational arena will also be explored.

 *Keywords:* nursing education, nursing shortage, technology, Jean Watson

Hot Issues in Nursing Education: Faculty Shortages & Technology

The American Association of Colleges of Nursing (AACN) ("Hot Issues," 2013) holds a Hot Issues conference every other year which focuses on an issue of concern for deans and faculty of AACN schools. The 2013 conference addressed the use of technology to transform nursing education.  This is an issue as online learning, simulation, and computer based programs are increasingly being incorporated into higher education classes (Button, Harrington, & Belan, 2013).

A past, yet recent Hot Issues conference focused on the shortage of nursing school faculty. Academic institutions are being challenged to increase nursing enrollment to help alleviate the nursing shortage (Sims, 2009). According to the AACN (2012), this shortage is expected to intensify as the baby boomer generation ages and demand for health care increases. Despite the tremendous need for future nurses, tens of thousands of qualified applicants are being turned away because nursing schools are unable to meet the demand (Cleary, McBride, McClure, & Reinhard, 2009).

Implementing technology into nursing education helps increase capacity through better use of faculty and clinical sites (Axley, 2008). Technology is rapidly changing and nurses will need to maintain information literacy as a lifelong skill (Button et al., 2013). In addition to teaching and learning skills, nurse educators must acquire vast computer and technology skills in order to succeed in this career choice.

Jean Watson’s Theory of Caring will be used as a framework to unite the issues of faculty shortages and educational technology. The paradigm of Watson’s theory is relevant in any situation or setting where human caring is a concern (Watson, 2013). This theory emphasizes the aspect of caring in a technological and educational environment.

**Nursing Faculty Shortage**

The care provided by the nursing profession is an integral part of the American healthcare system (Sims, 2009).This care is threatened in part, to the current and forecasted nursing shortage. According to Sims (2009), there are several reasons behind this deficiency including a mature labor force, job frustration, increased utilization of healthcare, and the inability of colleges to increase nursing graduation rates. This nursing shortage has no end in sight, even as current economic conditions bring more nurses back into the labor market (Cleary et al., 2009).

 Increasing nursing enrollment is a challenge facing academic institutions. Diminished financial resources and lack of qualified staff and clinical sites are main contributors to this challenge (Sims, 2009). The reasons for the nursing faculty shortage in part mimic the reasons for the nursing shortage itself; an aging workforce, increased healthcare demand, and job dissatisfaction. In addition, nursing faculty can choose other career options with more competitive salaries and superior work environments (Sims, 2009).

**Nursing Practice**

According to the National League for Nursing (NLN) (2012), the three main reasons for the nursing faculty shortage include the tendency for faculty to be older when they enter the academic arena; they are overburdened, and procure a lower salary than clinical practice nurses and educators from other disciplines. Over 48% of nurse educators are over the age of 55 with half stating they plan on retiring in the next ten years (National League for Nursing [NLN], 2012). Furthermore, compensation remains lower for nurse educators than for most other advanced practice nursing positions. In fact, salary was the most frequently listed reason for leaving an academic career (Sims, 2009). Other contributing forces include demands of tenure track positions, perception that all faculty members must have a doctorate degree, and the demands of the college environment.

 The AACN (2012) reports in the 2011-2012 enrollment years, there were 1,181 faculty vacancies identified in a survey of 662 nursing schools. A doctoral degree was a requirement in many of these openings. This resulted in 75,587 qualified applicants turned away from baccalaureate and graduate nursing programs, including 13,198 from master’s programs, and 1,156 from doctoral programs (AACN, 2012). In order to prepare and attract nurse educators, there must be an increase in the number of higher education curriculums.

 The profession of nursing must be able to replenish its nursing faculty workforce, thus it is important to understand the factors that discourage nurses from entering the academic world. In addition, it is crucial to research why nurses enter and remain in the educator role. According to Berent and Anderko (2011), the most important reasons cited for staying in academia include professional satisfaction in the educational environment, having a fulfilling and important role, and the ability to shape nursing practice.

**Creating Meaningful Change**

There is no one answer that will solve the nurse faculty shortage. According to the AACN (2005), both long and short term strategies will be necessary to alleviate this issue. In addition federal funding for nursing education, including faculty training may be necessary (Reinhard & Hassmiller, 2011).

 **Short term approaches.** The nursing profession has traditionally opposed employing faculty from other disciplines in colleges of nursing (AACN, 2005). However the time is right to consider this option. Core classes could be designed to meet prerequisite needs of several health professions; with physicians, statisticians, or traditional educators employed to teach them (AACN, 2005).

 Another source of faculty could be advanced practice nurses who have years of experience but lack training in the educator role (AACN, 2005). These highly skilled nurses are inaccessible as educators but could provide a wealth of knowledge to nursing students. Nurse educators must function as change agents and implement strategies for organizational change (National League for Nursing, 2007). This may include promoting the need for advanced practice nurses to join the academic arena.

 A short term strategy that could be implemented quickly is for health care institutions and nursing schools to continue the trend toward flexible work and school schedules (Smith & Zsohar, 2007). Many nurses who wish to further their education find juggling work, family, and a school schedule impossible. In order to help nurse educators create a work life balance, creating a mentoring program is essential. According to Smith and Zsohar (2007), mentoring programs help new nurse educators adjust better to the role and compel them to stay in their new career.

 **Long term approaches.** Long term strategies are also necessary to solve the nurse faculty shortage (AACN, 2005). Current practices need to be restructured to allow for more efficient pathways for nurses to obtain advanced degrees. An efficient nursing program which allows an uncomplicated transition from associate degree to graduate degree would allow nurses to reach the academic world more quickly (AACN, 2005).

 Nurses also need to be recruited at a younger age. One successful strategy includes Johnson & Johnson’s advertising promotion *Campaign for Nursing’s Future* (AACN, 2005). This promotion has had a positive effect on the image of nursing with young people. Locally, nursing schools and health care institutions can have educational events aimed at middle and high school aged children.

 Financial constraints must also be addressed as this is a significant barrier for nurses to move to the academic arena (Reinhard & Hassmiller, 2011). Reducing the salary gap between academia and the clinical arena may take federal support. The American Association of Retired People (AARP) utilized evidence-based reports to lobby congress regarding federal funding for nursing education and nursing capacity (Reinhard & Hassmiller, 2011). They believe this funding should be part of federal health reform that includes a dedicated flow of funding specifically to increase nursing education and faculty capacity (Reinhard & Hassmiller, 2011).

 In its current form, the Affordable Care Act addresses nursing workforce challenges in many ways (Wakefield, 2010). According to Wakefield (2010), the main source of federal funding for nursing programs is the Health Resources and Services Administration (HRSA). The Affordable Care Act lifts the previous funding cap for the Advanced Education Nursing Traineeship plan. Also the Nurse Faculty Loan Program which authorizes loans to higher level nursing students interested in becoming teachers is considerably larger due to increased appropriations and investment from the American Recovery and Reinvestment Act of 2009. The Nursing Student Loan and the Nursing Workforce Diversity programs were given additional funds to help students from disadvantaged backgrounds or limited financial resources get the assistance needed to be successful (Wakefield, 2010). These are a sampling of many federal programs aimed at alleviating the nursing faculty shortage.

 As a final point, nurse educators must “identify how social, economic, political, and institutional forces influence higher education in general and nursing education in particular” (National League for Nursing, 2007, p. 23). Nurses must not only draw attention to the nurse faculty shortage and why people should care, they must also present a strategic, publicly visible argument associated with an economic and health care return-on-investment (ROI) (Kowalski & Kelley, 2013). An initiative in the state of Colorado found the need to attempt a ROI for nurse faculty, however defining an ROI in human capital is not an easy feat. Nevertheless, it is indisputable that the abilities, knowledge, and experience of nursing faculty represent a crucial investment in health care with a definable ROI. The final analyses in this project state for every $1 invested in faculty there is a return of: $8.04 in general health care services (ROI +804%), $9.75 in hospital care services (ROI+ 975%), and $4.35 (ROI+435%) in nursing salary income (Kowalski & Kelley, 2013). In addition, $3.50 (ROI+350%) is saved in recruiting costs. Furthermore if nursing school capacity was reduced by 25% there was a -1490% ROI, compared to a +575% ROI if the nursing school capacity was expanded by 25% (Kowalski & Kelley, 2013). Despite its complexity, the addition of increased visibility and a defined ROI will help bring a solution to the solvable problem of the nurse faculty shortage.

**Technology in Nursing Education**

Digital technology has grown exponentially over the last few decades and these technologies are increasingly being integrated into higher education (Button et al., 2013). Both nursing students and faculty are expected to be computer literate and function in the digital arena.

**Nursing Practice**

Technology has “a remarkable way to hold great things at the center of our attention” (Palmer, 2007, p. 121). The computer has the power to create virtual reality. There is immediate access to charts, photographs, and technical information on every discipline imaginable. Technology is changing every specialty field including nursing. There are many forms of technology available for use in nursing education.

**Online learning.** The online learning environment boasts flexibility as an important positive aspect (Button et al., 2013). This environment also allows the ability to self-pace when learning. A study by Kelly, Lyng, McGrath, and Cannon (2009), found the online learning environment actually encouraged students to get to know each other outside of the academic environment, and they were more motivated to work collaboratively with one other. Other positive aspects of online learning include the ability to access their instructors more easily, receive responses more quickly, and establish a sense of deeper learning (Kelly et al., 2009).

Some negative aspects to online learning have also been acknowledged. Increased levels of anxiety with regards to computer literacy were found (Button et al., 2013). Lack of computer skills has been shown to affect student’s learning development. In addition, unreliable university computer systems, lack of technical support and wasted time with computer application issues was also noted (Button et al., 2013).

**Simulation.** Simulation in nursing education was the Hot Issue topic at the 2007 AACN conference. Technology has only continued to grow with more traditional clinical experiences being supplemented by simulation in many nursing programs (Oldenburg, Maney, & Ploncyzynski, 2013). A large component of nursing education is to observe and practice what nurses do in the clinical setting (Webb-Corbett, Schwartz, Green, Sessoms, & Swanson, 2013). Many educational facilities found their students were lacking this important clinical experience due to a lack of clinical sites, an increase in the number of students enrolled, and Health Insurance Portability and Accountability Act (HIPAA) guidelines. Faculty also noted that students with previous high-fidelity simulation experience performed better than students without this experience (Webb-Corbett et al., 2013).

Low fidelity simulation may involve case studies on paper, or learning how to start an intravenous line on a mannequin (Tosterud, Hedelin, & Hall-Lord, 2013). High-fidelity simulation involves true-to-life patient situations that are as close to real clinical experiences as possible, utilizing advanced technology and prepared situations. Simulation can assist critical thinking and clinical skills for nursing students, assure clinical-type practice for all nursing students, increase student’s perception of confidence, and allow learning experience in a safe environment (Oldenburg et al., 2013). However high-fidelity simulation can be resource intensive and students must be able to perceive a real situation in order to obtain true benefits (Tosterud et al., 2013).

**Second Life.** Second life is one example of a 3D world modeled to replicate real life and real experiences. Every online figure or avatar you see is a real person and every place you visit is built by members (Second Life website, 2013). These virtual worlds are fast becoming a part of educational technology including nursing (Perryman, Hansen, & Yellowlees, 2009). There are opportunities for students to interact, script experiences, role play and utilize simulation. Second Life encourages anonymity and the website can be accessed from any location with an internet connection.

This type of platform can be used by global health organizations and public outreach as a model to explore new ways to convey health information (Perryman et al., 2009). Nursing education programs are increasingly utilizing Second Life’s platform including Duke University School of Nursing (Duke University School of Nursing website, 2013). Second Life, like physical simulation experiences, allows users to engage in training situations yet remain in a safe environment (Perryman et al., 2009).

**You Tube.** Educators must “use information technology skillfully to support the teaching-learning process” (National League for Nursing, 2007, p. 16). Emerging technology such as You Tube may transform the way nursing education is delivered in the future (Logan, 2012). Currently nurse educators are utilizing this technology to provide learning experiences they are unable to provide. Specialty nursing clinical sites such as pediatrics are difficult to procure and You Tube provides an opportunity to provide this experience (May, Wedgeworth, & Bigham, 2013). Using You Tube as a pedagogic tool can foster learner engagement and provide conceptual links between theory and practice. This increased engagement may allow the nurse to better understand the material and smooth the transition from short term memory to long term memory (May et al., 2013).

These are just a few of the emerging technologies being used in the educational field. Nursing students are increasingly being introduced to these types of technological strategies in the classroom, thus today’s students have profoundly changed and our education system must change with them (Clifton & Mann, 2011)

**Creating Meaningful Change**

Computer technology has changed the way nursing education can be delivered (Axley, 2008). However for faculty that did not grow up with this technology, it can be a daunting experience. In addition teaching with technology requires more knowledge than simply knowing how to use a computer.

 Faculty development programs are a critical need for nursing instructors (Axley, 2008). Nursing education administrators must continually focus on this necessity for both enhanced student learning and retaining faculty. Furthermore, mentoring programs in which faculty with technological expertise are encouraged to support fellow colleagues with weaker computer skills are beneficial (Axley, 2008).

Certification programs in technology are available through some universities and professional organizations, however costs and time restrictions can be daunting (Axley, 2008). Technology itself also offers programs for those who wish to learn new skills. You Tube and other online computer websites have an abundant number of videos and simulation activities. The success of E-learning is critically dependent on appropriate training of both faculty and students (Button et al., 2013).

 A negative aspect of technology in nursing education is unpredictable computer systems, lack of technical support and problems with computer applications (Button et al., 2013). Universities must have updated computer systems and technological support necessary for online learning and other technology if they are offering these educational opportunities. In addition, computer competency classes must be available for nursing students prior to beginning their participation in an on-line learning environment (Button et al., 2013). Ensuring computer competency will strengthen the ability to perform an initial assessment that measures the development of a nursing student’s skills.

 Nursing educators must be cautious when using technology in their classroom (May et al., 2013). Entities such as YouTube do not certify the accuracy of their educational videos. The educator must remain responsible to evaluate any video, simulation program, or technology that is used in their classroom. Additionally, continued research on technology in education will contribute to the discipline of nursing and improve student outcomes (Webb-Corbett et al., 2013).

**Theoretical Framework**

 Jean Watson’s Theory of Caring was developed to give the discipline of nursing its own scientific, disciplinary, and professional reputation (Watson, 2013). This theory is evolving but the aspects remain the same: emphasizing the humanistic characteristics of nursing with scientific knowledge (Innovative Care Models website, 2013). Watson believes caring is confirmation of a nurse’s identity. People must be treated positively and caring moments must be established.

 Many universities and hospitals are selecting Jean Watson as their institution based theorist (George, 2011). The need for a caring touch in the clinical setting and university environment is becoming valuable. Nursing educators must frame their teaching duties and technological challenges with a theory that engages a caring environment in their classroom.

 Technology in the educational and clinical setting can easily push caring concepts to the background (Eggenberger, Keller, Chase, & Payne, 2012). One possible drawback to simulation in nursing education is developing competency in caring behaviors as online classes can create a sterile environment (Leners & Sitzman, 2006). However, these downsides can be overcome with purposeful considerations such as timely communication, having an empathetic perspective, creating an attitude of consideration, and encouraging harmony.

 Even though the debate continues on the appropriateness of measuring or quantifying caring, nurses are capable of identifying caring moments in their practice (Eggenberger et al., 2012). Nurses frequently have the privilege of being in special moments with their patients which defies description. These special, caring, relationships motivate nurses to continue practicing in the health care or academic environment.

**Conclusion**

Important issues in nursing education must be kept in the forefront of the nursing profession. The current and projected nurse shortage will not be alleviated without an increase in nursing faculty. Issues such as salary discrepancies, inefficient pathways in the education trajectory, and long working hours must be addressed in order to solve this important challenge. Public awareness and federal support will also be needed if the lack of nurses and nursing faculty is to be solved.

 Technology is exploding and its influence on nursing education will continue to grow. Online classes, simulation, virtual worlds, and other computer applications such as you-tube are increasingly being utilized in the nursing classroom and may help alleviate the nursing faculty shortage by effectively utilizing teachers and clinical sites. However, universities and other health care institutions must offer suitable support to both students and faculty.

 Even when faced with the issues of nursing faculty shortages and technology in nursing education, nurses remain focused on providing humanistic patient care. Maintaining this focus is a challenge since the worlds of health care and education are increasingly becoming technological arenas. However by utilizing Jean Watson’s Theory of Caring as a framework to implement the strategies identified in this essay, the profession of nursing can embrace technology and reduce the nursing faculty shortage.

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