

**Student Nurses' Views on Caring and Technology in Nursing Education**  
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**Problem**

Nurses entering the workforce are faced with many challenges, but today the multiple demands of patient care are complicated by a nurse's need to keep abreast of fast-changing technology. This research is universally relevant to nursing practice in educational settings and practice areas because nursing education needs to develop strategies to teach students the skills to manage technology, while keeping the elements of caring in learning and clinical practices.

**Evidence**

With new advancements in health care delivery and technology, it is important for nurses to be technologically competent and have the ability to maintain a caring environment.

**Strategy**

This quantitative study examined the perceptions of nursing students on caring, technology as caring, the technological influences on caring practice, and their confidence level of PDA use. Participants were students accepted into a BS Nursing Program located in the northern plains. Students were surveyed during the fall of 2008 and spring 2009 semesters.

The survey instruments included the Caring Attributes, Professional Self-Concept Technological Influences Scale and the Technology Confidence Survey.

**Practice Change**

Integrating technology and caring into the nursing curriculum prepares students for the technologically advancing world in which they will work. An opportunity exists for nursing faculty to create a course where the focus is on technology. The course should include caring theory and offer a variety of technology, Blackboard, iTouch, and the various resource programs. The course could be team taught with nursing and information technology staff. Locsin's book would be an excellent choice as the text for the course.

**Evaluation**

This study achieved the purpose; student nurses provided their perceptions for caring attributes, technology as caring, the impact of technology on caring, and PDA confidence levels. The study has provided the University's Nursing Program with valuable information.

**Results**

The following caring attributes were rated the highest: listening to the patients, creating a sense of trust, and a relationship between a nurse and a patient is one based on trust, truth, and respect. The following specific PDA features were rated low; changing the control preference, entering meeting notes, using some other database, infrared beaming, producing backup, word-processing, and creating voice recordings on the PDA. The results of the statistical tests for the Influence of Technology on Caring Practice indicated one significant difference between the pre and posttest groupings. Due to the application of technology,

nurses often become frustrated when the inevitable death of a patient occurs. In the area of Caring Communication the statistical test results indicated two items out of 28 with significant differences. Although, for the other research questions, there were no significant differences identified between the pre and posttest groupings.

### **Recommendations**

Advances in technology are inevitable. The findings of this study are applicable to nursing education and nursing practice because students educated today will care for the patients of tomorrow. Implementation of PDAs or other hand held devices in undergraduate nursing programs is one approach to integrating technology in nursing. Continued research needs to be completed on these areas with the results applied directly to education and practice. Another study focusing on the iPod Touch technology would also provide valuable information regarding the implementation of these devices.

### **Lessons Learned**

Nurses are most familiar with large reference textbooks. The use of handheld computers is a relatively new approach for nursing to retrieve medical information. When incorporating any new concept, there is a definite learning curve. The level of technology confidence at this university has room for improvement: although implementation of the devices is in the developmental stages, since the nursing program has only required them since 2007.

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