Objectives

- Identify factors that influence changes in nursing education.
- Describe common tools and benefits of teaching with technology.
- Examine the issues and challenges use of technology pose in nursing education.
Introduction

- Technology is used in all works of life – health care, business, education etc.
  - Instructional technology in all levels of education.
  - Students own & use technological devises such as laptops, iPods, iPads, Smartphone and digital cameras in academic related activities.
The Influence for change

Integration of technology in nursing education is influenced by

1. *Preparing the next generation of nurses to practice in a technology-rich environment: an informative agenda*

2. American Association of Colleges of Nursing Essentials of Baccalaureate Education for Practice
   - AACN, 2008

3. Technology Informatics Guiding Education Reform
   - (TIGER) Initiative (2007)

4. Quality and Safety Education for Nurses (QSEN)
   - Cronenwett et al., 2007
Changes in Health Care Arena

- Computerized medical record
- Varied generation of students & faculty
  - Generation Y/Millennials (1980-2001)
  - Generation X (1965-1979)
  - Baby boomer (1946-1964)
- Demand by consumer
Generation X (1965-1979)

- Seek 2nd degree
- Back to school due to mandate 80% BSN 2020
- Highly independent
- Seek balance between work and leisure
- Some knowledge of computers
- Experiential learning
  - Students perform the tasks under guidance
  - Value assignments that reflect real world skills needed to succeed
Generation Y (1980-2001)

- Culturally diverse
- Technologically advance
  - Exposed to large amount of information
- Respect authority who demonstrate competence
- Assertive & confident
- Innovative, tries new tech
- Have short attention spans
- Prefers to multitask
Tech Tools used in Nursing

- Online
- Hybrid courses
- Simulation
- Personal digital Assistant (PDAs)
- E-books
- Clickers
Online Learning

- Use of internet and computer to deliver a part of a course or program.
- Learners and the teachers are in different locations.
- Interact with each other can be asynchronous or synchronous using course management system such as a blackboard (CMS) or blended/hybrid.
- Wireless & portable devices with Wi-Fi capabilities help learners to connect with each other and the instructor from anywhere allowing they to stay connected with the course at any time.
Asynchronous

- Interaction is flexible and occurs at any time.
- Learners work independently to complete the course.
- Uses discussion board to respond to questions or pre-recorded video lectures.
- It is self-learning.
Synchronous

- A synchronous or virtual classroom mimics the traditional classroom.
- Participants interact with each other at the same time using enhanced technology features such as chat rooms, live videoconferencing or WebEx.
- Best for learners who prefer a specific learning time and traditional classroom-style instruction.
Hybrid or Blended

- Combines face-to-face instruction with delivering substantial portion of the course online.
- Use the CMS to post assignments or enhance face-to-face instruction.
Simulation

- Provides a bridge between theory & practice.
- Learning is active & interactive
- Student practice without risk to an actual patient.
- Promote critical thinking and clinical decision.

Challenges

- High cost - simulator, accessories and the lab.
- Development is time consuming
- Learners need clear direction
- Faculty adoption is required
Personal Digital Assistants (PDAs)

- Provide real-time access to clinical information
  - Drug reference
  - Labs
  - Diseases
- Improve decision-making
- Reduce the numbers of medical errors
- Enhance learning for both students and professionals,
Electronic book (e-books)

- Electronic version of a printed book
- Displayed on eBook readers, devices, or computers using eBook software programs.
- Easy access of content
Clickers (Poll everywhere)

- Classroom response
  - Use to promote active learning
  - Actively engage students
  - Provide prompt feedback
  - Evaluate understanding of concept covered in class

- Poll everywhere
  - Instant feedback without clickers
  - [http://www.polleverywhere.com](http://www.polleverywhere.com)
  - Free for up to 40 participants
Benefits of Technology

- Monitor patients
- Clinical decision making
- Computer skills
- Promote effective communication
- Prevent medication error
- Enhance patient safety
Challenges

- Reliance on technology may jeopardize recall of information making ability to problem solve and make clinical decisions difficult.
- Technology requires power supply
- Internet access is necessary for most of them
- High cost
When Technology Fails…

- Need to go back to pre-tech era
  - Be less reliant on technology
  - Teach/learn to use manual apparatus
  - Review & update ER preparedness policies
- Have ER kit available on every unit…every home
  - Battery/Solar powered Portable radio, flash light
  - Ensure all staff know how to and where to shut off the water, gas, and electricity in the event of emergency
  - Mandate training on hurricane preparedness
Thank You.