



มหาวิทยาลัยราชภัฏนครปฐม  
Nakhon Pathom Rajabhat University

4172801 Digital Technology and Nursing Information

## Topic 7

# Application of Information Technology in Nursing Education









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# *Learning objectives*

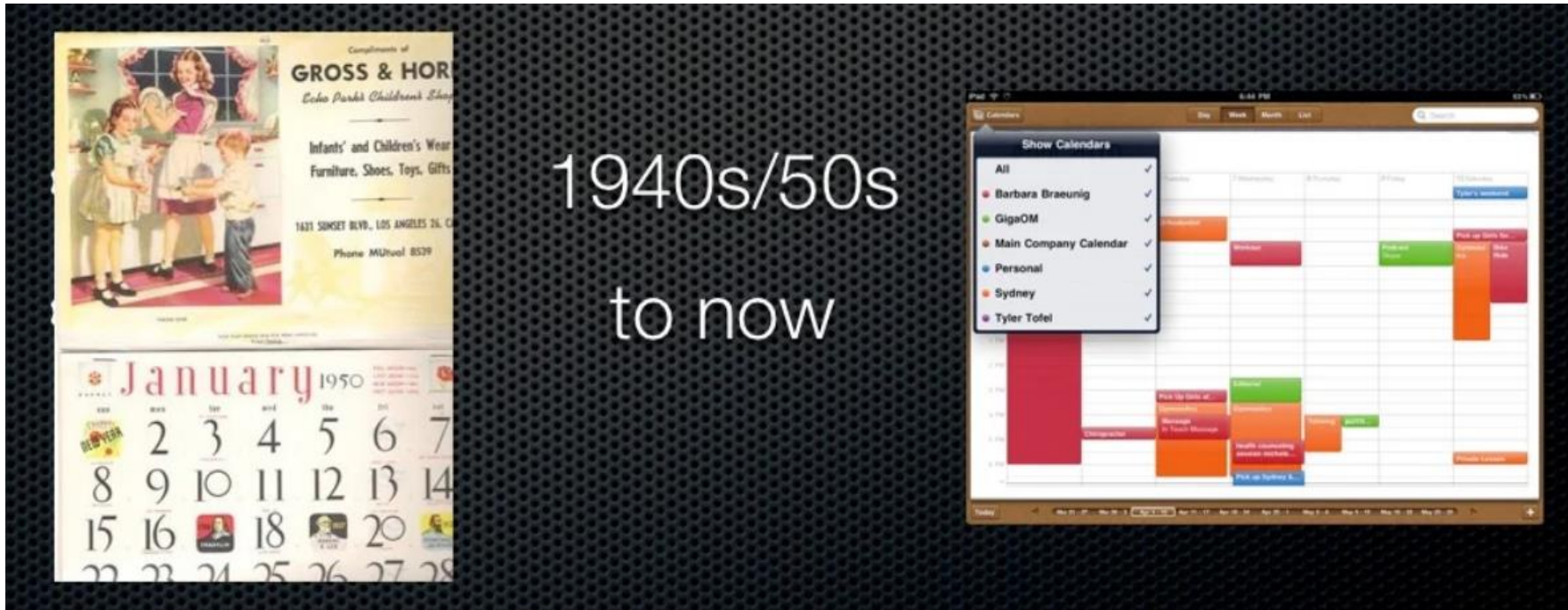
**To explore the application of  
information technology in  
nursing education**

# Learning Topics

-  **Health education in the information age**
-  **The impact of technology on the teacher and the learner in nursing education**
-  **Information Literacy**
-  **Strategies for using technology in health care education**
-  **Steps to develop website information literacy skills**
-  **How information technology is improving nursing education in Thailand**

# The information age

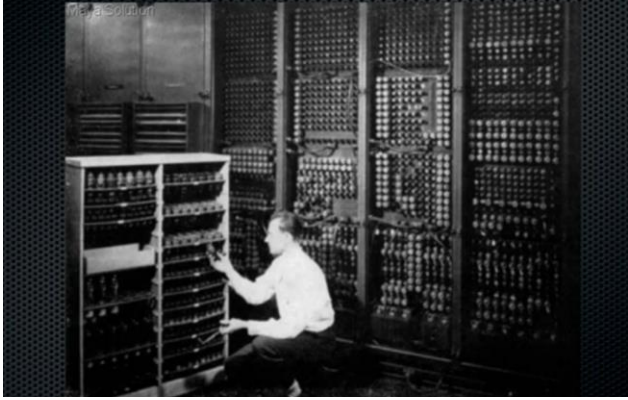
Very Fast Growth in COMMUNICATION and INFORMATION Technology



**A period in history characterized by**

- A change in focus from industry to information
- Growth of technology
- Information explosion

1948



1978



2001-2002



2003-2004



Google

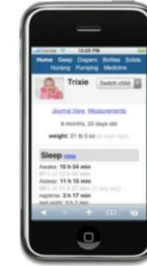


2005-2006

YouTube  
Broadcast Yourself™



2007-2008



2009-2010



# *Health education in the information age*

- **The use of technology in education is a reflection of what is happening on a much larger scale in our communities**
- **We are in a period of history often referred to as the information age ,the information age is characterized by a change in focus from industry to information**

# The impact of technology on the teacher and the learner in nursing education

- **Learning** has become a **shared responsibility**.
- **Teacher** has taken on the role of **facilitator** as the access to information bridge the gap between teacher and learner.
- **Educators in the information age** are becoming **facilitators of learning** rather than **providers of information**.

## The information age

Nursing  
Student

Digital  
Citizenship



the  
information  
age clients

- *How to communicate*
- *How to use effective information*
- *Understand need*

- ✓ **Job training and continuing education**
- ✓ **Virtual reality**
- ✓ **Computer simulation**



# Consider ability of Computer & Information Literacy

- The ability to use the computer hardware and software necessary to accomplish routine tasks

Information literacy	Computer literacy
A client who is information literate knows how to find the information needed and can evaluate the information founded for accuracy, currency and bias.	A client who is computer literate has the technical skills and knowledge of computers necessary to use contemporary hardware and software and can adapt to new technologies that emerge.

*Models/integrates consumer preferences into medical information systems*

# *Strategies for using technology in nursing education*

- A pre-teaching assessment of a client in the information age must begin with questions about computer use.
- **On-line Healthcare Education**
- Internet-based Communication
- **Social Media**
- Scenario/ Case study to practice analyze the information & E-Health Code of Ethics

# On-line Healthcare Education

## 1. World Wide Web (WWW)

**World Wide Web (WWW):** A technical definition of the World Wide Web is all the resources and users on the Internet that are using the Hypertext Transfer Protocol (**HTTP**) that provides access to images, videos , sound and text

the world wide web is the most familiar technology-based educational recourses Internet

As it is provides unlimited resources for nurses to use in practice and in professional education and development. Web sites provide access to bibliographic databases, continuing education, online journals and resources for patient teaching and professional practice.

*It is important to conduct a teaching session with health consumers about computer access in order to :*

- ✓ provide the nurse educator with the opportunity to review web-based information with the client.
- ✓ determine the type and amount of information to which the client has been exposed and assess the clients knowledge and identify areas in which the client may have need for further teaching.
- ✓ find information that needs further discussion.

## Safety Internet

The World Wide Web (WWW) is merely a small component of the much larger computer network called internet.

The internet service most likely to be of interest to nurse educators includes those that allow computer-facilitated communication such as

- E-mail
- Mailing lists
- Electronic discussion group
- Online chats

Websites	URL
Medline	<a href="https://www.medline.com/">https://www.medline.com/</a>
School nurse.com	<a href="http://www.schoolnurse.com">http://www.schoolnurse.com</a>
National Institutes for Health	<a href="https://www.nih.gov">https://www.nih.gov</a>
AllNursing Schools.com	<a href="http://www.allnursingschools.com">http://www.allnursingschools.com</a>

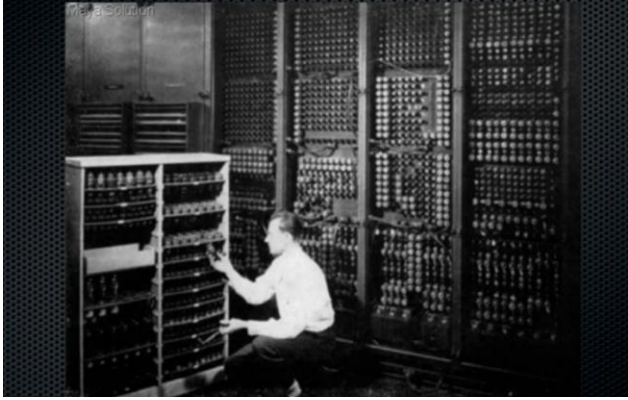


- Reduce a problem to a searchable command
- Categorize a Web page according to its purpose
- Identify sources of potential bias
- Make judgments about the accuracy and reliability of information found
- Make decisions about the comprehensiveness of information found
- Determine currency
- Identify resources to answer questions or verify assumptions about content of a webpage
- The nurse can teach clients who access the web to use it more effectively and can be proactive in encouraging others to give it a try.

# Internet-based Communication

- The internet services most likely to be of interest to nurse educators include those that allow computer facilitated communication that have been used to communicate with people about health and healthcare such as ;
- E-mail
- Electronic discussion groups
- Mailing lists
- Blogs, online forums, message boards, bulletin boards
- Online chats
- Discussion Boards

1948



1978



2001-2002



2003-2004

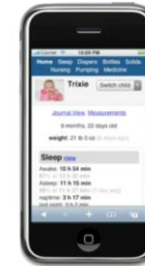


2005-2006

**You Tube**  
Broadcast Yourself™



2007-2008



2009-2010





# Social Media

The health care industry has begun to recognize the potential of social media to educate and empower people ,to quickly send messages t a worldwide audience and to gather information about public perceptions of health issues.

- **Blogs, Wikis**

- Consumers may turn to these for health-related information to share knowledge and experience in a specific topic.
- Many of the blogs found on the web are health related and the creators tell a story about their experience in a given disease or treatment.
- Wiki are more social in their construction as multiple users come together on a wiki to collaboratively write the content of collections of webpages

- **Facebook, Twitter, YouTube**

All are other social media tools that can be employed by nurse for educational purposes

With these media , users create their own profile pages where information, pictures, and other forms of media such as blogs for comments can be posted.

- **Webcasts**

Are live broadcasts over the Internet that growing in popularity as a training device that permit audio\video to be transmitted to participants in multiple locations .

Although webcast do not allow for interaction , they are growing in popularity as a training device for sharing lecture and demonstrations

- **Webinars**

Are web-based conferencing that allow for interaction and when well run, can be an effective teaching \ learning strategy with group of people at distance

- **Mobile Learning (m-Learning)**

The word mobile referes to both to the use of portable technologies such as MP3 player to the end user –the mobile adult who can truly learn any where ,any time ,any place . Mobile devices can be used for a wide range o activities and with both clients in the clinical area and students in the academic area. These activities include accessing websites, listening to the lectures, or broadcasts, recording experience, and assignments and participating in learning focused games

# Scenario/ Case study to practice analyze the information & E-Health Code of Ethics

- **Candor** ;disclose the information about the creators' purpose of the site that will help users make judgment about the creditability and trustworthiness of information or service provided
- **Honesty** ;truthful in describing products and present information that is not likely to mislead the user
- **Quality**; ensure that information is accurate, easy to understood and provide background information
- **Informed Consent**; inform the user if personal information is collected and allow them to choose whether the information can be used or shared

# Scenario/ Case study to practice analyze the information & E-Health Code of Ethics

- **Privacy** ; ensure that the user' s rights to privacy is protected
- **Professionalism in online health care** ;A bid by the ethical code of your profession (nursing ,medicine), provide the users with the information about who you are, what you can do online and which limitations may apply to the online interaction
- **Responsible Partnering** ; ensure that sponsors ,partners and others who works with you are trustworthy
- **Accountability** ; Implement procedure for collecting ,reviewing and responding to user feedback . Develop and share procedures for self-monitoring compliance with the e-Health Codes of Ethics

# *How information technology is improving nursing education in Thailand*

- **Addressing competency gaps among nursing students**
- **Updated curricula**
- **Adoption of IT in nursing education**

# Addressing competency gaps among nursing students

- An employer survey revealed that newly graduated nurses lacked soft skills and competencies, especially in
  - “critical thinking and problem solving”
  - “leadership and teamwork.”
  - less confident in “problem solving”
  - “management of healthcare,”
  - “application of information technology (IT) and computer” skills
- The attention of policymakers to the quality of nursing education in Thailand
- Promote in curriculum

# *Updated curriculum*

- **Faculties also introduced new teaching-learning methods, including problem-based, team-based, and simulation-based learning. Nursing students can now study theories in “flipped” classrooms and then practice in clinical simulation centers.**





# *Adoption of IT in nursing education*

- Nursing schools paid special attention to the adoption of IT in nursing education - including online resources, learning management systems, e-learning modules, competency-based examination, and others.
- Harnessing the power of IT has enable faculties to introduce new teaching-learning methods, such as “flipped” classrooms, blended learning, problem-based learning, and team-based learning.

# Discussion

Write 250 words essay about your own experience of using ICT, NIS during study in the nursing science program. Please explain as follow topics:

- What type of ICT or NIS that you have used?
- How do you feel to use them?
- What is your expectation of using ICT or NIS during studying in this program?
- How dose you plan for improve your ICT/NIS using skill?



*Thank You*