



# Teaching and Training Concepts in eHealth

**Foundational Curricula:  
Cluster 10: Leadership & Management  
Module 21: Teaching, Training and Education in eHealth  
Unit 2: Teaching and Training Concepts in eHealth  
FC-C10M21U2**

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# Unit Objectives



- Describe how to use and assist others in using technology as a reference or educational tool
- Identify different types of instructional methods used in eHealth: lectures, discussions, tutorials, seminars, demonstrations, groups, and brainstorming sessions
- Include the use of relevant educational technologies in eHealth



# Teaching and Training Concepts in eHealth

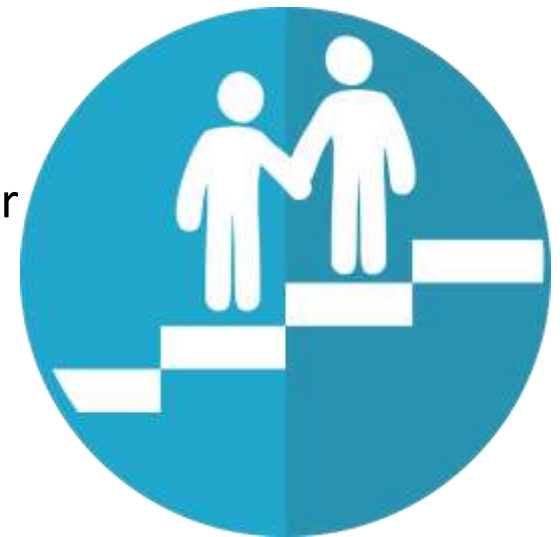
- The concept of "learning by doing" has become less acceptable, particularly when invasive procedures and high-risk care are required. The students should be as prepared as possible for the real patient care without causing any risks to the actual patients.
- eHealth skills are also needed in the current and future health care, and the process to learn these skills should already start during the education
- The figure presents some widely used teaching methods suitable for clinical and ehealth education. More eHealth related methods are learned during this unit.





# Use of technology for education

- Information technology platforms and tools can provide unique, timely, cost-effective and valuable opportunities as educational tool:
- **Distance learning** (e-Learning, tele-education), where teaching, education and training can be done in remote, without the physical interaction between the teacher and the student
- **Teaching assistance**, where the teacher and the conventional teaching techniques are supported or substituted by tutorials, multimedia and smart devices such virtual reality headset or and high fidelity patient simulation.





# Instructional methods for teaching



- Teaching methods are guides for designing educational activities, environments and experiences. They depend on a number of factors such as the developmental level of students, goals, intent and objectives of the teacher, content, and environment including time, physical setting and resources.
- In the **direct instruction models**, the teacher shares knowledge or demonstrates a skill. In the **indirect instruction models**, the teacher sets up strategies, but does not teach directly; the students make the meaning for themselves.
- Every method has advantages and disadvantages
  - For example, discussion allows the participation of everyone, but the groups often get side tracked.
  - However, activating the students is important, when the knowledge is intended to be saved in the long-term memory.



# Choosing and Instructional Methods for Teaching



- Choosing an instructional method requires the instructor to consider at least three main aspects: 1) the learning objectives, to make sure the method is appropriate, 2) the nature of the materials and 3) how we want students to interact with this information.
- One instructional method may not be enough to meet the learning objectives and it is required to combine different formats.





# Instructional methods for teaching:

## Examples of methods



- List of methods:
  - **Lectures** offer a one-way approach to learn new things. During the lectures teacher teaches students. Lectures are an easy way to transfer a lot of information to a large audience in a short time.
  - **Discussions** involve all the participants to commonly think and discuss about the topics. Discussions give a greater depth in information processing and helps to better understand the concepts discussed.
  - **Tutorials** can be step-by-step instructions e.g. in a book to learn a new thing or a regular meeting with a professor or tutor which aims to discuss about the subjects studied.
  - **Seminars** are meetings where people discuss about topics.



# Instructional methods for teaching: Examples of methods (cont'd)



- **Demonstration** means learning through examples or experiments. Demonstrating helps students to memorize subjects when they get a connection between a fact and a real-world application to those facts.
- **Group works** enable students to actively participate and take a closer look to a specific subject. Working in groups may improve team work, presentation and leadership skills.
- **Brainstorming sessions** are held in groups and they offer an overall sense of what skills and knowledge the participants are bringing to a particular objective. The aim of the brainstorming sessions is to first produce a lot of ideas that might seem crazy at first and then in the end improve or change the ideas. Brainstorming can produce creative ideas.





# Include the use of relevant educational technologies in eHealth

- As new technologies have merged for both classroom and clinical units, more opportunities to consider pedagogy and educational technology combinations in eHealth exist:
- **Educational technologies in problem-based learning**
  - Online group work include chat, shared whiteboards, video conferencing and group browsing. Online group working allows healthcare students to work at a distance.
  - Learning in virtual worlds offers a wide range of scenarios (more than learners are likely to meet in a standard face-to-face programme).
- **Educational technologies in clinical contexts**
  - Wikis are collaborative Web sites whose content can be edited by anyone who has access to it. Health-related wikis can for example help health communities prepare for, and perhaps cope, with a possible (avian) influenza pandemic.
  - Online forums are helpful for conversations. They can engage people in knowledge sharing and reflection.





# Unit Review Checklist

- Describe how to use and assist others in using technology as a reference or educational tool (JL02)
- Identify different types of instructional methods used in eHealth: lectures, discussions, tutorials, seminars, demonstrations, groups, and brainstorming sessions
- Include the use of relevant educational technologies in eHealth



# Unit Review Exercise/Activity



1. Describe three different teaching methods.
2. What experiences have you had learning with technology?
3. When and why would you use an brainstorming session as a teaching/learning method?
4. Describe how can the doctor practice surgical procedures of abdominal surgery without the patient.



# Unit Exam



1. Technology offers new methods of teaching despite geographical location and offering more detailed training.
  - a) True
  - b) False
  
2. Educator should find a teaching method that best fits to the learning objectives and avoid combining the methods.
  - a) True
  - b) False



# Unit Exam (cont'd)



3. Lectures should be used as a teaching method when students are expected to produce solutions for problems about the topic studied.
  - a) True
  - b) False
4. The difference of brainstorming sessions and group works is
  - a) Brainstorming sessions do not improve presentation skills, whereas group works do.
  - b) Group works are a more traditional way of working in the groups than brainstorming sessions
  - c) Group contains active participation of students to produce further knowledge of a certain subject, whereas brainstorming sessions combine individual knowledge and skills to produce a lot of new ideas in the topic
  - d) They have no difference