Effective online learning by design

Preparing for life post-pandemic
Presenter/Moderator

Presenters

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Learning objectives

• By the end of this session, you will be able to:
  – define common online learning terminology
  – list frameworks and approaches and their application to online learning design
  – describe approaches to incorporating interactivity and higher level outcomes to online learning
  – discuss how to create an equitable and inclusive online learning environment.
What is online learning

“Electronic (e) or online learning can be defined as the use of electronic technology and media to deliver, support and enhance both learning and teaching and involves communication between learners and teachers utilising online content” (Howlett et al., 2009).
Emergency remote teaching “is a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances. It involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that format once the crisis or emergency has abated” (Hodges et al., 2020, March 27).

Planned online learning development is delivery of a course or program which is intentionally designed in advance to be delivered in a virtual environment.
Modes of online learning

- Live, virtual
- Synchronous
- Blended
- Facilitated asynchronous
- Self-directed asynchronous
- Collaborative
  - Video
  - Podcasts
  - Blogs
  - Wikis
  - eBooks
  - eMail
  - Text
Benefits of online learning

• Time and location flexibility and accessibility (Ruggeri et al., 2013)
• Lower training costs and time commitment
• Self-directed and self-paced learning by enabling learner-centered activities
• Collaborative learning environment
• Builds universal communities
• Standardized course delivery
• Allows unlimited access to e-learning materials
• Private access to learning
• Just-in-time learning
• Workforce training monitoring
• Allows knowledge to be updated and maintained in a more timely and efficient manner
MODELS, FRAMEWORKS AND APPROACHES
Conceptual framework of factors influencing e-learning in health sciences education

(Regmi & Jones, 2020).
Outcomes and assessment

Stages of learning and change

Transtheoretical theory of change

(Prochaska & DiClemente, 1997, September 1)
Bloom’s taxonomy

(Carlton University, 2020)
Concept maps

(Detrie, 2017)
Development process

1. Needs assessment
2. Planning
3. Research
4. SME engagement
5. Curriculum development
6. Multimedia development
7. Review
8. LMS upload
9. Testing
10. Course launch

(Ronda, 2020)
INTERACTIVITY IN ONLINE LEARNING
Interactivity

- Is necessary to provoke learning experiences, increase learners’ knowledge and develop skills
- Includes learner-content, learner-instructor, and learner-learner

“People learn by considering, researching, analysing, evaluating, organising, synthesising, discussing, testing, deciding and applying ideas” (Horton, 2000, p. 260).
Benefits of interactivity

• Promoting motivation
• Enhancing knowledge retention
• Stimulates critical thinking
• Boosting engagement
• Encouraging reflection
• Increasing skills acquisition
• Providing opportunities to make decisions without taking real risks.
Designing online activities

• Align learning objectives, learning activities and assessment.
• Ensure the activities are relevant to the learners, encourage meaningful, active engagement and stimulate learning.
• Provide clear instructions on how to complete each activity.
• Technology is just a facilitator of the learning process.

“Education does not exist for technologies, but technologies are here for education” (Zounek, 2009, s. 49).
How can Bloom’s taxonomy inform learning design?

(Adapted from Carlton University, 2020)
Learner-instructor and learner-learner interactivity

• Synchronous, asynchronous or combined
• E-moderation of online discussions
• Online feedback about class activities
• “Ask an expert” forum
• Interaction between two learners or among a group of learners
Interactive applications

- Quizzes
- Knowledge checks
- Learner reflection
- Case studies and scenarios
- Simulations (video, audio, text-based)
- Branching activities
- Virtual patients and virtual reality
- Digital games
Learner reflection

• Ask thought-provoking questions.
• Use mind maps.
• Encourage learner-generated postings.
• Ask learners to summarize and reflect on their e-Learning experience.
• Encourage learners to contribute to a blog.

Let’s Reflect

Now that you have learned a bit more about identifying mental health concerns related to pandemics, let’s reflect on this topic. What did you notice about the way Vivian gathered information from Charmaine? What did Charmaine reveal about her mental health related to COVID-19?

Record your reflections below in the section marked “Notes.” This journal entry will be made available at the end of the module for you to view and print.
Case studies/scenarios

- Depict real world situations and move knowledge from theory to practice
- Are shown to enhance clinical knowledge, improve clinical skills, practice behavior and patient outcomes
- May be text-based, video, audio or a combination.
- The importance of feedback.
Check
The emerging mental health concern is low mood, which impacts Brian’s interest in daily activities.

In the context of COVID-19, he has lost his job, he has fears he will contract the virus, and is experiencing guilt and hopelessness.
Simulation-based learning activities

• Simulations approximate real-life situations, allowing participants to demonstrate (and receive feedback on) their application of knowledge (scientific and tacit), clinical reasoning, communication and problem-solving, as well as their ability to collaborate and work effectively in a health care team (Royal College of Physicians and Surgeons of Canada, 2020).

• They are cost-effective, enhance clinical competence, and improve patient safety (McDougall, 2015).
Interactive video simulation

Cornish & Associates Stepped Care Solutions Ltd., with support the support Health Canada/PHAC and CAMH. (2020).
Text-based simulation with quiz

Suggest warring about getting infected is not the best strategy
Relay information about current infection rates
Ask questions to probe for more information

How Would You Respond to Charmaine?

Hi, my name is Vivian. How can I help you?

I'm Charmaine. I really need to connect with someone...I'm just so stressed! I can't seem to stop worrying about catching COVID-19...or Liam, or my mother! I feel so alone.

I understand that you're worried, but do you think this is a realistic risk for you?

Try again. Use an engagement technique.

Relay information about current infection rates
Ask questions to probe for more information
Synchronous web-based simulation
Simulation game

Skills Practice: A Home Visit

Introduction
The game promotes the application of knowledge and skills related to establishing a therapeutic nurse-client relationship and completing a mental health assessment.

In the simulation you will assume the role of a community health nurse assigned to complete a home visit with Irina.

How it Works
- Watch interactions between Irina and the community health nurse.
- Following each interaction, you will be asked to select the most appropriate response. Possible responses are classified as:
  - Correct,
  - Not the Best, and
  - Incorrect.
- You can repeat this game numerous times for practice and to improve.

Start New Game

(Ryerson University, 2015)
A branching scenario contains multiple questions/decision points, and the consequence of one decision affects the next decision.
Branching simulation

Toby’s Third Session

How it works
- Watch the interactions between Toby and you, the problem gambling counsellor.
- Following each interaction, you will be provided with three response options. Watch all three and then use the radio buttons to select what you feel is the most appropriate response. If you don’t choose the best option, you’ll have the opportunity to choose again.
- You can play numerous times for practice.
- If you leave the game, you can resume where you left off.
- Sound and high-speed internet are required.
- The game takes 30-40 minutes to complete.

What will you focus on next?

There is a better response.
Reflection: A reflection may help elicit more information about this goal.
EQUITY AND INCLUSION INTERACTIVITY IN ONLINE LEARNING
Creating equitable and inclusive online learning environment

- Ensure accessibility for all learners.
- Articulate expectations.
- Accommodate different learning styles.
- Set ground rules that respect learner diversity.
- Use inclusive language.
- Embed equity, diversity and inclusion in course material.
Accessibility

• Comply with the accessibility standard or other regulations, such as Web Content Accessibility Guidelines (WCAG).
  – e.g., Colours, contract documents, fonts
• Provide closed captioning.
• Include alternative text for all visual content.
• Use plain language.

(WAI, 2020; United Nations, 2020)
Promoting gender equality and cultural diversity

- Produce content that is free of stereotypes and bias based on gender, ethnicity, nationality, culture, religion, age or background.
- Ensure the content is gender inclusive (including images, texts, audio recordings, videos and instructions).
- Use gender-inclusive language
- Incorporate visual material (illustrations, images, videos) that reflect cultural, ethnic and racial diversity

*(United Nations, 2020)*
Summary

- The effectiveness of e-learning to improve learners' knowledge or skills is influenced by the learning experience.
- Effective e-learning involves instructional design that is learner-centered, flexible, and engaging for the learners.
- Meaningful interactivity, practice exercises, and feedback seem to be key features of e-learning associated with improved learning outcomes.

*(Caroll et al., 2009; Shah & Stefaniak, 2018, Cook et al., 2010)*
Additional considerations

- Technology
- Faculty development
- Accessibility
- Equity and inclusion
- Resources
- Privacy/security
• Web Content Accessibility Guidelines (WCAG) http://www.w3.org/TR/WCAG/
References


• Cornish & Associates Stepped Care Solutions Ltd., with support the support Health Canada/PHAC and CAMH. (2020). One-at-a-Time (Single Session) Counselling Online Course


• Shah, S. J., & Stefaniak, J. E. (2018). A Review of the Effectiveness of e-learning on Knowledge and Skill Acquisition in Medical Education. Semantic Scholar.

