

# 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

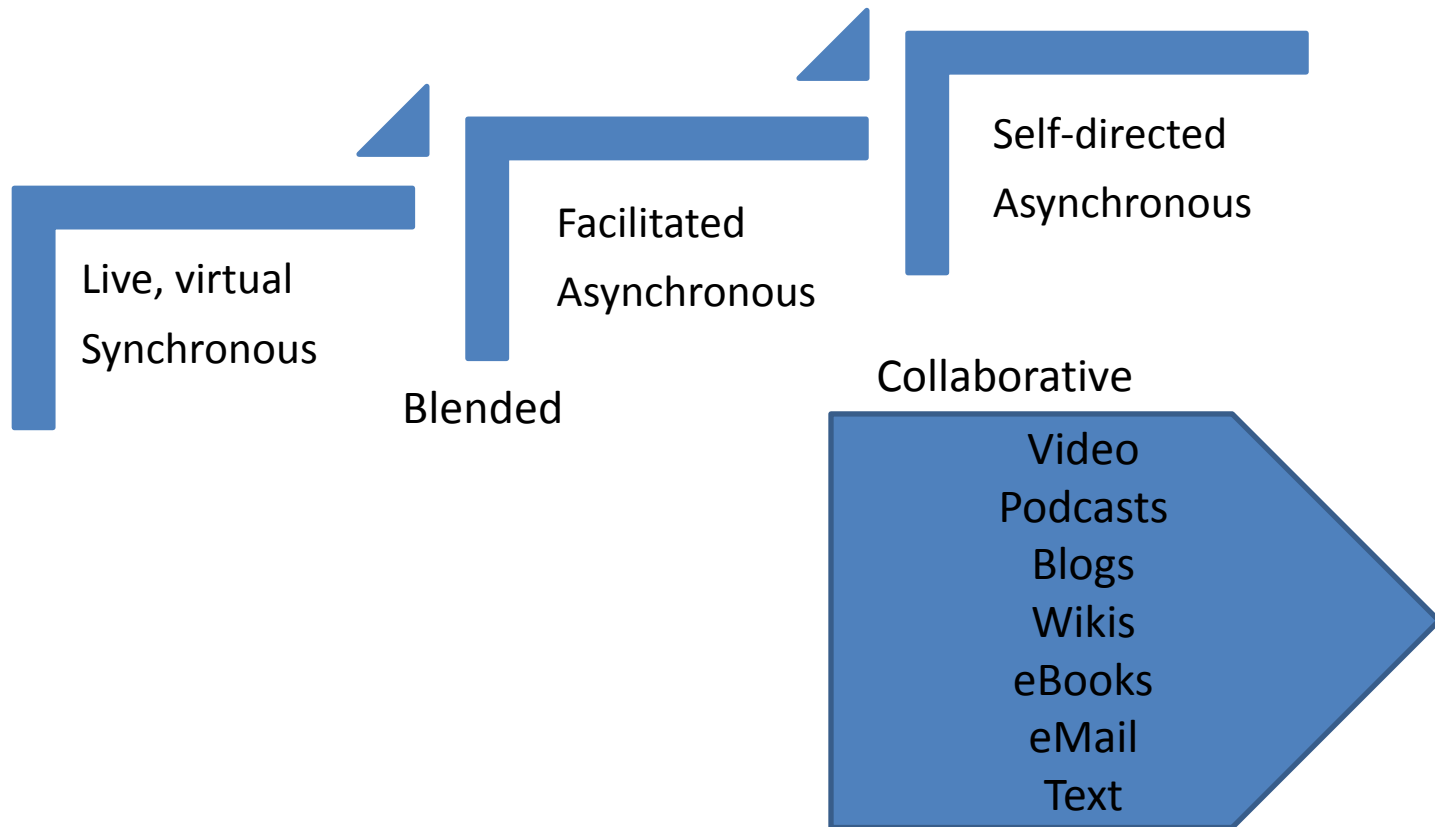
“Electronic (e) or online learning can be defined as the use of electronic technology and media to deliver, support and enhance both learning and teaching and involves communication between learners and teachers utilising online content” (Howlett et al., 2009).



# Pandemic pivot versus planned online learning development

- 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 an course or program which is **intentionally designed** in advance to be delivered in a virtual environment.

# Modes of online learning



# Benefits of online learning

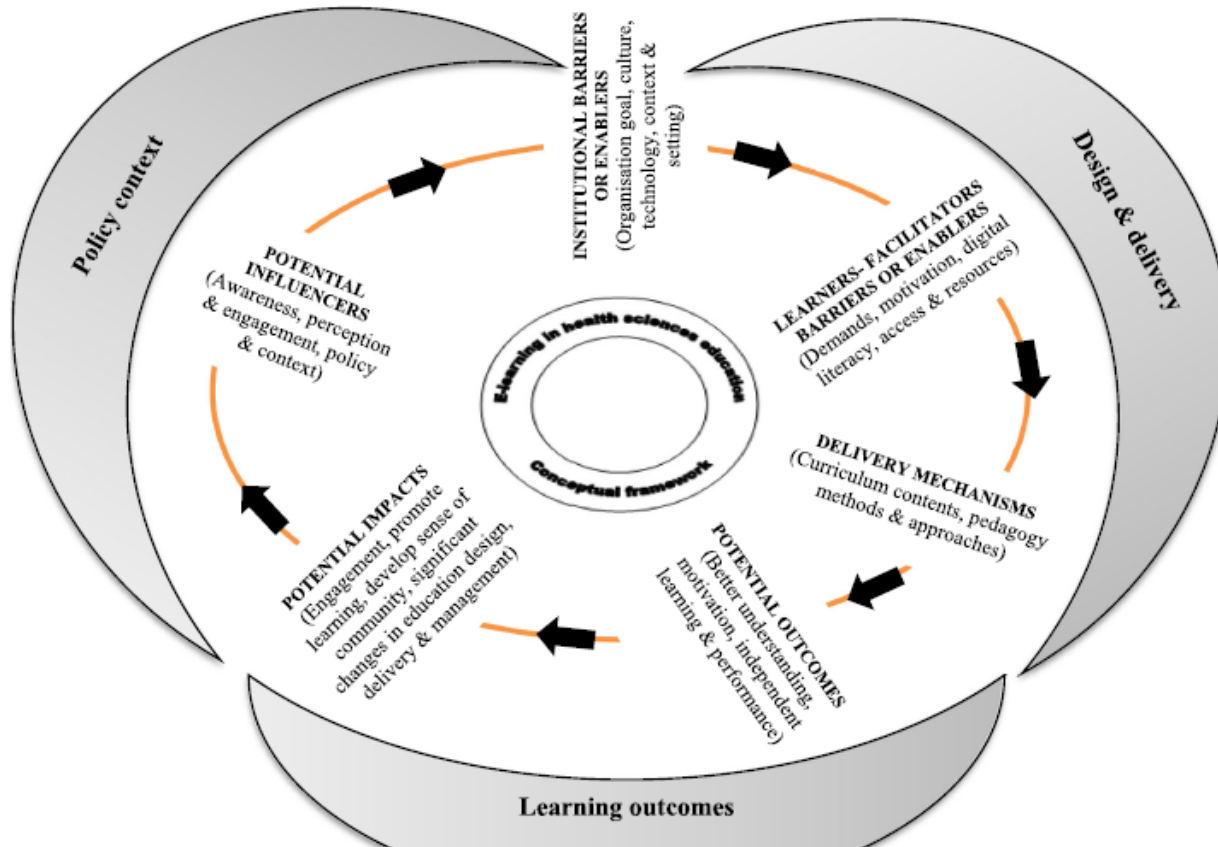
- Time and location flexibility and accessibility (Ruggeri et al., 2013)
- Lower training costs and time commitment
- Self-directed and self-paced learning by enabling learner-centered activities
- Collaborative learning environment
- Builds universal communities
- Standardized course delivery
- Allows 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

The background of the slide is a white surface with a large, irregular orange watercolor splash in the center. The splash has a gradient from a darker orange at the top to a lighter, almost white-orange at the bottom. There are several small, dark orange droplets scattered around the main splash, particularly on the left and right sides.

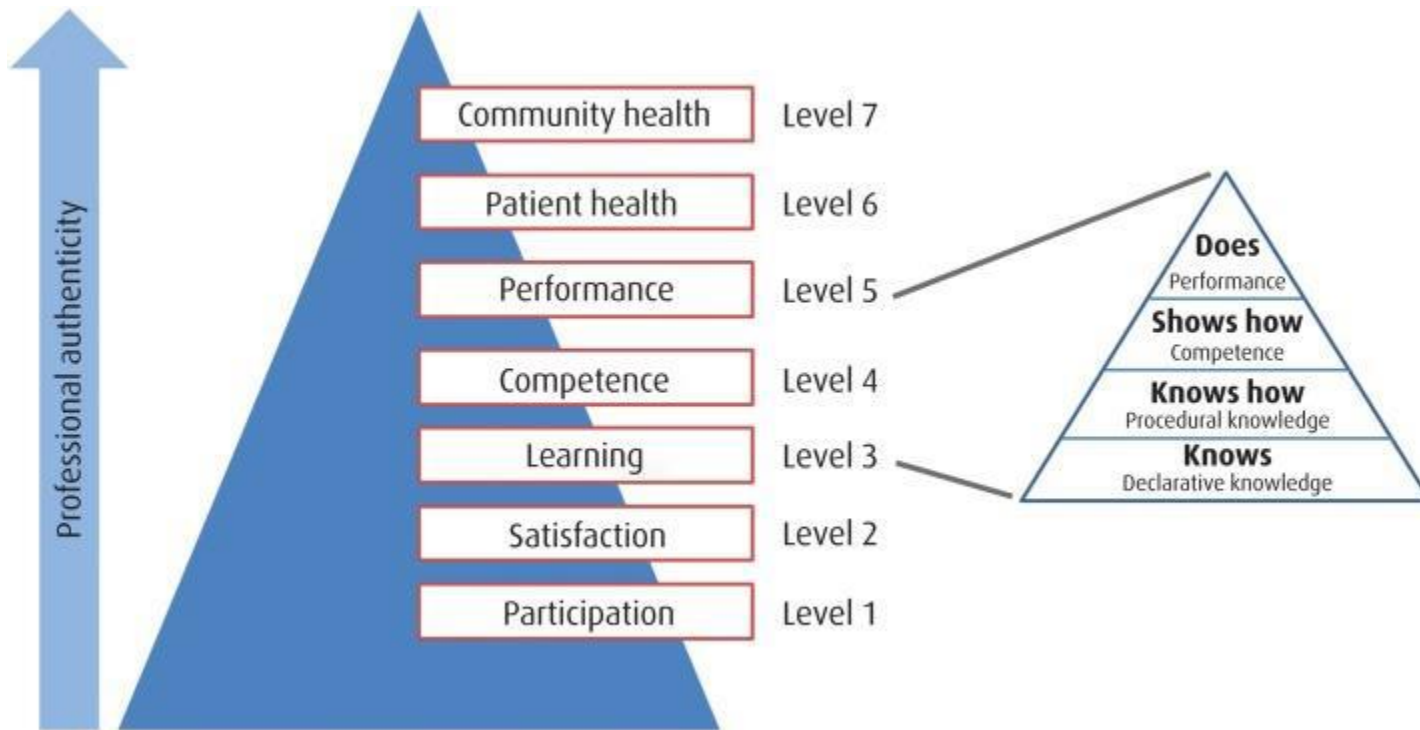
# **MODELS, FRAMEWORKS AND APPROACHES**



# Conceptual framework of factors influencing e-learning in health sciences education

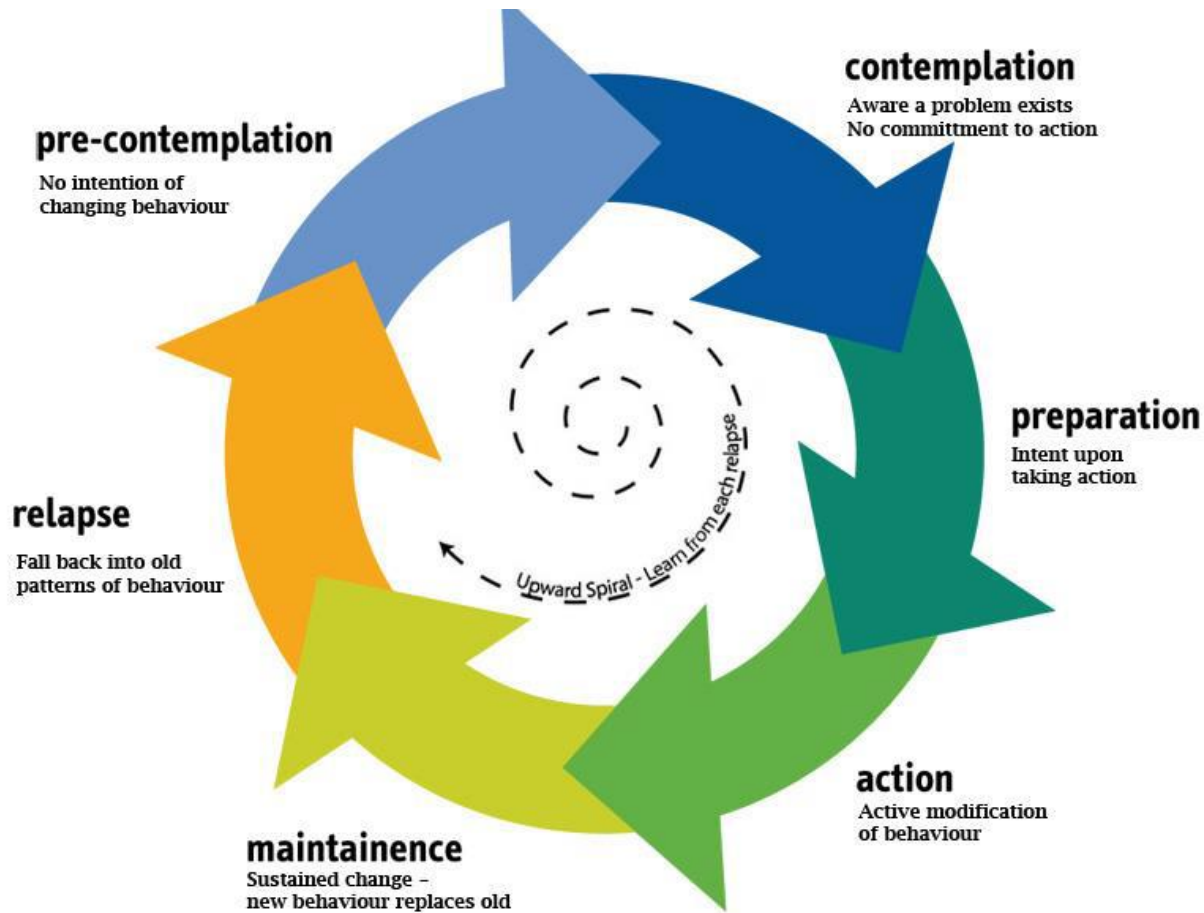


# Outcomes and assessment



*(Wallace, S. & May, S.A., 2016, p. 517).*

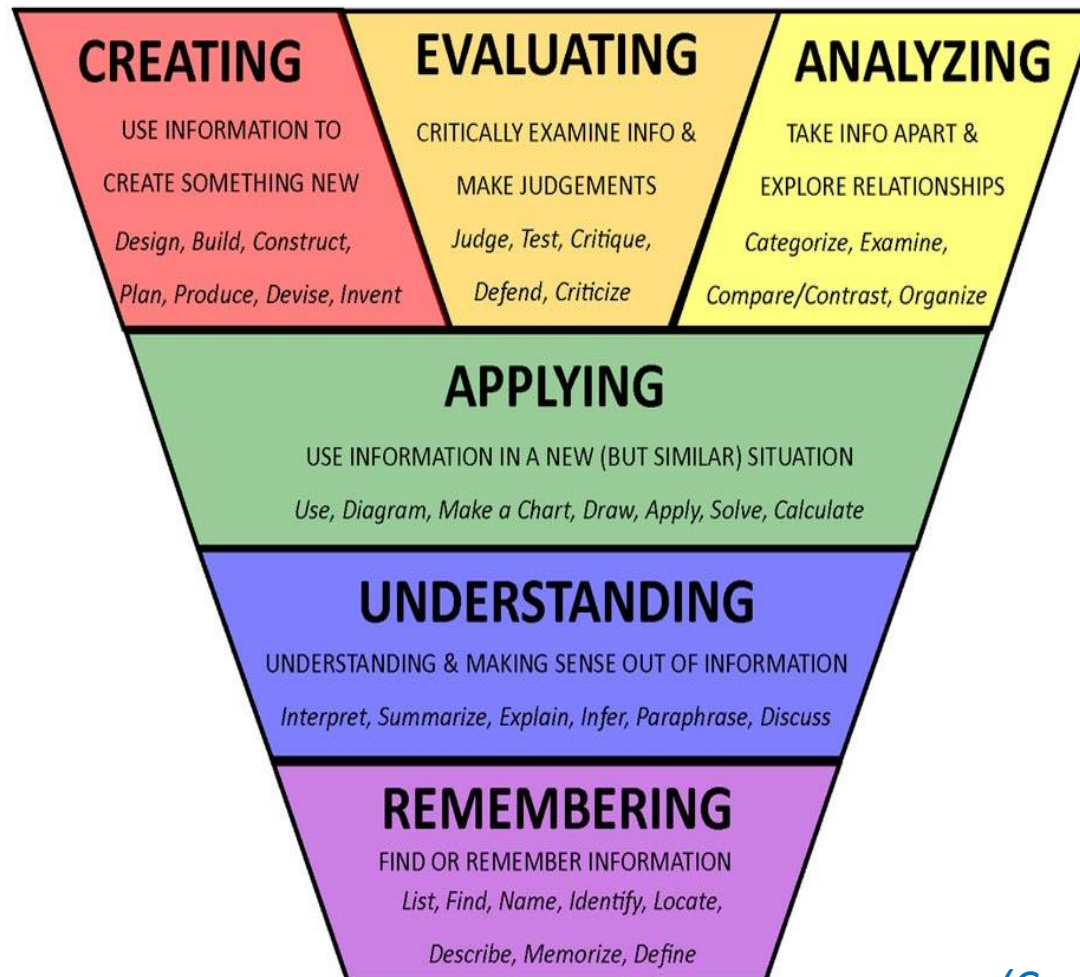
# Stages of learning and change



Transtheoretical theory of change

*(Prochaska & DiClemente, 1997, September 1)*

# Bloom's taxonomy



(Carlton University, 2020)



# Development process



*(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).



*(Ellis et al., 2009)*



# Benefits of interactivity

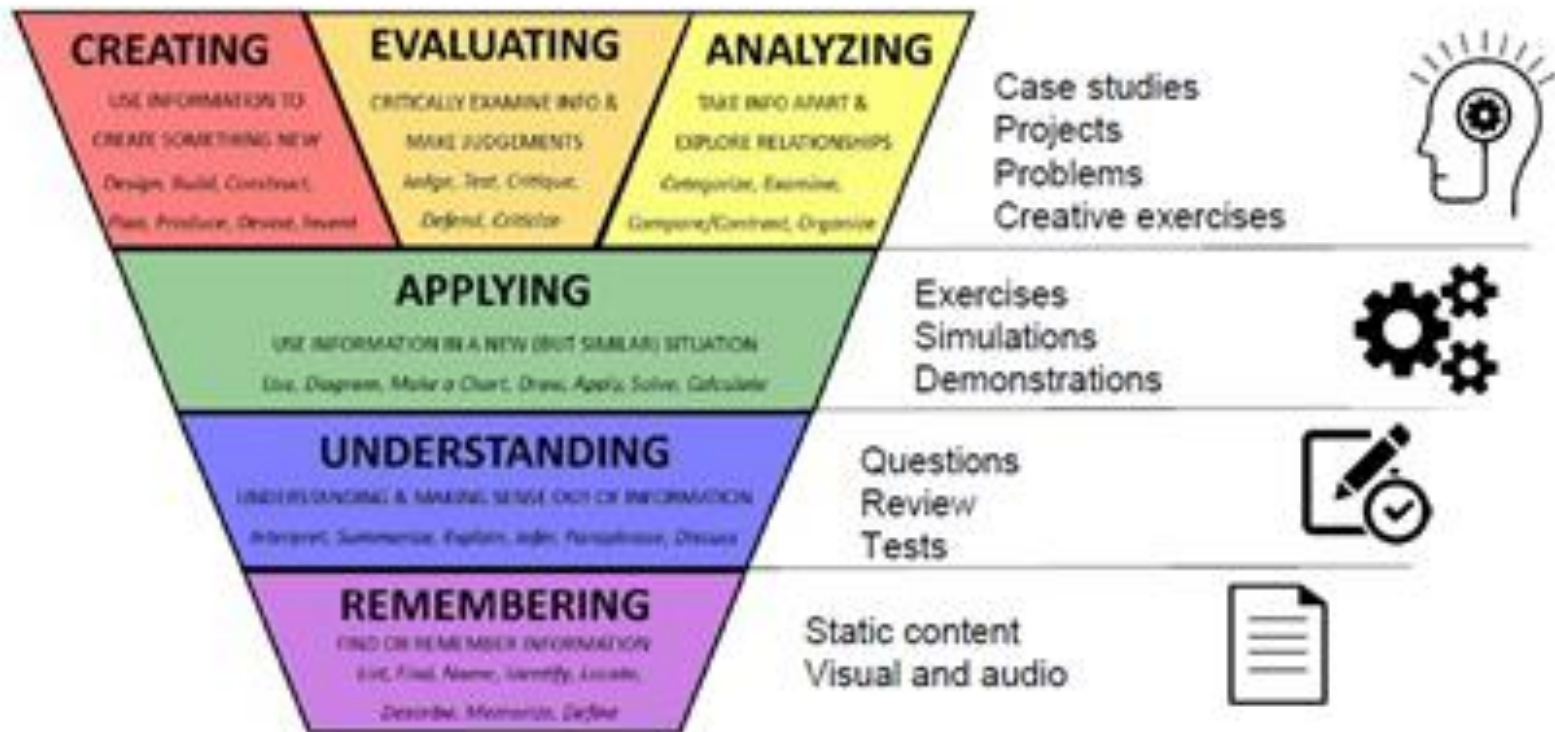
- Promoting motivation
- Enhancing knowledge retention
- Stimulates critical thinking
- Boosting engagement
- Encouraging reflection
- Increasing skills acquisition
- Providing opportunities to make decisions without taking real risks.

# 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.

Notes

# 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.

# Case scenario example

## Identify the Mental Health Concern: Meet Brian and Asha

Meet Brian and Asha, two clients who phone your mental health support line. After reading each case scenario, you will be asked to identify the emerging mental health concern(s) and how you would begin your conversation with each caller. To answer, consider both the content covered in this module and your experiences working as a frontline worker. Upon submitting a response, the best suited answer will be revealed.

Brian

Asha



Brian calls the mental health support line. He immediately tells you he thinks he might be depressed. He explains, since losing his serving job, he cannot get out of bed and spends most of his day lying around his apartment. His roommate has told him to call his family doctor, but after trying twice and being put on hold for long periods he's given up. He also fears going to a doctor's office will increase his exposure to COVID-19. He describes feelings of guilt, "I don't know why my mood is so bad ... I mean there are people in other parts of the world who have it much worse than I do right now!" He begins to cry, which interferes in his ability to respond to your questions. He seems hopeless but continues to stay on the line.

Identify the emerging mental health concern(s).

How would you begin to engage with Brian?

The emerging...

I would begin...

Check

Check

### 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



When was another time that Tom experienced stress and anxiety?

- When he was at school
- When he moved to Canada
- When he was arguing with his roommate
- In his previous job

0/1 [Show solution](#) [Retry](#) [Next](#)

The image shows a screenshot of an interactive video simulation. At the top, a video player displays a scene with two people in an office setting. Below the video, a question is posed: "When was another time that Tom experienced stress and anxiety?". There are four multiple-choice options. The first option, "When he was at school", is highlighted in red and has a red 'X' icon, indicating it is the incorrect answer. The other three options are in grey boxes. At the bottom of the interface, there is a progress indicator showing "0/1", a "Show solution" button, a "Retry" button, and a right-pointing arrow button.

*Cornish & Associates Stepped Care Solutions Ltd., with support the support Health Canada/PHAC and CAMH. (2020).*

# Text-based simulation with quiz

## 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

Suggest worrying about getting infected is not the best strategy

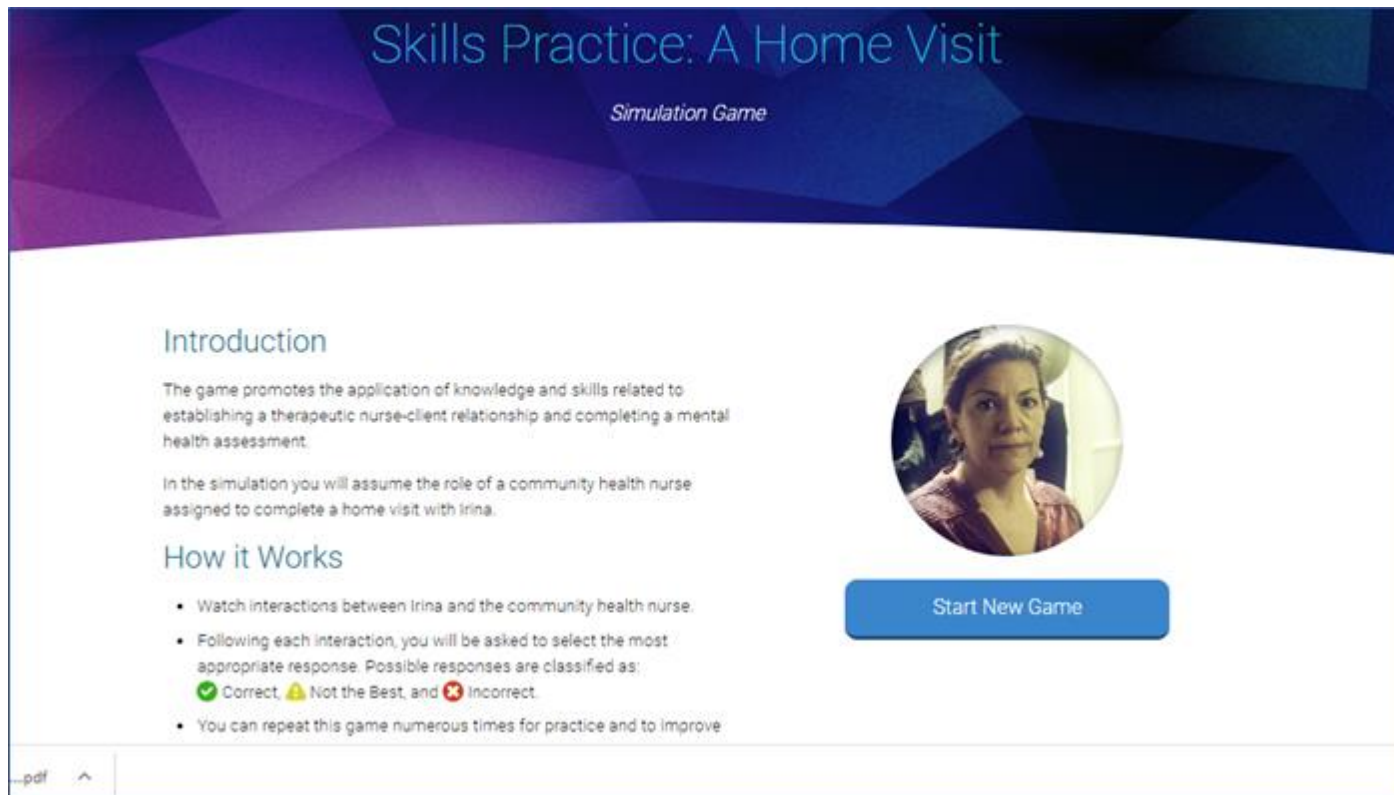
Relay information about current infection rates

Ask questions to probe for more information

# Synchronous web-based simulation

The screenshot displays a synchronous web-based simulation interface. At the top, three video feeds are shown side-by-side, each with a label below it: "Faculty/MI coach" (a woman with glasses and a headset), "Course participant" (a woman with red hair), and "Simulated patient" (a woman with dark hair and a headset). Below the video feeds is a control panel with four sections: "hat (Everyone)" (a chat area), "Attendee List (4)" (a list of participants including Pam King, Sandra B..., Sandra Benn..., Carolynne, and two others), "Adobe connect clock" (a large analog clock showing approximately 10:10), and "Stage lights" (a green circular indicator with the text "Stage Lights" and a timer showing "40:00").

# Simulation game



The screenshot shows a web-based simulation game interface. At the top, a dark blue banner contains the title "Skills Practice: A Home Visit" in a light blue font, with "Simulation Game" written below it in a smaller, white font. The main content area is white and features an "Introduction" section with two paragraphs of text. To the right of the text is a circular profile picture of a woman. Below the introduction is a "How it Works" section with a bulleted list of instructions. A blue button labeled "Start New Game" is positioned to the right of the text. At the bottom left, there is a small browser window icon labeled ".pdf" with an upward arrow.

## Skills Practice: A Home Visit

*Simulation Game*

### 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

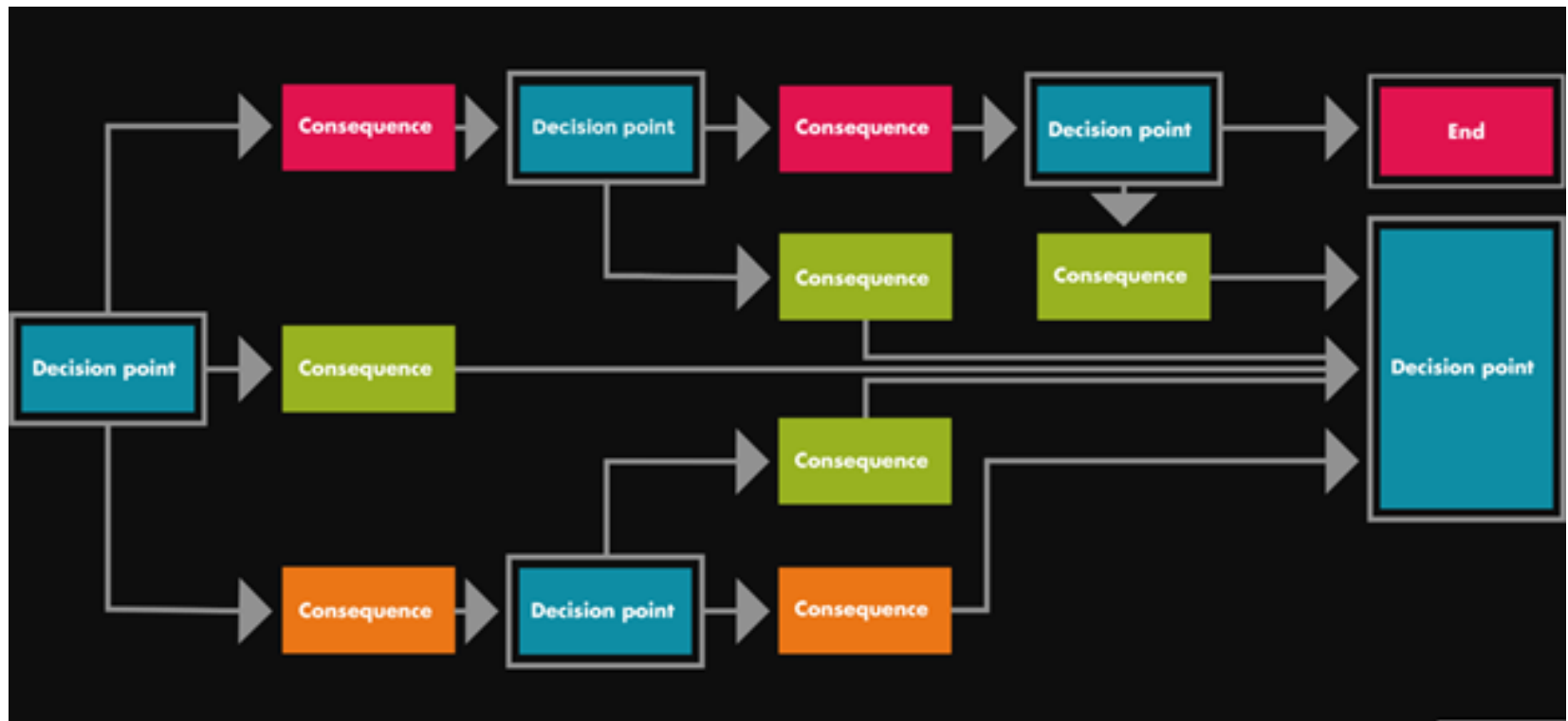
- Watch interactions between Irina and the community health nurse.
- Following each interaction, you will be asked to select the most appropriate response. Possible responses are classified as:
  - ✔ Correct, ⚠ Not the Best, and ✘ Incorrect.
- You can repeat this game numerous times for practice and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

Start New Game

.pdf ^


# Branching activities

- A branching scenario contains multiple questions/decision points, and the consequence of one decision affects the next decision



# Branching simulation

Navigation Help



## Toby's Third Session

[Play](#) [How it works](#)

Problem Gambling Institute of Ontario | camh | CENTENNIAL COLLEGE | Ryerson University | GEORGE BROWN

Navigation Help


## 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.

[Play](#)

Navigation Help

1/15



## What will you focus on next?

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Play	Select	Play	Select	Play	Select

Validate and ask a question


Navigation Help

★★★

## There is a better response.

Reflection: A reflection may help elicit more information about this goal.

[Try again](#)



**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.

# 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

# 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.

# Additional considerations



# Resources

- United Nations . (2018). Online Learning Framework. Available <https://hr.un.org/materials/online-learning-framework>
- UNICEF. Open digital educational tools for interactive online teaching and learning. Available <https://www.unicef.org/serbia/en/open-digital-educational-tools-interactive-online-teaching-and-learning>
- Web Content Accessibility Guidelines (WCAG) <http://www.w3.org/TR/WCAG/>

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