

[Tools for the Session](#)

[Challenge 1: Contextualizing Questions](#)

[Instructions:](#)

[Sample Question:](#)

[Challenge 2: Finding Errors](#)

[Instructions](#)

[Challenge 3: Using Custom Tools to Generate MCQs](#)

[Instructions:](#)

[The ACTOR Model with Examples](#)

[Full Prompt Example:](#)

[Challenge 4: Generating Questions and Problem Sets](#)

[Instructions](#)

[Challenge 5: Data Diagrams and Equations](#)

[Instructions](#)

[Challenge 6: Create an Artifact with Claude](#)

[Instructions](#)

[Export File](#)

[Final Challenge: Creating a Quiz or Problem Set](#)

[Instructions](#)

[References and Resources](#)

Tools for the Session

1. [ChatGPT](#)
2. [Claude](#)
3. [Assessment Partner](#)
4. [AI Teaching Assistant](#)

Challenge 1: Contextualizing Questions

Instructions:

1. Choose a question from your discipline or use one of the sample questions below.
2. **Contextualize** the question for a local context (e.g., geographic location, industry, or a specific problem).
3. **Evaluate** the quality of the output: Is it relevant and appropriate for your context?

Sample Question:

- Give some examples of changes in federal spending and taxes by the government that would be fiscal policy and some that would not.
- Have the spending and taxes of the U.S. federal government generally had an upward or a downward trend in the last few decades?
- What are the main categories of U.S. federal government spending?
- What is the difference between a budget deficit, a balanced budget, and a budget surplus?
- Have spending and taxes by state and local governments in the United States had a generally upward or downward trend in the last few decades?
- What are the main categories of U.S. federal government taxes?

Questions except from Principles of Economics 3e by Steven A. Greenlaw, David Shapiro, Daniel MacDonald, and others is licensed under CC BY 4.0 and available at OpenStax

Challenge 2: Finding Errors

Instructions

1. Use a complex concept from your discipline or one of the provided questions.
 2. Ask ChatGPT to generate 10 questions on the topic.
 3. Identify any inaccuracies, biases, or unclear phrasing.
 4. How would you refine the generated questions to make them more suitable?
-

Challenge 3: Using Custom Tools to Generate MCQs

Instructions:

1. Use tools like **Assessment Partner** or **AI Teaching Assistant Pro** to develop 10 multiple-choice questions (MCQs).
 - Rate the quality of the output on a scale of 1-5.
2. Assessment Partner MCQ Questions <https://assessment-partner.replit.app/mcq>
3. AI Teaching Assistant <https://www.aiteachingassistantpro.ca/multiple-choice>
4. Share your questions, ratings and reasoning in the chat

The ACTOR Model with Examples

Assign Persona: Specify that the AI takes on the role of an expert in Canadian Politics and Learning Design.

Construct Output: Specify the number of questions and format. For example: "Generate 5 multiple choice questions and 3 short answer questions."

Tailor Details: Indicate the level, context, and other key information. For instance: "Create questions suitable for an introductory-level university class on Canadian Politics. Focus on the role of the Prime Minister. Include realistic distractors, aligned with key learning outcomes about executive authority."

Offer Examples: Provide a sample question to guide the AI. For instance: "An example multiple-choice question might be: 'What is the primary role of the Prime Minister in Canada?' A. Leading the legislative process B. Representing the monarch C. Appointing members of Parliament D. Overseeing government operations (Correct answer: D)"

Refine: Ask the AI to evaluate and refine the generated questions. For example: "Ensure all distractors are plausible and modify any questions to better align with introductory-level content."

Full Prompt Example:

You are an expert in Canadian Politics and Learning Design. Please generate 5 multiple choice questions and 3 short answer questions suitable for an introductory-level university course on Canadian Politics. Focus specifically on the role and responsibilities of the Prime Minister. Include plausible distractors that reflect common misconceptions. An example multiple choice question is: 'What is the primary role of the Prime Minister in Canada?' A. Leading the legislative process B. Representing the monarch C. Appointing members of Parliament D. Overseeing government operations (Correct answer: D).

After generating the questions, review them to ensure the distractors are realistic and align with the intended learning outcomes."

Challenge 4: Generating Questions and Problem Sets

Instructions

1. Use **Claude**, **ChatGPT**, or another tool to create and refine 10 questions for your teaching context.
 2. Apply the **ACTOR prompt model** to structure your questions effectively.
 3. What patterns or limitations did you observe in the types of questions that Generative AI can effectively address?
 4. Bonus Create questions based on a PDF
-

Challenge 5: Data Diagrams and Equations

Instructions

1. Use tools like **ChatGPT**, **Wolfram Alpha**, or **Claude** to create a question that requires a chart, diagram, or equation.

2. How accurate was the AI-generated output?
3. Did the AI generate the correct output? How would you improve it?

Sample Question: A car starts from rest and accelerates uniformly over a time of 5.21 seconds for a distance of 110 m. Determine the acceleration of the car.

Challenge 6: Create an Artifact with Claude

Instructions

1. Use Claude to create an interactive that you could use to engage learners with your course content
2. Share the interactive in the chat

Example:

Create 5 interactive questions and answers about the Kolbs Learning Cycle

Export File

Hi I'd like to create a QTI 2.1 file that I can upload to Canvas LMS. Here's are the quiz details that you can use to create the quiz.. and then save it as a qti 2.1 zip file that I can upload.. please make sure the file name uses the title.. and that the qti format will successfully import the quiz and the questions into a Canvas course.

Title of the Quiz:

Benefits of Drinking Black Coffee

Number of Questions:

5

Type of Questions:

Multiple-choice, True/False

The Actual Questions and Possible Answers, Indicating the Correct Answer(s):

Question: What is one of the primary health benefits of drinking black coffee?

- A) Increases risk of heart disease
- B) Reduces risk of type 2 diabetes (Correct Answer)
- C) Causes dehydration
- D) Leads to weight gain

Question: True or False: Black coffee is high in calories.

- A) True
- B) False (Correct Answer)

Question: Which of the following vitamins is commonly found in black coffee?

- A) Vitamin C
- B) Vitamin B2 (Correct Answer)
- C) Vitamin D
- D) Vitamin A

Question: True or False: Drinking black coffee can help improve mental alertness and concentration.

- A) True (Correct Answer)
- B) False

Question: How does black coffee contribute to weight loss?

- A) By increasing appetite
- B) By boosting metabolism (Correct Answer)
- C) By adding calories
- D) By reducing physical activity

Final Challenge: Creating a Quiz or Problem Set

Instructions

1. Create a 15-question quiz or problem set that you could use in your teaching context.
2. What was your final output? How could you use this, and how much work would it take to ensure accuracy and quality?

3. How much additional work is required to ensure the AI-generated questions are accurate and of high quality?
-

References and Resources

[Demo Macroeconomics Adaptive Quiz Tool](#)

Steenbergen-Hu, S., & Cooper, H. (2014). A meta-analysis of the effectiveness of intelligent tutoring systems on college students' academic learning. *Journal of Educational Psychology*, 106(2), 331–347. <https://doi.org/10.1037/a0034752>

CTLT. (2023). *How can I use generative AI to make practice materials for my students?* UBC Centre for Teaching, Learning and Technology. Retrieved October 4, 2024, from <https://ai.cltt.ubc.ca/how-can-i-use-generative-ai-to-make-practice-materials-for-my-students/>

Mollick, E. R., & Mollick, L. (2023). *Using AI to implement effective teaching strategies in classrooms: Five strategies, including prompts* (The Wharton School, University of Pennsylvania Research Paper Series). SSRN. <https://doi.org/10.2139/ssrn.4391243>

Generative AI-powered adaptive assessment. (2024). In Wan Yahaya, Wan Ahmad Jaafar, D. Lim, N. M. Mohd Barkhaya, Z. Khlaif & M. Sanmugam (Eds.), *Power of persuasive educational technologies in enhancing learning* (). IGI Global. <https://doi.org/10.4018/979-8-3693-6397-3.ch007> UBC elink <https://go.exlibris.link/tmMY7kBs>