Generative AI Meets Active Learning

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Quick Poll

How would you describe your use of active learning?

1. Regularly
2. Sometimes
3. Rarely
4. Unsure

Learning Outcomes

By the end of this webinar, you will be able to:

- Apply prompt-writing strategies to design active learning activities

- Create interactive learning experiences using GenAI

- Evaluate AI-generated activities for alignment and rigor

- Integrate GenAI intentionally to deepen learning and reflection

What Do We Mean by Active Learning?

Active learning is not about activity.
It is about cognitive engagement.

Analysis

Evaluation

Creation

Application

Passive vs. Active Design

Passive
- Watch a lecture
- Read assigned material
- Complete a quiz
- Submit an assignment

Active
- Apply a concept to a scenario
- Analyze a real-world example
- Evaluate a solution or argument
- Revise work based on feedback

Why Active Learning Matters

Active learning supports:

- Deeper understanding

- Transfer of knowledge

- Sustained engagement

- Meaningful interaction

The Design Challenge

Designing strong active learning activities requires:

- Clear alignment with learning outcomes
- Intentional cognitive challenge
- Structured instructions and scaffolding
- Time and creative energy

And that takes time.

A Pedagogy-First Approach to AI

When integrating GenAI into active learning, consider:

- What is the learning outcome?

- What level of thinking is required?

- How will students engage with the task?

- Where does instructor feedback or facilitation occur?

Principle 1: Pedagogy Leads. Technology Assists.

Start with:

- A clearly articulated learning outcome
- The intended cognitive level
- The instructional purpose

Then use AI to:

- Brainstorm
- Draft
- Refine

Principle 2: Cognitive Challenge Must Be Intentional

Active learning requires students to:

- Analyze

- Evaluate

- Create

- Apply in new contexts

GenAI prompts must explicitly build in cognitive demand.

Principle 3: Instructor Judgment Is Essential

AI output should be reviewed for:

- Alignment with outcomes
- Cognitive rigor
- Clarity of instructions
- Accessibility and inclusivity
- Opportunities for feedback or revision

Principle 4: Design for Manageability

Thoughtful integration looks like:

- Strengthening one discussion prompt

- Adding structure to a case study

- Building reflection into an assignment

- Refining an existing activity

Not redesigning an entire course.

Prompt Template

Design an active learning activity for a **[course level]**, **[course name/discipline]**.

Learning outcome: **[insert outcome]**.

The activity should require students to analyze, evaluate, or create.

Include clear instructions, estimated time, and 2–3 guiding questions.

If collaborative, define student roles.

Ensure alignment with the learning outcome.

Example Prompt

Design an active learning activity for an **Introduction to Psychology course (asynchronous online)**.

Learning outcome: By the end of this course, students will be able to analyze how major psychological theories explain human behavior in real-world contexts.

The activity should require students to analyze and evaluate competing theoretical explanations.

Include clear instructions, estimated time (15–25 minutes), and 2–3 guiding questions.

If collaborative, define student roles.

Ensure alignment with the learning outcome.

Example AI-Generated Activity (Condensed)

- **Activity:** Applying Psychological Theories to a Real-World Case
  Time: 20–25 minutes | Asynchronous discussion (groups of 3–4)

- **Task:**
  - Analyze a case using two psychological theories
  - Evaluate which explanation is more persuasive
  - Justify your reasoning using course concepts

- **Guiding Questions:**
  1. What assumptions does each theory make?
  2. How does each theory explain the behavior?
  3. Which explanation is stronger — and why?

- **Optional Roles:** Theory Analyst A | Theory Analyst B | Synthesis Lead | Evidence Reviewer

Refine the AI-Generated Activity

Original (Excerpt)

- Analyze a case using two psychological theories

- Evaluate which explanation is more persuasive

- Justify your reasoning using course concepts

Refined (Improved Version)

- Analyze the case using two assigned theories (150–200 words each)

- Evaluate which explanation is stronger using two course concepts

- Post one peer response identifying one strength and one limitation

- Estimated time: 20 minutes

The Design Cycle

A practical way to address the design challenge.

- Start with the learning outcome.

- Define the cognitive demand.

- Use AI to draft.

- Evaluate critically.

- Refine intentionally.

Try the Design Cycle

Choose one learning outcome from your course.

Using the prompt template:

- Specify the course level and discipline

- Insert your learning outcome

- Require analysis, evaluation, or creation

- Add estimated time and 2–3 guiding questions

Take 3–4 minutes to draft.

Optional: Experiment with a GenAI tool if available.

Quick Reflection

In one word, what did the template help you clarify?

Type **one word** in chat (e.g., Alignment, Clarity, Rigor)

Deciding When AI Adds Value

Use AI when it helps you:

• Strengthen alignment with learning outcomes

• Increase cognitive engagement

• Clarify instructions and expectations

• Save drafting time without reducing rigor

Reconsider AI when it:

• Replaces meaningful instructor interaction

• Lowers cognitive demand

• Creates barriers to access or equity

• Shifts thinking away from students

Comments or Questions?

**Please submit using the
Q&A feature**

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