

CTEL Course Resource Guide

Using AI to Support Active Learning Strategies

Key Concepts & Highlights

Generative AI can support active learning by helping students brainstorm, question, reflect, revise, and apply course concepts more deeply. Rather than using AI as an answer generator, faculty can design activities that position AI as a learning partner. These strategies encourage student engagement, collaboration, metacognition, and critical thinking while keeping faculty oversight and course learning outcomes at the center.

Recommended Strategies & Practices for Implementation

1. Strategy: Use AI to Support Think-Pair-Share

Why it matters:

Think-Pair-Share gives students time to process ideas independently before discussing them with classmates. AI can help students clarify their thinking before the discussion, which may increase participation and confidence.

How to implement:

- Give students a course-related question, problem, or short reading passage.
- Ask students to write their initial response without AI.
- Allow students to use AI to ask clarifying questions or identify gaps in their reasoning.
- Have students discuss their revised thinking with a partner or small group.
- Invite students or groups to share key insights with the class.

2. Strategy: Use AI as a Small-Group Thought Partner

Why it matters:

Small-group problem-solving encourages collaboration and application. AI can help groups test their reasoning, generate questions, or consider alternative approaches without taking over the task.

How to implement:

- Give students a scenario, case study, sample paragraph, problem, or text-based question.

- Assign each group a specific role or task, such as evaluator, summarizer, or evidence finder.
- Allow groups to ask AI for questions, counterpoints, or suggestions.
- Require students to decide which AI suggestions are useful and which should be rejected.
- Have groups explain their final answer and how AI influenced or did not influence their thinking.

Quick Tips

- Start small with one active learning activity.
- Ask students to think independently before using AI.
- Require students to explain how they used AI and what they changed.
- Keep AI use connected to the course learning outcome.
- Remind students that AI can support thinking but should not replace their own work.
- Use AI outputs as a starting point for discussion, revision, or reflection.

Additional Resources

- [Microsoft Education AI Toolkit](#): Practical frameworks and curated resources for responsible AI adoption in education.
- [AI-Powered Teaching with Microsoft Education](#): A Microsoft Learn pathway on responsible AI use, assessment, AI literacy, and classroom implementation.
- [AI Pedagogy Project](#): Open-access teaching strategies, AI guidance, and classroom assignments that encourage critical engagement with AI.
- [EDUCAUSE: Artificial Intelligence](#): Higher education resources and research related to artificial intelligence in teaching and learning.
- [Google NotebookLM](#): A source-grounded AI tool that can support inquiry, synthesis, questioning, and study activities.
- [Microsoft Forms](#): A tool for creating polls, knowledge checks, reflection activities, and formative assessments.
- [D2L Discussions](#): Guidance for facilitating online discussion, reflection, and collaborative learning in Brightspace.
- [Broward College Artificial Intelligence in Higher Education Guide](#): Broward College Library guidance and resources on artificial intelligence in higher education.

- [CTEL Faculty Resources](#): Broward College faculty-development resources and professional learning opportunities.