Mc Graw Hill

Teaching with AI:

Practical Tips for Educators

Artificial Intelligence (AI) is becoming an everyday reality in education.

But it comes with challenges: What about academic integrity? How do we address biases? And how can we use AI ethically without replacing the human touch that makes teaching so impactful?

This guide will help you navigate the dynamic and evolving world of AI in higher education while keeping your classroom ethical, engaging, and student-centered. Whether you're curious about using AI to enhance your teaching, or worried about students misusing it, you'll find practical tips, real-world examples, and insights from educators who've been experimenting with AI in their classrooms.

Why Instructors Should Care



Save time AI can streamline grading, feedback, and lesson planning, giving you more time to focus on teaching.



Boost engagement Creative applications like AI-generated music and simulations can make learning more interactive and memorable.



Prepare students for the future. AI is shaping industries worldwide. By teaching students to use it responsibly, you're equipping them with essential skills for their future careers.



Address ethical concerns AI raises important questions about authorship, bias, and integrity. This guide will help you tackle these challenges head-on.

ONE

Writing and Ethics with AI

AI tools can help students with writing tasks, but they also raise ethical questions about authorship and originality.

Tips for Instructors

- **Discuss ethical use:** Guide students to use AI as a tool for brainstorming and refining ideas, not as a substitute for original thought.
- **Focus on transparency:** Encourage students to disclose when they've used AI in their work and explain how it contributed to their process.
- **Explore authorship:** Use class discussions to examine what constitutes authorship in the age of AI and how ethical boundaries can be maintained.

Learn about the literacy revolution and AI:
mcgrawhill.info/literacyrevolution»

> "ChatGPT is a literacy revolution, but it's also a teachable moment. It forces us to ask: What does it mean to write ethically in a world where machines can write for us?"
>
> —Michele Poulos
> Director of Online & Academic Program Strategy, Pima Medical Institute

TWO

Teaching Critical Thinking with AI

Students may assume AI-generated content is accurate. Teaching them to critically evaluate AI outputs is essential for developing their reasoning and skepticism.

Tips for Instructors

- **Assign fact-checking tasks:** Have students generate AI responses to prompts and spend the bulk of the assignment verifying the accuracy of the information. This works well for research-based fields.
- **Compare AI summaries with original sources:** Ask students to identify gaps, lost nuances, or inaccuracies in AI-generated summaries. This is particularly effective in literature, philosophy, and social sciences.
- **Reverse-engineer flaws AI answers:** Show students an incorrect AI response and ask them to infer the original prompt. Then, have them revise both the prompt and the AI's response to improve accuracy and relevance.

Learn about AI and critical thinking skills:
mcgrawhill.info/aicriticalthinking»

> "AI is not an authority. It's a pattern-based prediction engine, prone to hallucinations and biases. And that means it creates a perfect scenario to teach critical thinking: a source that sounds smart but might be wrong."
>
> —Kyle Moninger
> Associate Professor, Bowling Green State University

THREE

Using AI for Creative Teaching

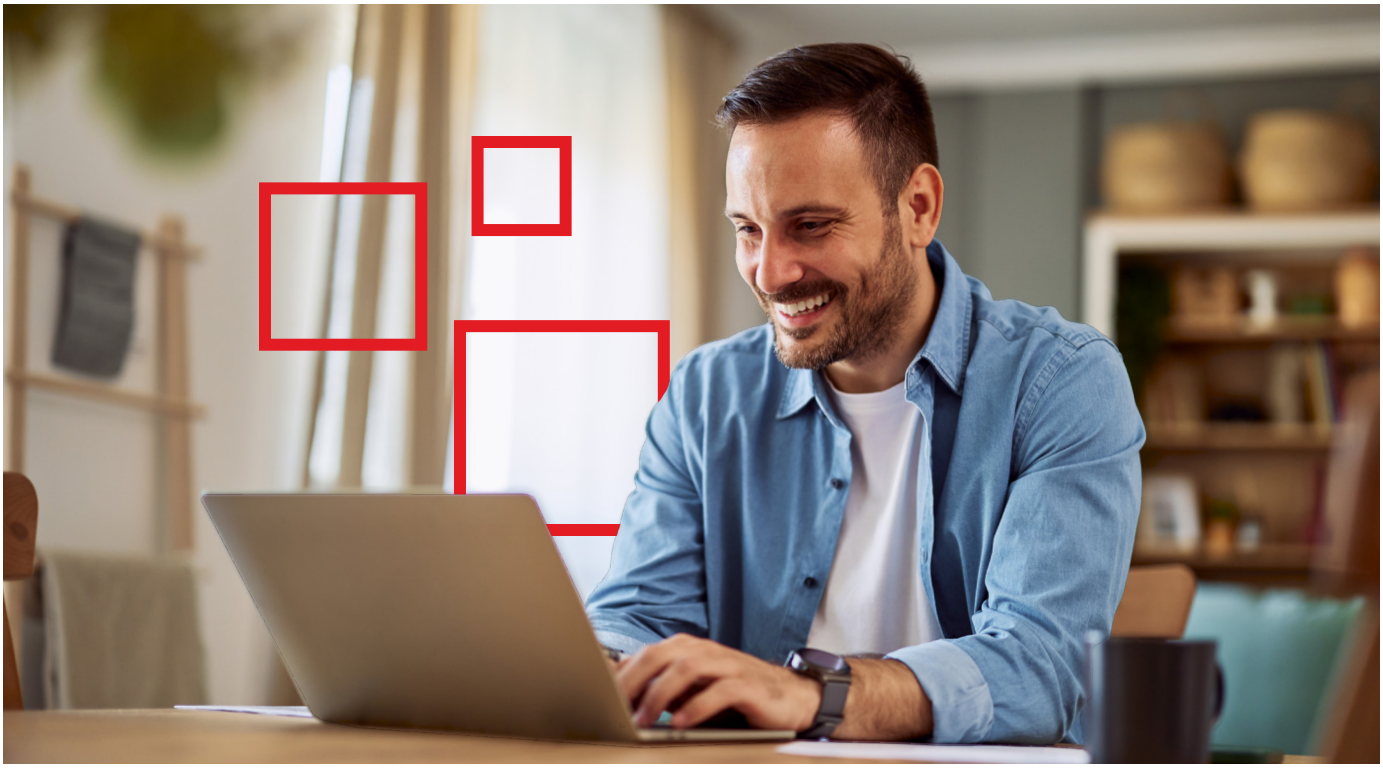
AI can enhance engagement by leveraging creative applications like music, simulations, and brainstorming activities.

Tips for Instructors

- **Incorporate simulations:** Use AI-powered simulations to provide real-time feedback and hands-on learning experiences. These interactive simulations utilize artificial intelligence to create realistic scenarios that adapt in real time to a student's decisions and responses, making learning more impactful.
- **Promote team brainstorming:** Have students use AI to generate questions and scenarios, then refine them collaboratively. This builds critical thinking and teamwork skills.
- **Use AI-generated music:** Turn complex concepts into songs using AI tools to generate lyrics and backing tracks. This approach combines science, technology, and creativity, making learning more memorable.

Learn about AI and creative teaching strategies:
mcgrawhill.info/aimusicmicrobiology»

> When I play these songs, the energy in the room changes. Students smile, tap their feet, and sometimes even sing along. Later, during reviews or exams, they recall the lyrics.
>
> —Dr. Gabriel Guzman
> Biotechnology Laboratory Technician Program Coordinator, Triton-College



FOUR

AI and Assessment

AI can support formative assessments but requires careful implementation to avoid over-reliance.

Tips for Instructors

- **Model peer feedback:** Use AI to provide sample feedback on student work, then assign students to critique the AI's feedback. This exposes them to multiple perspectives and sharpens their evaluation skills.
- **Explore process-based assessments:** Use AI tools to give feedback on drafts, focusing on formative assessments rather than final grades.
- **Encourage creativity and motivation:** Design assessments that require students to personalize and expand AI-generated content, avoiding generic responses.

Learn about AI and assessment:
mcgrawhill.info/airesearchimplications»

> Some research suggests AI might eventually support more formative, process-based assessment. But other studies warn about over-reliance and potential harm to student motivation and creativity
>
> —Kyle Moninger
> Associate Professor, Bowling Green State University

FIVE

Identifying AI Plagiarism

AI-generated content can be difficult to detect; look for a lack of personalization and specificity.

Tips for Instructors

- **Look for formatting tells:** AI-generated work often features overly consistent sentence lengths, generic responses, and unusual symbols like long dashes or decorative headings.
- **Test student understanding:** Use student responses in class discussions to determine whether they understand the vocabulary or concepts they submitted.
- **Emphasize proofreading:** Teach students to personalize and refine AI-generated content to make it their own.

Learn about identifying AI plagiarism:
mcgrawhill.info/aiplagiarism»

> The specific AI format of introduction, even paragraphs, typical bullet points that are not explained, and 'Conclusion' or 'in summary' lines allow us to see clearly that these were not student made.
>
> —Therese Gedemer
> Professor of Business Management, Marian University

SIX

Addressing Bias in AI Systems

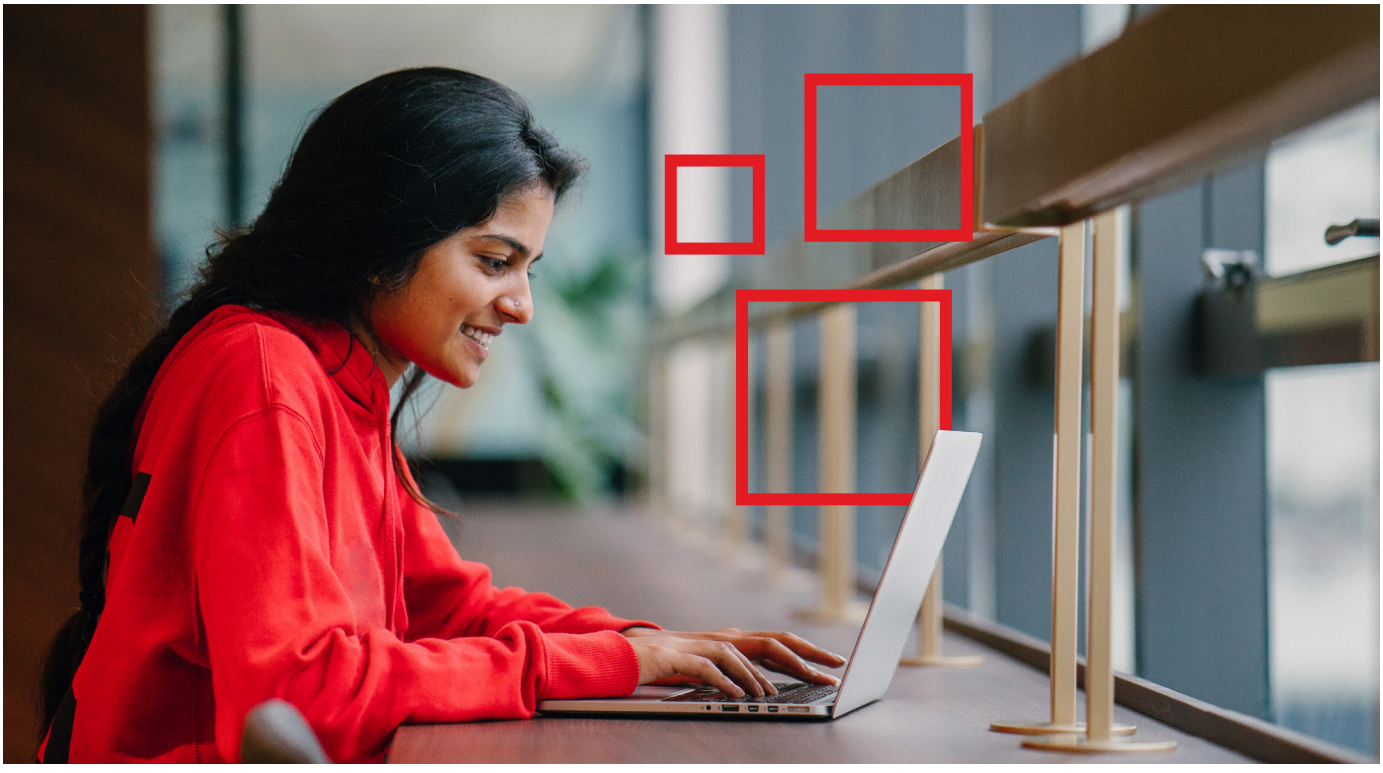
AI systems replicate biases present in their training data, which can impact fairness in education.

Tips for Instructors

- **Generate responses to diverse prompts:** Use AI tools to create outputs related to topics like gender, race, politics, or global events. Analyze the tone, framing, and assumptions in class discussions.
- **Lead discussions on bias:** Encourage students to identify what the AI got right, what it missed, and the biases reflected in its outputs. This fosters awareness of cultural, historical, and ideological biases.
- **Integrate AI literacy into the curriculum:** Teach students how AI works, its limitations, and when to use it. Connect AI literacy to research, writing, and problem-solving tasks.

Learn about addressing bias in AI systems:
mcgrawhill.info/aicriticalthinking»

> AI tools reflect the data they were trained on. That means cultural, historical, and ideological biases are often baked into their responses.
>
> —Kyle Moninger
> Associate Professor, Bowling Green State University



SEVEN

AI and Learning Personalization

AI tools can adapt to individual student needs, offering personalized learning experiences.

Tips for Instructors

- **Experiment with AI-driven feedback tools:** Use AI to provide personalized feedback on low-stakes assignments but monitor whether students find the feedback helpful or confusing. Involve students in evaluating the tool's effectiveness.
- **Try intelligent tutoring systems:** These systems show promise for foundational skills in math and reading. Use them to supplement instruction but ensure they genuinely enhance learning rather than just speeding up tasks.

Learn about AI and assessment:
mcgrawhill.info/airesearchimplications»

> AI tools can adapt to individual student needs in real time—at least in theory. Research on intelligent tutoring systems shows promise, especially foundational skills in math and reading. But studies also caution that 'adaptive' doesn't always mean 'effective.'
>
> —Kyle Moninger
> Associate Professor, Bowling Green State University



The Takeaway

AI is a powerful tool that can enhance education when used thoughtfully. By integrating AI into creative strategies, instructors can teach students to use AI ethically, avoid plagiarism, evaluate AI outputs, think critically, and identify biases. Instructors can prepare students for a tech-driven future.



We invite you to learn more.

mheducation.com/highered»