DEMYSTIFYING AI: A PRACTICAL INTRODUCTION FOR INSTRUCTORS



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Demystifying AI: A Practical Introduction for Instructors

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This text was compiled on 10/16/2026

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About the Book

Message from the Author

✉️ **AI for Teaching: Foundations and First Steps**

Welcome—and thank you for taking the time to explore this resource.

Whether you're feeling curious, cautious, or overwhelmed by artificial intelligence (AI), you're not alone. Like many educators, I've been watching AI evolve from a distant concept into a daily reality. What once felt futuristic now shows up in grading tools, writing assistants, and even the questions our students are asking. This book was created to help instructors navigate that shift—with clarity, curiosity, and confidence.

This isn't a book about becoming an AI expert. It's a book about starting where you are. It's about understanding what AI is, how it works at a basic level, and how it can (and can't) support your teaching. It's written for instructors across disciplines and levels of technical comfort, with real-world teaching in mind—not theoretical research or tech-sector hype.

In this book, you'll find:

- Plain-language explanations of AI tools and terms
- Practical examples of how instructors are using AI to save time, support students, and strengthen engagement
- Space for reflection about ethics, equity, and the future of learning

I believe we don't need to fear AI, but we do need to understand it. And that starts with honest, accessible conversations grounded in education, not automation.

If this book helps you feel even 10% more prepared to explore, question, or try a tool, then it's doing its job. Thank you for being willing to learn alongside your students, your colleagues, and the rest of us, navigating this together.

Warmly,
Pamela L. Huntington
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Fall 2025

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1: AN INTRODUCTION TO AI

Artificial intelligence (AI) is showing up everywhere—from recommendation engines and writing tools to virtual assistants and educational platforms. But what is AI, really? And why is it becoming so important in higher education?

AI can feel complex or intimidating, especially when it's generating essays, feedback, or lesson plans with just a few typed words. But at its core, AI isn't magic. It doesn't "think" the way humans do—it follows learned patterns to generate what it predicts will be useful, based on data it has seen before.

This section is designed to give you a grounded, jargon-free introduction to AI—no coding background or tech expertise required. Whether you're brand new to the topic or looking to fill in the gaps, you'll walk away with a solid foundation for understanding AI in a teaching and learning context.

1.1: What is a language model?

1.1.1: How language models generate text by predicting the next word

1.1.2: Examples of large language models used in education (e.g., ChatGPT, Bard)

1.1.3: How Instructors and Students Are Using Large Language Models in the Classroom

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🧩 What You'll Explore in This Chapter

- What artificial intelligence is—and isn't
- The different types of AI you're likely to encounter in education

- What generative AI does and how it differs from other tools
- How machine learning helps AI “learn” from data
- Where you’re already using AI in everyday life (often without realizing it)
- Why understanding the basics helps you guide student use and make informed instructional choices

By the end of this section, you’ll have a working understanding of what AI is, how it functions in educational settings, and how to begin thinking critically about its role in your teaching practice.

🔍 Chapter Takeaway

AI is no longer a futuristic concept—it’s already shaping the way students learn and instructors teach. You don’t need to be an expert to engage with it. A basic understanding of what AI is—and what it isn’t—can help you make thoughtful decisions, ask better questions, and support your students more effectively. As you move through this guide, keep one thing in mind: your curiosity, judgment, and experience as an educator are more important than any tool. You're already prepared to lead this conversation—this guide will just help you do it with more clarity and confidence.

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1.1: WHAT IS A LANGUAGE MODEL?

Overview

Language models are the foundation of many AI tools used in education today—including the one writing this sentence. But what exactly is a language model, and how does it work?

In this section, we'll break down what a language model is, how it generates text, and why tools like ChatGPT can produce such fluent, human-like responses. You'll learn that language models don't *understand* language the way humans do—they work by recognizing patterns and predicting the most likely next word based on massive amounts of data.

By the end of this section, you'll have a better grasp of what's happening behind the scenes when you ask an AI to summarize a paragraph, write a quiz question, or explain a concept to your students.

???? Example 1: "How a Language Model Predicts Words"

Purpose: Show how AI generates text by predicting the next word based on probability.

Description to include:

> Language models don't understand meaning—they predict what comes next. This illustration shows how a model uses patterns from training data to assign probabilities to words, then chooses the most likely one.

Visual layout idea:
A sentence with a blank at the end:

> "The cat sat on the ___"

Below the blank, display probability scores:

- **mat** (70%) ✅
- **table** (20%)
- **roof** (5%)
- **banana** (0.5%)

???? Example 2: "Training a Language Model"

Purpose: Explain the concept of learning from large datasets.

Description to include:

> Language models are trained on enormous datasets made up of books, articles, websites, and more. During training, the model learns patterns in how words are used—but not what they *mean*.

Visual layout idea:
Left side: Icons for data sources (books, Wikipedia, blogs, code)
Right side: A pipeline leading to a "language model" icon (a brain or AI chip)
Bottom: Label: "*Learns from patterns, not understanding*"

???? Example 3: "AI-Generated Text vs. Human Thinking"

Purpose: Emphasize that fluency ≠ understanding.

Description to include:

A language model can sound fluent and confident without actually understanding what it's saying. This comparison shows how AI predicts, while humans reason and reflect.

Visual layout idea:

	Human	Language Model
Thinks ahead	✅ Yes	???? No
Reflects	✅ Yes	???? No
Predicts	✅ Sometimes	✅ Always
Understands	✅ Yes	???? No

✅ Quick Reflection

Which AI terms in this section were new—or felt unclear at first? Think about how understanding the difference between terms like "machine learning," "large language model," and "prompt" might help you talk more confidently about AI with colleagues or guide students more effectively in your teaching.

1.1.1: How language models generate text by predicting the next word

1.1.2: Examples of large language models used in education (e.g., ChatGPT, Bard)

1.1.3: How Instructors and Students Are Using Large Language Models in the Classroom

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1.1.1: How language models generate text by predicting the next word

Not Understanding—Just Guessing Well

At the heart of language models like ChatGPT is a surprisingly simple mechanism: **prediction**. When you give the AI a prompt, it doesn't "think" about what to say next—it uses probability to guess which word is most likely to come next based on everything it has seen before.

This process happens **one word at a time**. And with each new word, the AI recalculates what the next most likely word should be. It's like high-speed autocomplete, operating on a much larger scale.

🧠 Example: Prediction in Action

Prompt:

> "The mitochondria is the..."

The AI predicts:

> "...powerhouse of the cell."

Why? Because those words often appear together in its training data. The model has seen that phrase repeated so many times in textbooks and online content that it becomes a highly likely sequence.

🔁 It's All About Probability

Here's what's happening under the hood:

- The AI breaks down your input into small units (called tokens).
- It looks at the sequence and assigns a probability to every possible next token.
- It picks the one with the **highest probability**.
- Then it repeats that process again. And again. And again.

The result? A response that often *sounds* fluent and accurate—even though the AI has no idea what it's saying.

🎓 Why This Matters for Instructors

- AI doesn't "know" facts—it knows **what looks like a fact**.
- It can **sound confident but be wrong**, especially with unfamiliar or complex topics.
- The fluency of the text can trick students (and instructors) into over-trusting the content.

Understanding this prediction-based process helps instructors **evaluate AI output more critically**—and teach students to do the same.

✅ Quick Reflection

> *Were you surprised to learn that AI is just predicting the next word, not understanding meaning? Think about how this might affect the way you evaluate AI-generated content—or how your students might interpret something that sounds*

fluent but isn't necessarily accurate.

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1.1.2: Examples of large language models used in education (e.g., ChatGPT, Bard)

From ChatGPT to Bard: What's Out There?

Large language models (LLMs) are behind many of the AI tools showing up in education today. These models process enormous amounts of text and respond to prompts by generating text that looks like something a human might write. While you don't need to memorize how each one works, it helps to know what's available—and how it might show up in your classroom.

Here are a few widely used LLMs that are relevant to teaching, learning, and academic support:

💬 ChatGPT (OpenAI)

- Perhaps the most recognizable LLM in education.
- ChatGPT can summarize readings, answer questions, brainstorm topics, and even draft outlines or rubrics.
- Comes in different versions (e.g., GPT-3.5 is free; GPT-4 is more advanced but subscription-based).
- Often used by students for writing assistance, and by instructors for planning and feedback.

🔍 Google Bard (Gemini)

- Developed by Google and connected to real-time web data (depending on version).
- Can help instructors find resources, generate content, or compare ideas with live references.
- Integrates easily with Google Workspace tools like Docs and Gmail.

🧠 Claude (Anthropic)

- Known for its long-form reasoning and ability to handle large documents or full syllabi.
- Often praised for producing thoughtful, "gentler" responses—ideal for more nuanced teaching tasks.

👩‍💻 Microsoft Copilot

- Integrated into tools many instructors already use, like Word, Excel, and PowerPoint.
- Helps with drafting text, summarizing notes, and reformatting content within Microsoft 365.
- Offers AI-assisted lesson prep right inside familiar software.

🛠️ Other Notables

- **Perplexity AI**: Designed to answer questions with cited sources.
- **YouChat**: A student-friendly assistant embedded in a search engine.
- **Quillbot**: Focused on paraphrasing and rewriting academic text.

📌 Why This Matters for Instructor

As these tools become more common, students may start using them without fully understanding how they work—or how to use them responsibly. Instructors who are familiar with the tools can better guide appropriate use, build critical literacy, and explore ways AI might enhance their own teaching practices.

✅ Quick Reflection

> *Which AI tools from this section have you heard of—or even used? Think about how these tools might already be showing up in your students' workflows. How might knowing the differences between them help you guide responsible use or enhance your own teaching strategies?*

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1.1.3: How Instructors and Students Are Using Large Language Models in the Classroom

While large language models (LLMs) like ChatGPT and Bard are powerful, how they're used in real college classrooms varies widely—from time-saving tools for instructors to writing support for students. This section focuses on the **actual use cases** instructors and students are exploring (and sometimes experimenting with).

👩‍🏫 How Instructors Are Using LLMs

- **Drafting Course Materials**
  Instructors use AI to help write or revise learning objectives, quiz questions, rubrics, and even discussion prompts.
- **Planning Lessons and Lectures**
  Some faculty prompt AI tools to summarize research, propose activity ideas, or generate case study scenarios.
- **Writing Communication**
  Many use LLMs to draft announcements, outreach emails, or syllabus sections—saving time while staying student-friendly.
- **Creating Accessible or Alternative Formats**
  Instructors have used AI to simplify complex language, create outlines, or generate materials that meet UDL (Universal Design for Learning) needs.

🎓 How Students Are Using LLMs

- **Brainstorming and Outlining**
  Students may prompt ChatGPT to help generate essay ideas, create outlines, or explain difficult concepts in plain language.
- **Language Support**
  For multilingual students, AI tools can provide paraphrased explanations or grammar help.
- **Studying and Review**
  Some use AI to quiz themselves, summarize readings, or compare answers across models.

  ⚠️ *Important note:* Student use of AI may or may not align with academic integrity policies. Instructors are encouraged to set clear expectations and create space for discussion.

🧠 Why This Matters for Instructors

Understanding how LLMs are used helps instructors:

- Anticipate and address student behaviors
- Guide ethical and appropriate use
- Consider ways to incorporate AI meaningfully into teaching practice

✅ Quick Reflection

> *Which of these classroom uses of AI felt familiar—or surprising? Think about how your students might already be using LLMs in their academic work. How might understanding these patterns shape the way you design assignments, set expectations, or engage in conversations about academic integrity?*

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1.2: WHAT DOES AI "LEARN" FROM? (BASICS OF TRAINING DATA)

Understanding the Basics of Training Data

When we say AI “learns,” we don’t mean it gains understanding like a student in a classroom. Instead, AI systems—especially language models like ChatGPT—are trained on massive amounts of data so they can predict patterns, not build true comprehension.

???? So What Is Training Data?

Training data is the collection of text, images, or other digital content that an AI model studies during its development. It’s kind of like a digital library the model reads millions (or billions) of times to figure out how people use language or describe things.

For example:

- A **language model** like ChatGPT is trained on books, Wikipedia, news articles, websites, and open forums.
- An **image model** like DALL·E is trained on pictures and their associated captions.
- Some educational tools are trained on specific types of writing—like student essays or textbook explanations.

> Think of training data as the AI’s “learning environment.” It’s how the model learns what words tend to come next, how questions are usually answered, and how tone or format might change based on the task.

⚠️ Why the Data Matters

Because AI models learn from existing content, the **quality** and **biases** in the training data directly affect how the model behaves. That means:

- **Outdated sources = outdated information**
- **Biased sources = biased responses**
- **Inaccurate sources = potentially inaccurate output**

AI doesn’t know what’s true or fair. It only knows what it has seen in its training.

???? Key Takeaways for Instructors

- AI doesn't "understand" content—it mirrors what it's seen during training.
- The data AI models learn from shapes what they’re good (and bad) at.
- As instructors, it's important to **verify**, **contextualize**, and **guide** students in using AI tools critically.

1.2.1: Overview of training data sources (books, websites, code, etc.)

1.2.2: The role of data quality and quantity in shaping AI behavior

1.2.3: Limitations- bias, outdated info, and misinformation in training sets

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1.2.1: Overview of training data sources (books, websites, code, etc.)

What Language Models Read Before They Generate

Before an AI like ChatGPT can respond to a question or write an essay, it has to be trained. But trained on what?

Language models are trained on **massive collections of text** pulled from publicly available or licensed sources. These texts are used to help the model learn how humans use language—how we phrase questions, explain ideas, or structure arguments.

📘 Common Types of Training Data

1. **Books**
   Many large language models include digitized books (both fiction and nonfiction) to learn sentence structure, tone, and storytelling.

2. **Websites and Forums**
   Content from Wikipedia, blogs, Reddit, and other public forums is used to expose the model to real-world conversations and knowledge.

3. **News Articles**
   These help the model understand journalistic tone and factual reporting structures—though they may also reflect bias and dated information.

4. **Instructional and Academic Materials**
   Some models are trained on educational content like course notes, scientific papers, or help documentation, though most do not access subscription-based or paywalled sources like JSTOR or academic databases.

5. **Code and Programming Repositories**
   Tools like GitHub provide models with source code to support programming-related tasks (relevant in models like Copilot).

❗ What's NOT Typically Included

- Private data or internal school documents (unless intentionally uploaded)
- Most copyrighted, gated academic content
- Real-time or recent web updates (unless using a model with browsing)

🧠 Why This Matters for Instructors

- The data a model is trained on shapes how it "speaks," what topics it knows, and what perspectives it reflects.
- If the training data is biased, incomplete, or outdated, the output will be too.
- Knowing where the model "learned" from can help you spot when it's out of its depth—or missing key perspectives.

✅ Quick Reflection

> *Did anything about the types of texts used to train AI surprise you? Think about how the sources these models were exposed to—like public websites, books, and forums—might influence the quality or bias of their responses. How might this shape the way you evaluate AI-generated content in your own teaching—or help students think more critically about the answers they receive?*

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1.2.2: The role of data quality and quantity in shaping AI behavior

What AI “Learns” Depends on What It Sees

Language models like ChatGPT learn by consuming vast amounts of data. But not all data is created equal. The **quantity** of data determines how broadly the AI can respond, while the **quality** of data determines how accurately, fairly, and clearly it does so.

In short: the AI’s behavior is a reflection of the material it was trained on.

📏 Why Quantity Matters

- **More data = more exposure to language patterns.**
  Millions of examples help the model get better at predicting text and sounding fluent across many subjects.
- **Diverse data improves generalization.**
  A wide range of sources means the model can write in different tones, summarize different genres, or switch between academic and conversational styles.

> 🧠 Analogy: It’s like training a student. The more books they read, the more confident they become in expressing ideas across different topics.

🧹 Why Quality Matters

- **Biased or misleading data = biased or misleading output.**
  If an AI sees mostly Western, English-language content, it may overlook or misrepresent other cultural or linguistic perspectives.
- **Errors in training = errors in output.**
  AI doesn’t fact-check its sources—it mirrors them. If it’s trained on bad information, it may confidently pass that on.
- **Reinforced stereotypes and misinformation.**
  If harmful language or assumptions show up often in the training data, the model may reproduce them—even unintentionally.

🎓 Why This Matters for Instructors

- AI responses reflect the strengths *and flaws* of the data it has seen.
- When a student asks ChatGPT for help, the quality of that response depends on what the model was trained to replicate.
- As educators, it’s important to approach AI output like we would a student draft: with curiosity, critique, and context.

✅ Quick Reflection

> *How does knowing that AI reflects the quality and bias of its training data change the way you view its responses? Think about how this might affect your trust in AI-generated content—or how you guide students in evaluating what AI tools produce in your course.*

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1.2.3: Limitations- bias, outdated info, and misinformation in training sets

Why AI Can Reflect—and Amplify—Flawed Sources

AI models are only as good as the data they're trained on. While training datasets are massive and diverse, they also include content that is **biased, outdated, or outright incorrect**. Since AI doesn't fact-check or filter for fairness, it can repeat—and even reinforce—those issues in its output.

Understanding these limitations is essential when using AI in the classroom or evaluating student use of it.

🧭 Bias in Training Data

AI reflects the social and cultural values found in its data. That means:

- **Cultural and linguistic bias**
  English-speaking, Western-centric sources dominate most training sets, potentially excluding or minimizing global perspectives.
- **Stereotypes and assumptions**
  AI can unintentionally reproduce racial, gender, or economic stereotypes present in the content it was trained on.
- **Imbalanced representation**
  Marginalized voices are often underrepresented in public datasets, which affects how AI discusses issues like identity, history, and equity.

  🔍 *Example:* When asked to generate "a professional person," an AI might default to a white man in a business suit—not because it knows that's accurate, but because that's what it has "seen" the most.

📅 Outdated Information

Most AI models were trained on data that stops at a certain point (e.g., GPT-3.5 is trained on content up to September 2021). As a result:

- They don't include recent research, news, or evolving terminology.
- They may provide inaccurate guidance on current policies, events, or technologies.

  🧠 *Instructor tip:* Don't rely on AI for anything time-sensitive or policy-related unless you're using a model that includes real-time browsing.

🧯 Misinformation and Inaccuracy

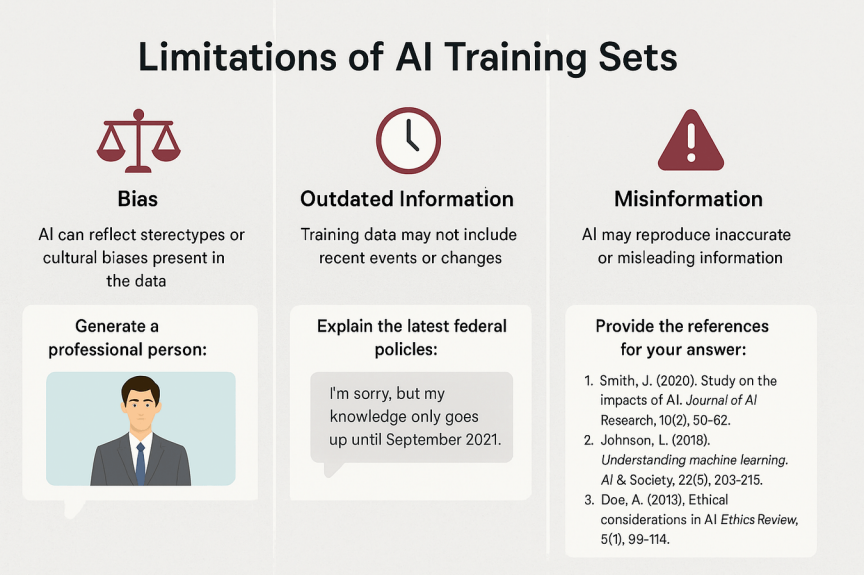
AI doesn't know what's true—it only knows what it has "read." If incorrect facts or conspiracy theories were common in its training data, the model may echo them unless carefully filtered.

- **Made-up citations** (hallucinations)
- **Misattributed quotes**
- **Overconfident false answers**

These issues are especially common when AI is prompted to generate academic-sounding text or simulate expertise.

🎓 Why This Matters for Instructors

- Students may over-trust fluent but flawed responses.
- Educators should verify AI-generated content, especially for instructional use.
- Teaching with AI is also an opportunity to model **critical evaluation of digital sources**.



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1.3: THE ROLE OF ALGORITHMS IN PREDICTION AND CONTENT GENERATION

When we hear the word “algorithm,” it can sound like something secret or overly technical. But at its core, an algorithm is simply a **set of rules or instructions** a computer follows to complete a task. In the case of AI, algorithms are what drive the process of recognizing patterns, making predictions, and generating content.

???? What Is an Algorithm?

Think of an algorithm like a recipe. It tells the AI what steps to take when it receives a prompt. For example:

- If the prompt is a question, the algorithm searches for the most likely response based on its training.
- If the task is to write a paragraph, the algorithm predicts one word at a time—each based on the words that came before it.

The algorithm doesn’t “understand” the topic. It just follows instructions to make the output sound plausible based on probability.

???? How Prediction Works

AI language models generate text by **predicting the next most likely word**, one word at a time. They’ve seen so many examples in their training that they’ve learned how language typically works.

For example, if the prompt is:

> "Photosynthesis is the process by which..."

The model might predict:

> "...plants convert sunlight into energy."

Because it has seen that phrasing in its training data hundreds of thousands of times.

The same goes for image generation. If the prompt is:

> "Draw a tree in autumn next to a small red cabin"

The model predicts pixel patterns based on the visual examples it has seen during training.

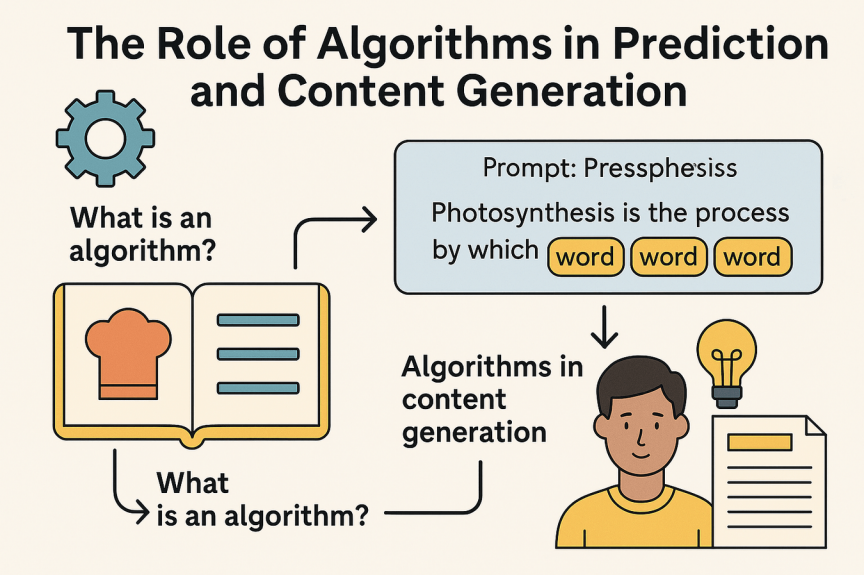
✍️ Algorithms in Content Generation

Once AI starts predicting, it doesn’t stop until it’s told to. That’s why your prompt matters—it shapes the path the algorithm takes. The AI doesn’t know if what it generates is accurate, ethical, or meaningful. It just follows instructions to assemble likely outputs, using math and rules.

???? Why It Matters for Instructors

- **AI-generated content is not fact-checked**—it’s predicted based on training patterns.
- **Your input (the prompt) guides the output**—which makes you a co-creator.
- **Algorithms shape everything** AI does—how it writes, how it completes your sentence, even how it grades (if embedded into a tool).

Understanding this helps instructors critically evaluate AI-generated content, guide student use, and make more informed decisions about when and how to integrate these tools.



1.3.1: What an algorithm is and how it powers AI decision-making

1.3.2: How AI predicts text, images, and more based on patterns

1.3.3: Key difference between rules (algorithms) and examples (training data)

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1.3.1: What an algorithm is and how it powers AI decision-making

The Recipe That Makes AI Work

When we hear the word “algorithm,” it often sounds technical, abstract, or even mysterious. But at its core, an algorithm is simply **a set of instructions**—a repeatable process the computer follows to solve a problem or complete a task.

In AI, algorithms tell the model how to **process data, recognize patterns, and generate outputs**. They are the engine behind how AI decides what to do with a question, prompt, or command.

🧠 Think of It Like a Recipe

An algorithm is like a cooking recipe:

- It tells the AI *what to do*, *in what order*, and *under what conditions*.
- The ingredients are your input (e.g., a prompt), and the output is the finished result (e.g., a paragraph, image, or summary).
- The quality of the result depends on both the instructions and the data.

> 🔍 *Example:* When you ask ChatGPT to summarize a paragraph, the algorithm runs steps that identify key points, reduce word count, and preserve meaning—based on statistical patterns it has learned.

🧩 How Algorithms Drive AI Behavior

AI algorithms:

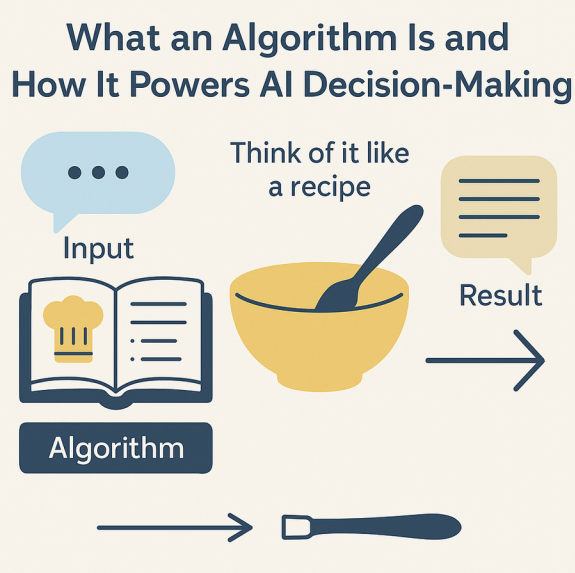
- **Break down input into smaller parts** (called tokens or data units)
- **Use mathematical models** to analyze and predict outcomes
- **Decide what comes next** based on probability, not understanding

Different models use different algorithms to optimize for speed, creativity, or accuracy—some even weigh trade-offs between fluency and factual reliability.

🎓 Why It Matters for Instructors

Understanding that AI runs on **rules, not reasoning** helps instructors:

- Avoid overestimating AI's decision-making ability
- Explain to students why AI responses can be fluent but flawed
- Guide thoughtful and critical use of AI tools in academic work



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1.3.2: How AI predicts text, images, and more based on patterns

Pattern Recognition, Not Intelligence

AI doesn't know facts. It doesn't reason or reflect. What it *does* exceptionally well is recognize patterns—and use those patterns to **predict what comes next**. Whether generating a sentence, answering a question, or creating an image, AI is simply guessing based on what it has seen before.

✍️ Predicting Text: Word by Word

When you give an AI a prompt, like:

> "Explain how climate change affects ocean currents..."

...the AI doesn't "think" about the science. It predicts the most likely words to follow based on millions of similar sentences it saw during training. It generates the output **one word at a time**, recalculating its prediction at each step.

> 🧠 Think of it as ultra-powered autocomplete—like when your phone suggests the next word in a text message.

🎨 Predicting Images: Pixel by Pixel

Image generation tools (like DALL·E or Adobe Firefly) work the same way—but with **pixels** instead of words. Based on your prompt ("a sunset over a mountain range in watercolor style"), the AI assembles a likely pattern based on thousands of similar images it's seen in its training data.

It doesn't "see" the image the way you do—it's assembling parts based on probability, not artistic intention or visual comprehension.

🎼 Beyond Text and Images

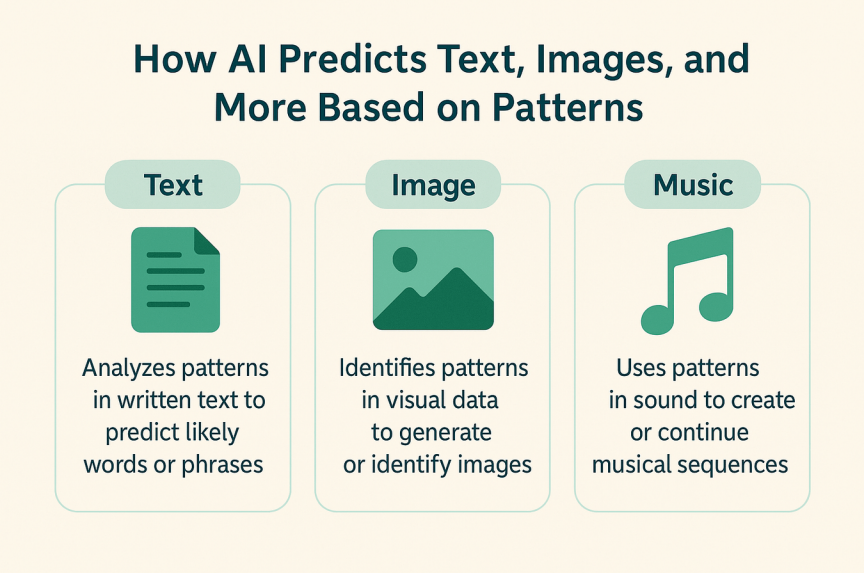
This pattern-based approach powers other types of AI too:

- **Music generators** predict note sequences
- **Speech tools** predict sound waves
- **Code generators** predict logical programming structures

No matter the medium, the core mechanism is the same: **learn the patterns → predict the output**.

🎓 Why It Matters for Instructors

- AI outputs are convincing because they're statistically likely—not because they're deeply reasoned or accurate.
- Understanding prediction helps explain **why AI sounds fluent but still gets facts or context wrong.**
- This also highlights why **prompt design** (what you ask the AI to do) matters so much.



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1.3.3: Key difference between rules (algorithms) and examples (training data)

The Instructions vs. The Inspiration

When you interact with an AI tool like ChatGPT, two components are working together behind the scenes:

1. **Algorithms** — the rules or instructions that guide the AI's behavior
2. **Training Data** — the examples the AI has seen and learned patterns from

Both are essential, but they do very different things.

⚙️ Algorithms = The Rules

Algorithms are the **set of steps** the AI follows to complete a task. They determine:

- How the AI breaks down your input
- How it assigns probabilities to possible outputs
- How it builds a response word by word (or pixel by pixel)

> Think of the algorithm like a chef's recipe: it gives the instructions, but doesn't supply the ingredients.

📚 Training Data = The Examples

Training data is the **massive library of examples** the AI has learned from—books, articles, code, images, and more. It provides the patterns the AI draws on to:

- Recognize common phrases, formats, or structures
- Know what "sounds" academic, friendly, or professional
- Simulate knowledge across a wide range of topics

> Think of training data as the chef's pantry: it supplies the ingredients, based on what's been used before.

🧠 How They Work Together

When you ask an AI to write something:

- The **algorithm** decides how to respond
- The **training data** shapes what that response looks like

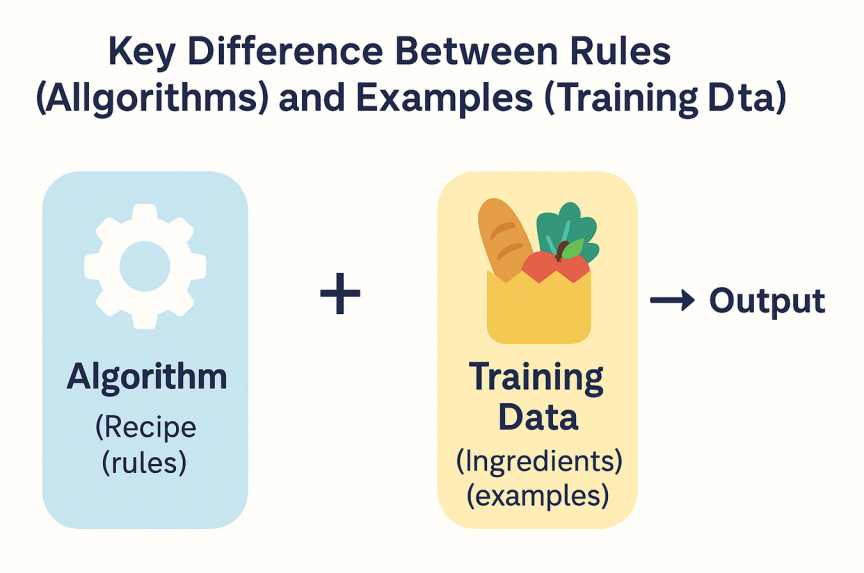
The result is a blend of structured rules and flexible pattern recognition.

🎓 Why It Matters for Instructors

Understanding this difference helps clarify why:

- AI outputs follow clear structure but can still **hallucinate** content
- Changing the algorithm (e.g., updating to GPT-4) may improve performance without changing the training data

- Even a great algorithm can't produce accurate content from poor or biased data



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1.4: EXAMPLES OF INPUT-OUTPUT PROMPTS (E.G., CHATGPT, DALL·E)

How Prompts Shape AI Responses

At the heart of AI tools like ChatGPT and DALL·E is something surprisingly simple: the prompt. A **prompt** is what you type in or say to the AI to get it started. It's the question, instruction, or idea you give—and it strongly influences the kind of output you get back.

The quality of the response depends a lot on how you phrase your input. Small changes in wording can lead to very different results. That's why experimenting with prompts is part of learning how to use AI effectively.

???? Text-Based Example: ChatGPT

Prompt 1 (broad and vague):

> "Tell me about photosynthesis."

Output:

> A general definition: "Photosynthesis is the process by which green plants use sunlight to convert water and carbon dioxide into glucose and oxygen..."

Prompt 2 (specific and contextualized):

> "In one paragraph, explain photosynthesis for a community college biology class using simple language and a real-world analogy."

Output:

> A more tailored response with clarity and relevance:
> "Photosynthesis is like a solar-powered kitchen inside plant leaves. Plants take sunlight, water, and air and turn them into food (sugar) and oxygen. It's how they feed themselves and give us the air we breathe."

???? Image-Based Example: DALL·E

Prompt 1:

> "A tree in autumn."

Output:

> A generic image of a tree with orange leaves.

Prompt 2:

> "A realistic digital painting of an old oak tree in autumn, with golden leaves, next to a red cabin and a calm lake at sunset."

Output:

> A more detailed, atmospheric image based on richer description.

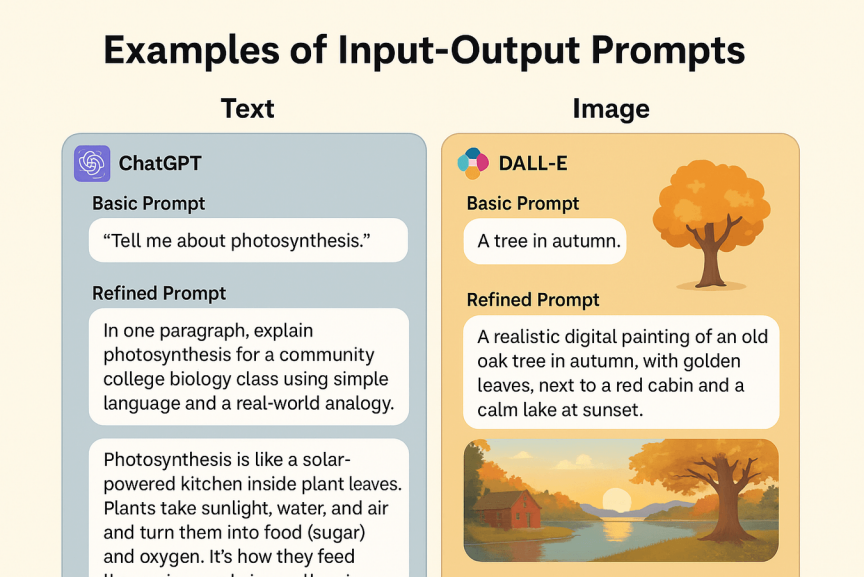
???? Try It Yourself: Discipline-Based Prompts

- **English:** “Generate a discussion prompt based on *Frankenstein* that explores the ethics of scientific discovery.”
- **History:** “Summarize the causes of the American Civil War in three bullet points using student-friendly language.”
- **STEM:** “Create a multiple-choice quiz question about Newton’s Second Law with an answer key.”
- **Social Sciences:** “Explain confirmation bias with a real-world example for an intro psychology course.”
- **Art:** “Generate an image of a Cubist-style still life with musical instruments and abstract shapes.”

???? Prompting Tips for Instructors

- Be specific about **tone, format, and audience** (e.g., “for first-year students”).
- Include context: what the AI should assume or focus on.
- Test and revise: small tweaks can improve relevance and clarity.

Key takeaway: You don’t need to be an expert to write good prompts—just be curious, clear, and willing to experiment.



1.4.1: What prompts are and how wording affects output

1.4.2: Sample prompts for ChatGPT and DALL·E across disciplines

1.4.3: Introduction to prompt refinement (aka “prompt engineering”)

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1.4.1: What prompts are and how wording affects output

The Power of the Ask

In AI tools like ChatGPT or DALL·E, the input you type is called a **prompt**. A prompt is simply a request or instruction given to the AI model to generate a response—whether that's a paragraph, a summary, a quiz question, an image, or something else entirely.

But here's the catch: **how you phrase the prompt matters. A lot.**

The AI doesn't interpret intent like a human. It responds to *what you say*, not necessarily *what you meant*. That's why even small changes in wording can produce very different results.

🧠 So What Is a Prompt?

A prompt can be:

- A question: *"What are the causes of the French Revolution?"*
- An instruction: *"Write a 3-question multiple-choice quiz on mitosis for high school students."*
- A task with context: *"Explain confirmation bias using a real-world example appropriate for a psychology course."*

Prompts can be short and simple—or long and detailed. The more guidance you provide, the more accurate and useful the output tends to be.

✏️ Why Wording Changes Everything

Let's look at a basic example using ChatGPT:

Prompt A:

> "Write a paragraph about climate change."

Prompt B:

> "Write a student-friendly paragraph for a general education course explaining how human activity contributes to climate change, using everyday language and one real-world example."

Outcome:
Prompt A gives you a generic summary.
Prompt B gives you a tailored explanation suited to your class and tone.

🔄 Prompting as a Conversation

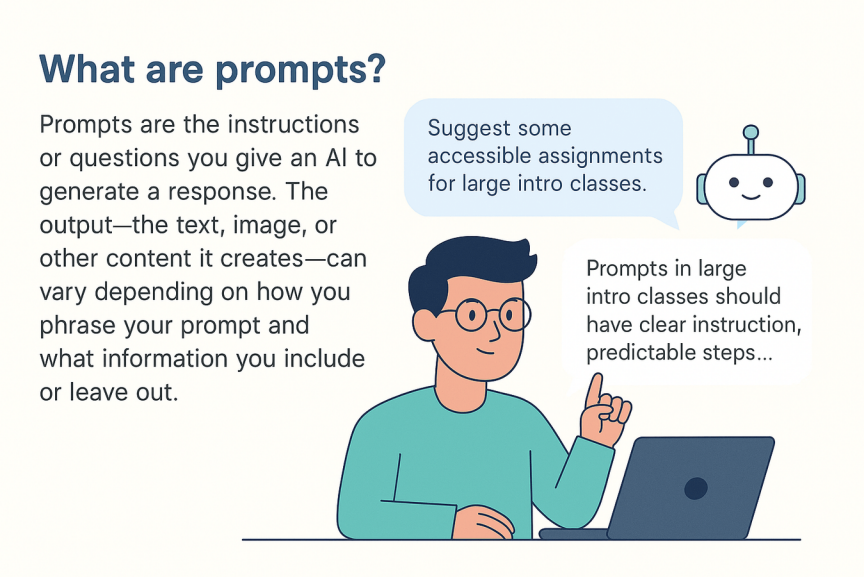
You don't need to get it perfect on the first try. Think of prompting as **an iterative process**:

- Start with a basic idea
- Read what the AI gives you
- Clarify, refine, or build on the result

This is where **prompt engineering** comes in—but you don't need to master that. Just being aware of the impact of your wording gives you a huge head start.

🎓 Why It Matters for Instructors

- You control the quality of the output through the quality of your prompt.
- Prompts can be reused, refined, or customized across assignments, courses, or student levels.
- Understanding prompt phrasing helps you teach students how to use AI responsibly and effectively.



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1.4.2: Sample prompts for ChatGPT and DALL·E across disciplines

A Head Start for Your Classroom and Course Prep

Sometimes the hardest part of using AI is knowing what to ask. To help you get started, this section offers sample prompts designed for both **ChatGPT** (text-based) and **DALL·E** (image-based), covering a variety of academic disciplines.

These prompts are meant to be copied, adapted, and improved to meet your course needs. You don't have to use them exactly as written—tweak them to reflect your teaching goals, tone, or student level.

✍️ ChatGPT Prompts (Text-Based Tasks)

English / Literature

> "Summarize the main theme of *Frankenstein* in 3–4 sentences for a first-year college student. Use clear, accessible language."

History

> "Create a timeline of five major events during the American Civil Rights Movement. Include one sentence of context for each."

Psychology

> "Give an example of classical conditioning using a relatable real-world scenario appropriate for an introductory course."

Math

> "Explain the concept of standard deviation using a real-life analogy and no more than 100 words."

Biology

> "Write three multiple-choice quiz questions (with answers) on the structure and function of the cell membrane."

Art History

> "Compare Impressionism and Cubism in one short paragraph, suitable for a student with no prior art background."

Career & Technical Education

> "List five soft skills important in the healthcare industry and explain how each can be demonstrated on the job."

🎨 DALL·E Prompts (Image-Based Tasks)

History

> “Create an image of a World War I trench scene, in the style of a historical documentary illustration.”

STEM

> “Generate a labeled diagram of a plant cell with bright, student-friendly visuals for an online biology class.”

Literature

> “Illustrate a scene from *Romeo and Juliet*—specifically the balcony scene—using a dramatic, oil-painting style.”

Art / Design

> “Produce a modern take on a Renaissance portrait, combining historical elements with current fashion trends.”

Career Education

> “Design an infographic-style image that shows proper workplace attire for a job interview in the business sector.”

📌 Tips for Strong Prompts

- Be specific about **style, purpose, and audience**.
- Tell the AI what **format or tone** you want (e.g., “student-friendly,” “3-sentence summary,” “multiple choice”).
- Refine as needed—treat AI like a first draft assistant, not a final authority.



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1.4.3: Introduction to prompt refinement (aka “prompt engineering”)

Getting Better Output by Asking Better Questions

Prompt engineering may sound technical, but it’s really just a fancy way of saying: **"How can I ask this in a way the AI understands?"**
It’s the process of refining your input—your prompt—to get clearer, more useful, and more accurate responses from an AI tool.

As with teaching or writing, clarity matters. The more specific and structured your prompt, the better your chances of getting something usable in return.

🎯 What Is Prompt Refinement?

Prompt refinement is the practice of:

- Adding context (who it’s for, what level, what purpose)
- Being clear about format (bullet points, paragraph, quiz)
- Giving examples or constraints (length, tone, vocabulary)

It’s not about “tricking” the AI. It’s about helping it do what you really mean.

🧠 Before vs. After Example

Prompt (Before):

> “Write an assignment.”

Prompt (Refined):

> “Draft a 250-word assignment for a second-year college course in sociology. The topic should explore how social media influences group behavior. Include clear instructions and one discussion question.”

Result:
Much more tailored, relevant, and useful.

🔁 Think Iteratively

Prompting is rarely one-and-done. Try this loop:

1. **Ask** your first version of the prompt
2. **Read** what the AI gives you
3. **Refine** by clarifying or narrowing the task
4. **Repeat** if needed

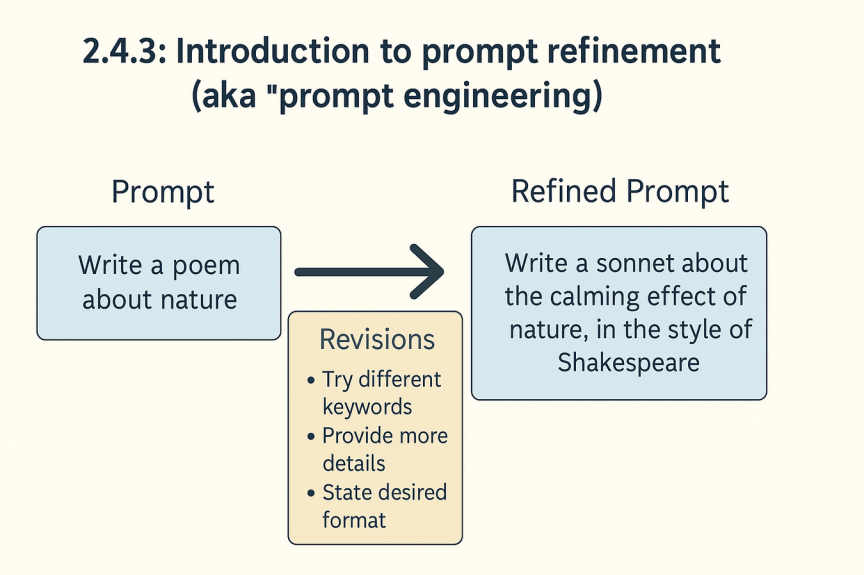
✍️ Common Prompt Refinement Starters

- “Make this more student-friendly.”

- “Add a real-world example.”
- “Explain it in 3 bullet points.”
- “Rewrite for an ESL learner at intermediate level.”
- “Change this to fit an online discussion activity.”

🎓 Why It Matters for Instructors

- Helps you get better support from AI tools without wasting time
- Makes AI outputs more aligned with your teaching goals
- Models strong critical thinking for students learning to use AI ethically



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1.5: WHERE AI GETS IT WRONG- HALLUCINATIONS, BIAS, OUTDATED INFO

Hallucinations, Bias, and Outdated Information

AI tools like ChatGPT can sound confident, fluent, and even brilliant—but they're far from perfect. In fact, AI models make mistakes often. And not just small ones—they can invent facts, reinforce bias, or give you information that's just plain wrong.

In this section, we'll look at where AI stumbles—and why those errors matter in an educational setting.

???? What Are Hallucinations?

In the world of AI, a **hallucination** refers to when the model generates content that sounds believable but isn't factually accurate.

Examples:

- Citing **a research article that doesn't exist**
- Making up **statistics**
- Describing historical events or people inaccurately

The AI isn't trying to deceive anyone—it simply doesn't know what's true. It's predicting what a "correct-sounding" answer should look like based on its training data.

> **Instructor tip:** Always double-check AI-generated content, especially when using it for assessments or instructional materials.

⚖️ What About Bias?

AI models are trained on real-world data—books, websites, forums, and more. But that data reflects all the **biases, stereotypes, and inequities** found in society.

That means AI outputs may unintentionally:

- Favor dominant cultural narratives
- Reinforce gender or racial stereotypes
- Marginalize non-Western perspectives

These patterns aren't always obvious at first glance, but they can show up in subtle ways: through examples, tone, omissions, or even default assumptions in writing.

> **Instructor tip:** Use AI as a *starting point*, not an unquestioned authority. Critique the output like you would any other source.

???? Why Is the Information Sometimes Outdated?

Most language models aren't connected to the internet in real time. For example:

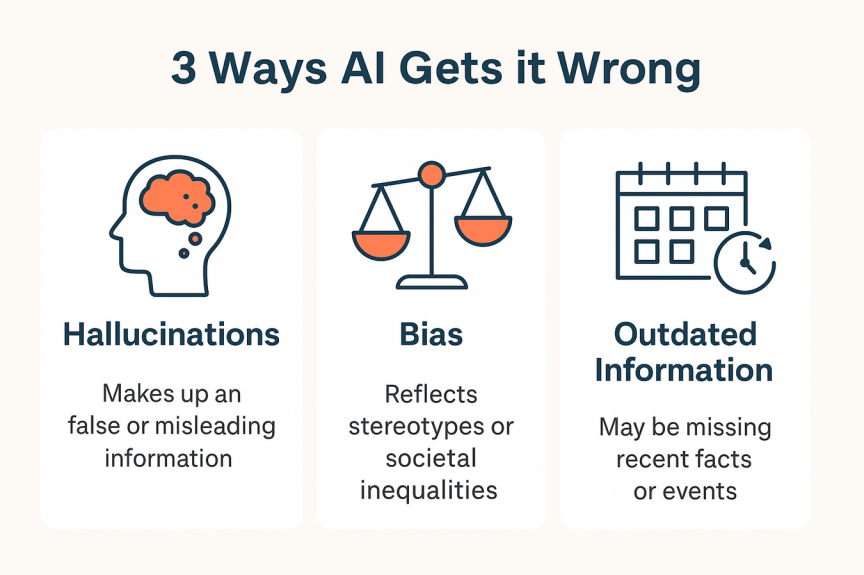
- ChatGPT 3.5 was trained on data up to **September 2021**
- GPT-4 (as of early 2024) may have limited web-browsing depending on platform

So if you ask an AI about recent laws, technologies, or events—it might give an outdated or incorrect response.

Instructor tip: When asking AI about time-sensitive topics (like COVID policy, AI regulations, or current events), check the model's knowledge cutoff or supplement with recent sources.

???? Key Takeaways

- AI **sounds confident**, but that doesn't mean it's right.
- Always **fact-check** and **consider potential bias**, especially in student-facing materials.
- Treat AI as a **co-drafter**, not a trusted expert.



1.5.1: What hallucinations are and why AI makes confident errors

1.5.2: Common sources of bias and misinformation in outputs

1.5.3: Why educators should always verify AI-generated content

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1.5.1: What hallucinations are and why AI makes confident errors

When AI Sounds Right but Isn't

One of the most surprising aspects of AI tools like ChatGPT is how confidently they can be wrong. These errors are known as **hallucinations**—a term used to describe content the AI generates that is factually incorrect, misleading, or entirely made up.

AI doesn't intentionally lie. It hallucinates because it doesn't *know* what's true. It's simply making the best guess based on patterns it learned from training data.

🤔 What Is a Hallucination?

A **hallucination** occurs when an AI:

- Makes up a quote or citation that doesn't exist
- Gets a concept fundamentally wrong
- Presents incorrect information with a tone of confidence and fluency

These aren't "bugs" in the traditional sense—they're baked into how the system works.

🔍 Why Do Hallucinations Happen?

AI doesn't have access to real-time facts or an internal understanding of truth. It relies on:

- **Probability**, not verification
- **Training data**, which may be outdated, biased, or inconsistent
- **Pattern matching**, without understanding context or nuance

Because it's been trained to sound authoritative, it may **confidently produce falsehoods**, especially when asked for something specific (like a source, law, or technical definition).

🧪 Example

Prompt:

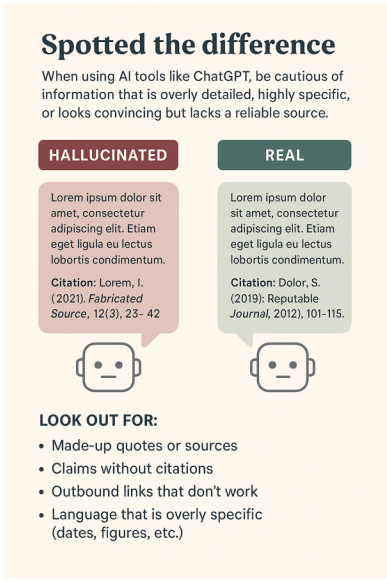
> "List five peer-reviewed sources about the effects of mindfulness on student retention."

ChatGPT Response:

> It provides five citations that *look* real—complete with titles, journal names, and DOIs—but none of them exist. The AI has combined elements from real and fictional sources to create a convincing list.

🎓 Why This Matters for Instructors

- You or your students might unknowingly accept incorrect information as fact.
- Hallucinations are especially dangerous when the content **looks academic** (citations, technical terms, legal language).
- Teaching students to **verify AI-generated content** builds digital literacy and academic integrity.



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1.5.2: Common sources of bias and misinformation in outputs

When AI Reflects What It's Learned—For Better or Worse

AI tools like ChatGPT and Bard are trained on large datasets pulled from books, websites, forums, and other public sources. While this makes them powerful and flexible, it also means they're exposed to the same **biases, gaps, and misinformation** found across the internet and in society at large.

Even when the AI sounds objective or fair, it may subtly reinforce inaccurate, stereotypical, or one-sided perspectives.

📚 Where Bias and Misinformation Come From

1. **Biased Training Data**
   - If the data overrepresents certain voices, regions, or viewpoints, the AI may echo that imbalance.
   - Underrepresented communities may be excluded or mischaracterized due to lack of presence in the training material.
2. **Outdated Information**
   - Many language models were trained on data up to a specific point (e.g., 2021), so they don't reflect newer research, laws, or terminology.
   - As language and understanding evolve (especially in topics like gender, disability, or climate), the AI may fall behind.
3. **Echo Chambers and Extremes**
   - AI trained on public internet content may absorb the **loudest**, not the most reliable, voices.
   - Forums, comment threads, or poorly moderated sites can introduce sensationalism or misinformation.
4. **Implicit Cultural Assumptions**
   - Outputs may reflect dominant cultural norms (e.g., Western, white, English-speaking) as if they are universal.
   - This can result in Eurocentric examples, heteronormative language, or a narrow view of professionalism, intelligence, or success.

🧠 Example: Subtle Bias

Prompt:

> "Describe a successful entrepreneur."

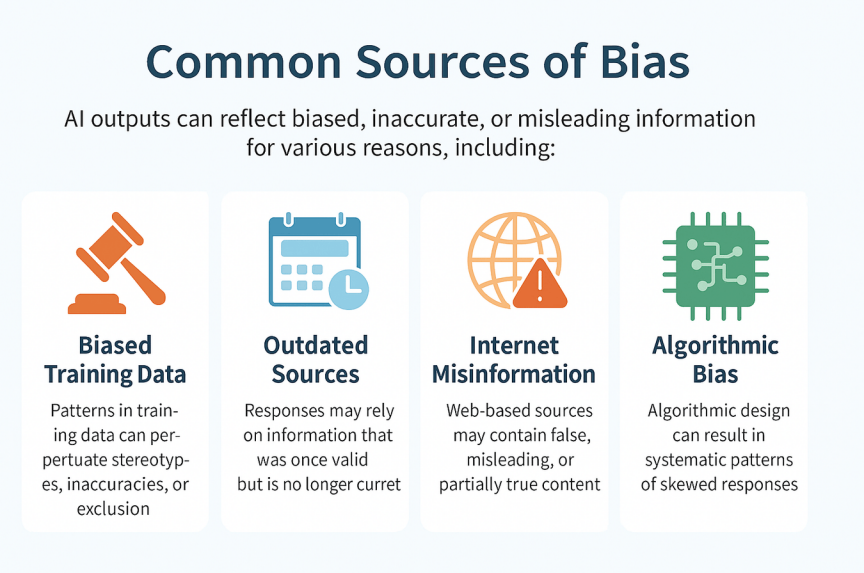
AI Response:

> "He started a tech company after graduating from a top university..."

Although the prompt didn't mention gender or background, the response assumed a specific identity and context—reflecting patterns in its training data.

🎓 Why This Matters for Instructors

- AI output can *sound neutral* while still embedding problematic ideas.
- Misinformation can be subtle, especially in areas where you're not an expert.
- Promoting **critical AI literacy** helps both instructors and students question and verify what they see—just like they would with any source.



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1.5.3: Why educators should always verify AI-generated content

Fluency Is Not Accuracy

AI tools like ChatGPT and Bard are impressive in how quickly they generate fluent, well-structured responses. But fluency isn't the same as **accuracy**—and for educators, that distinction matters.

AI tools **do not fact-check** the content they produce. They don't understand your course objectives, citation standards, or instructional context. That means anything AI generates—whether it's a quiz, summary, or citation—should be reviewed critically before using it in class or sharing it with students.

🔍 Why Verification Is Essential

1. **AI Can Hallucinate**
   It may create fake quotes, made-up sources, or misstate facts. Even when a response *sounds* academic, it may be entirely fabricated.

2. **AI Has No Real Understanding**
   The model doesn't know your course content. It uses patterns from its training data, not actual comprehension, so it can misinterpret nuance or leave out critical details.

3. **AI Can Reinforce Bias or Misinformation**
   If the model pulls from biased or outdated examples, the output may reflect those issues—especially in sensitive or culturally complex topics.

📘 Examples to Watch For

- **Fake citations** that look real but don't exist
- **Oversimplified explanations** that leave out key concepts
- **Inappropriate tone or phrasing** (e.g., informal or overly technical)
- **Incomplete or incorrect math/logical reasoning**

🧠 Your Role as an Instructor

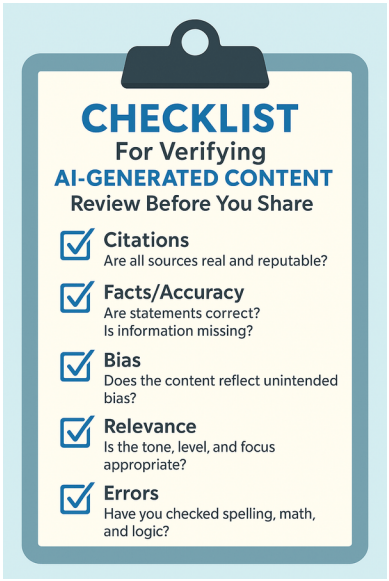
AI is a tool—not a source of truth. As the instructor, your role is to:

- Review and revise AI-generated content before using it
- Guide students in using AI responsibly and reflectively
- Model fact-checking, ethical citation, and source evaluation in your discipline

> ⚠️ *Rule of thumb:* If you wouldn't copy-paste from an unknown blog into your course shell without reviewing it, don't do it with AI-generated text either.

📌 Key Takeaway

AI can save time—but only if it's paired with **thoughtful review**. Verification isn't optional—it's part of responsible teaching in the age of AI.



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1.6: WHY AI DOESN'T "THINK" OR "UNDERSTAND" THE WAY HUMANS DO

Fluency Isn't the Same as Comprehension

AI tools can sound remarkably thoughtful. They can answer questions, offer feedback, and even mimic critical thinking. But here's the key point: **AI is not thinking. It's predicting.**

Language models like ChatGPT don't understand what words *mean*—they've just learned the **statistical patterns** of how words appear together. When an AI gives you an answer, it isn't reasoning through the problem. It's predicting the next word, sentence, or image based on what it has seen before.

???? Prediction vs. Understanding

Let's say you ask:

> "What's the theme of *Frankenstein*?"

The AI might respond with:

> "One major theme of *Frankenstein* is the danger of unchecked ambition."

That might sound insightful, but the AI didn't read the book, think about the characters, or weigh literary interpretations. It simply recognized that this type of phrasing has shown up often in its training data about *Frankenstein*.

???? So What's Missing?

Here's what AI **doesn't do**:

- Reflect on meaning
- Have real-world experiences
- Form opinions or emotions
- Understand nuance, tone, or intent the way people do

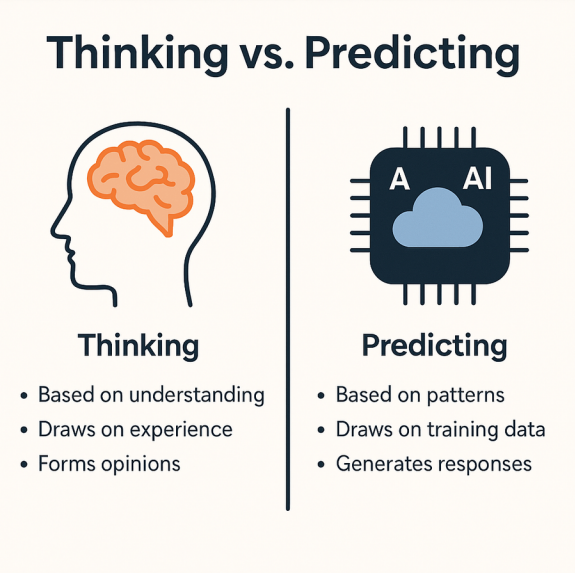
In short, AI has **no consciousness, memory of your past classes, or lived context**. It doesn't *know* anything—it just assembles words in ways that seem reasonable.

???? Why This Matters for Instructors

- **AI might sound smart**, but it can miss the point completely—especially in nuanced or emotionally complex topics.
- Students (and faculty) can over-trust the fluency of AI responses.
- Critical AI literacy involves asking: *Does this answer make sense? What's missing? Who's being left out?*

???? Takeaway

AI is a powerful tool for generating content, brainstorming ideas, or organizing information. But it doesn't "understand" your course, your students, or your subject the way you do. That's where you—and your critical thinking—come in.



1.6.1: How AI “predicts” rather than understands or reasons

1.6.2: Differences between AI-generated language and human cognition

1.6.3: Implications for teaching- critical AI literacy for instructors and students

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1.6.1: How AI “predicts” rather than understands or reasons

Why AI Sounds Smart Without Actually Thinking

When AI tools like ChatGPT respond to a prompt, they don’t *think* about the answer, analyze meaning, or reflect on what’s true. Instead, they generate responses by **predicting the most likely next word** (or pixel, or token) based on patterns learned during training.

This process is called **next-token prediction**—a technical way of saying that AI is guessing, not reasoning.

🔁 Prediction, Not Understanding

Language models are trained on billions of words and phrases. Over time, they learn:

- What words often appear together
- How sentences are typically structured
- How certain ideas are commonly expressed

But this doesn’t mean the model understands what it’s saying. It has no memory, beliefs, logic, or awareness. It simply strings together statistically likely responses based on your input.

> 💬 *Example:* If you type “Photosynthesis is the process by which…”, the model is very likely to complete that sentence with “plants convert sunlight into energy” — because that’s the pattern it has seen most often.

🧠 No Reasoning, No Insight

AI doesn’t:

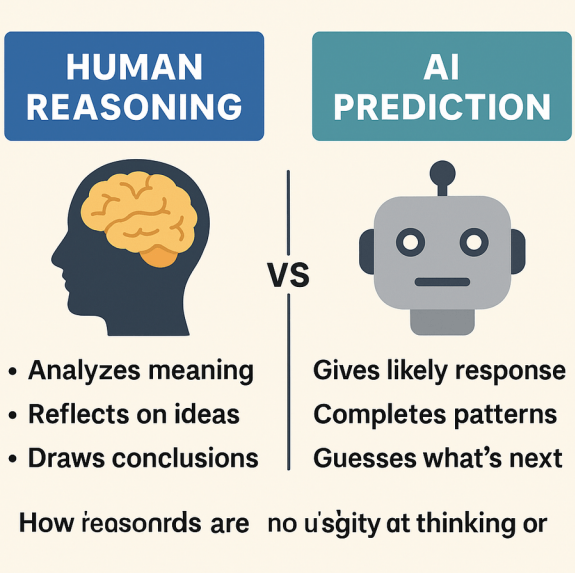
- Ask itself if something is true or false
- Evaluate consequences
- Weigh multiple perspectives
- Draw conclusions based on evidence

All of those are human processes. AI, by contrast, predicts based on training—not understanding.

🎓 Why This Matters for Instructors

- **AI can sound right while being wrong.** This is especially risky when content is delivered in an academic tone.
- **It won’t catch nuance, subtext, or deeper meanings.** That matters in literature, ethics, history, and other interpretation-heavy fields.
- **It can’t adapt to your course goals or students’ needs** unless you give it very specific instructions.

Understanding that AI is a **prediction engine—not a thinking tool—helps you use it with clarity and caution.** It’s great for brainstorming and drafting, but it needs human judgment to ensure accuracy, relevance, and depth.



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1.6.2: Differences between AI-generated language and human cognition

Why AI Sounds Smart—but Isn't Thinking

At a glance, AI-generated writing can seem impressively thoughtful. It can answer questions, summarize texts, and write with perfect grammar. But despite its fluency, AI doesn't "think" like a human. In fact, it doesn't think at all.

This section highlights the fundamental differences between **how AI produces language** and how **humans understand and communicate ideas**.

🔁 AI Uses Pattern Recognition

Language models like ChatGPT generate responses by recognizing patterns and predicting word sequences. The model doesn't know what the words mean—it just knows how words are typically used together.

- It has no awareness of your course, students, or goals
- It doesn't retain memory across conversations (unless explicitly designed to)
- It produces language based on probability, not reflection or logic

---

🧠 Humans Use Meaning and Intention

Human communication is grounded in:

- Experience and memory
- Emotion, motivation, and intent
- Cultural and contextual awareness
- Real-world feedback and revision

When instructors or students write, they are building on understanding—using language to express, persuade, question, or reflect. AI cannot do any of these things consciously. It only imitates the form.

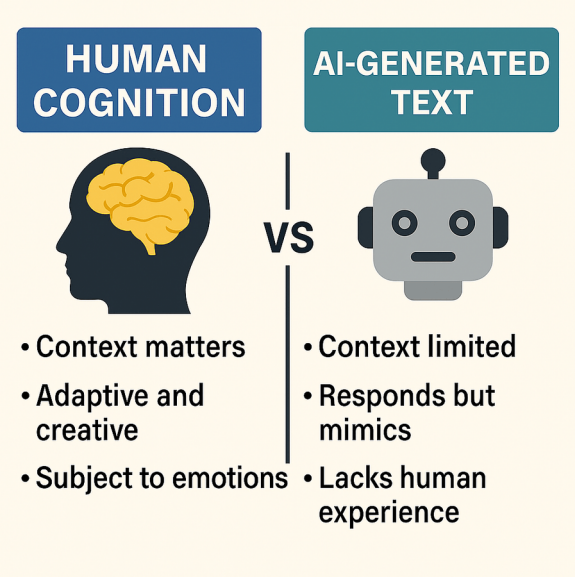
✍️ Comparison Snapshot

	AI-Generated Language	Human Cognition & Writing
Based on	Pattern prediction	Understanding and experience
Goal	Fluency and plausibility	Communication and meaning
Memory	None (or limited context)	Personal, social, long-term
Revision	No internal feedback loop	Intentional, reflective
Awareness	None	Emotional, cultural, social

🎓 Why This Matters for Instructors

- AI may sound convincing, but it's often shallow or generic.

- Students using AI without guidance may submit text that looks polished but lacks original thought or deep understanding.
- Instructors can model the **difference between sounding right and being thoughtful**, helping students develop stronger critical and metacognitive skills.

🧠 Teaching tip: Use AI-generated content as a comparison point in class—ask students to critique, improve, or reflect on 

what's missing.

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1.6.3: Implications for teaching- critical AI literacy for instructors and students

Helping Learners Think With, About, and Beyond AI

As AI becomes more integrated into academic tools, writing platforms, and everyday technologies, it's essential that both instructors and students develop **critical AI literacy**—the ability to use AI thoughtfully, question its output, and understand its limitations.

This isn't about mastering coding or algorithms. It's about helping learners recognize when AI is helpful, when it might mislead, and how to engage with it responsibly.

🔍 What Is Critical AI Literacy?

Critical AI literacy includes:

- Understanding how AI generates content (prediction, not understanding)
- Questioning accuracy, bias, and authority in AI outputs
- Evaluating when and how to use AI appropriately in academic work
- Reflecting on ethical use, attribution, and transparency

> 🧠 *It's not enough to know how to use AI tools—we need to ask what they're doing, how they shape our thinking, and where their blind spots are.*

👩‍🏫 For Instructors

- Model how to verify and revise AI-generated text
- Use AI to teach critical thinking by comparing drafts, identifying weaknesses, or challenging misinformation
- Introduce conversations about consent, transparency, and bias in digital tools
- Share your own boundaries and course expectations around AI use

---

🎓 For Students

- Learn to treat AI as a starting point, not a final answer
- Develop skills in fact-checking, revising, and citing AI-assisted work
- Practice metacognition: ask "How do I know this is true? Who might be left out?"
- Understand when using AI might undermine academic integrity

---

🔧 Strategies for the Classroom

- Use AI as a writing partner, then reflect: What did it miss? What would you change?
- Compare student-written and AI-generated responses to highlight depth and originality
- Build small assignments around *prompt refinement*, *bias detection*, or *fact-checking AI output*
- Scaffold assignments that require human judgment, lived experience, or source evaluation—skills AI can't replicate

---

📌 Key Takeaway

AI is here to stay—but deep learning still requires human insight. By fostering critical AI literacy, instructors empower students to engage with technology *without outsourcing their thinking.*

Would you like a reflective handout or a classroom activity template to go with this section?

🎓 Why This Matters for Instructors

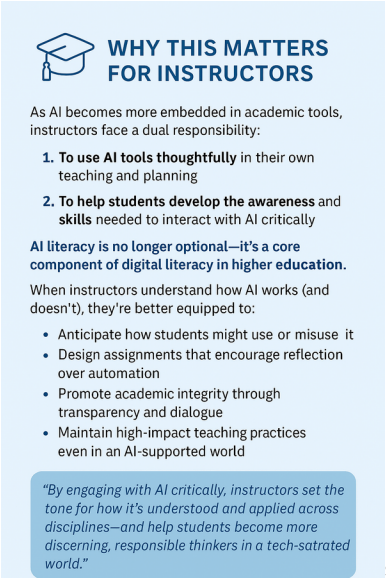
As AI becomes more embedded in academic tools, instructors face a dual responsibility:

1. **To use AI tools thoughtfully** in their own teaching and planning
2. **To help students develop the awareness and skills** needed to interact with AI critically

AI literacy is no longer optional—it's a core component of digital literacy in higher education. When instructors understand how AI works (and doesn't), they're better equipped to:

- Anticipate how students might use or misuse it
- Design assignments that encourage reflection over automation
- Promote academic integrity through transparency and dialogue
- Maintain high-impact teaching practices even in an AI-supported world

By engaging with AI critically, instructors set the tone for how it's understood and applied across disciplines—and help



students become more discerning, responsible thinkers in a tech-saturated world.

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2: PRACTICAL AI APPLICATIONS IN TEACHING AND LEARNING

Understanding How AI Works (Without the Jargon)

Artificial intelligence can feel mysterious—especially when tools like ChatGPT or DALL·E seem to produce instant answers, essays, or images out of thin air. But the truth is, AI isn't magic, and it doesn't "think" like humans. It follows instructions, identifies patterns, and predicts what's most likely to come next based on data it has seen before.

This section is designed to explain the **basics of how AI works**—without technical language, coding experience, or deep math knowledge. You don't need to be a computer scientist to understand what's happening when you or your students use AI. You just need a few key concepts.

🔍 What You'll Explore in This Chapter

- 🧩 What a language model is and how it generates content
- 📚 What AI "learns" from and why the data matters
- 🧮 The role of algorithms in prediction
- 🎯 How your input shapes AI output
- ⚠️ Where and why AI makes mistakes
- 🤖 Why AI doesn't truly "think" or "understand"

By the end of this section, you'll have a foundational understanding of how generative AI functions—and why that knowledge empowers you to use it more effectively in the classroom.

2.1: AI for Course Planning

2.1.1: Drafting syllabi, learning outcomes, and course descriptions

2.1.2: Generating module overviews or unit plans

2.1.3: Sequencing learning activities with AI assistance

2.2: AI for Assignment and Activity Design

2.2.1: Designing case studies or scenarios tailored to your course

2.2.2: Using AI to generate examples, metaphors, or analogies

2.3: AI for Feedback and Assessment

2.3.1: Drafting rubric language

2.3.2: Using AI to provide formative feedback (with caveats)

2.3.3: Reviewing student reflections or written responses for patterns

2.4: AI for Student Support

2.4.1: Suggesting writing starters or research questions

2.4.2: Summarizing complex readings or concepts

2.4.3: Translating or adapting content for multilingual learners

2.5: AI for Instructor Productivity

2.5.1: Composing announcements, assignment descriptions, and reminders

2.5.2: Drafting professional emails or recommendation letters

2.5.3: Organizing meeting notes or to-do lists

2.6: Discipline-Neutral Examples

2.6.1: For STEM, humanities, social sciences, CTE, and the arts

2.6.2: Prompts you can adapt directly for Canvas discussions or assignments

2.7: What to Watch Out For

2.7.1: When AI is helpful—and when it might backfire

2.7.2: Importance of verifying AI-generated content

2.7.3: Transparency and ethics in using AI for instruction

🔍 Chapter Takeaway

Understanding the mechanics behind AI—even at a basic level—gives you more control, more clarity, and more confidence. When you know that AI tools are predicting, not thinking, you can better evaluate their output, spot their limitations, and help your students do the same. You don't need to be fluent in algorithms—but you *do* need to ask good questions, think critically, and stay curious. That mindset is what transforms AI from a mystery into a meaningful part of your teaching toolkit.

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2.1: AI FOR COURSE PLANNING

✏️ Generate Syllabus Language

You can ask AI to:

- Draft a course description in your voice and tone
- Reword learning outcomes to align with Bloom's Taxonomy
- Suggest policy language (e.g., attendance, participation, late work)

> ✅ *Prompt Example:*
> "Write a student-friendly course description for a 16-week introductory sociology course focused on power, identity, and institutions."

???? Outline Weekly Modules or Units

AI can help you:

- Break a course into topics by week
- Suggest a logical progression of concepts
- Align modules with learning outcomes

> ✅ *Prompt Example:*
> "Generate a 10-week module outline for a community college biology course with 3 lab components and a focus on cell structure, genetics, and evolution."

???? Brainstorm Learning Activities

Use AI to get unstuck when you need:

- Icebreakers, discussion prompts, or exit tickets
- Small-group or asynchronous activities
- Low-stakes assignments linked to specific topics

> ✅ *Prompt Example:*
> "Suggest three interactive learning activities for an online art appreciation course focused on analyzing visual elements in modern paintings."

⚠️ Instructor Tips

- **Review and revise** everything AI suggests—it's a starting point, not a final draft.
- **Include your context** in prompts (level, audience, modality, goals).
- **Don't outsource your pedagogy**—AI can structure, but only you can teach.

???? Key Takeaway

AI can't replace your expertise, but it can help you move from a blank screen to a structured plan more quickly. When used intentionally, it can free up your time and mental bandwidth for what matters most: designing meaningful learning experiences for your students.



2.1.1: Drafting syllabi, learning outcomes, and course descriptions

2.1.2: Generating module overviews or unit plans

2.1.3: Sequencing learning activities with AI assistance

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2.1.1: Drafting syllabi, learning outcomes, and course descriptions

Using AI to Streamline the Foundations of Your Course

Writing or revising syllabi can be one of the most time-consuming parts of course planning. AI tools like ChatGPT or Microsoft Copilot can help by generating drafts for key components—including course descriptions, learning outcomes, and syllabus language—based on your guidance.

AI won't replace your pedagogical judgment, but it can offer a valuable **starting point** to accelerate routine writing and help align your documents with institutional language or tone.

🗒️ What AI Can Help You Draft

1. Course Descriptions

Use AI to:

- Convert formal catalog text into more student-friendly language
- Adapt a course description for a specific population (e.g., ESL learners, adult learners, first-year students)
- Brainstorm alternate phrasing for interdisciplinary or emerging topics

> ✅ *Prompt Example:*
> "Rephrase this catalog course description to be more engaging for students in an online community college setting."

---

2. Learning Outcomes

Use AI to:

- Align outcomes with Bloom's Taxonomy
- Draft learning outcomes that reflect discipline-specific skills or habits of mind
- Rewrite outcomes for clarity, measurability, or student-centeredness

> ✅ *Prompt Example:*
> "Suggest three learning outcomes for an introductory environmental science course that emphasize analysis and real-world application."

---

3. Syllabus Policies and Templates

Use AI to:

- Draft boilerplate policies (e.g., late work, participation, academic honesty)
- Reword policies for tone (e.g., "firm but student-friendly")
- Summarize campus resource links or student support information

> ✅ *Prompt Example:*
> "Create a welcoming attendance policy for a hybrid course with flexible participation options."

🎓 Why This Matters for Instructors

AI can reduce the cognitive load of repetitive writing tasks, allowing you to focus on **tailoring the content** to your students and goals. Think of it as your **first-draft partner**—never the final editor.



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2.1.2: Generating module overviews or unit plans

Building Course Structure One Unit at a Time—with AI Support

One of the most practical ways to use AI in course planning is to draft **weekly module overviews** or **unit plans** that scaffold learning over time. With a well-phrased prompt, AI can generate outlines that include weekly topics, suggested activities, assessments, and alignment with course outcomes.

These drafts help instructors visualize the course flow and can easily be customized for asynchronous, hybrid, or in-person formats.

🧰 What AI Can Help You Generate

1. Weekly Module Overviews

Use AI to:

- Break down a 10–16 week course into digestible units
- Align content with key outcomes or competencies
- Add suggested titles for lectures, readings, or media

> ✅ *Prompt Example:*
> "Create a 12-week module outline for an introductory college-level American Government course. Each week should include a topic title and one activity or discussion idea."

---

2. Unit Plans for Thematic or Project-Based Courses

Use AI to:

- Organize interdisciplinary or skills-based content
- Provide sample sequences (e.g., explore → practice → apply)
- Suggest culminating assessments or reflective tasks

> ✅ *Prompt Example:*
> "Generate a 3-week unit plan for a project-based high school sociology course on media and identity. Include learning goals, activity types, and a final project idea."

---

3. Adapt for Different Modalities

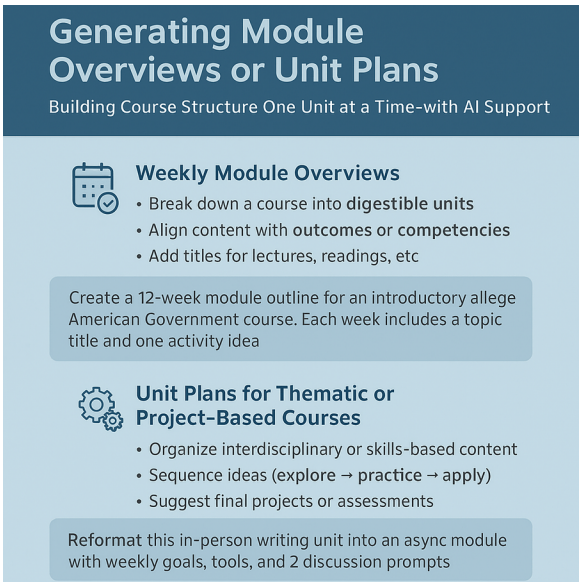
Use AI to:

- Translate traditional plans into asynchronous-friendly formats
- Suggest Canvas module titles and content types
- Add ideas for checkpoints or low-stakes assessments

> ✅ *Prompt Example:*
> "Reformat this in-person writing unit into an asynchronous online module with weekly goals, suggested Canvas tools, and 2 discussion prompts."

🎓 Why This Matters for Instructors

Instead of starting from scratch, you can use AI to **generate a draft course spine**, then revise it to reflect your teaching style, students' needs, and institutional context. AI won't replace your expertise—but it can help you plan more efficiently and with fewer blank screens.



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2.1.3: Sequencing learning activities with AI assistance

Using AI to Plan "What Comes Next" in Your Course

Designing an engaging learning experience isn't just about what activities you choose—it's also about **when** and **how** you use them. AI can help instructors draft a logical sequence of activities that move students from understanding to application, while maintaining alignment with outcomes and scaffolding cognitive complexity.

Used thoughtfully, AI can suggest learning pathways that reduce prep time and support inclusive, well-paced course design.

🔧 What AI Can Help You Sequence

1. From Intro to Application

Use AI to:

- Suggest a sequence like *explore → analyze → apply*
- Pair concepts with matching activity types
- Scaffold assignments or skill-building across a unit or module

> ✅ *Prompt Example:*
> "Sequence three learning activities for an asynchronous business course to help students move from understanding economic supply and demand to applying it in a case study."

---

2. Based on Bloom's Taxonomy or Skill Progression

Use AI to:

- Build activities from recall to evaluation
- Adjust cognitive level based on course level (e.g., intro vs. capstone)
- Offer examples across formats (e.g., writing, collaboration, discussion)

> ✅ *Prompt Example:*
> "List four sequenced learning activities for a week-long unit on climate policy in an environmental studies course, using verbs from Bloom's Taxonomy."

---

3. Connecting Activities to Outcomes

Use AI to:

- Suggest formative assessments between major assignments
- Tie activities directly to CSLOs (Course Student Learning Outcomes)
- Include reflective or metacognitive components between tasks

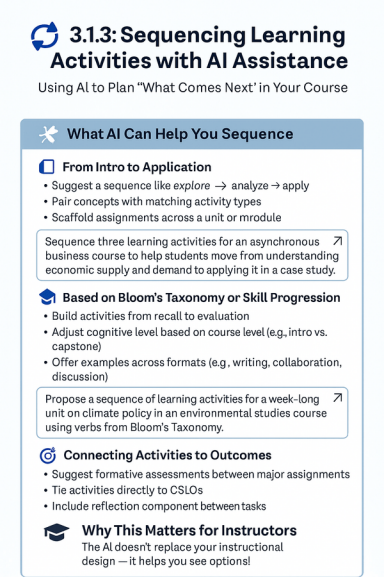
> ✅ *Prompt Example:*
> "Propose a sequence of three scaffolded learning tasks to support the outcome: 'Evaluate the effectiveness of public health campaigns.' Include checkpoints for feedback."

🎓 Why This Matters for Instructors

Sequencing is one of the most cognitively demanding parts of course planning. AI can reduce that load by helping instructors:

- Map learning logically across time
- Align activities with outcomes and assessments
- Include a variety of modalities and checkpoints for all learners

The AI doesn't replace your instructional design—it helps you see options you might refine and personalize.



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2.2: AI FOR ASSIGNMENT AND ACTIVITY DESIGN

Create, Customize, and Revise with a Digital Brainstorming Partner

Designing assignments that are clear, engaging, and aligned with learning goals can take time. Whether you're building from scratch or refreshing a familiar activity, AI can serve as a powerful support tool—helping you **generate ideas**, **tighten instructions**, and **match assignments to student needs**.

You're still in charge of your pedagogy. But when you're staring at a blank screen or short on prep time, AI can help you move from *idea to draft* more quickly.

???? What Can AI Help With?

✏️ Drafting Assignment Instructions

AI can help you:

- Write clear step-by-step instructions
- Add reflection questions or scaffolding
- Adjust tone or reading level for your audience

> ✅ *Prompt Example:*
> "Draft student-friendly instructions for a 500-word essay analyzing a primary source in a U.S. History course."

???? Brainstorming Assignment Ideas

Use AI to:

- Generate project ideas tied to specific course content
- Propose discussion or debate topics
- Create formative or low-stakes activity ideas

> ✅ *Prompt Example:*
> "Suggest 3 project ideas for a general education environmental science course that focus on community impact."

???? Revising and Adapting Activities

You can ask AI to:

- Shorten or expand existing assignments
- Make activities more inclusive or accessible
- Convert group tasks into individual options (and vice versa)

> ✅ *Prompt Example:*
> "Revise this in-class role-play into an asynchronous Canvas discussion prompt for a public speaking class."

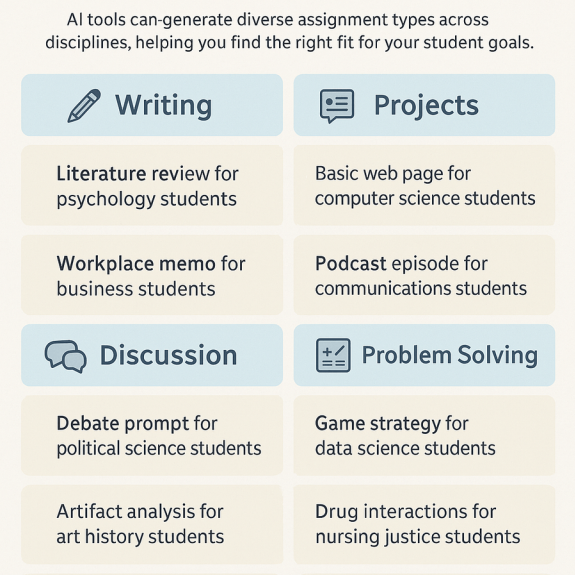
⚠️ What to Watch For

- **Always add your pedagogical lens.** AI doesn't know your students, outcomes, or course goals.

- **Keep equity in mind.** Don't let AI reinforce dominant cultural narratives or assumptions.
- **Use your best judgment.** AI can suggest—but it can't evaluate learning quality.

???? Key Takeaway

AI can help instructors think faster, not shallower. Use it to save time on routine writing tasks so you can focus on aligning assignments with meaningful learning experiences.



2.2.1: Designing case studies or scenarios tailored to your course

2.2.2: Using AI to generate examples, metaphors, or analogies

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2.2.1: Designing case studies or scenarios tailored to your course

Let AI Help You Draft Engaging, Real-World Contexts

Case studies and real-world scenarios are powerful instructional tools. They allow students to apply knowledge, reason through ambiguity, and explore complex issues. But designing compelling, course-aligned cases can be time-consuming—especially when you're trying to match difficulty level, student experience, and disciplinary relevance.

This is where AI can help. You can use tools like ChatGPT to quickly generate **customizable, discipline-specific case studies** or **"what would you do?" scenarios** that support your learning outcomes and classroom goals.

🧰 What AI Can Help You Design

1. Discipline-Aligned Case Studies

Use AI to:

- Generate realistic case examples with industry-specific details
- Adjust for level (introductory vs. advanced)
- Add built-in ethical dilemmas, data sets, or conflicting perspectives

> ✅ *Prompt Example:*
> "Create a 300-word case study for a business ethics course involving a tech startup facing a privacy dilemma. Include a discussion question at the end."

---

2. Role-Play or Scenario-Based Prompts

Use AI to:

- Write classroom scenarios for simulations, discussions, or debates
- Create branching decisions with potential consequences
- Adapt for individual, group, or online use

> ✅ *Prompt Example:*
> "Write a role-play scenario for a criminal justice course where students act as investigators responding to a potential wrongful conviction. Include at least three conflicting pieces of evidence."

---

3. Inclusive or Culturally Relevant Contexts

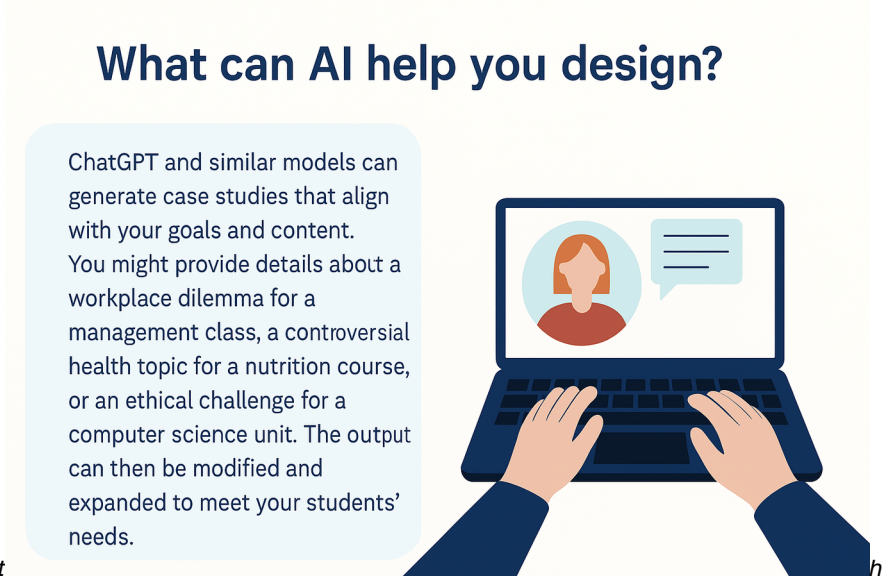
Use AI to:

- Draft case studies that reflect diverse identities and social dynamics
- Add layers of complexity related to equity, identity, or cultural assumptions
- Prompt empathy and critical reflection

> ✅ *Prompt Example:*
> "Generate a case study for a teacher education course focused on classroom management challenges involving culturally responsive teaching strategies."

🎓 Why This Matters for Instructors

- AI can help you move beyond generic examples by giving you tailored drafts to adapt and refine.
- Case studies become more feasible to integrate regularly—not just once per term.
- The process builds flexibility into your design: one core case can become a quiz, writing prompt, or discussion anchor.



AI gives you a *starting point wit* *h structure*, freeing up your time to focus on alignment, nuance, and impact.

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2.2.2: Using AI to generate examples, metaphors, or analogies

Clarify Complex Ideas with a Little AI Help

One of the most powerful teaching strategies is making the abstract feel concrete. Well-placed examples, metaphors, and analogies help students relate new concepts to something familiar—and that's exactly where AI can shine.

AI tools like ChatGPT can suggest comparisons, reframe jargon, or offer examples tailored to a student's level or background. While these suggestions often need fine-tuning, they give you a creative head start when designing explanations, activities, or assessments.

🔧 What AI Can Help You Create

1. Relevant Examples

Use AI to:

- Generate discipline-specific examples for different student levels
- Contextualize theory in applied, professional, or real-world settings
- Offer multiple examples for a single concept to support universal design

> ✅ *Prompt Example:*
> "Give three examples of diffusion in real-life contexts that a first-year biology student would understand."

---

2. Creative Analogies

Use AI to:

- Translate complex processes into familiar scenarios
- Develop analogies across domains (e.g., social science concepts compared to physical systems)
- Adjust tone (e.g., humorous, academic, student-friendly)

> ✅ *Prompt Example:*
> "Explain how federalism works using a metaphor that compares government power to a pizza."

---

3. Metaphors for Conceptual Understanding

Use AI to:

- Spark creative ways of thinking about a concept
- Build introductory explanations or openers for a lecture
- Encourage student-generated metaphors through modeling

> ✅ *Prompt Example:*
> "What's a metaphor to explain confirmation bias in a way that would make sense to a teenager?"

🎓 Why This Matters for Instructors

- Having fast access to a bank of analogies and examples saves time when planning or adapting content.
- Students benefit from **multiple ways to visualize** or relate to difficult material.
- You can turn AI-generated metaphors into **discussion prompts, writing starters, or reflection questions**—especially in online environments.



AI isn't always clever—but it can give you just enough of a spark to write or teach with greater clarity.

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2.3: AI FOR FEEDBACK AND ASSESSMENT

Supporting, Not Replacing, the Human Touch

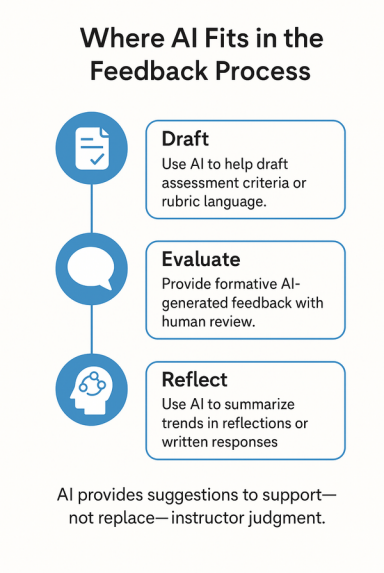
Feedback and assessment are at the heart of student learning—but they're also some of the most time-consuming responsibilities instructors carry. AI can assist by helping **generate draft rubrics, summarize patterns in student work, and offer formative feedback phrased in clear, accessible ways**.

Importantly, this section is not about automating grading. Instead, it explores how AI can **support thoughtful, instructor-led assessment practices** that are transparent, student-centered, and manageable at scale.

You'll learn how to:

- Draft clear, student-friendly **rubric language**
- Use AI to generate **formative feedback** that is supportive and actionable
- Identify **themes or patterns** across student writing (e.g., reflections, discussion posts, surveys)
- Respect student privacy and apply ethical boundaries in the feedback process

Used responsibly, AI becomes a **feedback assistant**—helping you provide timely responses, surface common learning needs, and ensure students feel seen and supported in their learning process.



2.3.1: Drafting rubric language

2.3.2: Using AI to provide formative feedback (with caveats)

2.3.3: Reviewing student reflections or written responses for patterns

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2.3.1: Drafting rubric language

Use AI to Clarify Expectations and Save Time

Well-written rubrics are essential for transparent, equitable assessment—but crafting strong criteria and descriptions for each performance level can be time-intensive. AI tools like ChatGPT can help you **draft, revise, or rephrase** rubric language so that it's clear, student-friendly, and aligned with your learning outcomes.

AI doesn't replace your pedagogical judgment, but it can give you a solid foundation—especially when you're building from scratch or adapting rubrics for new assignments.

🧰 What AI Can Help You Draft

1. Rubric Rows (Criteria)

Use AI to:

- Translate assignment expectations into evaluative categories
- Align criteria with verbs from Bloom's Taxonomy
- Suggest language for areas like clarity, organization, depth, or creativity

> ✅ *Prompt Example:*
> "List four rubric categories for a persuasive essay in a college-level English course. Each category should align with critical thinking and effective writing skills."

---

2. Performance Levels (e.g., Excellent → Needs Improvement)

Use AI to:

- Generate consistent language for scoring tiers
- Adjust tone (e.g., growth-oriented vs. corrective)
- Reword high-level expectations to support accessibility

> ✅ *Prompt Example:*
> "Write clear, student-friendly descriptions for four performance levels (Excellent, Proficient, Developing, Needs Improvement) for a rubric row evaluating use of evidence in a research paper."

---

3. Rubric Refinement

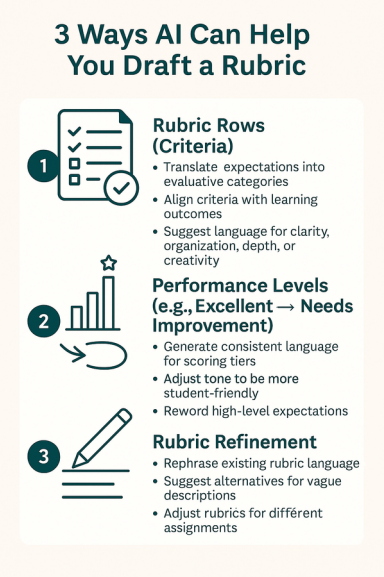
Use AI to:

- Rephrase existing rubric language to remove jargon
- Suggest alternative phrasing for confusing or vague descriptors
- Shorten or scaffold rubrics for different assignment types (e.g., reflection, presentation, group project)

> ✅ *Prompt Example:*
> "Revise this rubric row to be more concise and student-friendly: 'Demonstrates extensive command of source integration with proper APA formatting and minimal mechanical errors.'"

🎓 Why This Matters for Instructors

- Rubric clarity improves student confidence, performance, and fairness.
- AI can help you articulate what “success” looks like at multiple levels—without starting from a blank page.
- Use the time saved on formatting and phrasing to focus on meaningful feedback and alignment with course goals.



A wel l-drafted rubric supports learning, not just grading—and AI can help you build one with clarity and care.

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2.3.2: Using AI to provide formative feedback (with caveats)

✍️ 3.3.2: Using AI to Provide Formative Feedback (with Caveats)

Faster Draft Comments, Not Final Grades

Formative feedback is essential for learning—but time constraints often limit how much and how quickly instructors can respond to student work. AI tools like ChatGPT can help **generate draft feedback**, rephrase suggestions more clearly, or highlight patterns based on an instructor's input.

However, AI-generated feedback should be viewed as a **drafting aid**, not a substitute for human insight. It lacks awareness of context, student history, and tone sensitivity—meaning instructors still need to guide, edit, and approve any feedback before sharing it.

🛠️ What AI Can Help You Do

1. Draft Feedback on Writing or Structure

Use AI to:

- Provide initial comments on clarity, organization, and tone
- Offer sentence-level suggestions (e.g., transitions, thesis support)
- Reword feedback to be more encouraging or concise

> ✅ *Prompt Example:*
> "Provide friendly, constructive feedback on this paragraph from a first-year student's essay. Focus on clarity and flow."

---

2. Identify Patterns from Rubric Categories

Use AI to:

- Summarize student strengths and growth areas based on rubric scores
- Offer specific examples of what to revise based on criteria
- Add guiding questions to support reflection

> ✅ *Prompt Example:*
> "Write a 2–3 sentence summary of feedback for a student who earned 'Developing' in thesis, 'Proficient' in evidence, and 'Excellent' in organization on a writing rubric."

---

3. Rephrase or Simplify Comments

Use AI to:

- Make feedback more accessible or ESL-friendly
- Remove overly technical or punitive language
- Offer both praise and actionable suggestions

> ✅ *Prompt Example:*
> "Simplify this comment for a multilingual student: 'The conceptual framework is underdeveloped and lacks integration with the literature.'"

⚠️ Important Caveats

- **Don't use AI to evaluate student ideas or grade original thinking.** AI cannot assess nuance, critical insight, or personal experience.
- **Never feed entire student submissions into public tools** unless permitted by your institution's privacy policies or the student.
- **Always read and edit before sending.** What sounds "polite" to AI may still feel robotic, vague, or tone-deaf to students.

🎓 Why This Matters for Instructors

- AI can help you keep feedback timely and focused—but only with clear boundaries.
- Used responsibly, it supports *more frequent, more readable feedback* that helps students revise.
- It can also model tone, balance, and specificity for instructors looking to strengthen their written comments.

Think of AI not as a grading shortcut, but as a feedback co-author—one that still needs your expertise to guide the final 

message.

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2.3.3: Reviewing student reflections or written responses for patterns

Let AI Help You Spot What Students Are Saying—at Scale

Student reflections and open-ended responses can offer rich insight into learning—but reading every word for trends, misunderstandings, or recurring themes can be time-consuming. AI can support instructors by helping to **surface common ideas, questions, or confusions** across a set of submissions, especially in large or online classes.

With the right prompts, AI tools like ChatGPT can quickly scan multiple reflections and generate summaries, identify patterns, or group similar types of responses—while still keeping you in control of interpretation and action.

🔍 What AI Can Help You Analyze

1. Identify Common Themes or Concerns

Use AI to:

- Highlight repeated ideas across multiple student submissions
- Point out areas of confusion, excitement, or misunderstanding
- Suggest key takeaways that reflect collective sentiment

> ✅ *Prompt Example:*
> "Summarize the main themes across these five student reflections about their experiences in a flipped classroom. What topics come up most often?"

---

2. Group Responses by Attitude, Understanding, or Strategy

Use AI to:

- Cluster responses into categories (e.g., "confident," "confused," "curious")
- Help plan follow-up instruction or discussion
- Spot which students may need clarification or support

> ✅ *Prompt Example:*
> "Organize these responses into three categories: those showing full understanding, partial understanding, and misunderstanding of the course topic."

---

3. Generate a Synthesis for Debrief

Use AI to:

- Draft a short summary of class sentiment for use in announcements or feedback
- Create a bulleted list of what students learned or struggled with
- Turn collective insights into follow-up prompts or reflection questions

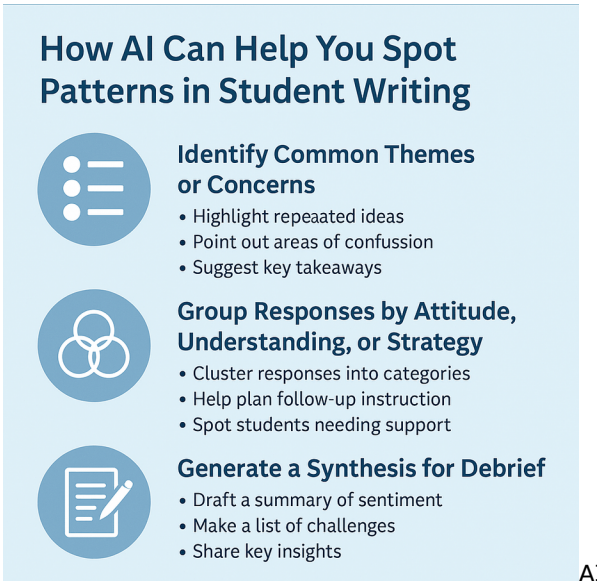
> ✅ *Prompt Example:*
> "Write a 3–4 sentence synthesis of these student discussion responses that I can use to open our next module."

⚠️ Ethical & Practical Considerations

- **Use anonymized or aggregated excerpts** when possible to protect student privacy.
- **Never outsource grading** of qualitative responses to AI tools—use it to spot trends, not assess individuals.
- **Always review summaries before sharing**—AI may miss nuance or flatten important differences.

🎓 Why This Matters for Instructors

- AI can speed up reflection review while giving you a clearer picture of classroom dynamics.
- It supports **responsive teaching**—helping you make decisions based on what students are actually experiencing.
- You can still focus on nuance and care—AI just helps you see the forest before zooming in on the trees.



AI can't replace deep reading, but it can point you toward the places where reading more closely really matters.

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2.4: AI FOR STUDENT SUPPORT

Encouraging Confidence, Curiosity, and Independent Thinking

AI isn't just a behind-the-scenes tool for instructors—it can also help students directly. When thoughtfully introduced and guided, AI tools like ChatGPT, Perplexity, or Grammarly can act as **writing aids, brainstorming partners, and study companions** that support learning beyond formal instruction.

This section explores how instructors can:

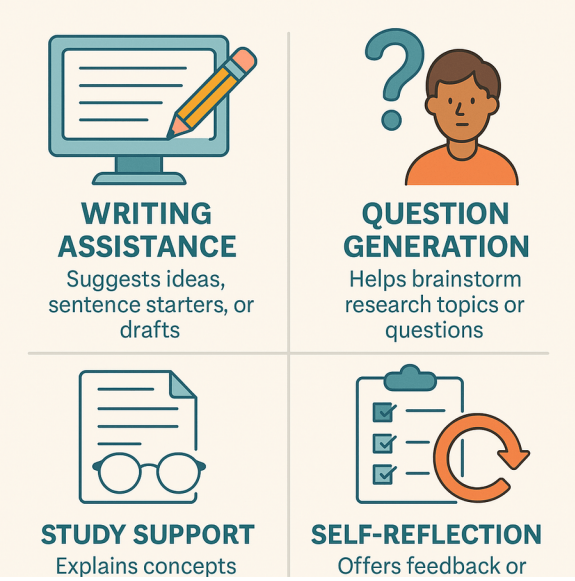
- Use AI to help students **start writing, clarify questions, and explore topics**
- Integrate AI into assignments as a **scaffold**, not a shortcut
- Encourage responsible use through **guided reflection and critical thinking**
- Reduce anxiety by giving students a **safe starting point** for difficult or unfamiliar tasks

Importantly, student support with AI is not about encouraging dependency—it's about offering **entry points**, **feedback loops**, and **practice spaces** that help students grow as thinkers and communicators.

You'll see how to:

- Prompt AI to generate sentence starters, research questions, or explanations
- Guide students in using AI to revise or reflect without doing the work for them
- Teach students how to **question, fact-check, and reframe** what AI produces

When positioned as a **learning partner**, AI can help students build confidence, engage more deeply with content, and develop stronger self-awareness about how they learn.



2.4.1: Suggesting writing starters or research questions

2.4.2: Summarizing complex readings or concepts

2.4.3: Translating or adapting content for multilingual learners

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2.4.1: Suggesting writing starters or research questions

Break Through Blank Page Syndrome with a Digital Brainstorming Partner

Sometimes the hardest part of writing is getting started. Whether students are crafting essays, reflections, or research proposals, AI can help instructors suggest **writing prompts, thesis starters, or research questions** that align with course content and learning outcomes.

Used responsibly, AI tools like ChatGPT can support diverse learners by offering entry points into writing tasks—especially in courses where students struggle to connect abstract topics with real-world questions.

💬 What AI Can Help You Generate

1. Writing Prompts and Sentence Starters

Use AI to:

- Suggest opening lines for reflection or argument essays
- Generate sentence stems that promote critical thinking or personal connection
- Offer phrasing that scaffolds academic writing without giving away content

> ✅ *Prompt Example:*
> "Generate five sentence starters for a reflective journal entry on leadership and group dynamics in a college-level sociology course."

---

2. Discipline-Specific Research Questions

Use AI to:

- Propose open-ended questions tied to your course topic
- Adjust complexity level based on student experience
- Frame questions for different types of inquiry (e.g., analytical, experimental, comparative)

> ✅ *Prompt Example:*
> "Suggest five research questions suitable for a first-year biology student interested in sustainability."

---

3. Scaffolded Inquiry for Drafting Support

Use AI to:

- Break broad topics into smaller sub-questions
- Help students narrow their focus when they feel stuck
- Offer alternative framings of the same topic (e.g., from historical, ethical, or scientific perspectives)

> ✅ *Prompt Example:*
> "Help a student refine the topic 'education and technology' into three focused research questions for a composition course."

🎓 Why This Matters for Instructors

- AI can quickly generate a range of prompts, giving you a head start on writing task design.
- Writing starters help reduce student anxiety, support multilingual learners, and build academic confidence.
- You can use AI-generated prompts in **Canvas discussions, assignment sheets, peer review setups, or warm-up activities**.

You bring the content and context—AI helps with phrasing, variety, and accessibility.

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2.4.2: Summarizing complex readings or concepts

Helping Students Navigate the Dense, the Theoretical, and the Technical

Many students—especially those new to a discipline or still developing their academic reading skills—struggle with dense texts, unfamiliar vocabulary, or layered theories. AI tools like ChatGPT or Claude can act as **scaffolding tools** by summarizing complex materials in plain language or breaking them into manageable parts.

When paired with instructor guidance, AI summaries can help students:

- Preview a reading before tackling it
- Confirm their understanding after reading
- Build confidence with abstract or technical content

🧰 What AI Can Help Students Summarize

1. Scholarly Articles and Textbook Chapters

Use AI to:

- Condense main ideas into a bulleted list or short paragraph
- Highlight key arguments, methods, or conclusions
- Translate academic tone into student-friendly language

> ✅ *Prompt Example:*
> "Summarize this article in 5 bullet points suitable for a first-year psychology student."

---

2. Theoretical Frameworks or Abstract Concepts

Use AI to:

- Offer analogies or real-world examples
- Compare different theories side by side
- Rephrase a definition in simpler terms

> ✅ *Prompt Example:*
> "Explain 'cognitive dissonance' in plain language with an everyday example that a community college student might relate to."

---

3. Step-by-Step Breakdowns of Processes

Use AI to:

- Outline multi-step concepts (e.g., DNA replication, legal procedures, historical timelines)
- Convert paragraphs into flowcharts or checklists
- Support visual learners with structured summaries

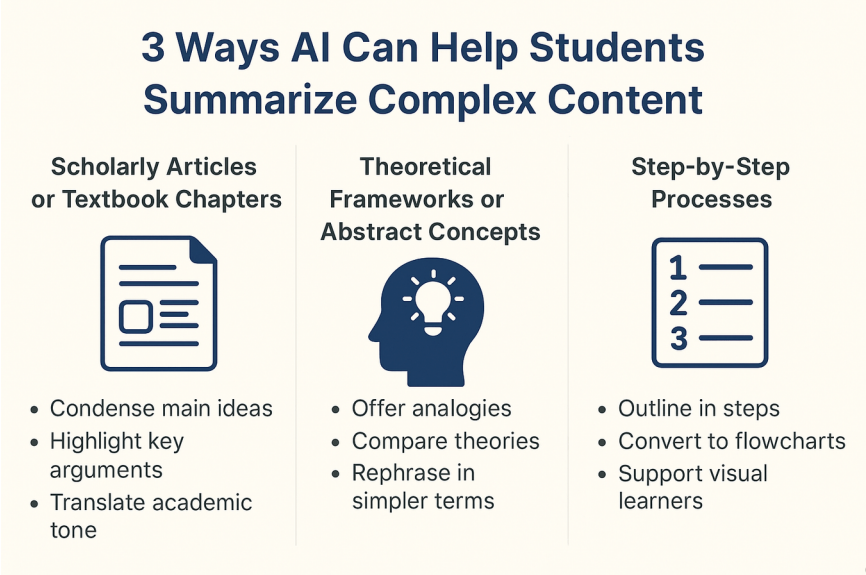
> ✅ *Prompt Example:*
> "Break down the process of glycolysis into 5 simple steps for a biology review sheet."

⚠️ Instructor Tips

- Always encourage students to compare AI summaries to the original—**not** to skip the source.
- Consider using AI summaries as a starting point for **fact-checking, annotating, or reflection exercises**.
- Teach students to prompt critically: e.g., “in my own words,” “for someone new to the topic,” or “without jargon.”

🎓 Why This Matters for Instructors

- AI can reduce reading anxiety and build comprehension without dumbing down the material.
- Summarization support encourages **self-regulated learning**—especially for online or first-generation learners.
- Paired with guidance, this strategy promotes **accessibility, equity, and metacognition** in content-heavy courses.



When students can *see* the big picture, they’re more likely to persist through the details.

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2.4.3: Translating or adapting content for multilingual learners

Making Course Materials More Understandable, Accessible, and Supportive

Multilingual learners often face extra cognitive load when navigating dense academic language, unfamiliar idioms, or discipline-specific jargon. AI tools like ChatGPT or DeepL can help instructors **rephrase, translate, or adapt content** to be more accessible—without changing the core academic goals.

Used thoughtfully, AI can help bridge the gap between language complexity and content mastery by offering multiple points of access for students still developing English fluency.

💬 What AI Can Help You Adapt or Translate

1. Simplify Academic Language Without Losing Meaning

Use AI to:

- Rephrase assignment prompts or readings using clear, direct English
- Break down sentence structure or eliminate jargon
- Create tiered explanations (e.g., one basic and one full version)

> ✅ *Prompt Example:*
> "Simplify this assignment prompt for an intermediate ESL student without changing its meaning: 'Discuss the implications of federalism on public policy using two contemporary examples.'"

---

2. Translate Instructions or Vocabulary Lists

Use AI to:

- Provide first-language support for complex directions or terminology
- Offer bilingual glossaries for recurring key terms
- Clarify culturally specific references or idioms

> ✅ *Prompt Example:*
> "Translate this paragraph into Spanish for a student who speaks English conversationally but struggles with technical vocabulary."

---

3. Adapt Materials for Clarity and Cultural Relevance

Use AI to:

- Revise examples to avoid region-specific assumptions
- Offer alternatives that reflect global perspectives
- Remove unnecessary metaphors or analogies that may confuse learners

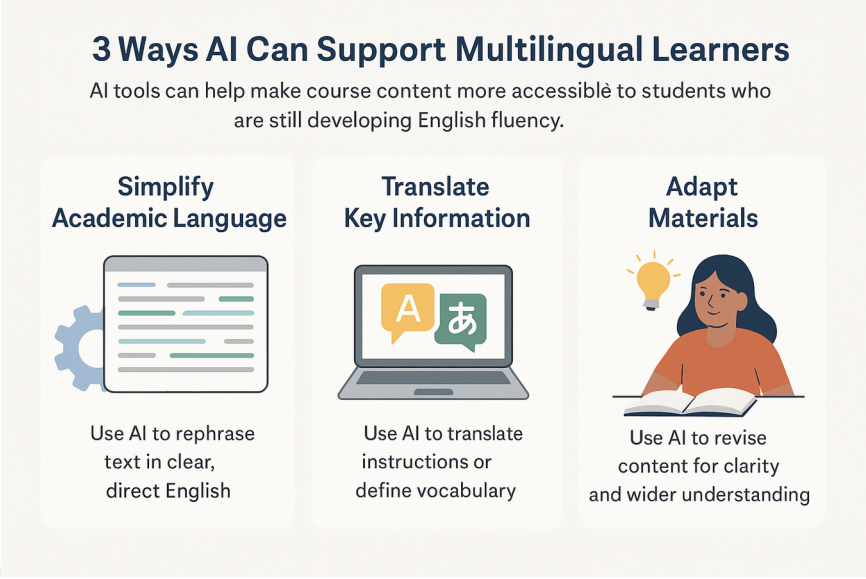
> ✅ *Prompt Example:*
> "Revise this example about 'American football teamwork' so it's more globally accessible without losing the point about collaboration."

⚠️ Instructor Considerations

- Always preview translations for nuance—AI may miss idioms, tone, or context.
- Use adaptation **to support**, not lower, expectations.
- Consider offering both the original and simplified/translated versions side-by-side.

🎓 Why This Matters for Instructors

- AI can help reduce barriers without compromising rigor.
- Adapted materials empower multilingual students to engage confidently and equitably.
- This strategy promotes Universal Design for Learning (UDL) and strengthens a culture of inclusion across the course.



When students understand the expectations, they can rise to meet them—regardless of their language background.

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2.5: AI FOR INSTRUCTOR PRODUCTIVITY

???? 3.5: AI for Instructor Productivity

Work Smarter—Without Compromising Quality

The demands on instructors are higher than ever: lesson planning, grading, emails, department meetings, technology updates—and still, we're expected to show up for students with energy and care. AI can't replace the human work of teaching, but it can help you **streamline the repetitive tasks**, **reclaim time**, and **stay organized** in ways that reduce burnout and support instructional quality.

This section explores how AI tools can assist with:

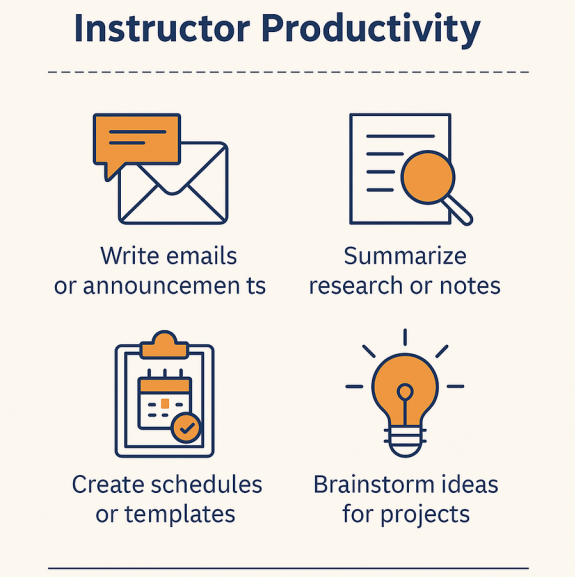
- Writing professional emails or announcements
- Summarizing research or meeting notes
- Creating schedules, templates, or documentation
- Brainstorming ideas when you're stuck

Whether you're teaching five sections or redesigning a program, AI can serve as a behind-the-scenes collaborator—one that helps you spend less time formatting and more time connecting.

You'll learn how to:

- Prompt AI to handle mundane writing tasks
- Use AI to support consistency and clarity in communication
- Build systems that keep your materials, notes, and ideas organized
- Identify where AI saves time—and where your expertise is essential

This section is about **practical strategies** for making the day-to-day lighter—so your energy can stay focused on what matters most: teaching, mentoring, and reflection.



2.5.1: Composing announcements, assignment descriptions, and reminders
2.5.2: Drafting professional emails or recommendation letters
2.5.3: Organizing meeting notes or to-do lists

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2.5.1: Composing announcements, assignment descriptions, and reminders

Use AI to Communicate Clearly, Consistently, and in Less Time

Consistent communication is key to helping students stay on track—but writing weekly announcements, assignment descriptions, or reminders can be time-consuming. AI tools like ChatGPT or Copilot can help you draft messages that are clear, encouraging, and tailored to different audiences or tones.

Used thoughtfully, AI helps you **maintain a strong instructor presence** in online, hybrid, and in-person courses—without spending hours formatting emails or Canvas updates.

🧰 What AI Can Help You Compose

1. Weekly or Module Announcements

Use AI to:

- Recap the week's goals or key deadlines
- Introduce the topic or theme in a student-friendly tone
- Include reminders, tips, or encouragement

> ✅ *Prompt Example:*
> "Write a warm, motivating announcement for Week 4 of a fully online English 1A course. Mention the upcoming discussion board and due date for the first essay draft."

---

2. Assignment Descriptions

Use AI to:

- Draft the assignment overview in accessible, direct language
- Break instructions into digestible bullet points
- Rephrase dense prompts for students who may need extra support

> ✅ *Prompt Example:*
> "Write a clear, student-facing assignment description for a 3–5 page argumentative essay about media and identity. Use inclusive language and a tone that encourages creativity."

---

3. Reminders and Nudges

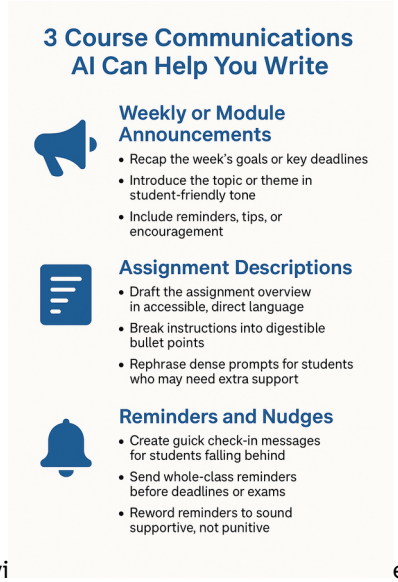
Use AI to:

- Create quick check-in messages for students falling behind
- Send whole-class reminders before deadlines or exams
- Reword reminders to sound supportive, not punitive

> ✅ *Prompt Example:*
> "Compose a reminder message for students who haven't submitted the quiz by the due date. Be friendly, encouraging, and offer an option to reach out with questions."

🎓 Why This Matters for Instructors

- AI-generated drafts help you save time while keeping your course “voice” consistent.
- Regular, well-timed communication builds **trust, motivation, and accountability**.
- Instructors in high-enrollment or asynchronous courses can **scale their presence** without sacrificing tone or clarity.



You still revi ew and personalize the message—AI just helps you get there faster.

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2.5.2: Drafting professional emails or recommendation letters

Communicate Clearly and Professionally—Without Starting from a Blank Page

Writing professional emails and recommendation letters is part of everyday academic life—but it can be difficult to find the right tone, especially when writing under pressure or on a tight deadline. AI tools like ChatGPT, Claude, or Microsoft Copilot can help you generate **first drafts** that are clear, respectful, and appropriately tailored to the audience.

Whether you're responding to a student, emailing a colleague, or writing a letter of support, AI can help reduce the friction of getting started—so you can focus on personalization, accuracy, and nuance.

🧰 What AI Can Help You Draft

1. Routine or Polished Emails

Use AI to:

- Respond to student questions with clarity and care
- Compose respectful messages to colleagues or administrators
- Adjust tone for formality, warmth, or brevity

> ✅ *Prompt Example:*
> "Draft a polite, encouraging response to a student who missed the assignment deadline due to illness and is requesting an extension."

---

2. Letters of Recommendation

Use AI to:

- Draft personalized recommendation letter templates
- Help structure letters around specific criteria (e.g., transfer, scholarship, graduate school)
- Offer alternative phrasing for strengths, qualities, or experiences

> ✅ *Prompt Example:*
> "Write a draft of a recommendation letter for a student applying to a public health master's program. Highlight their research skills, professionalism, and communication."

---

3. Tone Matching and Revisions

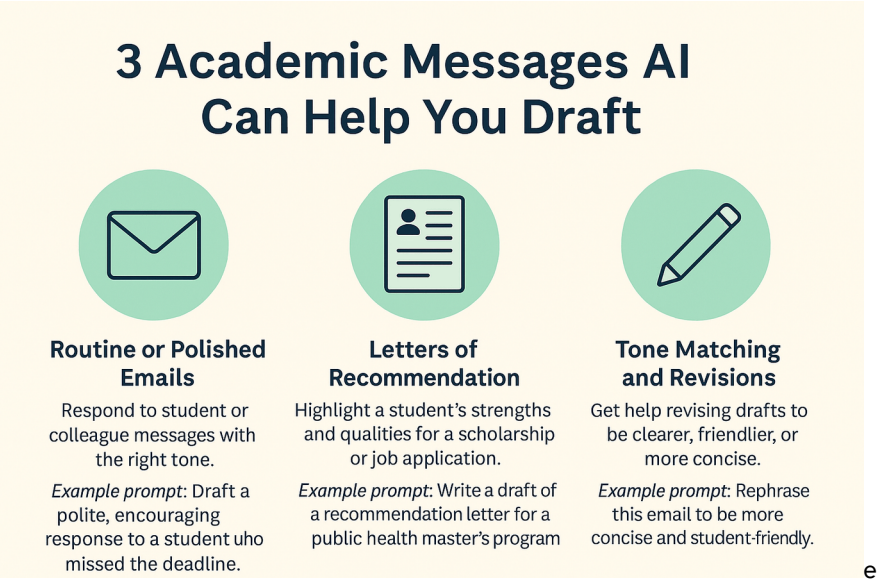
Use AI to:

- Revise a draft to be more diplomatic, enthusiastic, or formal
- Translate institutional jargon into accessible language
- Catch overly long or unclear phrasing

> ✅ *Prompt Example:*
> "Rephrase this email to be more concise and student-friendly without losing the professionalism."

🎓 Why This Matters for Instructors

- AI can help reduce the cognitive load of high-frequency writing tasks.
- Drafting with AI frees up time and energy to focus on personalization and reflection.
- Instructors working in multilingual, interdisciplinary, or fast-paced environments can use AI to maintain **consistency, tone, and clarity** under pressure.



You provide th e insights—AI helps shape them into polished, audience-ready drafts.

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2.5.3: Organizing meeting notes or to-do lists

Turn Chaos into Clarity with AI-Structured Summaries and Checklists

Faculty meetings, committee work, department planning, and personal course prep often produce long, messy notes or scattered to-do lists. AI can help you transform rough ideas, bullet points, or transcripts into **clean summaries, prioritized lists, and actionable follow-ups**.

Whether you're organizing your own thoughts or documenting shared work, AI tools like ChatGPT or Copilot can reduce clutter and help you stay on top of academic and administrative responsibilities.

🧰 What AI Can Help You Organize

1. Meeting Summaries and Action Items

Use AI to:

- Condense meeting notes into organized summaries
- Extract next steps and deadlines
- Format outcomes for sharing with teams or saving to project folders

> ✅ *Prompt Example:*
> "Summarize these department meeting notes into bullet points, separating announcements, discussion highlights, and action items."

---

2. To-Do Lists and Project Planning

Use AI to:

- Turn text notes into a prioritized checklist
- Break large projects into smaller tasks
- Add due dates or assign roles (with your input)

> ✅ *Prompt Example:*
> "Convert this list of course redesign goals into an organized to-do list with checkboxes and suggested order of completion."

---

3. Follow-Up Communications or Logs

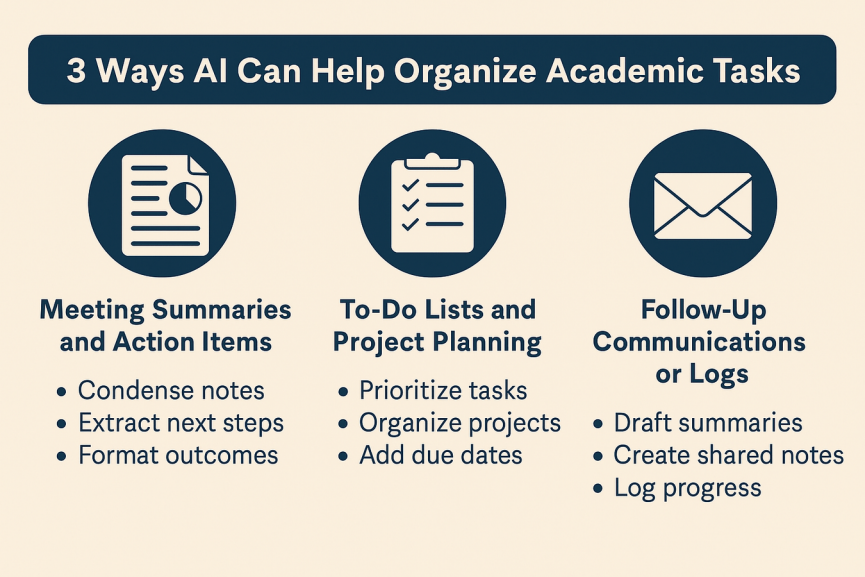
Use AI to:

- Draft recap emails based on meeting takeaways
- Create shared notes for asynchronous team members
- Log progress on long-term projects using consistent templates

> ✅ *Prompt Example:*
> "Write a follow-up email summarizing today's meeting and listing the three next steps we agreed on."

🎓 Why This Matters for Instructors

- AI helps reduce the time spent formatting, rewriting, or deciphering disorganized notes.
- Clear summaries and task lists support **collaboration, transparency, and follow-through**.
- It's easier to plan proactively—and avoid duplication or last-minute scrambles—when your notes are actually usable.



You do the thinking—let AI help with the structuring.

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2.6: DISCIPLINE-NEUTRAL EXAMPLES

Prompts and Applications That Work Across Courses and Contexts

Not every AI use case needs to be tailored to a specific discipline. Some of the most useful applications—like generating writing prompts, summarizing readings, or drafting discussion questions—can be applied across general education, CTE, STEM, humanities, and social sciences alike.

This section provides a curated set of **versatile, low-barrier AI prompts** that any instructor can adapt for their course. These examples focus on foundational teaching practices that show up in nearly every field:

- Writing and communication
- Student reflection and feedback
- Content explanation and review
- Assignment design and classroom discussion

Whether you're teaching history or healthcare, math or media studies, the examples here are meant to be **plug-and-play starting points**. Each prompt includes:

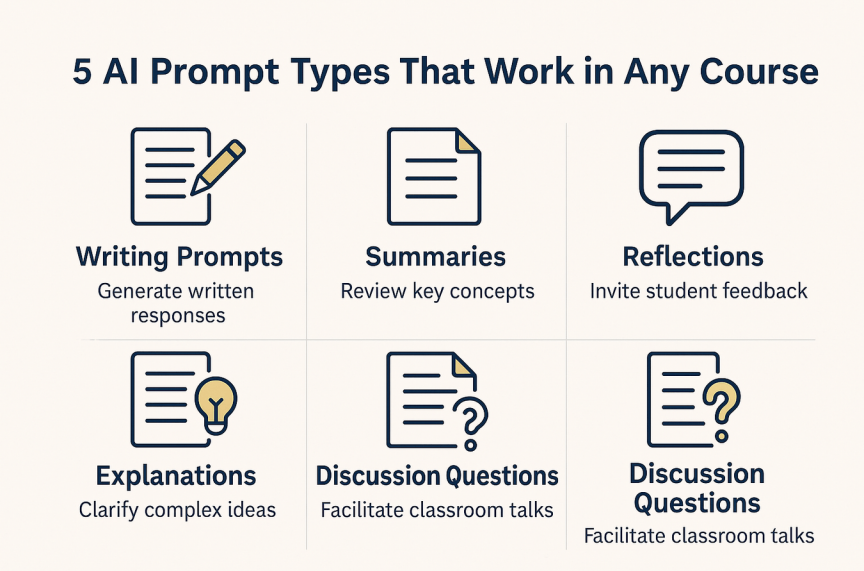
- A short explanation of why it's useful
- An example of how it could look in two different course types
- Tips for editing or refining the output to fit your tone, level, or modality

---

???? Why This Matters for Instructors

- Instructors who are new to AI often ask, *"But how would this apply in my subject?"* These examples show that many strategies are **flexible across contexts**.
- Discipline-neutral prompts offer a great way to **model AI use for students**—especially in general education or multidisciplinary classrooms.
- Reusable templates help save time, promote instructional clarity, and support consistency across courses or departments.

The goal of this section isn't to offer *everything*—but to spark ideas that are easy to build from, no matter what you teach.



2.6.1: For STEM, humanities, social sciences, CTE, and the arts
2.6.2: Prompts you can adapt directly for Canvas discussions or assignments

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2.6.1: For STEM, humanities, social sciences, CTE, and the arts

AI Prompts That Travel Well Across Subjects

While every discipline has its own language and logic, many instructional needs—like generating examples, summarizing content, or drafting questions—are shared across fields. AI can support instructors in any subject by helping with common tasks like content explanation, assignment design, and formative feedback.

This section includes prompt templates that can be adapted for:

- **STEM** (e.g., biology, math, computer science)
- **Humanities** (e.g., literature, philosophy, art history)
- **Social Sciences** (e.g., psychology, sociology, political science)
- **CTE** (e.g., nursing, culinary arts, criminal justice)
- **Creative Arts** (e.g., design, music, theater)

🧰 5 Adaptable Prompt Templates Across Disciplines

1. Explain a Complex Concept in Simple Terms

> **Prompt:**
> "Explain [insert concept] in simple terms for a first-year student unfamiliar with the topic. Use everyday language and one example."

- STEM: *Explain photosynthesis for someone new to biology.*
- Humanities: *Explain postmodernism for a student new to literary theory.*
- CTE: *Explain the concept of mise en place in culinary arts.*

---

2. Generate a Real-World Scenario or Case

> **Prompt:**
> "Write a short scenario that demonstrates [insert skill or issue] in a real-world or workplace context. Include one discussion question."

- Social Sciences: *A scenario involving bystander effect in psychology.*
- CTE: *A patient interaction involving ethical decision-making in nursing.*
- Arts: *A creative prompt for lighting a stage scene using minimal equipment.*

---

3. Create a Quick Comprehension Check

> **Prompt:**
> "Write three low-stakes quiz questions (multiple choice or short answer) about [insert topic] for a [beginner/intermediate] course."

- STEM: *Basic questions on the periodic table.*
- Humanities: *Questions about character motivation in Antigone.*
- CTE: *Identify safe handling procedures for kitchen equipment.*

---

4. Rephrase Course Content for a Different Audience

Prompt:
"Summarize this explanation for a [middle schooler/community college/ESL student] without losing the core meaning."

- STEM: *Turn a research-heavy explanation of DNA replication into a visual-friendly summary.*
- Social Sciences: *Simplify a definition of structural inequality.*
- Arts: *Rephrase a critique of a visual composition.*

---

5. Generate Student Reflection Prompts

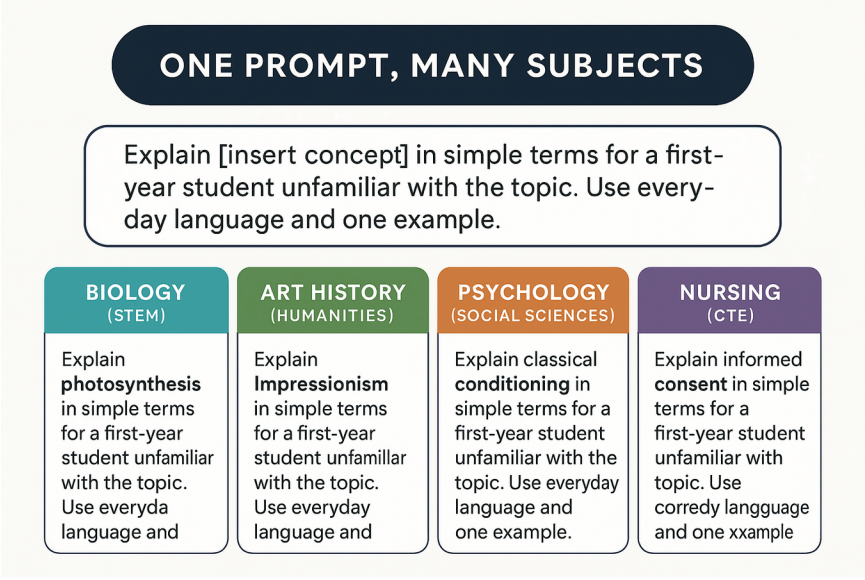
Prompt:
"Write a reflection prompt for students to connect [topic] to their personal experience or goals."

- Social Sciences: *How do social media habits reflect social norms?*
- Humanities: *How does a theme from the novel relate to a personal value or belief?*
- CTE: *Reflect on how time management plays a role in your future career field.*

🎓 Why This Matters for Instructors

- These adaptable prompts save time while still being customizable to content and level.
- Prompts like these can be used in **Canvas modules, lectures, warm-ups, or formative check-ins**.
- They're also great for modeling effective prompt design to students who will be using AI tools themselves.

Think of these as "teaching launchpads"—easy to reuse, remix, or scaffold.



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2.6.2: Prompts you can adapt directly for Canvas discussions or assignments

Plug-and-Play Prompts for Any Online or Hybrid Course

Canvas discussions and assignments are central to student engagement in online learning—but crafting thoughtful, relevant, and level-appropriate prompts takes time. AI can help instructors generate or rephrase prompts that are:

- Aligned with course outcomes
- Approachable for different learner levels
- Structured for meaningful student responses

This section provides **ready-to-use AI-generated prompt templates** you can adapt directly into Canvas. Use them to draft new discussion threads, design critical thinking activities, or scaffold assignments across disciplines.

🧰 Prompt Templates for Online Teaching

1. Discussion Prompt: Connect Theory to Practice

Prompt to AI:
"Write a discussion question that helps students apply Maslow's hierarchy of needs to a modern workplace scenario."

Canvas Version:
Think of a real or hypothetical job setting (e.g., retail, healthcare, education). How might Maslow's hierarchy of needs explain the motivation or dissatisfaction of employees in that setting? Respond with examples and reply to at least one peer with a comparison or follow-up question.

---

2. Assignment Prompt: Compare Perspectives

Prompt to AI:
"Create a writing prompt that asks students to compare two theories of learning in education."

Canvas Version:
Write a 500-word response comparing behaviorism and constructivism. How do these learning theories differ in their approach to motivation, assessment, and classroom environment? Use at least one real-world example to support your analysis.

---

3. Discussion Prompt: Reflect and Relate

Prompt to AI:
"Write a student-friendly discussion prompt that invites personal reflection on course content about sustainability."

Canvas Version:
Reflect on how your daily habits contribute to or challenge environmental sustainability. What small changes might make a difference in your personal or professional context? Reply to a classmate with encouragement, a shared challenge, or a suggestion.

---

4. Assignment Prompt: Visual or Creative Response

Prompt to AI:
"Design a short assignment prompt asking students to use an image, chart, or creative product to explain a course concept."

Canvas Version:
Choose a key concept from this week's reading and represent it visually (e.g., sketch, meme, infographic, concept map). Upload your visual and include a short paragraph explaining how it connects to the material. Creativity counts—but clarity is most important.

---

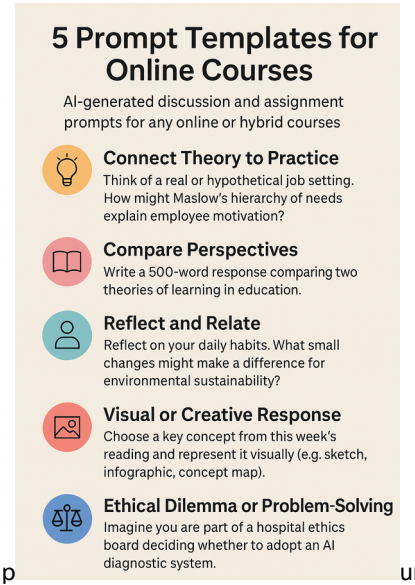
5. Discussion Prompt: Ethical Dilemma or Problem-Solving

Prompt to AI:
"Write a discussion question that presents an ethical dilemma related to artificial intelligence in healthcare."

Canvas Version:
Imagine you are part of a hospital ethics board deciding whether to adopt an AI-based diagnostic system. The system increases speed but may overlook rare conditions. How would you weigh the benefits and risks? What questions should be asked before implementation?

🎓 Why This Matters for Instructors

- AI-generated prompts can help reduce prep time while offering variety in tone and structure.
- These templates support **deeper engagement, personalization, and relevance**—especially in asynchronous settings.
- You can also show students how you used AI in the prompt design process—modeling **transparency and critical use**.



You still provide the p urpose and framing. AI just helps you find new ways to ask better questions.

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2.7: WHAT TO WATCH OUT FOR

Using AI Responsibly in the Classroom

While AI can be a powerful tool for improving efficiency, engagement, and creativity, it's not without risks. Misuse, overreliance, or unchecked outputs can lead to misinformation, bias, and ethical gray areas—especially in educational settings where trust and transparency matter.

This section outlines key limitations and common pitfalls to help instructors **integrate AI thoughtfully**. The goal isn't to discourage use—but to equip you with the awareness needed to **use AI without outsourcing your professional judgment.**

???? 5 Things to Watch Out For

1. Hallucinations (Confidently Incorrect Information)

AI may invent facts, citations, or sources—even when asked for "academic" or "reliable" content.

> **Teaching Tip:** Always verify any source, claim, or data point before using it in your materials.

---

2. Outdated or Biased Outputs

Language models are trained on snapshots of the internet and may reflect outdated knowledge or cultural bias.

> **Teaching Tip:** Be especially careful in fields that evolve quickly (e.g., tech, law, public health) or deal with sensitive identities or perspectives.

---

3. Overreliance on AI for Instructional Voice

Relying too heavily on AI to write announcements, feedback, or assignments can lead to a course that feels impersonal or generic.

> **Teaching Tip:** Use AI to draft—but always add your own tone, empathy, and context.

---

4. Student Misuse or Misunderstanding

Students may assume AI output is always correct or acceptable to submit without revision or citation.

> **Teaching Tip:** Set clear expectations in your syllabus and model responsible AI use.

---

5. Data Privacy and Confidentiality

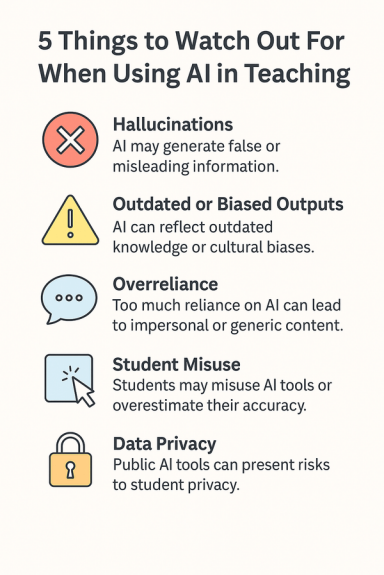
Public AI tools (like ChatGPT) may store and learn from input. Entering student information or unpublished work can create FERPA or academic integrity risks.

> **Teaching Tip:** Avoid sharing sensitive content and follow your institution's data use guidelines.

???? Why This Matters for Instructors

- Your role as a **critical thinker and ethical guide** is more important than ever.
- Students are watching how you use AI—and learning to form their own habits in the process.
- Being proactive about potential issues helps create a **transparent, inclusive, and trustworthy classroom environment**.

AI is not just a tool—it's a teaching moment. And like any teaching tool, how you use it makes all the difference.



2.7.1: When AI is helpful—and when it might backfire

2.7.2: Importance of verifying AI-generated content

2.7.3: Transparency and ethics in using AI for instruction

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2.7.1: When AI is helpful—and when it might backfire

Knowing the Difference Makes All the Difference

AI can be an incredible time-saver and teaching support—**when used in the right way, at the right moment, and for the right task.** But when used without context, care, or boundaries, it can backfire: producing inaccurate information, alienating students, or undermining trust.

This section explores **practical signals** for when AI use is likely to be productive—and when it might cause more problems than it solves.

✅ When AI Is Helpful

- **For Drafting, Not Finalizing**
  AI excels at producing rough drafts of announcements, rubrics, or feedback you can personalize.
- **For Brainstorming and Rephrasing**
  Use it to generate examples, reword complex ideas, or get past writer's block.
- **For Repetitive or Structural Tasks**
  Let AI outline, summarize, or convert bulleted ideas into polished prose—then revise as needed.
- **For Student Support Scaffolds**
  AI can help students summarize complex readings or clarify assignment expectations, if framed correctly.
- **When You Have Time to Review and Edit**
  AI is most helpful when it gives you a head start—not when you're rushed and tempted to copy/paste unchecked output.

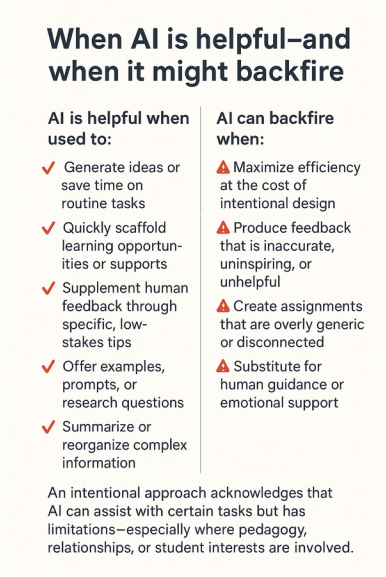
⚠️ When AI Might Backfire

- **When You Use It to Avoid Deep Engagement**
  If you're unsure about the content or context, letting AI "fill the gap" may introduce errors or misleading simplifications.
- **When the Output Feels Generic or Unempathetic**
  Students can tell when feedback or announcements sound robotic. AI can't replicate your tone or care without effort.
- **When There's No Time to Fact-Check**
  AI can hallucinate facts, citations, or terminology. Using unverified content puts your credibility at risk.
- **When Privacy or Academic Integrity Is at Risk**
  Entering identifiable student info or grading original ideas into public tools can violate ethical or institutional policies.
- **When Students Aren't Taught How to Use It Critically**
  If students use AI without understanding its limitations, they may rely on flawed or shallow content—and never know the difference.

🎓 Why This Matters for Instructors

- AI is not good or bad—it's **context-sensitive**. The same tool can save time or erode trust depending on how it's used.
- By modeling when, how, and *why* you use AI, you help students form their own responsible habits.
- Reflecting on AI's limitations reinforces your role as a thoughtful, present, and ethical educator.

Use AI like a GPS: helpful for guidance, but you still need to know where you're going—and when to take the wheel.



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2.7.2: Importance of verifying AI-generated content

Fluent Doesn't Mean Factual

AI-generated content often looks polished and professional—but that doesn't mean it's accurate. AI tools like ChatGPT don't "know" facts in the traditional sense. Instead, they predict text based on patterns in their training data. This means AI can generate **confident-sounding responses** that contain outdated info, biased assumptions, or flat-out fabricated details.

As instructors, it's essential to approach AI output with the same critical lens we teach students to apply to their sources: **read carefully, verify facts, and check for alignment with your goals and values.**

⚠️ What Can Go Wrong If You Don't Verify

- **Fake citations or sources** that don't exist or misattribute work
- **Oversimplified or misleading summaries** of complex ideas
- **Cultural or disciplinary inaccuracies**, especially in specialized fields
- **Biased language** based on skewed training data
- **Content that sounds neutral but omits key perspectives or context**

✅ How to Verify AI Content Effectively

1. Cross-Check Against Trusted Sources

Compare facts, figures, and definitions with:

- Peer-reviewed research
- Textbooks or course materials
- Reputable media, databases, or government/NGO sources

2. Ask for Citations—but Vet Them

If the AI provides sources:

- Look them up independently
- Confirm author names, publication dates, and journal titles
- Ensure the source actually says what the AI claims it does

3. Run a Quick Logic or Bias Check

Ask yourself:

- Is this answer too neat or generic for a complex topic?
- Whose perspective is missing?
- Is the tone or language skewed, stereotyped, or oversimplified?

🎓 Why This Matters for Instructors

- Your materials shape what students accept as credible. If AI errors go uncorrected, they reinforce misinformation.
- Demonstrating how you verify AI output models **academic rigor, digital literacy, and ethical use**.

- Verification ensures your instructional content reflects **accuracy, inclusivity, and alignment with your teaching values**.

AI is a starting point—not a source of truth. Use it to generate, not to assume.



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2.7.3: Transparency and ethics in using AI for instruction

Be Clear, Be Fair, and Keep Students in the Loop

As instructors begin using AI to support teaching—whether drafting announcements, designing assignments, or brainstorming prompts—it's essential to model **transparency, ethics, and integrity**. Not because AI use is inherently unethical, but because students deserve to know **how, when, and why** it's being used in their learning environment.

Transparency builds trust. Ethics ensure equity.

🧭 Why Transparency Matters

Students may assume that:

- You wrote everything from scratch
- The feedback they received is fully human-generated
- AI use is not allowed for them if it's not discussed openly

Being transparent about how you use AI helps:

- Set expectations around what's allowed
- Model responsible decision-making
- Avoid confusion or accusations of inconsistency

> ✅ *Example:*
> "This assignment prompt was drafted with the help of an AI writing tool and then revised to align with our course goals and expectations."

⚖️ Core Ethical Principles for AI Use in Instruction

1. Consent and Privacy

Avoid entering student work, names, or grades into public AI tools. Always check institutional FERPA and data-sharing guidelines.

2. Equity and Access

Not all students have equal access to AI tools or digital literacy support. Avoid assigning tasks that assume or require AI use unless guidance and alternatives are provided.

3. Credit and Acknowledgment

When AI is used to draft instructional materials, let students know—just like you would cite a colleague's contribution or a textbook excerpt.

4. Critical Modeling

Demonstrate how to question, edit, or refine AI-generated content. Use AI as a teachable moment to reinforce information literacy and academic integrity.

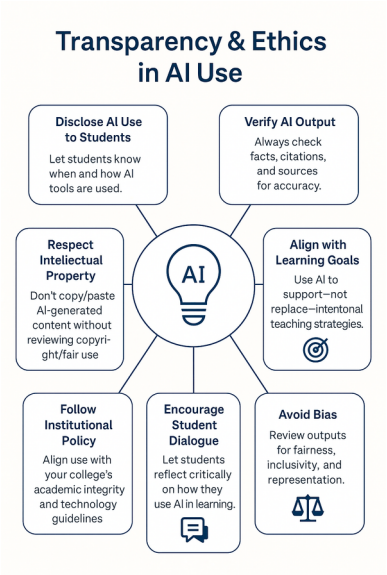
🧑‍🏫 Talking Points for Students

Consider including a short section in your syllabus or LMS about AI use, such as:

> *"In this course, we may use AI tools (like ChatGPT) to support course planning and communication. Any content generated with AI will be reviewed and revised by the instructor to ensure alignment with course goals. Students are encouraged to ask questions about how these tools are used and will receive guidance if AI is ever recommended for their own work."*

🎓 Why This Matters for Instructors

- Transparency fosters **trust, clarity, and inclusion**.
- Ethical use models the kind of integrity we ask of our students.
- By demystifying AI in instruction, you make room for critical thinking—not secrecy or confusion.



Use AI to enhance learning—but never let it replace honesty, care, or connection.

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3: TEACHING WITH AI- BOUNDARIES, BIAS, AND BEST PRACTICES

As generative AI becomes more common in higher education, instructors are balancing opportunities for innovation with important ethical considerations. Tools like ChatGPT, Bard, and Copilot can support instruction, save time, and expand access—but they also raise complex questions about privacy, equity, and responsible use.

This section is designed to help you think critically about how AI fits into your teaching—not just as a tool, but as part of a broader learning environment. You don't need a background in computer science to engage with AI thoughtfully. What you *do* need is a clear understanding of the potential risks, boundaries, and responsibilities that come with integrating these tools into your practice.

🧭 What You'll Explore in This Chapter

- ⚖️ How to set clear, ethical boundaries for AI use in your course
- ⚠️ Why bias exists in AI outputs—and how to evaluate content critically
- 🔒 What privacy and data ethics mean when using third-party tools
- ♿ How to ensure AI use supports accessibility and UDL
- 📘 Ways to model critical, intentional use of AI for your students

By the end of this section, you'll have a clearer understanding of how to set boundaries, spot limitations, and model best practices for teaching with AI—so you can confidently integrate (or reject) AI in ways that serve your students and your course goals.



-  Teaching with AI- Boundaries, Bias, and Best PracticesEdit 

3.1: AI and Academic Integrity

3.1.1: What counts as "cheating" with AI?

3.1.2: Should instructors disclose their own AI use?

3.1.3: Encouraging transparency in student assignments

3.2: Bias and Limitations in AI

3.2.1: How AI reflects human biases in its training data

3.2.2: Risks of inaccurate or misleading information

3.2.3: Equity concerns for marginalized student groups

3.3: Student Privacy and Data Security

3.3.1: Equity concerns for marginalized student groups

3.3.2: FERPA considerations

3.3.3: Platform privacy policies (e.g., ChatGPT, Grammarly, Copilot)

3.4: Transparency and Consent

3.4.1: Notifying students when AI is used in course design or grading

3.4.2: Inviting students to opt in/out of AI-based tools or supports

3.5: AI and Accessibility

3.5.1: How AI can support UDL and learners with disabilities

3.5.2: Cautions about assuming AI is “accessible” by default

3.6: Frameworks and Guidelines

3.6.1: Sample institutional or course-level policies

3.6.2: Short AI use declarations instructors can adopt

🔍 Chapter Takeaway

Teaching with AI requires more than just tool knowledge—it requires ethical awareness, transparency, and thoughtful boundaries. As AI becomes more accessible to both instructors and students, your role is to lead with clarity and intention. Understanding where AI is helpful, where it might reinforce bias, and where it raises privacy or accessibility concerns equips you to make better decisions. You don’t need to have all the answers—you just need to keep asking the right questions and centering student learning in the process.

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3.1: AI AND ACADEMIC INTEGRITY

AI tools like ChatGPT, Grammarly, or Canva's Magic Write can be incredibly helpful in the classroom—but they also raise important questions about academic integrity. As instructors, we want to create a learning environment that values original thinking, ethical decision-making, and transparency. That's why it's important to guide students on how to use AI tools responsibly, not secretly.

What Academic Integrity Looks Like with AI

Using AI isn't cheating—**unless** it goes against your course expectations. If a student uses AI to brainstorm ideas, check grammar, or summarize a reading, that might be fine—**if** they're allowed to and give credit when necessary. On the other hand, if they submit an AI-written response and claim it as their own, that crosses the line.

Clear Expectations Help Everyone

Students often don't know what's "okay" when it comes to AI. The best thing we can do is be clear. For each assignment, let students know:

- Can they use AI? If yes, for what parts?
- Should they cite or explain how they used it?
- What counts as original work in your course?

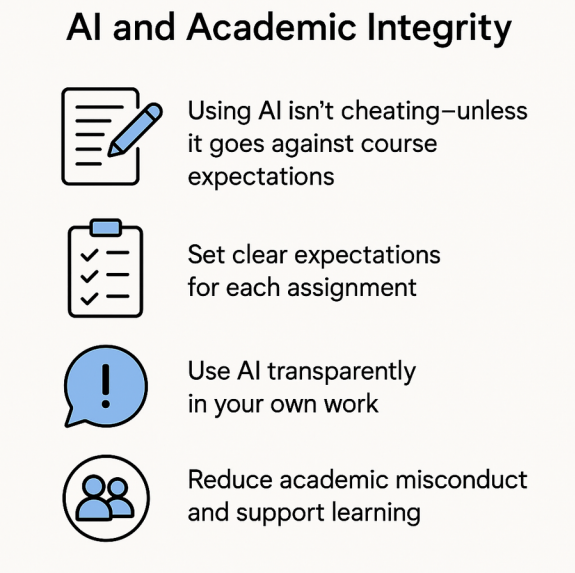
A short note in the assignment instructions or syllabus can go a long way in preventing misunderstandings.

Sample Language You Can Use:

> "You may use AI tools like ChatGPT to help brainstorm ideas for your discussion post, but the final writing should be your own. Please include a short note at the bottom of your post if you used AI."
>
> "For this essay, do not use AI to write any part of your response. You may use proofreading tools like Grammarly to check your grammar."

Model Integrity in Your Own Use

If you use AI to help draft announcements, write quiz questions, or create rubrics—let students know! Modeling transparency shows students how to use AI ethically and responsibly. It also builds trust.



3.1.1: What counts as "cheating" with AI?
3.1.2: Should instructors disclose their own AI use?
3.1.3: Encouraging transparency in student assignments

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3.1.1: What counts as “cheating” with AI?

As AI tools become more accessible, students are using them in a variety of ways—some appropriate, some not. What qualifies as “cheating” depends on the expectations you set. Without clear guidelines, students may unintentionally cross academic integrity lines.

Used without permission or in ways that bypass learning, AI can undermine the purpose of your assignments. Being explicit about what is and isn’t allowed helps protect your course objectives and supports student success.

🚫 Misuse of AI Tools

Use this section to identify red flags and clarify boundaries.

Use AI *misuse* examples to:

- Spot when students rely on AI for core thinking tasks (e.g., writing an essay start to finish)
- Identify unauthorized use during assessments
- Recognize mismatches between student voice and submitted work
- Reinforce that misrepresentation of authorship violates policy

✅ Prompt Example:
“List five examples of how students might misuse AI in a college writing course, including those that would qualify as academic dishonesty.”

🔍 What to Watch For

Use this section to evaluate submitted work for signs of AI overuse.

Use AI to:

- Analyze tone and style mismatches compared to earlier submissions
- Check for vague, generic, or overly polished content
- Detect inconsistencies between prompt specificity and the student response
- Review Canvas or Google Docs version history for sudden jumps

✅ Prompt Example:
“Provide five signs that might indicate a student’s writing assignment was heavily assisted or generated by AI tools like ChatGPT.”

✅ Preventing AI-Related Cheating

Use this section to design assignments that make misusing AI harder.

Use AI to:

- Generate writing prompts that require personal or course-specific reflection
- Develop process-based assignments that include outlines, drafts, or reflections
- Create transparency checklists (e.g., “Explain how you used any outside tools”)
- Build rubrics that reward originality, effort, and critical thinking

✅ Prompt Example:
“Create a discussion prompt that includes a question only answerable through personal reflection or course-based experience.”

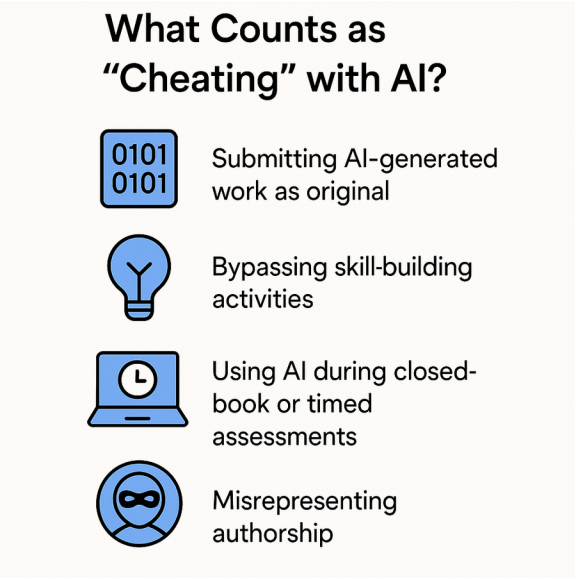
🎓 Why This Matters for Instructors

AI isn't inherently dishonest—but unmonitored, it can replace the very skills you're trying to teach. Students may not understand when AI use crosses into cheating unless you guide them.

By proactively addressing AI misuse:

- You reduce academic integrity violations
- You support authentic student learning
- You build transparency and trust in your course
- You model ethical tech use in real-world scenarios

When students know the rules, they're more likely to play fair.



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3.1.2: Should instructors disclose their own AI use?

AI isn't just a student tool—it's quickly becoming part of teaching, too. From drafting announcements to generating quiz questions, instructors are using AI to save time and streamline their work. But when we expect students to be transparent about their AI use, we also need to consider modeling that transparency ourselves.

Disclosing when and how you use AI promotes trust, reduces stigma, and sets a clear standard: AI isn't "cheating" when it's used ethically and responsibly.

🤖 Ways Instructors Might Use AI

Use this section to identify how AI might support your work as an educator.

Use AI to:

- Draft course announcements or weekly reminders
- Generate quiz or test questions aligned with learning objectives
- Create examples, case studies, or discussion prompts
- Suggest rubric language or assignment instructions

✅ Prompt Example:
"Suggest three ways an instructor might ethically use AI to support instructional planning without replacing their professional judgment."

🔍 When and How to Disclose

Use this section to model transparency without over-explaining.

Use AI to:

- Write short disclosure notes (e.g., "This announcement was drafted using ChatGPT and reviewed by your instructor.")
- Create syllabus language about instructor and student AI use
- Draft a one-time "How I Use AI" statement to include in your course shell

✅ Prompt Example:
"Draft a 1–2 sentence disclosure an instructor can add to a Canvas announcement to let students know AI helped write it."

✅ Benefits of Being Open About AI Use

Use this section to understand the value of disclosure in teaching.

Use AI to:

- Brainstorm ways transparency builds student trust
- Help draft professional and approachable language around AI use
- Encourage open conversations about appropriate use of technology

✅ Prompt Example:
"List five benefits of instructors being transparent about their own use of generative AI in teaching and learning."

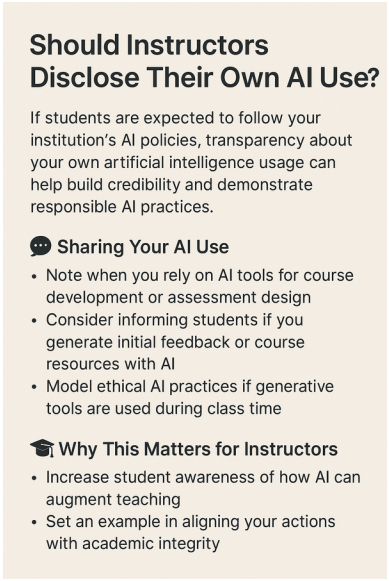
🎓 Why This Matters for Instructors

When you share how you use AI—especially when students are learning about it too—you create a culture of integrity and openness. Disclosure doesn't mean explaining every tool you use, but offering occasional insight into your process shows students how professionals use AI ethically.

Transparency:

- Models responsible digital literacy
- Normalizes thoughtful AI use in academic and career settings
- Helps students feel more comfortable asking questions
- Sets a consistent tone around academic honesty for everyone in your course

You set the standard—students will follow your lead.



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3.1.3: Encouraging transparency in student assignments

As students experiment with tools like ChatGPT, Grammarly, and other AI-based apps, they may not always understand when or how to disclose their use. Some may assume that AI support is the same as using a spell-checker, while others may be unsure what "original work" really means in an AI era.

Creating a culture of transparency helps students think critically about how they use AI, supports ethical learning, and prevents accidental academic integrity violations.

🗣️ Help Students Share How They Used AI

Use this section to promote open reflection, not punishment.

Use AI to:

- Create reflection questions that ask students to describe how they used AI during the assignment
- Draft sentence starters for student disclosure statements
- Develop assignment templates with a dedicated “AI Use” section

✅ Prompt Example:
“Write a short paragraph template students can use to explain if and how they used AI during a group presentation.”

🧭 Make Disclosure a Standard Practice

Use this section to normalize transparency and lower the stakes.

Use AI to:

- Generate syllabus language that defines when and how students should disclose AI use
- Suggest checklist items for assignments (e.g., “Did you use AI tools? If yes, explain how.”)
- Provide examples of acceptable and unacceptable AI usage for your course

✅ Prompt Example:
“Draft three short assignment reminders that prompt students to disclose whether they used AI tools while completing their work.”

🔍 Help Students Reflect Critically on AI Use

Use this section to promote awareness, not just compliance.

Use AI to:

- Generate journal prompts that ask students to reflect on how AI helped or hindered their work
- Develop Canvas discussion topics on the pros and cons of using AI in school
- Frame questions that link AI use to personal growth, ethics, or course learning goals

✅ Prompt Example:
“Create two reflection questions that help students evaluate their decision to use AI on a writing assignment.”

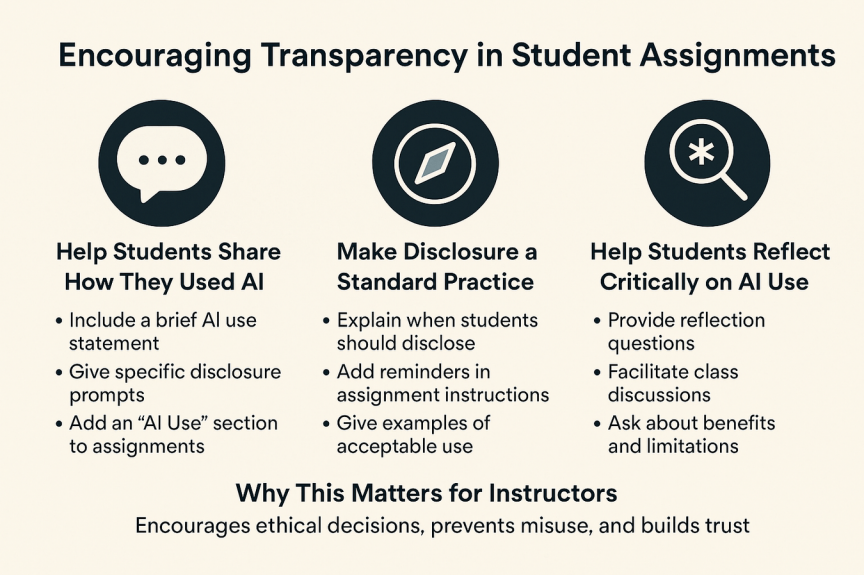
🎓 Why This Matters for Instructors

Transparency creates teachable moments. When students are asked to think about their use of AI tools, they're more likely to make intentional, ethical choices. It also gives instructors insight into student habits and misconceptions about technology.

By encouraging transparency:

- You prevent misuse before it happens
- You help students see AI as a support tool, not a shortcut
- You model ethical behavior through assignment design
- You reduce suspicion and increase trust in the learning process

AI in the classroom doesn't have to be hidden—it can be part of the conversation.



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3.2: BIAS AND LIMITATIONS IN AI

AI tools can be powerful partners in teaching and learning—but they are not neutral or infallible. The data used to train AI models reflects human decisions, cultural norms, and systemic biases. As a result, instructors need to critically evaluate the suggestions and content generated by AI tools to ensure equity, accuracy, and alignment with their instructional values.

⚠️ Recognizing AI Bias

Use AI to:

- Understand how historical data and internet sources can introduce bias
- Explore examples of cultural, gender, or racial bias in AI-generated content
- Generate class discussion prompts about fairness and objectivity in technology

> ✅ **Prompt Example:**
> "Explain how gender bias might appear in AI-generated hiring recommendations. Give an example."
> ✅ **Prompt Example:**
> "List three examples of bias that might be present in an AI writing tool trained primarily on English-language academic texts."

???? Acknowledge AI's Limitations

Use AI to:

- Generate ideas, not finished products—AI may be factually incorrect
- Supplement, not replace, subject matter expertise
- Identify gaps or limitations in AI-generated answers, especially in niche or rapidly evolving fields

> ✅ **Prompt Example:**
> "List possible limitations of using ChatGPT to explain Indigenous history in the U.S."
> ✅ **Prompt Example:**
> "Create a response to a student's question about the ethics of AI-generated art—include one limitation of using AI in creative fields."

???? Encourage Critical Use of AI

Use AI to:

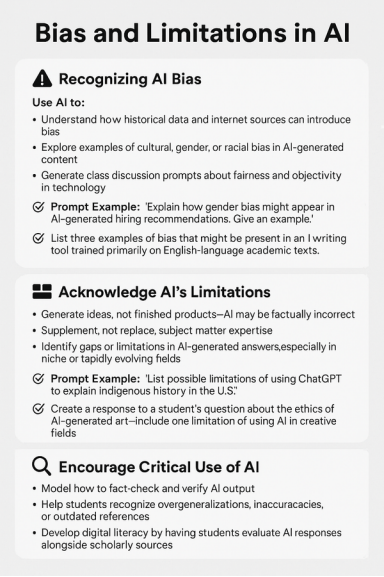
- Model how to fact-check and verify AI output
- Help students recognize overgeneralizations, inaccuracies, or outdated references
- Develop digital literacy by having students evaluate AI responses alongside scholarly sources

> ✅ **Prompt Example:**
> "ChatGPT says that X causes Y. Find a peer-reviewed article to confirm or challenge this claim."
> ✅ **Prompt Example:**
> "Use an AI tool to draft a summary of a topic, then annotate inaccuracies or missing perspectives."

???? Why This Matters for Instructors

AI can streamline workflows and enhance learning—but it also reflects the biases and blind spots of the data and people behind

it. Instructors who understand these limitations are better prepared to use AI responsibly, guide student inquiry, and maintain academic rigor. By modeling critical use, faculty empower students to think ethically and evaluate sources—including digital ones—with care.



3.2.1: How AI reflects human biases in its training data

3.2.2: Risks of inaccurate or misleading information

3.2.3: Equity concerns for marginalized student groups

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3.2.1: How AI reflects human biases in its training data

AI models learn from vast amounts of human-generated content—books, websites, forums, social media, and more. While this data helps AI develop language fluency and context awareness, it also absorbs the biases, stereotypes, and gaps present in the source material. These embedded patterns can unconsciously shape the AI's outputs in ways that perpetuate injustice, inequality, or misinformation.

🧠 Understand the Source of Bias

Use AI to:

- Discuss how algorithms learn patterns from biased, incomplete, or outdated data
- Illustrate the influence of dominant cultures or languages in training sets
- Explore examples of how underrepresented groups may be mischaracterized or omitted

> ✅ **Prompt Example:**
> "Explain how training data from mostly Western sources could affect how AI responds to questions about global cultural practices."
> ✅ **Prompt Example:**
> "List two examples of how stereotypes about race, gender, or ability could unintentionally appear in AI-generated text."

📚 Examine the Impact on Teaching and Learning

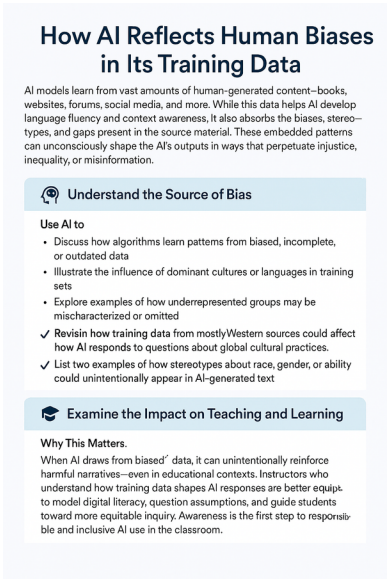
Use AI to:

- Help students analyze how AI might reinforce rather than challenge cultural assumptions
- Generate examples of how marginalized voices may be underrepresented in AI summaries or content suggestions
- Support critical discussions about fairness, access, and inclusive design in technology

> ✅ **Prompt Example:**
> "Revise this AI-generated summary to include perspectives from Indigenous scholars."
> ✅ **Prompt Example:**
> "Use AI to describe a historical event, then identify whose voices are missing from the account."

🎓 Why This Matters for Instructors

When AI draws from biased data, it can unintentionally reinforce harmful narratives—even in educational contexts. Instructors who understand how training data shapes AI responses are better equipped to model digital literacy, question assumptions, and guide students toward more equitable inquiry. Awareness is the first step to responsible and inclusive AI use in the classroom.



How AI Reflects Human Biases in Its Training Data

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3.2.2: Risks of inaccurate or misleading information

AI-generated responses may *sound* authoritative, but they are not guaranteed to be factually correct. Since AI tools generate text by predicting patterns in language, they can produce statements that are outdated, oversimplified, or completely false—especially in topics that require nuance, current data, or ethical interpretation. Instructors and students must be vigilant about verifying AI-generated content before accepting or using it.

⚠️ Understand Common Pitfalls

Use AI to:

- Identify how misinformation can arise from hallucinated facts or misapplied concepts
- Recognize when AI makes confident claims without citations or sources
- Explore how subtle wording choices can influence reader perception

> ✅ **Prompt Example:**
> "Give three reasons why ChatGPT might give incorrect information about a medical condition."
> ✅ **Prompt Example:**
> "Rewrite this AI-generated paragraph to remove unsupported claims and include a verifiable source."

🕵️ Strengthen Information Literacy

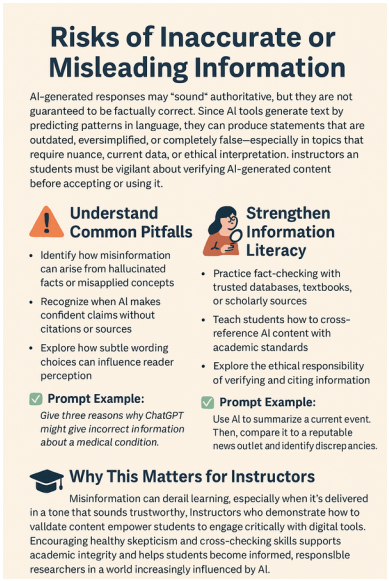
Use AI to:

- Practice fact-checking with trusted databases, textbooks, or scholarly sources
- Teach students how to cross-reference AI content with academic standards
- Explore the ethical responsibility of verifying and citing information

> ✅ **Prompt Example:**
> "Use AI to summarize a current event. Then, compare it to a reputable news outlet and identify discrepancies."
> ✅ **Prompt Example:**
> "Create a mini-lesson using AI to illustrate the difference between a claim, an opinion, and a verified fact."

🎓 Why This Matters for Instructors

Misinformation can derail learning, especially when it's delivered in a tone that sounds trustworthy. Instructors who demonstrate how to validate content empower students to engage critically with digital tools. Encouraging healthy skepticism and cross-checking skills supports academic integrity and helps students become informed, responsible researchers in a world increasingly influenced by AI.



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3.2.3: Equity concerns for marginalized student groups

AI tools can unintentionally reproduce systemic inequalities when they reflect the dominant norms, languages, and perspectives found in their training data. For students from historically marginalized groups, this can result in microaggressions, lack of representation, or harmful stereotypes embedded in AI-generated content. Without thoughtful intervention, these oversights may reinforce feelings of exclusion or alienation in learning environments.

🧩 Identify Representation Gaps

Use AI to:

- Examine how cultural, linguistic, or socioeconomic biases shape AI output
- Detect when diverse identities are misrepresented or completely missing
- Explore how default assumptions (e.g., male, Western, able-bodied) influence AI language

> ✅ **Prompt Example:**
> "Ask AI to describe a 'typical college student,' then analyze whose experiences are left out."
> ✅ **Prompt Example:**
> "Generate a list of holiday traditions. Are global or Indigenous practices included?"

🌍 Promote Inclusive Use of AI

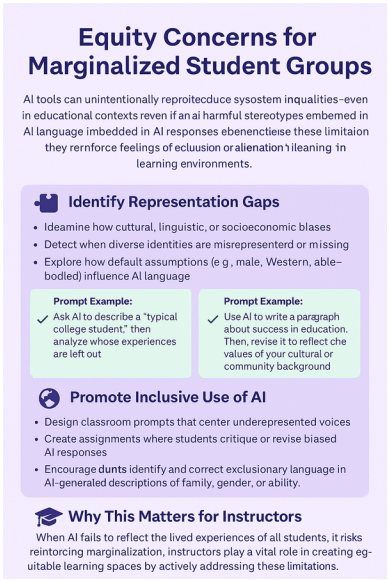
Use AI to:

- Design classroom prompts that center underrepresented voices
- Create assignments where students critique or revise biased AI responses
- Encourage students to bring in personal and cultural knowledge when using AI

> ✅ **Prompt Example:**
> "Use AI to write a paragraph about success in education. Then, revise it to reflect the values of your cultural or community background."
> ✅ **Prompt Example:**
> "Have students identify and correct exclusionary language in AI-generated descriptions of family, gender, or ability."

🎓 Why This Matters for Instructors

When AI fails to reflect the lived experiences of all students, it risks reinforcing marginalization. Instructors play a vital role in creating equitable learning spaces by actively addressing these limitations. Modeling inclusive, critical engagement with AI helps ensure that every student feels seen, respected, and empowered to participate fully.



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3.3: STUDENT PRIVACY AND DATA SECURITY

As AI tools become more common in education, concerns about student privacy and data security grow more urgent. Many AI systems rely on user inputs to improve performance, which means that anything a student types—personal details, assignments, or sensitive reflections—could be stored, analyzed, or used in ways that are not transparent. Instructors must consider not only how they use AI, but also how their students interact with it.

???? Understand Data Risks

Use AI to:

- Discuss how AI systems collect, store, or process user data
- Explore what happens to information typed into free or commercial AI tools
- Examine privacy policies to determine how data is retained or shared

> ✅ **Prompt Example:**
> "Review the privacy policy of a generative AI tool. What data is collected, and who can access it?"
> ✅ **Prompt Example:**
> "Explain the difference between using AI with a personal login versus through an institutional account."

???????? Promote Safe Use of AI

Use AI to:

- Help students understand what *not* to share with AI (e.g., personal identifiers, grades, health info)
- Design activities that avoid collecting unnecessary student data
- Create classroom norms for ethical and secure AI use

> ✅ **Prompt Example:**
> "List five types of information students should avoid entering into generative AI tools."
> ✅ **Prompt Example:**
> "Write a classroom announcement explaining the privacy limits of using AI in this course."

???? Why This Matters for Instructors

Student trust depends on maintaining a safe, respectful digital environment. Instructors who model privacy awareness and set clear expectations around AI use help protect students from unintended data exposure. Being proactive about data ethics isn't just about compliance—it's about safeguarding student dignity and autonomy in the digital age.



3.3.1: Equity concerns for marginalized student groups
3.3.2: FERPA considerations
3.3.3: Platform privacy policies (e.g., ChatGPT, Grammarly, Copilot)

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3.3.1: Equity concerns for marginalized student groups

AI tools have the potential to increase access—but only if their design and implementation actively account for equity. Without intentional effort, these technologies may reinforce existing systemic inequities that affect students from historically marginalized groups, including those based on race, gender identity, disability, socioeconomic status, or language background.

⚠️ **Equity Risks to Be Aware Of**
Use AI to *support*, not *replace*, inclusive teaching strategies. Be mindful of:

- **Language bias**: AI may default to dominant cultural norms and overlook linguistic diversity, disadvantaging multilingual learners or those who use dialects or non-standard English.
- **Representation gaps**: AI systems trained on unbalanced data may reflect and perpetuate stereotypes or exclude culturally relevant perspectives.
- **Accessibility issues**: Not all AI tools are screen reader-compatible or designed with Universal Design for Learning (UDL) in mind, limiting use by students with disabilities.
- **Digital divide**: AI often assumes consistent device access and bandwidth, creating barriers for students in low-connectivity or low-resource environments.

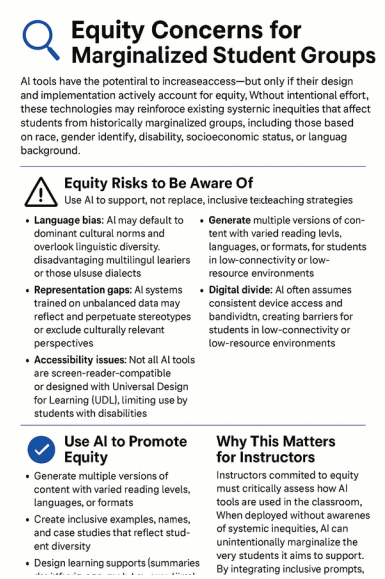
✅ **Use AI to Promote Equity**
Use AI to:

- Generate multiple versions of content with varied reading levels, languages, or formats
- Create inclusive examples, names, and case studies that reflect student diversity
- Design learning supports (summaries, definitions, scaffolded explanations) tailored to diverse needs
- Translate instructions or discussions into multiple languages for multilingual learners

💡 **Prompt Ideas for Instructors**
✅ "*Rewrite this assignment prompt at a 6th-grade reading level for ESL students.*"
✅ "*Provide three culturally diverse examples of this case study topic.*"
✅ "*Summarize this article with alt-text for visual learners and screen reader users.*"
✅ "*Suggest inclusive alternatives to this discussion question that avoid gender stereotypes.*"

🎓 Why This Matters for Instructors

Instructors committed to equity must critically assess how AI tools are used in the classroom. When deployed without awareness of systemic inequities, AI can unintentionally marginalize the very students it aims to support. By integrating inclusive prompts, adaptive formats, and accessibility checks, instructors can ensure AI becomes a tool for expanding—not restricting—student opportunity.



Equity Concerns for Marginalized Student Groups

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3.3.2: FERPA considerations

The Family Educational Rights and Privacy Act (FERPA) protects the confidentiality of student education records. As AI tools become more integrated into teaching and learning, instructors must be vigilant about how these tools collect, store, and process student data. Not all AI platforms are FERPA-compliant—particularly third-party tools that operate outside the institution's LMS or data governance systems.

⚠️ **Privacy Pitfalls to Avoid**
Use AI responsibly to avoid unintentionally violating student rights:

- **Unapproved tools**: Avoid using AI tools that require students to create accounts or upload coursework unless the tool has been vetted and approved by your institution.
- **Data leakage**: Student names, grades, or written submissions should never be entered into public or generative AI tools that store or train on user inputs.
- **Implied surveillance**: Be transparent when using AI tools that analyze student behavior, engagement, or writing styles—especially if such data could influence grades or instructor perceptions.

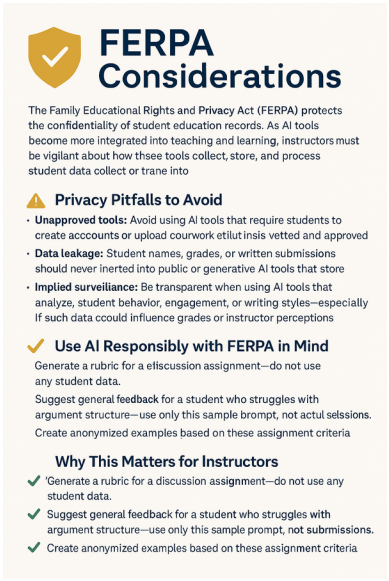
✅ **Use AI Responsibly with FERPA in Mind**
Use AI to:

- Draft anonymized rubrics, instructions, or feedback without inputting student-identifiable information
- Generate alternative assignment formats or support tools without uploading student work
- Analyze trends or patterns using de-identified data approved for instructional use
- Collaborate with your institution's data privacy officer before integrating new AI technologies into coursework

> 💡 **Prompt Ideas for Instructors**
> ✅ "*Generate a rubric for a discussion assignment—do not use any student data.*"
> ✅ "*Suggest general feedback for a student who struggles with argument structure—use only this sample prompt, not actual submissions.*"
> ✅ "*Create anonymized examples based on these assignment criteria.*"

🎓 Why This Matters for Instructors

FERPA isn't just a legal obligation—it's a foundation for student trust. As instructors explore AI tools for grading, feedback, or instructional support, maintaining strict boundaries around student data is essential. A proactive, FERPA-conscious approach ensures ethical, legal, and student-centered use of AI in the classroom.



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3.3.3: Platform privacy policies (e.g., ChatGPT, Grammarly, Copilot)

Many popular AI platforms used by instructors and students—such as ChatGPT, Grammarly, and Microsoft Copilot—are governed by privacy policies that vary widely in how they handle user data. While these tools can be powerful for drafting, revision, and content generation, instructors must understand what happens to the data entered into them.

⚠️ **Risks Related to Platform Use**
Use caution when engaging with third-party AI tools not governed by institutional contracts:

- **Data retention**: Some tools store user inputs to improve model performance. This can include prompts, responses, and uploaded content—potentially including sensitive or identifiable information.
- **Lack of FERPA alignment**: Tools not approved through your college's IT or legal review process may not align with FERPA protections or institutional policies.
- **Opaque terms of service**: Many AI tools reserve the right to change privacy practices with little notice, and users often accept terms without reading the fine print.

✅ **Safer Practices with Third-Party Tools**
Use AI with transparency and care by:

- Checking the platform's privacy policy before using it with student work
- Avoiding the entry of student names, assignments, or grades into tools unless institutionally approved
- Using local or institutionally hosted AI tools when available (e.g., within Canvas, Microsoft 365, or Google Workspace under EDU licenses)
- Teaching students to verify tool privacy settings before inputting coursework

> 💡 **Prompt Ideas for Instructors**
> ✅ "*Summarize this policy document without uploading any student names or identifiers.*"
> ✅ "*Generate practice quiz questions using only textbook content—no student input.*"
> ✅ "*Rewrite this assignment prompt using plain language—do not use any student examples.*"

🎓 Why This Matters for Instructors

Not all AI tools are created—or secured—equally. Instructors should model and teach responsible digital citizenship by evaluating AI platforms for their privacy safeguards. Knowing the risks and protecting student data helps maintain trust, comply with institutional policy, and set a strong example for students navigating AI-powered tools.

🔒 Platform Privacy Policies

Many popular AI platforms used by instructors and students—such as ChatGPT, Grammarily, and Microsoft Copllot—are governed by privacy policies that vary widely in how (if at all) handiing user data. Instructors need to understand what data they put in these tools

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3.4: TRANSPARENCY AND CONSENT

As AI becomes more embedded in instructional practices, it's essential for educators to clearly communicate how these tools are used in the classroom. Transparency about AI use builds trust and helps ensure that students understand—and can meaningfully consent to—the ways their data and work may interact with AI systems. Consent is not just a checkbox; it is a process of informed participation.

⚠️ **What to Avoid Without Consent**
Avoid using AI in ways that impact students without their knowledge or input:

- **Silent surveillance**: Do not use AI to monitor, analyze, or evaluate student behavior or performance without disclosure.
- **Unannounced grading tools**: Inform students if AI is used for feedback or assessment purposes and clarify what aspects are automated.
- **Assumed agreement**: Students should not be expected to upload assignments or personal data to AI-integrated platforms without a clear explanation of risks, alternatives, and data policies.

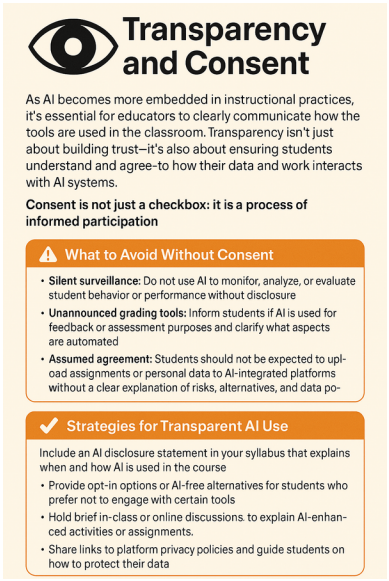
✅ **Strategies for Transparent AI Use**
Use AI in ways that center student awareness and choice:

- Include an AI disclosure statement in your syllabus that explains when and how AI is used in the course
- Provide opt-in options or AI-free alternatives for students who prefer not to engage with certain tools
- Hold brief in-class or online discussions to explain AI-enhanced activities or assignments
- Share links to platform privacy policies and guide students on how to protect their data

???? Prompt Ideas for Instructors
✅ "*Draft a syllabus statement that explains AI-assisted grading tools and includes opt-out language.*"
✅ "*Create a student-facing guide that describes how AI is used in weekly assignments.*"
✅ "*Suggest ways to introduce students to responsible AI use without requiring them to use external tools.*"

???? Why This Matters for Instructors

Transparency and consent are foundational to ethical AI integration. Instructors who proactively explain their use of AI tools not only comply with best practices—they also model responsible digital behavior and respect for student autonomy. Clear communication empowers students to engage critically with emerging technologies and make informed decisions about their learning.



3.4.1: Notifying students when AI is used in course design or grading

3.4.2: Inviting students to opt in/out of AI-based tools or supports

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3.4.1: Notifying students when AI is used in course design or grading

Students have the right to know when artificial intelligence is part of their educational experience—especially when it shapes instruction or contributes to grading and feedback. Transparent communication about AI use in course design or assessment builds trust, reduces confusion, and encourages informed student participation.

⚠️ **Risks of Failing to Notify Students**
Omitting AI disclosures can damage student trust or lead to ethical missteps:

- **Lack of informed participation**: Students may not understand how feedback was generated or decisions were made.
- **Perceived unfairness**: If AI plays a role in grading, students may question the validity or fairness of their scores without knowing which components were automated.
- **Missed teachable moments**: Failing to explain AI use forfeits opportunities to help students think critically about AI's role in education and society.

✅ **Responsible Notification Practices**
Use these approaches to ensure students are aware and comfortable with AI integration:

- Mention AI use in the course syllabus (e.g., "AI-assisted tools may be used to provide general feedback or streamline grading rubrics.")
- Include notes within assignments or discussion boards indicating where AI support has been used
- Clearly distinguish between human and AI-generated feedback when applicable
- Provide students with the option to request clarification or human-only grading if appropriate and feasible

> 💡 **Prompt Ideas for Instructors**
> ✅ "*Write a syllabus paragraph that informs students AI may assist in grading essays.*"
> ✅ "*Create a Canvas module announcement explaining which elements of the course were developed using AI.*"
> ✅ "*Generate a student-facing FAQ about AI-supported grading or feedback.*"

🎓 Why This Matters for Instructors

Notifying students about AI involvement respects their autonomy and fosters a culture of transparency. It also sets clear expectations about how their work is evaluated and how AI supports (but does not replace) instructor presence. This simple step reinforces ethical teaching practices and helps students build digital literacy.

Notifying students when AI is used in course design or grading

Guidelines

- Inform students when AI tools or systems are employed in designing courses or assignments, or in grading
- Clearly communicate the capabilities and limitations of AI applications
- Be transparent about the purpose of AI use and obtain students' consent when appropriate

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3.4.2: Inviting students to opt in/out of AI-based tools or supports

Ethical AI integration includes giving students meaningful choices. Some students may be unfamiliar with AI, have privacy concerns, or simply prefer to engage with human-only supports. Offering opt-in or opt-out options fosters student agency and respects diverse needs, experiences, and comfort levels with technology.

⚠️ **Risks of Mandatory AI Use Without Options**
Requiring AI interaction without alternatives may cause:

- **Loss of autonomy**: Students may feel forced to engage with technology they don't trust or understand.
- **Unequal access**: Not all students have the same digital literacy or technology access, creating inequities.
- **Negative learning experiences**: Students who are uncomfortable with AI may disengage or perform poorly when it's required.

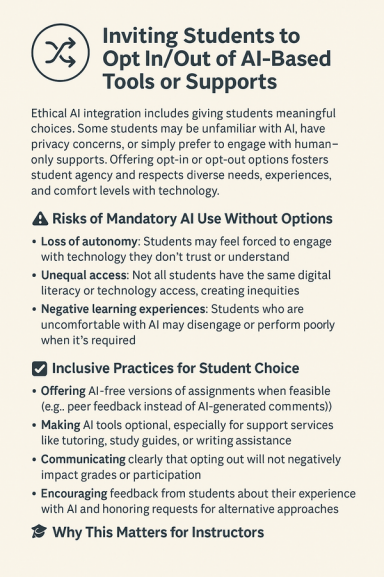
✅ **Inclusive Practices for Student Choice**
Support agency and inclusion by:

- Offering AI-free versions of assignments when feasible (e.g., peer feedback instead of AI-generated comments)
- Making AI tools optional, especially for support services like tutoring, study guides, or writing assistance
- Communicating clearly that opting out will not negatively impact grades or participation
- Encouraging feedback from students about their experience with AI and honoring requests for alternative approaches

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🎓 Why This Matters for Instructors

Giving students the choice to use or avoid AI tools reflects inclusive, learner-centered teaching. These options can reduce anxiety, promote trust, and empower students to take ownership of their learning. By honoring opt-in/opt-out preferences, instructors show respect for diverse values and foster a more ethical classroom culture.



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3.5: AI AND ACCESSIBILITY

AI tools have the potential to expand access to learning—especially for students with disabilities—by generating alternative formats, offering personalized support, and enhancing communication. However, without intentional design and oversight, AI may also create new barriers or reinforce exclusion.

⚠️ **When AI Falls Short on Accessibility**
AI can inadvertently exclude users if not designed with diverse abilities in mind:

- **Inaccessible outputs**: AI-generated content (e.g., images, charts, or videos) may lack alternative text, captions, or screen reader compatibility.
- **Inconsistent language or formatting**: Automated responses may use jargon, inconsistent headings, or confusing structure that impedes comprehension for neurodivergent or visually impaired users.
- **Voice, text, and translation errors**: Voice-to-text tools may misinterpret non-standard speech patterns, while translation models may fail to preserve meaning for multilingual learners or users with AAC devices.

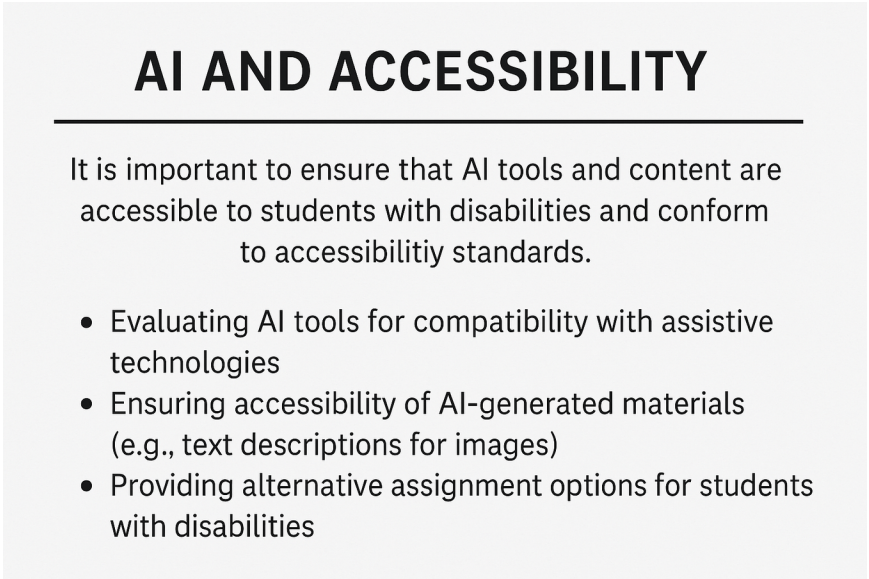
✅ **Using AI to Enhance Accessibility**
When used intentionally, AI can support Universal Design for Learning (UDL) and inclusive teaching practices:

- Generate alt-text for images, closed captions for video content, or plain-language summaries
- Translate materials into multiple languages or convert written content into audio
- Adjust reading levels or simplify complex texts for cognitive accessibility
- Design accessible layouts using clear headings, lists, and consistent formatting

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???? Why This Matters for Instructors

Accessibility is not just about compliance—it's about equity. AI can be a powerful tool for inclusion, but only when instructors review outputs carefully and make accessibility a priority. By integrating AI with accessibility in mind, educators can reach more students and model inclusive teaching practices that support all learners.



3.5.1: How AI can support UDL and learners with disabilities

3.5.2: Cautions about assuming AI is "accessible" by default

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3.5.1: How AI can support UDL and learners with disabilities

Universal Design for Learning (UDL) emphasizes flexible learning environments that accommodate individual learning differences. When used thoughtfully, AI can help implement UDL principles by providing personalized, accessible, and adaptive content that meets the needs of all learners, including those with disabilities.

✅ **AI Aligned with UDL Principles**
AI tools can be used to:

- **Provide multiple means of representation**: AI can convert written content into audio, generate simplified summaries, or offer real-time translations to make materials more accessible.
- **Support multiple means of action and expression**: Students can use voice-to-text tools, visual organizers, or multimodal platforms powered by AI to demonstrate their understanding in diverse ways.
- **Offer multiple means of engagement**: AI-driven tools can recommend personalized study plans, suggest pacing strategies, or gamify routine practice to sustain interest and motivation for students with attention-related or executive functioning challenges.

🛠️ **Examples of AI in Action for Accessibility**

- Generating alt-text, image descriptions, or slide narration
- Simplifying complex texts into plain language
- Customizing quiz formats for different sensory or cognitive needs
- Offering audio narration of written content or visual content for screen readers
- Adapting pacing or scaffolding based on learner input

🎓 Why This Matters for Instructors

AI can act as a bridge between accessibility and engagement—two pillars of inclusive education. By integrating AI within a UDL framework, instructors can create responsive, inclusive learning environments that empower all students, especially those who face systemic barriers to access.

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3.5.2: Cautions about assuming AI is “accessible” by default

While many AI tools are marketed as accessibility solutions, instructors should not assume these tools meet the diverse needs of all students simply because they use AI. True accessibility requires thoughtful implementation, human oversight, and alignment with established accessibility standards—not just automation.

🚫 Common Misconceptions to Avoid

- **“Built-in AI = accessible”**: Just because a tool offers captions or translations doesn’t mean they are accurate, complete, or usable by all learners.
- **“AI fixes all barriers”**: AI may assist with accessibility, but it cannot fully replace accessible instructional design, intentional formatting, or assistive technology tools.
- **“If it works for me, it works for everyone”**: Accessibility must be tested across diverse learners, including screen reader users, neurodivergent students, and students with low vision, hearing differences, or limited mobility.

✅ Best Practices to Ensure True Accessibility

- Review AI-generated content for compliance with WCAG (Web Content Accessibility Guidelines)
- Test outputs using screen readers, keyboard navigation, or contrast checkers
- Invite feedback from students with disabilities to evaluate whether AI-supported features are actually helping
- Collaborate with accessibility specialists when piloting new AI tools in your course

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🎓 Why This Matters for Instructors

Equity in education means going beyond good intentions. While AI may expand what’s possible, it’s not automatically inclusive. Instructors must critically assess AI tools for real-world accessibility, ensuring that “helpful” features actually work for—and with—all learners.

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3.6: FRAMEWORKS AND GUIDELINES

As AI tools become more integrated into education, instructors need clear frameworks and ethical guidelines to inform responsible use. These frameworks help educators navigate questions around equity, privacy, transparency, and accessibility while aligning with institutional and legal expectations.

✅ **Commonly Referenced Guidelines**
Several organizations offer established models and principles to guide AI use in education:

- **ISTE's AI in Education Standards**: Emphasize ethical use, data literacy, and student agency when integrating AI into instruction.
- **U.S. Department of Education's "AI and the Future of Teaching and Learning" Report**: Highlights the importance of centering human decision-making, safeguarding equity, and ensuring data transparency.
- **WCAG (Web Content Accessibility Guidelines)**: Provide benchmarks for ensuring digital content—including AI-generated materials—is accessible to users with disabilities.
- **IEEE's Ethically Aligned Design**: Offers a global perspective on AI ethics, focusing on human well-being and values-driven design.

???? How Instructors Can Apply These Frameworks

- Align course policies and assignment design with institutional AI guidance and national standards
- Use published frameworks to evaluate third-party tools before integrating them into coursework
- Incorporate digital ethics and AI literacy into course objectives or discussions
- Seek cross-campus collaboration with accessibility, equity, and IT teams when piloting AI initiatives

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???? Why This Matters for Instructors

Frameworks offer more than policy—they provide a shared language for making thoughtful, ethical decisions about AI use in the classroom. By anchoring AI practices in established standards, instructors can protect students' rights, promote equity, and ensure that innovation does not outpace ethical responsibility.

3.6.1: Sample institutional or course-level policies

3.6.2: Short AI use declarations instructors can adopt

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3.6.1: Sample institutional or course-level policies

Creating clear, well-structured policies around AI use helps institutions and instructors set expectations, maintain academic integrity, and protect student rights. Whether developed at the college-wide level or customized for individual courses, these policies should clarify acceptable use, privacy protections, and ethical boundaries.

🏛️ **Institutional-Level AI Policy Elements**
Effective institutional policies often include:

- **Definition of AI use**: Clearly describe what constitutes AI use in academic settings (e.g., generative writing tools, predictive analytics, adaptive learning platforms).
- **Acceptable use guidelines**: Outline when and how AI may be used for teaching, assessment, grading, or student support.
- **Data governance protocols**: Detail how student data is protected when AI tools are used and who has access.
- **Faculty and student responsibilities**: Identify the obligations of instructors and students when using AI tools, including disclosure and consent.

📘 **Course-Level AI Policy Elements**
Instructors can supplement institutional guidance with course-specific expectations:

- **Disclosure of AI use**: Explain where and how AI will be used in the course (e.g., assignment feedback, discussion prompts, or content creation).
- **Student use guidelines**: Define when students may or may not use AI (e.g., brainstorming okay; writing full essays not okay).
- **Ethics and citation**: Clarify whether students must cite AI tools and how to do so.
- **Alternatives or opt-outs**: Offer flexibility for students uncomfortable using AI tools.

🎓 Why This Matters for Instructors

AI is transforming the classroom—and clear policies help everyone navigate this shift with confidence. When instructors adopt transparent, student-centered policies, they create a culture of trust, responsibility, and clarity. These policies not only reduce confusion but also model ethical and professional digital practices.

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3.6.2: Short AI use declarations instructors can adopt

Clear, concise declarations about AI use can be embedded into syllabi, Canvas modules, or assignment instructions to help students understand when, how, and why AI tools are used in the course. These statements set expectations, promote transparency, and support ethical engagement.

📌 **Purpose of a Declaration**
A short AI use statement should:

- Communicate the instructor's stance on AI use in the course
- Clarify which tools or practices are permitted or restricted
- Explain how AI may support instruction, assessment, or student learning
- Offer students a point of contact for questions or concerns

✅ **Sample Statements Instructors Can Use or Adapt**
Here are a few examples instructors can modify for their courses:

- **Instructional Support**: "AI tools like ChatGPT or Grammarly may be used by the instructor to draft quiz questions, discussion prompts, or assignment feedback. Human review is always included before final use."
- **Student Use Guidelines**: "Students may use AI tools to brainstorm ideas or clarify writing, but all submissions must reflect original thinking. Use of AI must be cited using [institution's preferred citation method]."
- **AI-Free Zone**: "This course emphasizes original, human-generated work. Please do not use AI tools to generate assignments unless explicitly allowed."
- **Transparency and Feedback**: "If you have concerns about how AI is used in this course, please reach out. We are committed to responsible and inclusive practices."

🎓 Why This Matters for Instructors

Short declarations do more than inform—they build trust. By clearly communicating how AI is used, instructors demystify the role of these tools and foster an open, ethical learning environment. These brief statements also help students understand the evolving expectations around digital literacy and academic integrity.

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4: MOVING FORWARD WITH AI IN YOUR TEACHING

AI tools are evolving quickly—and so is their role in higher education. As instructors, you're in a unique position to shape how these tools are used in ways that are ethical, accessible, and student-centered. Adopting AI in your teaching isn't about replacing human expertise—it's about enhancing instruction through intentional experimentation, equity-focused design, and ongoing reflection.

This section offers practical strategies and reflective questions to help you integrate AI in a way that aligns with your teaching values. Whether you're ready to dive in or just testing the waters, this is your guide to approaching AI with clarity and confidence.

🧭 What You'll Explore in This Chapter

- 🔍 How to reflect on your readiness and reasons for using AI
- 🛠️ Practical, low-risk ways to begin experimenting with AI tools
- 📈 Why pedagogical purpose should guide tool adoption—not tech hype
- ✅ Checklists, prompts, and use cases for trying AI in your teaching
- 🪞 Reflection activities to help you evaluate and evolve your approach

By the end of this section, you'll be equipped with strategies, prompts, and practical tools to move forward with AI—not reactively, but intentionally.



-  Moving Forward with AI in Your Teaching 

4.1: Recap- What You Now Know About AI

4.1.1: Revisit the basics, practical uses, and ethical considerations

4.1.2: Acknowledge what's still evolving

4.2: Your AI Teaching Toolkit

4.2.1: A checklist of low-barrier tools or practices to try

4.2.2: Questions to ask when evaluating new AI tools

4.3: Reflection Prompts

4.3.1: How might AI help you solve a persistent teaching challenge?

4.3.2: What concerns or hopes do you have about student use of AI?

4.3.3: Where do you feel most confident—and least confident—about using AI?

4.4: Start Small- Low-Risk Ways to Try AI

4.4.1: Drafting assignment descriptions

4.4.2: Using AI to brainstorm quiz questions

4.4.3: Co-writing announcement templates

4.5: Ongoing Learning

4.5.1: 5.5.1-

4.5.2: Suggested blogs, videos, podcasts, or newsletters

4.5.3: Staying up-to-date with tools and policy changes

4.6: Final Encouragement

4.6.1: There's no one "right way" to use AI.

4.6.2: Curiosity and critical thinking are your most valuable tools.

🔍 Chapter Takeaway

Moving forward with AI isn't about doing it all—it's about doing it with purpose. As AI tools become more available and more powerful, instructors have an opportunity to lead with intention, not impulse. Whether you choose to use AI for planning, feedback, or accessibility—or choose not to use it at all—what matters most is that your decisions are grounded in pedagogy, equity, and transparency. Starting small, staying curious, and reflecting often are the most valuable steps you can take as you shape how AI fits into your teaching practice.

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4.1: RECAP- WHAT YOU NOW KNOW ABOUT AI

This guide has walked you through the core concepts, challenges, and opportunities of using AI in teaching and learning. Whether you're just beginning to explore AI tools or refining your approach, you now have a foundation to make informed, ethical, and student-centered decisions.

✅ **Key Takeaways**
You now understand:

- **What AI is and how it works** in educational settings, including generative and assistive applications
- **Where AI can support instruction**, from drafting materials to offering personalized feedback and accessibility enhancements
- **The importance of ethical considerations**, including bias, transparency, data privacy, and consent
- **How to integrate AI into your course** using frameworks, sample policies, and opt-in practices
- **Why accessibility and equity must guide AI use**, especially for marginalized and disabled learners
- **How to communicate with students** about AI's role in your course and set clear expectations

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???? Why This Matters for Instructors

Being AI-informed means more than learning the tools—it means understanding the responsibilities that come with them. By applying what you've learned, you can lead with clarity, compassion, and confidence in your teaching practice, ensuring that AI enhances—rather than disrupts—student learning.

4.1.1: Revisit the basics, practical uses, and ethical considerations

4.1.2: Acknowledge what's still evolving

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4.1.1: Revisit the basics, practical uses, and ethical considerations

As you continue integrating AI into your teaching, it's important to periodically return to core principles. Revisiting the basics ensures that your use of AI remains intentional, effective, and aligned with student needs and institutional values.

📌 The Basics: What AI Is (and Isn't)

- AI is a tool—not a teacher. It can assist with tasks but does not replace the human role in instruction, empathy, or decision-making.
- AI generates patterns and predictions based on training data. It does not think, understand context, or verify truth on its own.
- Understanding what AI can and cannot do helps avoid overreliance and ensures more thoughtful use.

🧰 Practical Uses Worth Revisiting

- Drafting quiz questions, rubrics, and announcements
- Summarizing readings or creating study guides
- Brainstorming writing prompts or discussion questions
- Supporting accessibility (e.g., generating captions, simplifying text, offering translations)

⚖️ Ethical Considerations to Keep Front and Center

- **Bias and fairness**: Re-examine whether outputs reflect diverse perspectives and avoid stereotypes
- **Transparency**: Keep students informed about AI use, both in design and evaluation
- **Data privacy**: Only use tools that protect student data and comply with institutional policies
- **Accessibility**: Don't assume a tool is inclusive—test it, adapt it, and seek student feedback

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🎓 Why This Matters for Instructors

Revisiting these core areas helps keep your AI use grounded in pedagogy—not novelty. The best AI-enhanced teaching is flexible, ethical, and responsive to the needs of real students in real time. Reflection and refinement are key to staying aligned with your values as an educator.

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4.1.2: Acknowledge what's still evolving

AI in education is advancing rapidly—but it's far from settled. Tools, policies, and research are changing by the day. Instructors don't need to have all the answers, but they do need to stay curious, flexible, and ready to adapt as new developments arise.

🌐 Areas of Ongoing Change

- **Technology capabilities**: New tools emerge frequently with expanded functions, including multimodal generation (text, audio, visuals), predictive analytics, and adaptive learning platforms.
- **Institutional policies**: Colleges and universities are still developing formal AI guidelines around student use, instructor roles, academic integrity, and data protection.
- **Accessibility standards**: Many AI tools are not yet fully accessible, and expectations are still being shaped through legal cases, advocacy, and practice.
- **Student experiences**: As more learners interact with AI, instructors need to monitor how these tools impact engagement, motivation, and equity—and update their practices accordingly.

📣 What Instructors Can Do Now

- Stay updated through professional development, institutional communications, and trusted educational technology sources
- Join faculty learning communities or AI working groups
- Ask students about their experiences with AI and invite ongoing feedback
- Prepare to revise course materials as tools and standards evolve

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🎓 Why This Matters for Instructors

Acknowledging what's still evolving shows students—and colleagues—that responsible teaching means staying open to change. By modeling adaptability and inquiry, instructors build trust and resilience in a digital learning landscape that is still being written.

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4.2: YOUR AI TEACHING TOOLKIT

You don't need to be an expert in computer science to use AI effectively in your teaching. What matters most is having a thoughtful approach and a toolkit of strategies, questions, and resources to guide your practice. This toolkit helps you make AI decisions that align with your teaching values, course goals, and student needs.

???? Key Components of an AI Teaching Toolkit

- **Clear use guidelines**: A short, student-facing statement about how AI is used in your course
- **Ethical reflection prompts**: Questions to help you assess potential benefits, risks, and boundaries before adopting new tools
- **Accessibility checklist**: A quick reference to ensure AI-supported content is compatible with screen readers, captioning, and inclusive formats
- **Feedback channels**: Opportunities for students to share how AI is affecting their learning experience
- **Curation of trusted tools**: A list of institutionally supported, privacy-compliant AI tools for content creation, feedback, or instructional support
- **Sample prompts**: A few reusable, discipline-neutral AI prompts for lesson planning, feedback generation, or discussion ideas

???? Questions to Keep in Your Pocket

- Is this tool improving access, engagement, or clarity?
- Have I explained its use clearly to my students?
- Have I considered alternatives for students who opt out?
- Am I using this tool to support pedagogy—not replace it?

???? Why This Matters for Instructors

Your AI teaching toolkit is more than a list of apps—it's a mindset. With a toolkit grounded in ethics, equity, and pedagogy, instructors can use AI with intention, clarity, and creativity. Whether you're exploring, piloting, or refining, the right tools and questions will keep your teaching rooted in student success.

4.2.1: A checklist of low-barrier tools or practices to try

4.2.2: Questions to ask when evaluating new AI tools

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4.2.1: A checklist of low-barrier tools or practices to try

You don't need a large-scale AI implementation to make a difference. Many instructors start small—with easy-to-use tools and low-risk practices that support teaching and learning. This checklist offers practical, low-barrier ideas you can try in your course today.

📋 Low-Barrier AI Practices for Instructors

- ☐ Use AI to **draft quiz questions**, multiple-choice items, or short-answer prompts
- ☐ Generate **rubrics** or assignment instructions based on course outcomes
- ☐ Summarize an article or **create a student-friendly reading guide**
- ☐ Rewrite a prompt at **multiple reading levels** for student accessibility
- ☐ Ask AI to generate **sample student responses** to use as discussion models
- ☐ Use AI to **draft weekly announcements**, reminders, or Canvas updates
- ☐ Develop **lesson outlines** or slide content based on lecture goals
- ☐ Create **variations of discussion questions** to support different perspectives
- ☐ Generate **alt-text** or image descriptions for visuals in course materials
- ☐ Translate course instructions into **another language** to support multilingual learners

💡 Tips for Getting Started

- Start with **one use case** in one module
- Keep student data out of AI tools unless approved by your institution
- Share your process with students—invite reflection, not just automation
- Check the tool's **accessibility and privacy policies** before use

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🎓 Why This Matters for Instructors

Small changes can have a big impact. These low-barrier strategies let you explore AI while preserving student trust, academic integrity, and instructional quality. Starting small builds momentum—and confidence—as you find what works best for your teaching style.

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4.2.2: Questions to ask when evaluating new AI tools

Not all AI tools are created equal—and not every tool is right for your course. Before adopting new AI technology, it's important to evaluate it through the lens of ethics, equity, accessibility, and instructional value. These questions help you make informed, student-centered decisions.

🔍 **Core Evaluation Questions**
Ask yourself:

- **What problem does this tool solve?**
  Does it meaningfully support learning, save time, or improve access?
- **Is it accessible?**
  Can students using screen readers, captions, or assistive devices use it effectively?
- **Is it private and secure?**
  What data does the tool collect? Is student information protected and FERPA-compliant?
- **Does it align with my course goals and pedagogy?**
  Is this tool enhancing instruction—or just adding novelty?
- **Is it inclusive?**
  Does it reflect diverse perspectives, languages, and learning needs?
- **What are the risks?**
  Could this tool unintentionally introduce bias, misinformation, or inequity?
- **Can students opt out?**
  Are alternatives or accommodations available for students who prefer not to engage with AI?
- **Is it approved or supported by my institution?**
  Has this tool been vetted by IT, accessibility, or academic affairs?

🎓 Why This Matters for Instructors

Evaluating AI tools thoughtfully ensures that technology serves your students—not the other way around. By asking the right questions up front, instructors can avoid unintended consequences, uphold ethical standards, and make intentional choices that reflect the values of inclusive, effective teaching.

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4.3: REFLECTION PROMPTS

Meaningful integration of AI into teaching doesn't come from tools alone—it comes from intentional reflection. These prompts can help instructors evaluate their goals, refine their practices, and deepen their understanding of how AI supports (or challenges) student learning.

???? Reflect on Your Teaching Philosophy

- How do I define meaningful learning in my classroom, and how can AI support that?
- What do I want students to retain from this course—content, skills, habits of mind?
- Does AI help me personalize instruction, or does it risk making it impersonal?

⚖️ **Reflect on Equity and Inclusion**

- Whose needs are met—and whose might be overlooked—by using this tool?
- Are all my students able to access and benefit from this AI-enhanced content?
- How can I invite feedback from students who experience learning differently?

???? Reflect on Transparency and Communication

- Have I clearly communicated how AI is used in my course?
- What assumptions might my students have about AI that I need to clarify?
- How can I model responsible and ethical AI use through my teaching?

???? Reflect on Growth and Practice

- What's one small way I've used AI that has improved student learning or made my teaching easier?
- What's one AI-related challenge I've encountered—and what did I learn from it?
- How can I stay informed about emerging tools, policies, or pedagogical strategies?

???? Why This Matters for Instructors

Reflection keeps your AI use rooted in purpose—not just possibility. When instructors regularly step back to consider the impact of AI on their students, their teaching, and their values, they make room for deeper learning and more authentic engagement in an evolving digital landscape.

4.3.1: How might AI help you solve a persistent teaching challenge?

4.3.2: What concerns or hopes do you have about student use of AI?

4.3.3: Where do you feel most confident—and least confident—about using AI?

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4.3.1: How might AI help you solve a persistent teaching challenge?

Every instructor faces recurring challenges—whether it's limited time for feedback, low discussion engagement, inconsistent student performance, or accessibility barriers. AI tools, when aligned with your teaching goals, can offer creative, low-effort strategies to address these long-standing issues.

💬 **Common Teaching Challenges & AI-Supported Solutions**

- **Challenge**: *Too much time spent grading or writing feedback*
  → Use AI to draft personalized feedback templates or rubric-based responses you can edit quickly.
- **Challenge**: *Students struggle to understand dense reading materials*
  → Use AI to summarize content at different reading levels or provide guided reading questions.
- **Challenge**: *Discussion forums lack depth or participation*
  → Use AI to suggest thought-provoking prompts, simulate opposing viewpoints, or provide model responses.
- **Challenge**: *Supporting multilingual learners*
  → Use AI to translate key instructions or scaffold academic vocabulary in multiple languages.
- **Challenge**: *Need for more inclusive course materials*
  → Use AI to diversify examples, rewrite case studies with inclusive language, or generate alt text for images.

📝 **Reflective Prompt**

> What is one persistent challenge you face in your teaching—and how might AI serve as part of the solution, not just a shortcut?

🎓 Why This Matters for Instructors

Teaching challenges are complex—but AI can be part of a thoughtful solution. Framing AI as a tool for problem-solving—not replacement—empowers instructors to experiment strategically and enhance the learning experience while staying grounded in what matters most: student success.

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4.3.2: What concerns or hopes do you have about student use of AI?

As students increasingly explore AI tools for learning, instructors are navigating a mix of excitement and uncertainty. Some worry about plagiarism or overreliance, while others see potential for creativity, inclusion, and support. Reflecting on your own perspective can help you guide students with empathy, clarity, and intentionality.

⚠️ Common Concerns Instructors Express

- **Loss of original thinking**: Will students bypass critical thinking or writing practice by relying on AI outputs?
- **Academic integrity**: How can I ensure student work is authentic while maintaining trust and fairness?
- **Equity gaps**: Will students with better access to AI tools gain an unfair advantage?
- **Skill erosion**: Are students learning to use AI as a crutch instead of a scaffold?

🌟 Hopes for Student Use of AI

- **Support for diverse learners**: Can AI help students with disabilities, multilingual learners, or neurodivergent students thrive?
- **Creative exploration**: Could students use AI for brainstorming, design, or testing ideas in new ways?
- **Confidence building**: Might AI tools lower barriers for students who struggle with writing, organization, or language?
- **Digital literacy**: Can AI use spark conversations about ethics, authorship, and information literacy?

📝 Reflective Prompt

> What are your biggest hopes—and most pressing concerns—about how students use AI in your course? How can your policies and guidance reflect both?

🎓 Why This Matters for Instructors

Instructors set the tone for how students engage with AI. By naming both your hopes and concerns, you model transparency, curiosity, and care. This balanced reflection helps shape policies that are not only ethical and clear—but also grounded in the realities of student learning today.

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4.3.3: Where do you feel most confident—and least confident—about using AI?

Your AI teaching journey will evolve over time. Some areas may feel intuitive and energizing, while others remain uncertain or intimidating. Taking stock of your comfort level can help you identify where to build on strengths and where to seek support, training, or collaboration.

💪 Common Areas of Confidence

- Drafting low-stakes materials (e.g., announcements, quiz questions, rubrics)
- Using AI to personalize instruction or generate content quickly
- Designing accessible course elements (e.g., alt text, simplified reading guides)
- Supporting students with AI-enhanced brainstorming or language tools

🤔 Common Areas of Uncertainty

- Ensuring academic integrity and detecting AI-generated submissions
- Balancing student autonomy with ethical use of generative tools
- Navigating privacy, FERPA compliance, and data policies
- Evaluating new AI tools for accessibility and equity implications

📝 Reflective Prompt

> What's one area where you feel confident using AI—and what experience built that confidence?
> What's one area where you still feel unsure—and what support or resource would help you feel more equipped?

🎓 Why This Matters for Instructors

Confidence grows with clarity, curiosity, and community. By identifying both your strengths and your growth edges, you create space for intentional experimentation and ongoing learning. Reflecting on confidence is the first step toward becoming a more empowered and ethical AI-integrated educator.

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4.4: START SMALL- LOW-RISK WAYS TO TRY AI

You don't need to overhaul your course to begin using AI. Some of the most effective integrations start with small, low-risk practices that enhance teaching without adding complexity. Starting small allows you to test, adapt, and grow your AI confidence at your own pace.

???? Simple Ways to Explore AI in Your Teaching

- Use AI to **rewrite a confusing assignment prompt** for clarity and tone
- Draft a **discussion question with multiple difficulty levels** using an AI assistant
- Ask AI to **generate a sample student response** to use for peer review
- Summarize a scholarly article into a **student-friendly reading guide**
- Create alternate versions of instructions for **ESL or neurodivergent learners**
- Generate quiz feedback like: "Correct! You chose this because..." or "Close! Review the concept of..."
- Use AI to brainstorm **alternative assessment formats** (e.g., infographics, podcasts, visual essays)

???? Tips for Starting Small

- **Choose one task** that's time-consuming or repetitive
- **Keep students informed**—let them know when you're experimenting
- **Avoid uploading student data** unless the tool is institutionally approved
- **Reflect on impact**: Did it improve clarity, engagement, or access?

???? Why This Matters for Instructors

Starting small builds momentum. When instructors take a low-stakes approach to AI, they create space to experiment, evaluate outcomes, and scale practices that actually serve their students. It's not about doing everything—it's about doing the next right thing with intention.

4.4.1: Drafting assignment descriptions

4.4.2: Using AI to brainstorm quiz questions

4.4.3: Co-writing announcement templates

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4.4.1: Drafting assignment descriptions

One of the easiest and most impactful ways to start using AI in your teaching is by drafting or revising assignment descriptions. Clear, student-friendly instructions improve engagement, reduce confusion, and support all learners—including multilingual students and those with diverse processing needs.

💡 **How AI Can Help**

- **Simplify academic language** to make expectations more accessible
- **Rephrase or restructure** dense instructions into more student-friendly formats
- **Generate multiple versions** of an assignment description—for different reading levels or learning needs
- **Add clarity and tone adjustments** to ensure your voice is supportive and encouraging
- **Break complex assignments into steps**, helping students manage workload and time

🧪 **Try This**

- Ask AI to revise your prompt using plain language
- Have it generate an example description for a visual, creative, or collaborative version of the task
- Use AI to model “good” and “needs improvement” versions of instructions to self-assess your drafts

📝 **Reflective Prompt**

> What assignment prompt have students misunderstood in the past? How might reworking it with AI support clarity and reduce barriers?

🎓 Why This Matters for Instructors

Strong assignment descriptions are a foundation for student success. Using AI to improve clarity and accessibility allows you to maintain academic rigor while creating a more inclusive and supportive learning environment—without increasing your workload.

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4.4.2: Using AI to brainstorm quiz questions

Creating effective quiz questions takes time—and it can be especially challenging to design items that assess higher-order thinking, align with learning outcomes, and offer variety. AI can help instructors quickly brainstorm draft questions, offering inspiration and saving time without sacrificing quality.

💡 How AI Can Help

- Generate **multiple-choice, true/false, or short-answer questions** aligned with course content
- Create **scaffolded question sets**, from basic recall to analysis or application
- Suggest **distractors** (incorrect answer options) that are plausible and instructionally meaningful
- Rewrite quiz questions for **clarity, accessibility, or tone**
- Create **alternative versions** of questions for practice, test review, or make-up assessments

🧪 Try This

- Ask AI to generate five questions based on a textbook chapter, then review and revise
- Provide AI with a course objective and prompt it to create a quiz item that aligns with that outcome
- Use AI to reword complex questions into simpler versions for multilingual or neurodivergent students
- Generate answer explanations to support learning after the quiz

📝 Reflective Prompt

> What type of quiz question do you struggle to write—application, analysis, distractors? Try using AI to help with that one next time.

🎓 Why This Matters for Instructors

Quizzes are more than grades—they're learning tools. When AI helps you design better assessments more efficiently, you can spend less time generating content and more time supporting student growth and feedback. Starting here gives you both impact and momentum.

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4.4.3: Co-writing announcement templates

Course announcements set the tone for communication, build community, and guide students through key milestones. AI can help co-write friendly, inclusive, and effective announcement templates that save time while maintaining your authentic voice.

💡 How AI Can Help

- Draft weekly reminders, due date notices, or encouragement messages
- Adjust tone (e.g., supportive, motivational, professional, casual) depending on the context
- Personalize messages by generating variations for students who are ahead, on track, or falling behind
- Generate announcements for holidays, campus events, or mid-semester check-ins
- Translate announcements into multiple languages to support multilingual learners

🧪 Try This

- Ask AI to generate a weekly check-in message that includes key tasks, encouragement, and helpful links
- Provide an existing announcement and ask AI to rewrite it in a more welcoming or student-friendly tone
- Use AI to brainstorm different formats (e.g., bullet points, Q&A style, narrative update)
- Co-write templates you can reuse across modules with light editing

📝 Reflective Prompt

> How much time do you spend writing routine announcements? What would it free up for you if AI helped streamline that task?

🎓 Why This Matters for Instructors

Communication matters. Well-written announcements help students feel supported, informed, and connected—especially in online and asynchronous environments. Co-writing with AI keeps your tone warm and consistent while reducing the repetitive workload of weekly updates.

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4.5: ONGOING LEARNING

AI in education is not a one-and-done skill—it's a continuously evolving field. As tools advance and ethical conversations deepen, instructors benefit from staying curious, reflective, and connected. Ongoing learning ensures that your approach to AI remains current, responsible, and student-centered.

???? Why Ongoing Learning Matters

- AI tools and capabilities are **rapidly changing**, with new features and platforms introduced regularly
- Policies around **privacy, accessibility, and academic integrity** continue to develop
- Student needs evolve—ongoing learning helps you stay responsive and inclusive
- The best AI practices are often discovered through **community sharing and experimentation**

???? Strategies to Stay Informed and Engaged

- Join campus or district-level **faculty learning communities or AI workgroups**
- Follow **trusted education and technology organizations** like EDUCAUSE, ISTE, or the U.S. Department of Education
- Subscribe to **newsletters or blogs** focused on AI in higher education
- Attend **webinars, conferences, or virtual workshops** on AI and digital pedagogy
- Set aside time each term to **review your AI practices** and make updates based on new insights or feedback
- Connect with **instructional designers or technologists** to brainstorm new applications

???? Reflective Prompt

> What would help you stay up to date with AI in education—a community, a resource hub, or just 30 minutes a month to explore?

???? Why This Matters for Instructors

Staying informed about AI helps you remain both confident and cautious. When you invest in ongoing learning, you're better equipped to evaluate tools, model ethical use, and make instructional decisions that truly benefit your students. Lifelong learning applies to educators too—especially when it comes to transformative technologies.

4.5.1: 5.5.1-

4.5.2: Suggested blogs, videos, podcasts, or newsletters

4.5.3: Staying up-to-date with tools and policy changes

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4.5.1: 5.5.1-

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4.5.2: Suggested blogs, videos, podcasts, or newsletters

Keeping up with AI in education doesn't have to be overwhelming. Following a few high-quality, educator-focused resources can help you stay current without needing to sort through noise. These blogs, videos, podcasts, and newsletters offer practical insights, ethical considerations, and real classroom applications.

📰 **Newsletters & Blogs**

- **AI & Education Weekly** – Curated updates on generative AI, instructional uses, and policy news (EdTech flavor, higher ed focus)
- **Ditch That Textbook Blog (Matt Miller)** – Accessible posts with ready-to-use ideas for AI in the classroom
- **ISTE's Learning Unleashed** – Explores emerging EdTech tools, including AI integration strategies for educators
- **Daniel Stanford's Blog (idmode)** – Sharp insights from an instructional designer with a focus on AI and accessibility
- **The AI Education Project (aiEDU)** – Focused on helping educators and students build AI literacy

🎧 **Podcasts**

- **Teaching in Higher Ed (Bonni Stachowiak)** – Covers instructional strategies with occasional episodes on AI and digital pedagogy
- **EdSurge Podcast** – Features interviews with educators and technologists about AI trends and classroom impact
- **AI in Education Podcast (powered by AI for Education)** – Focused exclusively on AI in K–16 learning contexts
- **The EdTech Take Out** – Casual and practical episodes about new tools, with ongoing AI-related discussions

▶️ **YouTube Channels & Video Series**

- **Cult of Pedagogy (Jennifer Gonzalez)** – Occasionally covers AI in instructional design and classroom impact
- **Sinclair Community College eLearning Division** – Features tutorials, AI guides, and faculty perspectives
- **Common Sense Education** – Short videos reviewing AI tools from a privacy and classroom readiness lens
- **Edutopia** – Occasionally features real-world examples of AI-enhanced learning environments

📝 **Reflective Prompt**

> Which type of content fits your learning style—quick newsletters, podcasts during commutes, or visual walkthroughs?

🎓 Why This Matters for Instructors

Reliable sources help you cut through the noise and stay informed without burnout. A few trusted voices can help you make confident, timely decisions about how to use AI in ways that serve your students and your teaching practice.

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4.5.3: Staying up-to-date with tools and policy changes

AI tools evolve quickly—and so do the policies that govern their use in education. Staying informed about both helps instructors make decisions that are not only pedagogically sound, but also ethically and legally responsible. Whether you're considering a new platform or reevaluating your classroom practices, up-to-date knowledge is key.

📌 Why It Matters

- AI capabilities shift rapidly, and features you rely on may be added, removed, or monetized
- Policies around **student data, academic integrity, and accessibility** are still emerging and may vary by institution
- Institutional guidance and state-level decisions can affect what's allowed—or encouraged—in your classroom
- New tools may offer **improved functionality, inclusivity, or integration** with your LMS

🔍 Ways to Stay Informed

- Monitor **campus communications** from IT, academic affairs, or instructional design teams
- Subscribe to updates from **statewide systems** (e.g., California Community Colleges Chancellor's Office or CVC@ONE)
- Follow **U.S. Department of Education AI guidance** and reports (e.g., *AI and the Future of Teaching and Learning*)
- Use **EdTech directories** (like Common Sense Education or EdSurge Product Index) to track tool updates and educator reviews
- Set Google Alerts or follow **professional hashtags** like #AIinedu, #OER, or #DigitalPedagogy
- Join your institution's **AI workgroup, academic senate subcommittee**, or teaching and learning center updates

📝 Reflective Prompt

> What's one way you can build staying current into your existing workflow—subscribing to updates, joining a listserv, or calendar reminders?

🎓 Why This Matters for Instructors

When instructors stay current, they can lead with clarity and confidence. By staying informed about evolving tools and policies, you protect your students, uphold ethical standards, and model professionalism in a time of rapid technological change.

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4.6: FINAL ENCOURAGEMENT

You've taken on a fast-changing topic, asked meaningful questions, and explored how AI can fit into your teaching—ethically, accessibly, and intentionally. That's no small feat. Whether you're still experimenting or already integrating AI into your practice, your willingness to learn, reflect, and adapt is what makes this work impactful.

???? Remember This:

- You don't have to be an AI expert—you just have to be a thoughtful educator.
- Starting small is not only okay—it's often the best path forward.
- Your voice, presence, and professional judgment matter more than any tool.
- It's normal to have more questions than answers. Keep asking them.
- This isn't about replacing your teaching—it's about enhancing it, one choice at a time.

???? Looking Ahead

- Lean on your peers, instructional designers, and professional communities
- Share what you're learning—it helps others and solidifies your own understanding
- Celebrate small wins, and reflect often
- Keep your teaching values at the center of every AI-related decision

???? Final Reflective Prompt

> What's one way you've grown during this learning journey—and what's one small next step you're excited to take?

???? Why This Matters for Instructors

Teaching with AI isn't about having it all figured out—it's about being open to possibility while grounded in purpose. By leading with curiosity, care, and clarity, you're not only adapting to change—you're shaping what ethical, inclusive, and impactful AI use in education can look like.

4.6.1: There's no one "right way" to use AI.

4.6.2: Curiosity and critical thinking are your most valuable tools.

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4.6.1: There’s no one “right way” to use AI.

When it comes to integrating AI into teaching, there’s no universal formula—just thoughtful choices guided by your goals, values, and students’ needs. What works in one course, discipline, or institution may look entirely different elsewhere. That flexibility is a strength, not a flaw.

🔓 What This Means for You

- You have permission to **adapt, test, and revise** your approach
- It’s okay to **take it slow** or focus on just one area (like writing announcements or generating quiz ideas)
- You can be **selective**—not every tool or feature is right for every course
- Your **pedagogical instincts** matter more than trends or tech headlines
- Student needs, course design, and your comfort level all shape what “good” AI use looks like

💡 In Practice

- One instructor may use AI for **accessibility enhancements**, like generating alt text or audio summaries
- Another may explore **assignment design**, using AI to help reframe writing prompts or scaffold research steps
- Some may limit AI to **behind-the-scenes prep**, while others invite students to use it transparently for brainstorming or feedback
- And some may choose **not to use AI at all**—and that’s just as valid

📝 Reflective Prompt

> What approach to AI feels most aligned with your course and teaching style right now—and why?

🎓 Why This Matters for Instructors

There is no single path to effective AI integration—only the path that works for you and your students. Trust your expertise. Stay curious. And remember: thoughtful, intentional teaching will always matter more than the tools you use.

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4.6.2: Curiosity and critical thinking are your most valuable tools.

You don't need to know everything about AI to use it well. What matters most is the mindset you bring to the process. Curiosity helps you explore what's possible; critical thinking helps you evaluate what's appropriate. Together, these skills are your compass in a rapidly changing landscape.

🔍 Why These Skills Matter in AI Integration

- **Curiosity** opens doors to experimentation, creative design, and student-centered applications
- **Critical thinking** helps you identify ethical risks, equity concerns, and instructional misalignment
- These tools support **continuous learning**, enabling you to adapt as technology evolves
- They empower you to ask better questions, challenge assumptions, and engage students in meaningful dialogue about AI use

💬 What This Looks Like in Practice

- Asking: *How might this tool enhance what I'm already doing well?*
- Evaluating: *Does this tool support all learners, or could it create new barriers?*
- Reflecting: *What values are driving my AI decisions? Efficiency? Equity? Creativity?*
- Modeling: *How can I show students what thoughtful, ethical technology use looks like in action?*

📝 Reflective Prompt

> What's one way you've used curiosity or critical thinking during this process—and how did it guide your decision-making?

🎓 Why This Matters for Instructors

Tools will change. Guidelines will evolve. But your professional judgment—shaped by curiosity and critical thinking—will always be essential. These are the skills that ensure AI serves learning, not the other way around.

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GLOSSARY

Accessibility
The practice of designing content and tools so that all students, including those with disabilities, can access and engage with learning materials.

AI (Artificial Intelligence)
Computer systems designed to simulate human intelligence, including tasks like language processing, decision-making, and pattern recognition.

Algorithm
A set of rules or calculations followed by a computer to solve a problem or perform a task—used in AI to identify patterns and generate responses.

Annotation
A note or explanation added to a text or image. In AI contexts, annotations are often used in training data to help machines learn from examples.

Assistive Technology
Tools or software designed to support students with disabilities. AI can enhance assistive technologies by generating captions, text-to-speech, or simplified content.

Bias (in AI)
Systematic errors or unfair patterns in AI outputs that reflect imbalances or prejudice in the data used to train the model.

ChatGPT
A generative AI language model developed by OpenAI that can produce text-based responses to prompts, used in many educational applications.

Creative Commons (CC) License
A set of copyright licenses that enable creators to share their work openly while retaining certain rights. Commonly used in OER materials.

Data Privacy
The protection of personal or sensitive information collected or used by digital tools. In education, this includes student data and FERPA compliance.

Equity
Ensuring fair access, participation, and outcomes for all learners by addressing barriers related to race, income, ability, language, and other factors.

Ethical AI Use
Using AI tools in ways that are transparent, fair, respectful of privacy, and aligned with institutional values and student needs.

FERPA (Family Educational Rights and Privacy Act)
A U.S. law that protects the privacy of student education records and governs who can access or share that data.

Generative AI
AI tools that create new content—such as text, images, or code—based on patterns learned from existing data. ChatGPT is an example.

Instructional Design
The process of designing, developing, and refining instructional materials and experiences that support student learning.

Large Language Model (LLM)
An advanced type of AI trained on massive amounts of text data to generate human-like responses in conversation. ChatGPT is an LLM.

Learning Management System (LMS)
A platform like Canvas or Blackboard used to deliver, manage, and track course content and student activity.

Open Educational Resources (OER)
Teaching and learning materials that are freely available to use, adapt, and share—often licensed through Creative Commons.

Pedagogy
The art and science of teaching, including strategies and philosophies that guide how instructors help students learn.

Prompt
A question or instruction given to an AI model to generate a response. Effective prompting leads to clearer, more useful outputs.

Prompt Engineering
The practice of crafting and refining prompts to guide AI tools in producing specific, high-quality responses.

Rubric
A scoring guide used to evaluate student work based on specific criteria and levels of performance.

Scaffolding
Instructional supports that help students progressively build knowledge and independence in their learning.

Transparency (in AI Use)
Clearly communicating when, how, and why AI tools are used in instructional design or student assessment.

UDL (Universal Design for Learning)
A framework for designing instruction that provides multiple means of engagement, representation, and expression to meet the needs of all learners.

ZTC (Zero Textbook Cost)
A course model that uses free and openly licensed materials in place of traditional commercial textbooks, supporting cost-free learning for students.

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