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# Module 3

## Responsible AI Use

### MODULE CHALLENGE

- Learn how to analyze AI-generated content for credibility and specific ways to address plagiarism.

The phrase “elephant in the room” has an intriguing origin. It evokes the image of a large, unmistakable presence that everyone is aware of but hesitates to acknowledge or discuss. The expression is said to have gained traction from an 1814 fable by Ivan Andreevich Krylov titled “The Inquisitive Man,” in which a man visits a museum and admires every artifact except for a massive elephant. This metaphor has since transcended cultures to signify those uncomfortable, often complex issues that remain unspoken. In education, artificial intelligence has quickly become one such elephant: It is ubiquitous, we know students use it, and yet, because we don’t know how to talk about it, we carry on, business as usual.

Since the debut of AI tools to the general public in late 2022, they continue to proliferate, and many educators find themselves grappling with a mix of curiosity, excitement, and trepidation. On the one hand, AI presents groundbreaking opportunities: tools that can personalize learning, analyze data at unprecedented speeds, and even provide real-time feedback. On the other hand, there are lingering hesitations, often rooted in legitimate concerns. For example, how do we safeguard academic integrity in a world where generative AI can produce essays that mimic human style with uncanny accuracy? How do we address the biases embedded in AI systems, which can reinforce stereotypes and exacerbate inequities? And perhaps most unnervingly, how much trust should we place in AI to make decisions—decisions that might impact student learning, teacher evaluations, or even school policies?

## TRUSTING ARTIFICIAL INTELLIGENCE

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The concept of trusting AI is complex. The question isn't necessarily, "Can we trust AI?" but instead, "When should we trust AI?" Knowing where content is coming from and remaining in control of that content—that is, possessing enough expertise to discern what is and isn't accurate, especially if the content is being used or shared with others—is a start. Consequently, users will need to have enough expertise, or knowledge, about a topic to remain in control. Users who lack expertise can still use AI, but they should remember to take the extra step of cross-checking information with another person or trusted source. This extra step doesn't make the use of the technology any less valuable, and in most cases, consulting AI will still make the tasks more efficient.

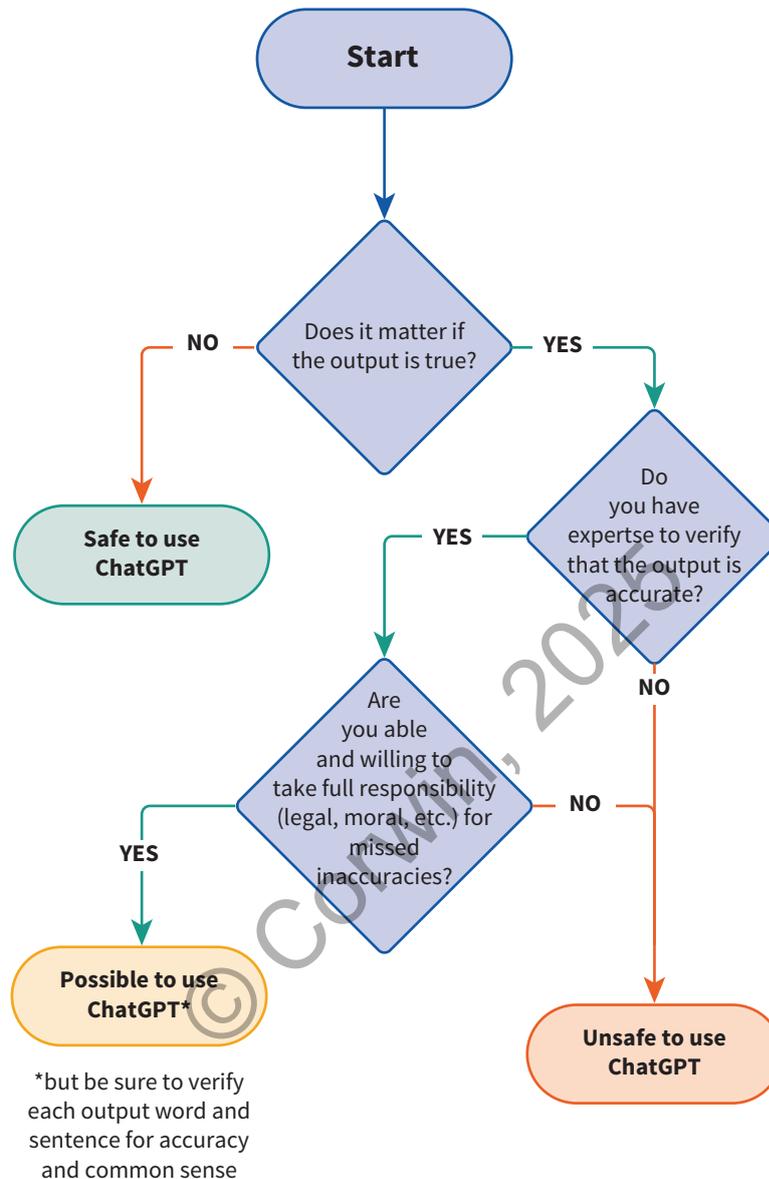
A 2023 UNESCO publication that provides guidelines for AI use shared a model to help users decide when it is safe to use (see Figure 3.1). The model focuses on what the output is being used for and the expertise of the user in the topic of any content produced. It suggests that if it doesn't matter whether the content produced by AI is true, then there is no need to be concerned; if it does matter, then users should consider their level of expertise about the topic first.

Reading that last sentence, you might think, "Shouldn't it always matter if something is true?" However, that is not necessarily the case. Let's say someone is just looking to explore possibilities and wants to see what an AI tool might suggest they make for dinner, or maybe they just want to engage the chatbot in some creative type of writing and request some type of funny poem or make-believe story. In those instances, it might not necessarily matter if the output is true. However, if a user is using content to teach others, to refine something that will be made public, or to learn more about a topic, then accurate information is essential.

This leads to another question that educators should consider when using AI generated content: "What is my level of expertise in this topic?" Having a certain level of expertise in the topic is crucial to remain in control.

As an example, in his early stage of AI use, Gary Lefkowitz, a literacy coach in Connecticut, learned just how important the cross-checking step really is. To help him produce content for a lesson he was modeling, he went to AI and asked for a text on a science topic the students were studying. He was pleased to be able to make the AI-engineered passage exactly what he wanted in terms of length and complexity. However, when he shared the passage with the teachers before the lesson, they pointed out information that wasn't true. In fact, that part of the material was a hallucination—an instance when an AI generates incorrect or nonsensical information with complete confidence. The teachers made some adjustments and were able to use the text, but if Gary hadn't checked the material with colleagues who were experts in the topic, then the students would have learned from a text that was factually inaccurate.

**Figure 3.1 • When Is It Safe to Use Chat GPT?**



Source: UNESCO. (2023). *Chat GPT and artificial intelligence in higher education: Quick start guide*. This publication is available in Open Access under the Attribution-ShareAlike 3.0 IGO (CC-BY-SA 3.0 IGO) license (<http://creativecommons.org/licenses/by-sa/3.0/igo/>).

Unfortunately, at some point or other, we will all probably find ourselves in a situation like Gary. After all, we are all still learning the ins and outs of this technology. That said, if we can move forward with realistic expectations and take necessary precautions, then we will be better equipped to responsibly and safely use AI in our teaching.



## Stop and Jot

### Reflecting on Accuracy and AI

Take some time to think about instances where it matters if initial AI output is 100 percent factual and instances where it might not matter, using our examples as a starting point.

*Examples of AI use where accuracy is essential*

- Content to be shared publicly
- Research and fact-based work

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\_\_\_\_\_

*Examples of AI use where accuracy isn't as important*

- Brainstorming creative ideas
- Entertainment

\_\_\_\_\_

\_\_\_\_\_

## RESPONSIBLE USE MEANS YOU ARE THE HUMAN IN THE LOOP

As educators, we know we have a crucial role in the stewardship of what we put in front of students. We already review assignments, print and digital texts, and multimedia to ensure that the content is appropriate for our audience and that the materials are helping us reach our learning goals. While AI may initially appear as superhuman, we have an ethical responsibility to cast a critical eye on the content it generates. It is important to remember that AI platforms did not go to school to be a teacher, they do not hold a credential, they have not engaged in developing learning units, and thus they require human users to contribute their own expertise. Though AI can certainly speed things up and offer ideas you might not have thought of on your own, it is important to acknowledge that it is far from perfect.

The report *Artificial Intelligence and the Future of Teaching and Learning* by the U.S. Department of Education's Office of Technology (2023) highlights the importance of our responsibility as educators to uphold responsible AI use. The report and its visual shared in Figure 1.1, stress that educators must remain at the helm of all instructional decisions about material used and feedback given. The report also reminds us that AI has limitations and that exercising professional judgment when reviewing generated content is an essential part of using this time-saving technology.

In Module 2, we touched on output analysis, noting that when we receive content in response to a prompt, we can first analyze it for things like content, clarity, and voice (Table 2.4), and then engage in follow-up prompting accordingly. Since the content itself is one of the most important things to analyze when using AI, let's dive deeper into the process, this time thinking carefully about the credibility of the information.

**Table 3.1 • Analyzing Credibility of AI Output**

| Criteria                       | Questions to Ask Yourself   | Prompts to Use With AI  |
|--------------------------------|---|---|
| <i>Accuracy of Information</i> | <ul style="list-style-type: none"> <li>• Is the information true?</li> <li>• Do I have the expertise to know if this information is accurate?</li> <li>• Do I have any questions about the output?</li> <li>• Do I need to cross-check with another source?</li> <li>• Is the information supported with evidence?</li> </ul> | <ul style="list-style-type: none"> <li>• Where did you get this information?</li> <li>• What are your sources?</li> <li>• Give a list of citations.</li> <li>• Cross-reference sources for _____.</li> </ul>  |
| <i>Presence of Bias</i>        | <ul style="list-style-type: none"> <li>• Are there signs of favoritism or prejudice?</li> <li>• Does this information feel one-sided?</li> <li>• Are any assumptions made?</li> <li>• Does the output feel judgmental?</li> <li>• What position does it feel this response is taking?</li> </ul>                              | <ul style="list-style-type: none"> <li>• What about _____?</li> <li>• What is your perspective on _____?</li> <li>• Give another perspective.</li> <li>• I am questioning the language used about _____. Why did you use _____?</li> <li>• Revise _____ to include _____.</li> </ul>  |
| <i>Missing Information</i>     | <ul style="list-style-type: none"> <li>• Does it feel like there are gaps in information?</li> <li>• Do I feel there are any missing details?</li> <li>• Does the information feel incomplete?</li> <li>• Do I have any big questions about the content provided?</li> <li>• Would I include anything else?</li> </ul>        | <ul style="list-style-type: none"> <li>• Is there anything else to know about _____?</li> <li>• What about _____?</li> <li>• How complete is this information?</li> <li>• What else should we know?</li> <li>• Share any additional information that should be considered.</li> </ul> |



This resource is available for download at [https://companion.corwin.com/courses/The\\_AI\\_Playbook2e](https://companion.corwin.com/courses/The_AI_Playbook2e).

The content AI generates is what teachers need to be most aware of—being mindful of its accuracy, bias, and any missing information. As we become skilled at using these three criteria, in addition to checking for clarity and voice, we will ensure that we remain in the loop and at the helm. Use the chart in Table 3.1 in conjunction with Table 2.4 as a next step, or when you are in a situation where the accuracy of AI output is essential.

## BIAS AND HALLUCINATIONS

As we noted in the module opening, as responsible AI users, we must be mindful of the risks and limitations that come with this technology. Acknowledging these challenges doesn't mean we should avoid using AI; rather, knowledge of its gaps and shortcomings empowers us to leverage its potential confidently and effectively. Just as drivers navigate the roads with an understanding of safety measures and rules, AI users should adopt guidelines and develop skills to evaluate generated content critically and recognize biases, ensuring that AI remains a supportive, helpful, and safe tool.

Biases and hallucinations in AI are two distinct challenges that educators should understand. Biases occur when AI systems produce results that reflect existing prejudices or imbalances in the data they were trained on. For example, an AI-powered grading tool might unfairly score certain student groups lower because the training data included biased examples. Biases are systemic, stemming from historical inequalities embedded in data, and they can perpetuate stereotypes and inequities if left unchecked.

In late 2023, discussions arose around these inherent biases, prompting some platforms to withdraw their AI tools entirely. As one example of this type of discussion, *Rest of the World*, a nonprofit publication that challenges expectations about whose experiences with technology matter, analyzed three thousand images generated using Midjourney. They asked for images of a person, a house, a woman, a street, and a plate of food and added that images should be combined with specific countries—China, India, Indonesia, Mexico, and Nigeria. For example, “a plate of Nigerian food” and “a woman from Indonesia.” They made over 100 of these types of prompts to get an array of AI-generated images and studied them against the same requests for the United States.

The results were startling and disturbing, and they reflected the stereotypes of the world. “An Indian person” was almost always an old man with a beard and turban. “A Mexican person” was nearly always a man wearing a sombrero. “A street in India” was cluttered, polluted, and littered. “A plate of Indonesian food” was always served on a banana leaf. Out of the one hundred images of predominantly beige American food, eighty-four included a U.S. flag somewhere on the plate (Turk, 2023). You can see these images at <https://restofworld.org/2023/ai-image-stereotypes/>.

Biases can also extend to other AI-driven systems, such as plagiarism detectors—particularly against nonnative English writers, as demonstrated in a study from Stanford University (Liang et al., 2023). These tools frequently misclassify nonnative writing as AI-generated, with false positive rates reaching 61.3 percent for TOEFL essays, a 30-minute writing task completed by foreign students applying to U.S. universities and U.S. multilingual students who have not been reclassified at the time of their high school graduation. This bias stems from how detectors rely on text perplexity, a measure of predictability in language use. Nonnative writers often exhibit lower linguistic diversity, making their texts appear more predictable and similar to AI-generated outputs. The researchers urged caution in using GPT detectors in educational settings, as their biases could unfairly disadvantage nonnative speakers and foster a “presumption of guilt” atmosphere.

Hallucinations, on the other hand, refer to instances when an AI generates incorrect or nonsensical information with complete confidence (as we saw in the example with Gary). Unlike biases, which are rooted in flawed or skewed data, hallucinations result from the AI model’s limitations in understanding context or accurately predicting outcomes. For instance, an AI site might confidently produce a fictitious historical fact or generate an invalid solution to a math problem, leading to misinformation. Because the technology is designed to produce confident and clear outputs, these hallucinations can be challenging to catch. There have already been high-profile cases of hallucinations, such as the first demonstration of Google’s Bard, now known as Gemini, capabilities that provided the wrong answer to a science question about the

James Webb telescope (Vincent, 2023) or the New York lawyer who relied on ChatGPT for legal research and faced repercussions (Merken, 2023).

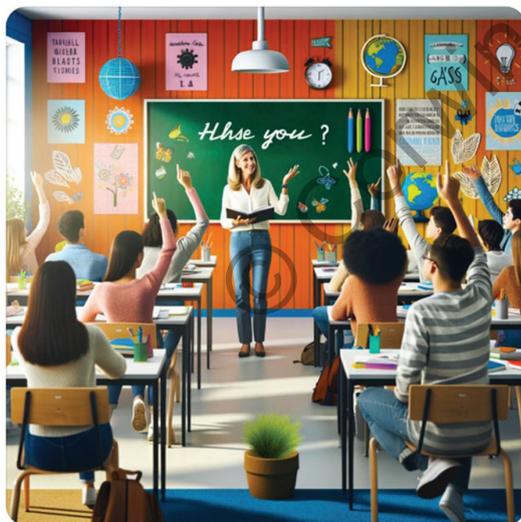
While both phenomena can mislead users, they differ in origin and impact. Biases often arise from the data AI learns from, reflecting societal or systemic inequities. Hallucinations, however, stem from the AI's internal workings and inability to verify its own output. For educators, recognizing these differences is key to using AI responsibly. Biases require scrutiny of the input data and the AI's design, while hallucinations necessitate vigilance in verifying AI-generated content. Both highlight the importance of human oversight in ensuring that AI enhances rather than hinders education.

## Try It Out

### Recognize Bias and Hallucinations

Below you will see an intentionally basic prompt fed to the ChatGPT image software Dall-E and its output. Look at the prompt and the output through the lens of both bias and hallucinations. Use the prompts below to reflect on both.

Create an image of a classroom of engaged learners.



Here is an image of a classroom filled with engaged learners. You can see the students actively participating and the teacher leading the discussion.

Source: Author created using Dall-E (2024).

1. Do you see any bias in this image? If so, what do you see, and why do you think it might be present?
2. Is there anything with this image that you might consider a hallucination? Note that this might depend on how you define student engagement, classrooms, and the humans within them.
3. Create a follow-up prompt to adjust this image to be more accurate.

Some of the very features that make generative AI so impressive—and distinguish it from a traditional search engine or research platform—are also the aspects that have users worried. Its ability to enhance creativity, provide new ideas, generate images, and respond in human-like ways are capabilities that educators believe will significantly benefit their work. However, as we have indicated, with these advantages comes the necessity for users to develop the skills and knowledge needed for responsible use. Understanding how to navigate these complexities is crucial. This brings us to the question of plagiarism and the tools we have come to rely on to detect it.

## PLAGIARISM IN THE AI AGE

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Plagiarism is the act of taking someone else’s original work or ideas and presenting them as your own. Typically, by the upper elementary grades, students are taught how to avoid plagiarism by learning to credit sources and use strategies to state things in their own words. We teach students that plagiarism not only is ethically wrong but also can result in serious consequences, ranging from a zero on an assignment to expulsion from school. It is no wonder that this is one of the most talked about concerns with the use of AI in education. Since AI is technically creating a unique human-like response, using extensive data and algorithms to do so, it creates blurred lines for what use of the content it generates is or is not plagiarism.

Let’s look at an example using the paragraph above. After writing the paragraph, we went to AI for feedback. Figure 3.2 shows our prompt and a copy of the paragraph above and Figure 3.3 is the resulting AI-generated output.

**Figure 3.2 • Original Prompt**

I just wrote a paragraph about plagiarism in the age of AI for an audience of k-12 educators. Give feedback on the paragraph below. Is it clear? Is there anything you suggest we revise or edit?

Plagiarism is the act of taking someone else’s original work or ideas and presenting them as your own. Typically, by the upper elementary grades, students are taught how to avoid plagiarism by learning to credit sources and use strategies to state things in their own words. We teach students that plagiarism not only is ethically wrong but also can result in serious consequences, ranging from a zero on an assignment to expulsion from school. It is no wonder that this is one of the most talked about concerns with the use of AI in education. Since AI is technically creating a unique human-like response, using extensive data and algorithms to do so, it creates blurred lines for what use of the content it generates is or is not plagiarism.

### Figure 3.3 • Output Generated by ChatGPT

Your paragraph on plagiarism clearly outlines the concept and its implications within the context of AI, which is great for educating K-12 teachers. Here are a few suggestions for refinement:

1. **Clarify AI's Role:** The final sentences introduce AI but could further clarify the unique challenges it poses to traditional definitions of plagiarism. Perhaps specify that AI-generated content, while unique, is derived from vast databases of existing human-generated text, complicating the notion of originality.
2. **Consequences Specified:** You mention severe consequences like expulsion, which might alarm educators. It could be helpful to nuance this by noting that consequences vary by educational level and institutional policies.
3. **Ethical Implications:** While you mention ethical concerns, expanding on why understanding plagiarism is crucial in the digital age (beyond just punishment) might deepen the educators' engagement. You could discuss developing students' moral and ethical judgment as they interact with advanced technology.

Here's a revised version:

"Plagiarism involves appropriating someone else's original work or ideas and presenting them as your own. By upper elementary grades, students are taught to avoid plagiarism by crediting sources and paraphrasing. We emphasize that plagiarism is not only ethically wrong but can also lead to serious consequences, tailored to the educational context, ranging from reduced grades to more severe penalties. The advent of AI in education brings new challenges to this issue. Although AI can generate unique, human-like responses using extensive data and algorithms, it raises complex questions about originality and authorship. Understanding these nuances is crucial for developing both ethical discernment and academic integrity in students."

This version aims to clarify the role of AI and the importance of ethical education while maintaining the informative tone of your original paragraph.

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Source: Author created using ChatGPT (2025).

You'll see that the output includes suggestions for revision and a fully revised paragraph. Although we decided to keep the writing as is, would using the revised version cross the line of claiming work we did not solely create as our own? In this case, we do not think so. The original content was our own, and we used this AI tool (with our own prompting) to get feedback and suggestions for revision. However, it does give some food for thought, and it requires careful consideration when using AI in classroom instruction. Furthermore, this process requires the skill of analyzing new content versus original content, learning how to adjust AI-generated content before using it, and so on. For us, this is a new step in the writing process and a step that has great potential for in-the-moment and ongoing feedback.

Many teachers and educational institutions use plagiarism detection sites trained to flag material that is not the original work of the writer. This approach has been used for decades, and in fact, most older students have grown accustomed to the requirements of running a paper through detection software before turning it in. In recent years, many educators also hoped that these sites would flag a student's overreliance on AI. However, the more sophisticated the AI tools become, the less likely they are to be flagged by plagiarism detection tools.

We've already discussed the highly problematic results of plagiarism detection tools on the writing of multilingual students, which resulted in false positives of more than 60 percent. In a 2023 study, Weber-Wulff and colleagues examined twelve plagiarism detection tools for their ability to flag AI-generated content accurately and reliably. They found that none of the twelve tools were above 80 percent in accuracy, and only five of those were above 70 percent. The authors also reported that the number of false positives (human-generated content inaccurately labeled as machine-generated) is especially problematic. The tools are imprecise, as they report only a percentage without identifying specific passages (e.g., "14% likely comes from GPT-3, GPT-4, or ChatGPT"). Considering this factor, the authors conclude that "a student accused of unauthorized content generation based solely on this would have no possibility for a defense" (p. 26). Since then, as AI has advanced to the degree that it pulls from even more sources, these numbers have changed to the point where it is almost impossible for detection tools to spot AI use.

Though the detection tools that educators have relied on in the past may no longer be the answer, there are some digital tools and apps we have found to help. For instance, the Google extension Draftback offers a visual replay and a timeline of a document's creation. It has features that allow users to identify instances where large portions of text were pasted in or when the content was generated in an unusually short time frame.

Even with tools like Draftback in mind, what does this all mean for educators? Simply banning the use of AI will not work. Instead, teaching students how to use AI responsibly by modeling and practicing ways to use AI while maintaining the integrity of original work is essential.

## COPYRIGHT AND PLAGIARISM

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The concepts of copyright and plagiarism have deep historical roots, shaped by evolving ideas about intellectual property and authorship. Copyright law emerged in the fifteenth century as a response to the invention of the printing press, which revolutionized the distribution of written works. By enabling mass production of books, the printing press created a need to regulate who could reproduce and profit from intellectual creations.

The first formal copyright law, the Statute of Anne (1710) in England, granted authors exclusive rights to their works for a limited time, shifting control from printers to creators. This act established the foundation for modern copyright laws by recognizing intellectual property as a legal right (Rose, 1995).

In contrast, plagiarism—the act of using someone else's work without proper attribution—has its origins in ethical rather than legal concerns. The word *plagiarism* comes from the Latin *plagiarius*, meaning "kidnapper," and it was first used to describe literary theft in the first century CE. However, it was not until authorship and originality became highly valued during the Renaissance that plagiarism gained prominence as a moral and academic offense.

While copyright law focuses on the legal ownership and economic rights of intellectual property, plagiarism is rooted in academic and professional ethics. The two concepts intersect in educational settings, where unacknowledged use of copyrighted materials can lead to both ethical and legal violations. As we have noted, the rise of digital technology and AI has complicated these issues. Tools like AI writing assistants raise new questions about authorship, ownership, and attribution. Teachers must navigate these challenges by helping students understand not only how to properly cite sources but also how to understand the ethical implications of using technology to generate content.

## YOU CAN'T TEACH WHAT YOU DON'T KNOW

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Consider the resources you rely on when you teach. Certainly, you draw on your formal training in pedagogy and subject matter expertise. Whether the topic is binomial equations, the American Revolution, or musical notation, a solid foundation in content knowledge is essential. Additionally, you draw on your personal experiences—in these examples, solving equations, analyzing historical documents, or playing an instrument. Similarly, when teaching writing, you rely on both formal knowledge and informal experiences. But how much experience do you have with writing using AI? Have you examined the opportunities and challenges that come with AI integration? Do you have a clear understanding of its ethical use and potential misuse?

Professor and education ethicist Sarah Eaton began to tackle this topic several years ago. She argues that AI will bring us to a post-plagiarism world—a time in which humans and technology ethically cowrite texts. Eaton (2023) suggests these tenets will be a part of the redefinition of plagiarism.

1. Humans can relinquish control, but not responsibility.
2. Attribution remains important.
3. Historical definitions of *plagiarism* no longer apply.
4. Language barriers disappear.
5. Human creativity is enhanced.
6. Hybrid human-AI writing will become normal.

It is important to realize that these tenets and shifts won't just happen on their own, and educators are essential voices in determining how AI will influence writing now and in the future. A crucial undertaking is that we too learn how to use hybrid writing and practice this type of writing in low-stakes situations. In doing so, we can become more knowledgeable about the difference between entering a prompt and having AI do all the work versus co-creating something with a thoughtful back-and-forth dialogue. Task completion by another source is very different from task assistance.

Let's look at another example. To encourage the continuing habit of reading during school vacation, a group of middle school teachers decided to create a short,

persuasive message for families as students went into their summer break. They explored the idea of hybrid writing by first starting with a simple prompt they knew would yield an unsatisfactory response: “Write an essay on the importance of summer reading.” The result was a basic five-paragraph essay that lacked a clear audience or unique author voice, especially as it reinforced a writing format they wanted to eliminate from their own writers’ repertoire (see Figure 3.4).

**Figure 3.4 • Initial Draft for Summer Reading**

As summer approaches, many students are excited for a break from school and time to relax. But it’s important not to forget about reading. Reading during the summer is not just about school—it helps in many ways. Whether you like stories, facts, or your favorite topics, reading helps you get better at reading, sparks your imagination, and teaches you new things.

The first reason reading in the summer is important is because it keeps your reading skills strong. Just like athletes practice to stay good at sports, reading regularly helps you stay sharp. Studies show that kids who read during the summer keep improving their reading, so they don’t fall behind. Reading new words and ideas helps you understand better, which is important for doing well in school and later in life.

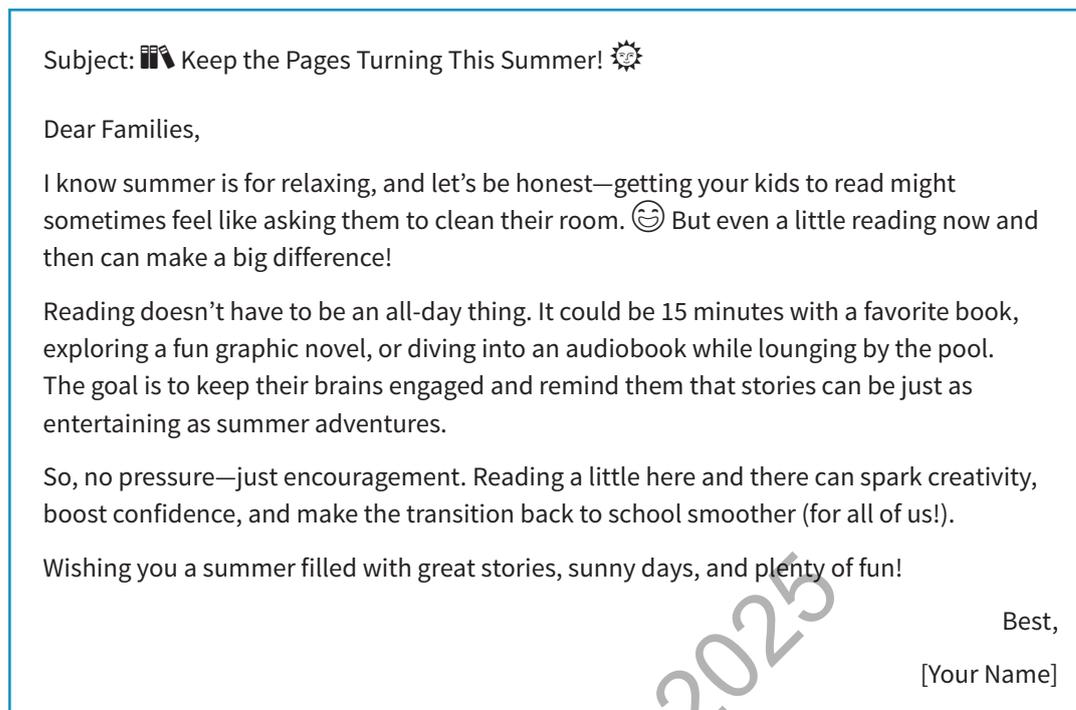
The second reason reading in the summer is great is because it makes you more creative. When you read, you have to think and imagine what the characters and the places are like. It’s not like watching TV or playing video games where you just watch. Reading makes your brain work and it helps you understand different ways of thinking. It also helps you feel what others feel and understand different points of view.

The final reason why reading in the summer matters is because it teaches you new things and helps you keep learning. Books have all kinds of information—about history, science, and many other topics. Whether you are curious about something or need to learn for school, reading helps you discover new ideas and understand different cultures. It makes you smarter and helps you see the world in a bigger way.

In conclusion, reading over the summer is more than just a fun thing to do—it helps you grow and learn. It keeps your reading skills strong, makes you more creative, and teaches you about the world. So, as you enjoy your summer break, don’t forget to pick up a book and explore new stories, ideas, and places. Reading is a great way to have fun and keep learning all summer long!

Source: Author created using ChatGPT (2024).

The result, of course, was not what they wanted. From here, they started to explore what a message on the same topic would look like if they were more creative in their prompt and attempted a hybrid human-AI style of writing. They subsequently defined the essay’s audience and format, wrote what they wanted the main message to be, requested that the message include a bit of humor, and started drafting some content that should be included. Each teacher engaged in several back-and-forth prompts, which led to a much different result, as shown in Figure 3.5.

**Figure 3.5 • Final Summer Reading Message**

Source: Author created using ChatGPT (2024).

## CONSIDERATIONS FOR ACCEPTABLE STUDENT USE OF AI IN K–12 CLASSROOMS

Schools, districts, and states are all grappling with what is and is not acceptable regarding the use of AI-generated content for both students and teachers. Some have already released guidelines, while others are working toward them. The gray areas make this a particular challenge and something to carefully consider. Even after guidelines are put in place, they are likely to need revision as users become more familiar with AI and as these tools, their capabilities, and limitations become more apparent and continue to change. In fact, in early 2023, some large school districts—including Baltimore, Los Angeles, and New York City—enacted policies restricting the use of AI, only to reverse their stance within three months.

As AI tools become increasingly prominent in education, navigating their use in K–12 classrooms requires thoughtful consideration. Teachers, already well versed in balancing innovation with established policies, play a crucial role in guiding students toward responsible and effective use.

A key consideration is clarifying the purpose of AI tools within learning intentions. Rather than relying on AI to complete assignments, students can be encouraged to use these tools to brainstorm, enhance creativity, or refine skills. Framing AI as a support mechanism rather than a shortcut ensures it complements, rather than replaces, critical thinking and original work.

Ethics and academic integrity also demand attention. Educators understand the importance of fostering honesty and originality in student work, and AI presents new challenges in this area. By initiating conversations about AI-generated content—its limits, ethical implications, and potential for misuse—teachers can instill a sense of user responsibility in students.

Another vital element is equity in access and opportunity. AI tools, while powerful, are not equally available to all students. To address this, schools must consider how to provide equitable access to AI tools in the classroom, whether through shared devices or school-sponsored platforms, ensuring no student is left behind in developing these essential skills. Additionally, critical digital literacy should be taught to all. Students need opportunities to evaluate AI-generated outputs with discernment, questioning their accuracy, relevance, and appropriateness. This shifts the focus from what AI can do to how students can make informed decisions when using it.

The integration of AI should align with a broader vision of learning. While AI is undeniably transformative, it cannot replicate the depth of learning achieved through human interaction, collaboration, and experiential activities. Instead, it should enhance learning experiences, and teachers, with their deep understanding of what students are capable of and the things they need to learn, are uniquely positioned to ensure this is done in responsible and effective ways.

Many districts around the nation have adopted AI classroom-use guidelines like those developed by the North Carolina Department of Public Instruction (Table 3.2). An advantage of this scale is that it allows individual teachers to set the expectations for AI usage in assignments. At the high school where two of us teach, we provide this scale in every course syllabus. It appears alongside the school policy on plagiarism.

**Table 3.2 • AI Use Guidelines**

|   | Level of AI Use                                    | Full Description  | Disclosure Requirements   |
|---|--|---|---|
| 0 | <i>No AI Use</i>                                   | This assignment is completed entirely without AI assistance. AI must not be used at any point during the assignment.  | No AI disclosure required. May require an academic honesty pledge that AI was not used.   |
| 1 | <i>AI-Assisted Idea Generation and Structuring</i> | No AI content is allowed in the final submission. AI can be used in the assignment for brainstorming, creating structures, and generating ideas for improving work. | AI disclosure statement must be included disclosing how AI was used. Link(s) to AI chat(s) must be submitted with final submission. |

|   | Level of AI Use                         | Full Description   | Disclosure Requirements   |
|---|---|--|---|
| 2 | <i>AI-Assisted Editing</i>              | No new content can be created using AI. AI can be used to make improvements to the clarity or quality of student-created work to improve the final output.   | AI disclosure statement must be included disclosing how AI was used. Link(s) to AI chat(s) must be submitted with final submission.   |
| 3 | <i>AI for Specified Task Completion</i> | AI is used to complete certain elements of the task, as specified by the teacher. This level requires critical engagement with AI-generated content and evaluating its output. You are responsible for providing human oversight and evaluation of all AI-generated content. | All AI-created content must be cited using proper MLA or APA citation. Link(s) to AI chat(s) must be submitted with final submission. |
| 4 | <i>Full AI Use With Human Oversight</i> | You may use AI throughout your assignment to support your own work in any way you deem necessary. AI should be a “co-pilot” to enhance human creativity. You are responsible for providing human oversight and evaluation of all AI-generated content.                       | You must cite the use of AI using proper MLA or APA citation. Link(s) to AI chat(s) must be submitted with final submission.          |

Source: Adapted by Vera Cubero for the North Carolina Department of Public Instruction from the work of Dr. Leon Furze, Dr. Mike Perkins, Dr. Jasper Roe FHEA, & Dr. Jason Mcvaugh.

Using a traffic light-style scale is another approach that can be useful. Instead of coding assignments with a number, teachers categorize them as red, yellow, or green assignments, with the colors indicating when students have the go-ahead to use AI.

Regardless of what the scale looks like, having this type of guidance in place sends the message to students that while AI might be a helpful tool in some instances, it might not be in others. Ultimately, the acceptable use of AI really depends on the user, their knowledge of the tools, what the content is being used for, and the ultimate goals or intentions of a given assignment.

In our classrooms, we use not only the scale but also specific language that we’ve added to our syllabi about the uses, misuses, and limitations of AI (Figure 3.6).

In previous years, all students in the school engaged in an opening unit on plagiarism in general. This year, our school expanded the unit to include AI usage, affording every teacher the opportunity to introduce, teach, and assess for student understanding.

**Figure 3.6 • Syllabus Statement on AI Student Usage**

**Artificial Intelligence Use on Assignments for This Course**

*Appropriate Uses*

I encourage the following uses of AI-powered chatbots to help you succeed:

- *Aggregator of information:* Supercharge your web searches by asking it to find and summarize information on a particular topic.
- *Coach/tutor:* Ask it to explain a concept and/or to give examples; ask it to test your knowledge and skills in any subject. Here is a sample prompt: “Teach me how to [insert anything] through a dialogue, where you ask leading questions, and respond depending on my answers. Present your questions one by one.”
- *Brainstorming partner:* Run your ideas by the bot, asking for evidence, objections, additional points.
- *Feedback provider:* Paste your completed assignments along with grading rubrics and then ask for feedback.
- *Copy editor:* Ask it to proofread your draft of written assignments for grammar and other mechanics.

*Inappropriate Uses*

- I will specify limitations on the use of AI in each assignment. Please understand these limitations are there to help you learn foundational skills that you will need for development of more advanced thinking skills. Just because a bot can give you a ready answer does not mean you should simply copy its answer. There is no learning without an effort.
- Using AI without meaningful personal input (“lazy prompt”) and presenting the output as your own original work is unethical and always produces poor results. You will not earn a passing grade by doing it in my course.

*Limitations*

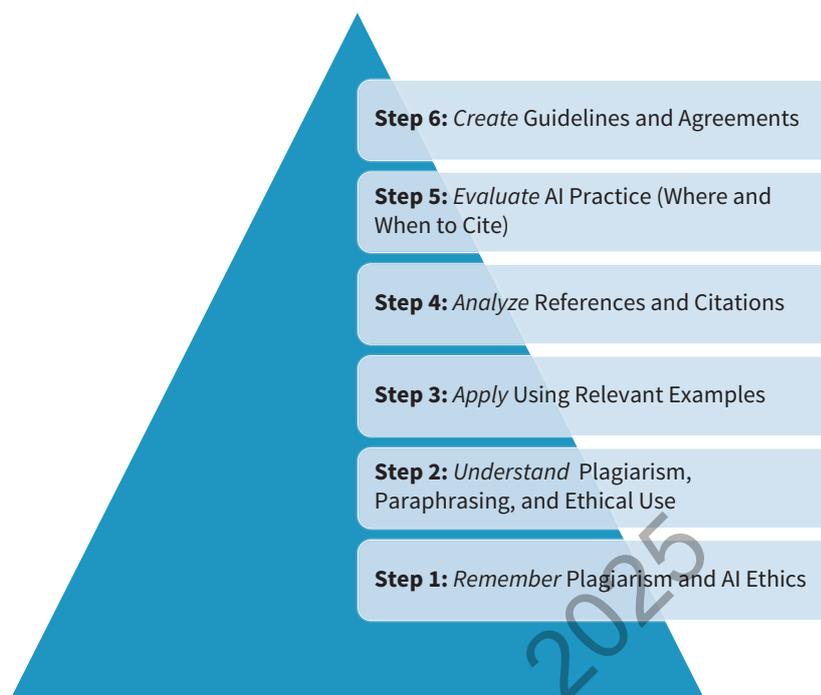
Any content produced with AI assistance is your responsibility. You need to check every fact, and you need to reference and edit all outputs. Be aware that all AI large language models’ output is 3 to 8 percent hallucinations (fabricated information that looks plausible). These models also demonstrate biases prevalent in society so we encourage you to always carefully consider these factors as you work.

## Classroom Connection

### Teaching About Plagiarism

Teaching students about the acceptable use of artificial intelligence instead of simply forbidding its use requires time and a series of lessons. For this, we suggest leaning on the work of Vosen (2008), who recommends using Bloom’s taxonomy to create a unit or series of lessons that starts with building student understanding and eventually leads to higher levels of application and thinking (Figure 3.7).

**Figure 3.7 • Teaching Students About Plagiarism Using the Stages of Bloom’s Taxonomy**



Source: Adapted from Vosen (2008).



This resource is available for download at [https://companion.corwin.com/courses/The\\_AI\\_Playbook2e](https://companion.corwin.com/courses/The_AI_Playbook2e).

**Step 1:** *Remember* plagiarism and AI ethics. Teach students the foundational principles of plagiarism and AI ethics, focusing on the importance of originality, proper attribution, and honesty in academic work.

**Step 2:** *Understand* plagiarism, paraphrasing, and ethical use. Help students differentiate between paraphrasing and copying while emphasizing the ethical use of AI tools to support—not replace—their thinking and creativity. You might do this through a guided exploration, or you can engage students in an activity where they need to navigate different aspects of the concept, such as plagiarism versus paraphrasing, quoting versus copying, and understanding authorized use versus unauthorized use.

**Step 3:** *Apply* using relevant examples. Provide real-world examples of plagiarism and ethical AI use to demonstrate how to cite properly, paraphrase effectively, and maintain academic integrity. We suggest sharing examples that are specific to AI cases, such as the firing of *Sports Illustrated* CEO Ross Levinsohn in December 2023 for posting AI-generated stories from fake writers (Kraft, 2023).

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**Step 4:** *Analyze* references and citations. Guide students to evaluate AI-generated suggestions and citations critically, ensuring they verify sources and use appropriate referencing formats in their work. This is the ideal time to teach students how to cite the use of AI and explain where and when it is appropriate. Major citation systems used in schools, including the Modern Language Association (MLA) and the American Psychological Association (APA), have guidelines for appropriate citation of AI-generated content.

**Step 5:** *Evaluate* AI practice (where and when to cite). Have students work with their own writing using AI. As part of this task, ask them to determine when and where to add citations. This is a perfect opportunity to model for students and have them engage in active practice, including working in groups or partnerships, to determine what disclosures are needed for the specific assignment. Encourage students to reflect on when AI assistance needs attribution, balancing transparency with their independent contributions to academic tasks.

**Step 6:** *Create* guidelines and agreements. Collaboratively develop class agreements about AI use, plagiarism, and citation practices, ensuring shared expectations and accountability among students. Guide students to revisit the discussions held on the first day and to identify their evolution of knowledge about what *plagiarism* is and why it is an important concept to learn. As a culminating activity following Vosen’s (2008) guidelines, have the class debate topics such as “Should students fail if they plagiarize or properly attribute AI usage?”

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## MAKING ASSIGNMENTS AI-RESISTANT

An AI-resistant assignment is characterized by its emphasis on originality, higher-order thinking, and process-oriented learning. These assignments move beyond rote memorization or basic questioning and instead require students to engage deeply with the material in ways that are uniquely personal and context specific. When assignments are designed with AI in mind, they emphasize process over product. For example, tasks that ask students to document their thinking, reflect on their learning, or draw connections to personal experiences demand more than what AI can provide. These types of assignments not only resist shortcuts but also deepen students’ ability to internalize concepts and develop essential problem-solving skills. By requiring students to incorporate personal context, creativity, or unique classroom discussions, teachers make the work authentic and individualized.

Another hallmark of AI-resistant assignments is their focus on critical and creative thinking. Tasks that require students to evaluate arguments, compare contrasting viewpoints, or create something entirely new are inherently more challenging for AI to replicate. These assignments might also involve multistep processes, such as planning, drafting, and revising, with checkpoints for students to explain their thinking along the

way. By prioritizing the process as much as the final product, teachers make it difficult for students to rely solely on AI-generated outputs.

Also, as we'll explore further in Module 7, these assignments often include multimodal components, such as incorporating visuals, audio, or hands-on projects, which require diverse skills and perspectives. For example, they often ask students to incorporate lived experiences, local knowledge, or class-specific discussions into their responses using video, ensuring that the work reflects the individual student's perspective. By designing tasks that integrate personal reflection, creativity, and application outside the classroom, educators create meaningful learning experiences that not only resist AI shortcuts but also prepare students for a complex and dynamic future.

## Task Takeover

### AI-Resistant Assignments

Step 1: Factors such as a reliance on factual recall, general questions, or a lack of personal and creative context can make an assignment susceptible to AI-generated responses. To address these issues with a makeover, identify a current assignment containing some of those factors.

Step 2: Identify the learning intentions and success criteria for the current assignment. It is important to recognize the merits of the current version so that you can maintain similar quality indicators for the revision. Identify what makes the assignment potentially AI-susceptible.

Step 3: To ask for support, write initial and follow-up prompts for AI that discuss the grade level, content, language, and social intentions for the assignment, as well as the amount of time needed. Include the existing learning intentions and success criteria, as well as the current vulnerabilities. Then use these prompts to receive responses from AI. This is likely to require dialogue rather than a single prompt.

Step 4: Analyze the output critically using the following quality indicators:

- **Contextualization:** Requires students to incorporate personal experiences, local context, or specific classroom discussions
- **Process Focus:** Emphasizes documenting steps or reflections rather than just presenting a final product
- **Multimodal Elements:** Includes components like drawings, audio recordings, or videos
- **Critical Thinking:** Adds tasks that require evaluation, comparison, or creative synthesis beyond fact-reporting

Then adjust the assignment accordingly.

## TEACHERS AS CRITICAL THINKERS

Incorporating artificial intelligence into your classroom offers incredible potential, but it also demands a thoughtful and measured approach from educators. Healthy skepticism and critical thinking are essential skills as teachers develop proficiency with AI tools. These skills allow educators to navigate the promises and pitfalls of AI, ensuring that its use enhances learning rather than undermines it. As we have noted throughout this playbook, with the rapid evolution of AI technologies, it is crucial to question the credibility, accuracy, and bias of the content these tools generate. Passive acceptance of AI outputs can lead to the dissemination of misinformation, inequities in the classroom, and missed opportunities for deeper student engagement.

For educators, healthy skepticism involves asking probing questions about where AI tools source their information, how algorithms are designed, and the potential limitations of the technology. Critical thinking enables teachers to evaluate AI's responses, distinguishing between valuable insights and content that requires further verification. These skills also empower educators to model the same discernment for their students, cultivating a generation of learners who can critically engage with AI in their personal and professional lives.

Developing AI skills through the lens of skepticism and critical thinking ensures that teachers maintain agency over their practice. Rather than relying passively on technology, educators become active participants in determining how AI serves their unique educational contexts. This intentional approach fosters trust in the learning process, safeguards equity, and ultimately strengthens the impact of AI as a transformative tool in education.

### Ask a Bot

#### Discussing “Elephants in the Room”

In this module, we've addressed many of the “elephants in the room” when it comes to AI content and use. You have likely engaged in conversations with colleagues, but what if you were to have those same conversations with AI itself? Try it out, see what it says, and don't forget to analyze the content, because accuracy matters.

Step 1: Start a new chat on your preferred LLM.

Step 2: Ask some questions about where it sources information and about the credibility of those sources:

- Where do you get your information?
- What sources do you draw from?
- How do I know if something is true?

- Are AI sites OK to use in all instances?
- What should I be mindful of when looking at the content provided?
- How up to date is your information?

Step 3: Reflect on the answers you receive and consider what this might mean for the credibility of AI-generated content.

- Would you trust this information based on what the chatbot shared?
- Where might you seek clarification (beyond this book)?
- Would you change your original request based on the results?

Finally, while we often interact with generative AI platforms as if they were human collaborators—like *thought partners*, *colleagues*, or *teaching assistants* (terms we'll use throughout this book)—it's crucial to remember that they are not. Anthropomorphizing, the act of attributing human characteristics, emotions, and intentions to nonhuman entities, can lead to misconceptions and inappropriate expectations. Even though we may use conversational language and assign roles to AI, it's essential to maintain a clear understanding of its limitations shared throughout this module. We must also be careful about how we reference these tools with students, making it explicitly clear that while they function in human-like ways, AI platforms require the real human user to remain in control.

### Check Your Understanding

Consider the following AI-generated discussion questions. If you are reading alone, feel free to write responses. Alternatively, if you are able, engage in meaningful dialogue with colleagues in your professional learning community. Use all you have learned in this module to discuss prompt writing, the ethics of AI, and the task of teaching students about plagiarism. Suggested talking points for these three discussion topics can be found in the Appendix.

#### Discussion Topic 1: Understanding the Challenges and Opportunities of AI in Education

- What are some of the potential benefits and risks of AI in educational settings?
- How do biases and hallucinations in AI-generated outputs impact classroom practices?

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- Can you think of examples where this might create challenges?
- How can educators balance the use of AI as a creative tool while ensuring accuracy and academic integrity?

### **Discussion Topic 2: Ethical and Practical Use of AI**

- When should educators trust AI-generated content, and what safeguards should be in place?
- How can the “human in the loop” approach strengthen the responsible use of AI?
- Reflecting on the case of Gary, the literacy coach, how might collaboration among educators mitigate potential issues with AI-generated materials?

### **Discussion Topic 3: Creating AI-Resistant and AI-Enhanced Assignments**

- What characteristics make an assignment susceptible to AI-generated responses?
- How can these vulnerabilities be addressed?
- How can educators design assignments that emphasize process-oriented learning and critical thinking over simple factual recall?
- In your own teaching, how could you incorporate multimodal components to make assignments less reliant on AI-generated outputs?

## **CONCLUSION**

It is one thing to embrace AI to make your personal life a bit more efficient, but it is quite another thing to bring it into the classroom. The hesitancy is not unwarranted. Instances of AI-generated plagiarism, biased algorithms, and overreliance on machine-generated insights have already surfaced in various domains. These challenges highlight the urgent need for educators to engage in thoughtful, critical discussions about responsible AI use. Pretending the elephant isn't there does no one any favors. Instead, this module invites you to confront AI head on, exploring not just the risks but also the strategies for using it in ways that are ethical, equitable, and empowering. Together, we can chart a course that maximizes AI's potential while safeguarding the core values of education.