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# What **AI-Literate** Students Do Differently



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## Table of Contents

<b><i>Introduction</i></b> .....	<b>1</b>
<b><i>What AI-literate Students Do Differently</i></b> .....	<b>2</b>
<b>1. They Use AI as a Thinking Partner</b> .....	<b>2</b>
<b>2. They Use AI to Edit the Mechanics of Language</b> .....	<b>4</b>
<b>3. They Ideate Themselves</b> .....	<b>6</b>
<b>4. They Question and Verify AI Information</b> .....	<b>6</b>
<b>5. They Never Copy and Paste AI Content</b> .....	<b>8</b>
<b>6. They Use AI to Enhance Their Reading Comprehension</b> .....	<b>8</b>
<b>7. They use AI for Formative Feedback</b> .....	<b>12</b>
<b>8. They Set Clear Boundaries for When AI is Allowed</b> .....	<b>14</b>
<b>9. They Reflect on How AI Shape Their Thinking</b> .....	<b>14</b>
<b><i>Conclusion</i></b> .....	<b>16</b>
<b><i>References</i></b> .....	<b>17</b>
<b><i>Explore Similar Guides</i></b> .....	<b>19</b>

## Introduction

In this short guide, I share a set of ideas that illustrate how AI-literate students engage with AI in meaningful ways. At this point, you might be asking what I mean by AI-literate students. In simple terms, these are students who use AI in constructive, creative, and responsible ways.

By constructive, I mean students use AI to co-construct knowledge and deepen understanding. They turn to AI to help unpack complex readings, clarify difficult concepts, or support their thinking and drafting process, while keeping intellectual ownership firmly in their hands.

By creative, I refer to students who use AI to explore new directions for inquiry and learning. They use it to test ideas, imagine alternative perspectives, generate questions, and explore connections they might not have considered on their own. Creativity here is about expanding thinking and preserving authenticity.

By responsible, I mean students approach AI with a strong sense of academic integrity and ethical awareness. They respect authorship, value originality, and remain accountable for the ideas they submit. They understand that using AI carries responsibility and that learning depends on their active engagement and judgment.

I outline nine ways AI-literate students put these principles into practice. These ideas draw from my own work and research in educational AI, as well as my ongoing conversations with teachers, school leaders, and members of the wider education community. My hope is that these examples offer prompts for thinking about AI use in classrooms and learning spaces, and that they spark further reflection and discussion.

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## What AI-literate Students Do Differently

The following sections outline what AI-literate students do differently when they engage with AI in learning contexts. These practices focus on how students think with AI, how they protect the integrity of their learning, and how they make deliberate choices about when and how the technology supports their work.

### **1. They Use AI as a Thinking Partner**

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When I talk about using AI as a thinking partner, I am not talking about handing thinking over to a machine. I mean using AI as a support tool, an extension of the student's thinking, not the thinking itself. The intellectual work remains irreducibly student done. Students start by laying out their own understanding of a topic or problem in their own words. Only then do they bring AI into the process.

At that point, AI becomes a mirror and a sounding board. Students might ask it to restate their reasoning to check coherence, comment on the logic of their argument, or point out gaps, weak links, or unsupported claims. They may ask for alternative perspectives they have not considered or for counterarguments they need to respond to. In each case, AI responds to thinking that already exists, instead of generating it from scratch.

The key shift is how students position AI. In the case of a thinking partner, or what Mollick (2024) refers to as a co-intelligence, they treat it as a dialogic peer that can question, challenge, and offer feedback, not as an authority that delivers answers. This back-and-forth makes their thinking visible. It creates space for revision, reflection, and judgment. Learning happens in the dialogue, with the student remaining firmly in control of decisions about what to keep, change, or discard.

**Prompt Examples:**

Paste your reasoning and include any of the following prompts:

1. Here is my current reasoning on the topic. Restate it in your own words so I can check clarity and coherence.
2. Read my explanation and point out gaps, weak connections, or assumptions that need support.
3. Challenge my argument and explain where my thinking may be too narrow or incomplete.
4. What alternative perspectives am I missing, based on what I have written?
5. Act as a peer reviewer and give feedback on the logic of my reasoning, not my writing style.
6. What counterarguments could a critical reader raise against my position?
7. Ask me five probing questions that would help deepen my thinking on this issue.
8. Identify places where my reasoning moves too quickly to a conclusion.

## 2. They Use AI to Edit the Mechanics of Language

Language can sometimes get in the way of thinking. When students worry too much about grammar, wording, or sentence flow, their attention drifts away from ideas. Instead of wrestling with how to phrase something, they stop thinking altogether. This is where AI can actually help, if it stays in its lane.

Students focus first on what they want to say. They write freely and get their thoughts down without trying to make the language perfect. The goal at this stage is thinking, not polishing. Offloading language mechanics to AI later frees up mental space for ideas, connections, and reasoning.



The first draft is always student-written. That is exactly how I write myself. Only after ideas are clear do students turn to AI, and even then, they work in small chunks. They paste a paragraph or a few sentences at a time, not the whole draft. Feeding AI everything at once often leads to flattened ideas and a voice that no longer sounds like the student.

The rule is simple and non-negotiable. AI edits language, not ideas. It fixes grammar, improves clarity, and smooths sentences. It does not add claims, reorganize arguments, or change meaning or ideas. It's role is strictly that of a language editor!

Here are examples of prompts students can use when they want AI to support language mechanics without interfering with thinking.

**Prompt Examples:**

1. Edit the paragraph below for grammar and sentence flow only. Do not change meaning or add ideas.
2. Improve clarity and readability while keeping my voice and argument intact.
3. Proofread the text below for punctuation, spelling, and basic sentence structure. No content changes.
4. Edit this paragraph to sound clearer and more natural without rewriting or expanding ideas.
5. Smooth the language in the draft below without reorganizing the argument.
6. Check the text below for awkward phrasing and suggest small language-level edits only.
7. Improve sentence flow while preserving tone, meaning, and structure.
8. Proofread the text below as a language editor, not a co-writer.

### **3. They Ideate Themselves**

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I touched on this earlier when I talked about using AI as a thinking partner, but it deserves its own space. In my conversations with students about AI, I always stress the importance of authentic and original thinking. The ideation process has to belong to them. This process consists of ideas they build through course readings, class discussions, and their own accumulated learning experiences.

AI does not think the way humans do and does not generate ideas through understanding or experience. It rather operates as a stochastic parrot (Somers, 2025), generating patterns based on existing data.

Imagine students use AI for ideation on the same topic; the results would often look different on the surface but remain similar underneath. The same ideas get recycled, just phrased in slightly different ways.

That is why I urge students to write their ideas down first before involving AI. Get the thinking out on the page. Once that core is in place, AI can play a supporting role. It can help refine ideas, offer feedback, point to other possible directions for thinking, or suggest alternative pathways worth exploring. The key is that the core thinking remains intact and unmistakably student's responsibility.

### **4. They Question and Verify AI Information**

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AI limitations are now well documented in the research literature. We know about hallucinations, bias, inaccuracies, and the generation of fake or fabricated sources and citations (Baker et al., 2022; Hawkins et al., 2025; Mills et al., 2024; Ruiz & Galzer, 2024). These are not edge cases. They are structural issues. For students, this should immediately raise a red flag.

I often tell students who treat AI as a search engine, especially for fact-based queries, that they are usually better off using Google. AI can get things wrong, and it often does. It may present incorrect information with confidence, invent statistics, misattribute ideas, or generate citations that look convincing but do not exist. The well-known case of the lawyer who relied on ChatGPT to generate legal citations, only to be called out by a judge for citing fabricated cases (Proctor, 2024), is a powerful reminder of what can go wrong when AI output is taken at face value.

This is why students need to build the habit of questioning and verifying everything AI produces. Numbers, statistics, dates, quotations, citations, page numbers, URLs, and DOIs all need to be checked against reliable sources. Verification is not an optional step or a technical detail. It is part of responsible academic work.

Using AI does not absolve students from responsibility. The moment they include AI-generated information in their work, they own it. Developing a skeptical stance toward AI output helps students slow down, cross-check claims, and strengthen their judgment. In the long run, this habit matters far more than speed or convenience.



## **5. They Never Copy and Paste AI Content**

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This point may sound obvious, but it still needs to be stated clearly. Copying and pasting AI-generated content undermines the entire learning process. When students use AI this way, learning stops. Thinking stops. The task turns into a mechanical transaction and not an intellectual effort. Beyond being a form of academic dishonesty, this kind of use dulls students' thinking and weakens the very habits education is meant to develop.

This is why I always insist that teachers explain the rationale behind learning tasks. Students need to understand that education is not only about passing courses or collecting grades. It is about developing ways of thinking that stay with them long after formal schooling ends. These include the ability to question ideas, examine claims, resist manipulation, and make informed judgments in everyday life. These are civic and intellectual habits, not just academic skills.

When AI replaces students' thinking entirely, those habits never get a chance to develop. Research has already raised alarm bells about this kind of uncritical AI use, showing that overreliance on automated content generation can severely impair learners' cognitive engagement and long-term thinking abilities (Bai et al., 2024; Chatfield, 2025; Gerlich, 2025; Kosmyna et al., 2025; Zhai et al., 2024). If students bypass thinking now, they pay for it later.

That is why I draw a clear line. AI can support learning, but it cannot substitute for it. The moment students copy and paste AI output as their own work, they give up the most valuable part of the learning experience.

## **6. They Use AI to Enhance Their Reading Comprehension**

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One of the most productive ways to use AI is to support reading comprehension. I cannot overstate how helpful this has been for me personally

in my own reading. I often think about how much time it would have saved me during my PhD. Hours and hours. AI can act like a patient reading companion that helps you unpack difficult ideas without replacing the reading itself.

Students can take dense or hard-to-grasp sections from their readings and ask AI to explain them in simpler terms. Sometimes I even ask for an explanation as if it were meant for a five-year-old, just to strip the concept down to its core.

For certain ideas, I find it even more helpful to ask for a contextual translation into my mother tongue. That kind of linguistic anchoring can deepen understanding in ways that purely academic explanations sometimes cannot. Students can also ask for analogies, concrete examples, or connections to real-world events to make abstract ideas more tangible.

That said, I am very clear about one boundary. AI should not do the reading for students. I always emphasize in my classes and workshops that the first reading must be theirs. Students should read the material themselves before involving AI in any way. Uploading a paper and asking AI to summarize it from start to finish skips the most important part of learning. It brings us back to the same issue I raised earlier. When AI replaces engagement, learning loses its meaning.



Think about a student working on a research project who uploads a stack of articles into AI and asks for a synthesis without reading any of them. They may end up with a polished summary, but their understanding remains shallow. The product exists, but the thinking does not. That is not learning.

The sequence is important: Read first, struggle a little, build an initial sense of what the text is about, and only then does AI become useful. At that point, AI can help synthesize main ideas, clarify confusing sections, or highlight connections across texts. Because students already know the material from the first reading they did, they are also in a position to catch errors, spot hallucinations, and notice when AI drifts away from the original argument. This step is crucial.

Another effective approach, again after the first reading, is to use AI tools that allow for a contained context, such as NotebookLM. Students can upload selected readings and then interrogate the material more deeply. They can ask targeted questions, request specific quotations or citations, and explore how ideas relate across texts, always verifying what AI provides against the original sources.

Below is a collection of sample prompts students can use to support their understanding of challenging texts and concepts. These prompts are meant to help clarify meaning, unpack complexity, and build comprehension after students have engaged with the reading themselves.

**Prompt Examples:**

1. Explain this concept [insert text] in simple terms, focusing on the core idea.
2. Explain this concept [insert text] as if you were explaining it to a beginner with no background knowledge.
3. Explain this concept [insert text] as if it were written for a five-year-old.
4. Provide two concrete examples that help clarify this idea [insert text].
5. Create an analogy that relates this concept [insert text] to a real-world situation.
6. Translate this passage [insert text] into [target language] while keeping the meaning intact.
7. Rephrase this section [insert text] using clearer, more accessible language.
8. Break this idea [insert text] into smaller parts and explain each part briefly.

## **7. They use AI for Formative Feedback**

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One of the most practical roles AI can play is as a feedback provider. It is available around the clock, it does not get tired, and, most importantly, it does not bring judgment into the interaction. For students, this lowers the barrier to asking for feedback and encourages experimentation. They can ask for comments, revisions, and critiques whenever they are ready, not just when a teacher is available.

AI can also be assigned specific roles. Students might ask it to respond as a journal reviewer, a critical peer, or a skeptical reader. This can be especially helpful when they want early feedback on writing, ideas, or plans before submitting work.

At the same time, students need to be aware of a well-documented issue with AI systems: sycophancy (Du et al., 2025; Fanous et al., 2025; Naddaf, 2025; Sharma et al., 2023). AI often tries to please the user, softening criticism or reinforcing what the student already believes. That is why prompts need to be explicit. Students should ask for direct critique, clear identification of weaknesses, and concrete suggestions for improvement.

Students can use AI feedback at multiple stages of their work. They can seek comments on early ideas, outlines, drafts, or plans. What matters is not the feedback itself, but how students respond to it. They remain responsible for deciding what to accept, what to revise, and what to ignore.

This opens up a powerful teaching opportunity. Teachers can invite students to bring AI feedback into class and discuss it openly. Which suggestions did they find helpful? Which ones did they reject? Why? What feedback aligned with course criteria, and what did not? These conversations are important for enhancing students sense of judgment and in honing their decision-making skills.

Here are 10 prompt examples that model how students can use AI for feedback while keeping judgment and decision-making in their own hands

**Prompt Examples:**

1. Read my draft below and give direct, critical feedback on the quality of my argument. Focus on weaknesses, not praise.
2. Respond to this piece as a skeptical reader. What parts feel unclear, unsupported, or unconvincing?
3. Act as a journal reviewer and point out major issues that would need revision before publication.
4. Give feedback on the logic of my reasoning. Identify gaps, assumptions, or leaps in thinking.
5. Review this outline and comment on the strength and sequencing of ideas.
6. Provide constructive critique on this paragraph and suggest where my thinking could go deeper.
7. Identify the strongest and weakest parts of this draft and explain why.
8. Comment on how well this work aligns with typical academic expectations for this kind of assignment.
9. Ask me five critical questions a knowledgeable reader would raise after reading this.
10. Give feedback focused only on ideas and structure, not grammar or wording.

## **8. They Set Clear Boundaries for When AI is Allowed**

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AI is an impressive technology, no doubt about that. But as I have argued throughout, it has limits. It is not, and should not be, an all-purpose solution for everything cognitive. Some thinking tasks are better done without AI in the loop. Deep reflection, sense-making, and sustained reasoning often benefit from struggle, friction, silence, and time.

This kind of judgment does not appear automatically. It needs to be taught. As a teacher, you can open this up as an explicit conversation with students. Turn it into a full class discussion. When does AI help? When does it interfere? What kinds of tasks benefit from AI support, and which ones lose their educational value once AI is introduced?

Setting boundaries can also be reflected in the assignments you create. I often recommend a hybrid approach. Some assignments can be AI-enabled, with clear guidelines about how AI may be used. Others should be intentionally AI-free, designed to foreground independent thinking, personal reflection, or in-class reasoning.

Students need to know that AI is not omnipresent, not always appropriate, and not always necessary. When students understand why AI is allowed in some contexts and restricted in others, they are more likely to use it thoughtfully, responsibly, and with purpose.

## **9. They Reflect on How AI Shape Their Thinking**

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Metacognition is one of the most important capacities learners develop through education. It is at the center of all other thinking skills, across disciplines and contexts. Reflection is the engine of metacognition. When students pause to think about how they learn, how they make decisions, and how tools influence their thinking, growth becomes visible and intentional.

This applies directly to AI use. Students who take time to reflect on how AI shaped their thinking gain much more from the experience. They notice when AI helped them clarify ideas, when it sharpened their reasoning, and when it introduced confusion or distraction. They become aware of patterns in their own use and begin to make more deliberate choices.

Reflection also invites documentation. Students can record when they used AI, for what purpose, and at what stage of their work. Over time, this creates a personal map of strategies that work well for them. It also opens space to consider alternative paths they could have taken and how different choices might have shaped the outcome.

This reflective stance supports proactive thinking. Students move beyond reacting to AI suggestions and begin to anticipate how a tool might influence their process before using it. That awareness strengthens judgment, builds confidence, and helps them grow as thoughtful learners and responsible users of AI.



## Conclusion

AI is a powerful technology with significant educational potential. I consistently encourage teachers and researchers to engage with it and explore how it can support their learning, thinking, and inquiry. The ideas shared in this guide grow out of the work I do in educational AI, along with ongoing conversations with educators and students across different contexts.

Like any technology, I believe that AI becomes meaningful through how it is framed and taught. Treating AI as a form of literacy helps shift attention away from tools and toward judgment, intention, and practice. It invites us to ask how AI shapes thinking, how it fits into learning goals, and how students remain active participants in the process. From there, explicit teaching becomes essential. Students benefit from clear guidance, shared language, and concrete examples that show what thoughtful AI use looks like in practice.

The suggestions outlined in this guide offer starting points for that work. They highlight habits that support learning, protect intellectual ownership, and encourage reflection. They also create space for dialogue, experimentation, and growth.

I hope this guide sparks conversation among teachers, students, and educational leaders. AI will continue to evolve, and so will our understanding of its place in education. What matters most is that we keep learning at the center and support students in developing the judgment and thinking habits they will carry with them well beyond the classroom.

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