

Promoting Students' AI Literacy – Artificial Intelligence Tools – Faculty Support | Oregon State Ecampus

Oregon State University Ecampus

Promoting students' AI literacy

Why AI literacy?

Students will need to develop a skill set for using and interacting productively and ethically with AI tools, for personal, school-related, and work-related reasons. Some technical disciplines may decide to strategically integrate these skills into their curricula to help prepare students for [rapidly changing workforce needs](#). In other disciplines, teaching students how to use AI may not be explicitly necessary as part of the established program or course learning outcomes, for example; but faculty may wish to help students develop their skill set in a way that prepares them to be informed students, engaged citizens, and effective members of their chosen profession. Incorporating AI literacy into diverse courses may be expedient in much the same way that many faculty have integrated [critical thinking](#) and [digital literacy skills](#) previously. (Faculty or disciplinary groups may decide that encouraging AI use leads to a loss of learning – a perspective we are not focusing on here.)

AI literacy frameworks

AI researchers and scholars have already posited frameworks for teaching this skill set, which [Laupichler, et. al \(2023\)](#) point out is often termed **AI literacy**. They describe AI literacy as: “the ability to understand, use, monitor, and critically reflect on AI applications without necessarily being able to develop AI models themselves.” Conceptualized in this way, AI literacy is a broad set of skills that is not confined to technical disciplines. Laupichler, et. al., also provide a helpful overview and comparison of recent studies and frameworks related to AI literacy that we recommend as a starting point for any faculty wishing to know more about teaching AI skill development.

Of important note: the studies and frameworks included in that literature review predate the release of ChatGPT in November 2022. We anticipate that these frameworks will be revisited and revised to account for the now widely-available generative AI tools, as well as in light of the rapid and ongoing advancements in these tools. However, the frameworks provide a useful point of departure for those thinking about how to incorporate AI literacy into their courses.

Take, for example, the four categories of skills that [Ng, et. al. \(2021\)](#) describe:

AI literacy skill set	Provided definition	Potential current uses
“Know & understand AI”	“Know the basic functions of AI and how to use AI applications.”	Integrating the history of AI tools; orienting students to the basic elements and limitations of Large Language Models (LLMs); identify relevant AI tools for student use in courses and when/how to use them

AI literacy skill set	Provided definition	Potential current uses
“Use & apply AI”	“Applying AI knowledge, concepts, and applications in different scenarios.”	Using AI as a tutor, as a reviewer of student-produced for a course, etc.
“Evaluate & create [with or in] AI”	“Higher-order thinking skills (e.g., evaluate, appraise, predict, design) with AI applications.”	Evaluate the bias and accuracy of AI-produced content; create with tools that use AI technology or create AI-based tools.
“AI ethics”	“Human-centered considerations (e.g., fairness, accountability, transparency, ethics, safety).”	Providing space to discuss course-specific and discipline-specific intersections of ethical AI use; debating these boundaries and applications, etc.

These categories highlight different discrete skills that could be introduced and advanced in meaningful ways within higher education courses.

Addressing AI literacy

Faculty need not delve deeply into AI literacy development to help students navigate with these new technologies. All courses would, in fact, benefit from even the lightest-touch approach to AI ethics where [faculty explicitly address how AI can/can't and should/shouldn't be used in that particular course](#). Faculty might also offer an open invitation to discuss further with the class how and why those guidelines have been selected and what they mean in the context of activities and assignments in the course.

For faculty who may choose to allow the use of AI tools in the course, providing students structured guidance and resources about how to use them could help to further equity in the course since some students may have more familiarity with and access to AI tools than others. For example, in a course that includes an individually-produced term paper, and where students are allowed to use AI tools to generate and evaluate potential topics, faculty might provide an effective example of how to ask an AI tool to help, ideally situating explanation in the context of what would be appropriate and ethical in that discipline or profession.

Further reading on AI literacy and integration

Carvalho, L., Martinez-Maldonado, R., Tsai, Y., Markauskaite, L., & De Laat, M. (2022). [How can we design for learning in an AI world?](#). *Computers and Education: Artificial Intelligence* 3.

Mollick, E. & Mollick, L. (12 June 2023). [Assigning AI: Seven approaches for students, with prompts](#). SSRN.

Pomerlau, M. (2023). [Integrating AI into college writing and communication courses](#). *Tech Style*.

Southworth, J., Migliaccio, K., Glover, J., Glover, J., Reed, D., McCarty, C., Brendemuhl, J., Thomas, A. (2023). [Developing a model for AI Across the curriculum: Transforming the higher education landscape via innovation in AI literacy](#). *Computers and Artificial Intelligence* 4.

The University of Sydney. (2023). [AI in education](#). [Note: Self-paced Canvas course created by students for students.]