

Register for the **EDUCAUSE Annual Conference** today. Extra 25% off in-person registration, through July 8. →

EDUCAUSE

AI Literacy in Teaching and Learning: A Durable Framework for Higher Education

by **Michelle Kassorla**, **Maya Georgieva** and **Allison Papini** ⌚ Thursday, October 17, 2024

Collection(s): **EDUCAUSE Working Group**

Faculty ALTL

Faculty-Specific Definition

AI Literacy in Teaching and Learning (ALTL) for faculty involves a comprehensive understanding of the fundamentals of AI, including machine learning, natural language processing, and neural networks. Faculty must be familiar enough with general AI tools to evaluate the application of AI tools in their teaching, research, and administrative responsibilities critically. This includes the ability to integrate AI tools effectively into pedagogical practices to enhance student engagement and improve research methodologies. Faculty must maintain vigilance in assessing the reliability and ethical implications of AI tools, ensuring that they protect against bias, misuse, and misapplication. Additionally, faculty should develop deliberate AI-informed assignments and assessment strategies, create personal and course-specific AI policies, and foster a culture of responsible and transparent AI usage in academia. This approach ensures that faculty can adopt AI technologies to augment their productivity and teaching effectiveness while upholding ethical standards and promoting critical thinking among students.

Faculty Competencies

Faculty ALTL competencies are crucial for advancing teaching, research, and academic leadership in the age of AI. Proficiency in AI fundamentals and critical evaluation skills allows faculty to use AI tools in curricula, enhance research methodologies, and guide students in responsible AI use effectively. Ethical considerations and vigilance in AI application ensure that faculty maintain academic integrity while harnessing AI's potential. By developing AI-informed assignments, assessments, and course policies, and by promoting transparent AI usage, faculty create an environment of innovation and critical thinking in their students. Mastering these competencies equips faculty to lead in AI-enhanced education, preparing students for an AI-integrated future while upholding ethical standards in academia.

Technical Understanding

Competency	Description
Fundamentals of AI	Faculty must grasp the core principles of AI, including machine learning, natural language processing, and neural networks. This foundational knowledge is crucial for understanding how AI operates and what its potential applications are in various academic disciplines.
Application of AI Tools	Faculty should become proficient in using AI tools in their own academic and administrative work. This includes learning to write effective prompts, utilize AI-driven teaching aids, leverage virtual tutors, and integrate AI research assistants that can augment their instructional and research processes.
Hands-On Experience	Through practical sessions and workshops, faculty will gain hands-on experience with AI technologies, enabling them to apply these tools effectively in their teaching and research projects.

Evaluative Skills

Competency	Description
Critical Evaluation of AI Tools	Faculty need to develop the ability to assess the effectiveness and reliability of various AI tools critically. This involves fact-checking and verifying the credibility of AI sources to evaluate the quality of AI-generated content.
Assessment of AI Impact	Faculty should learn to evaluate the impact of AI on their teaching and research outcomes. This includes understanding how AI can enhance instructional performance and recognizing any potential limitations or biases in AI applications.
Ethical Evaluation	Faculty must be trained to consider the ethical implications of using AI in their academic work. This involves understanding issues related to privacy, data security, and the potential for bias in AI algorithms.

Practical Application

Competency	Description
Integration into Teaching	Faculty should be encouraged to integrate AI tools into their daily teaching activities. This includes using AI to personalize learning experiences, manage course content, and assess AI-informed assignments.
Research Enhancement	Faculty should integrate AI tools into their research activities. This includes using AI for data analysis, literature reviews, and generating research insights that can inform their academic work.
Course Design and Development	Incorporating AI into course design will provide faculty with practical experience in applying AI tools to create and enhance course content. This approach will help them develop innovative and effective teaching strategies.

Ethical Considerations

Competency	Description
Responsible Use of AI	Faculty must be educated on the ethical use of AI in their academic work. This includes understanding the importance of data privacy, the potential for AI bias, and the responsible use of AI-generated content.
Development of Course AI Policies	Encouraging faculty to create their own ethical AI usage policies for their courses will help them navigate the complex landscape of AI in education. Providing templates and guidelines will support them in this endeavor.
Vigilance in AI Application	Faculty should be trained to remain vigilant in their use of AI tools, ensuring that they continually assess and address any ethical concerns that arise. This includes AI transparency in all academic work, including statements about and citation of AI-influenced academic work. This proactive approach will foster a culture of responsible AI usage in academia.

Suggested Faculty Outcomes

Faculty outcomes for ALTL are vital for ensuring effective and responsible AI integration in higher education. These outcomes provide clear benchmarks for faculty development, guiding them toward mastery of AI fundamentals, critical evaluation skills, and ethical considerations. By achieving these outcomes, faculty members become adept at using AI tools to enhance teaching, research, and administrative tasks. This proficiency allows them to model responsible AI use for students, create innovative learning experiences, and address ethical challenges proactively. Well-defined outcomes also facilitate consistent assessment and improvement of faculty AI literacy across institutions. Ultimately, these outcomes prepare faculty to lead in AI-enhanced education, fostering an academic environment that embraces AI's potential while maintaining ethical standards and critical thinking.

Technical Understanding

Competency	Outcome	Example Assessment
Fundamentals of AI	Faculty will understand core AI principles, including machine learning, natural language processing, and neural networks.	Faculty will complete courses or training sessions on AI fundamentals, with assessments such as quizzes or projects demonstrating their understanding.
Application of AI Tools	Faculty will become proficient in using AI tools for their academic and administrative work.	Faculty will develop lesson plans or administrative workflows that incorporate AI tools, demonstrating effective use through peer reviews or presentations.
Hands-On Experience	Faculty will gain practical experience with AI technologies through interactive sessions and workshops.	Faculty will complete hands-on projects using AI tools to solve academic or administrative problems, with assessments based on their application and problem-solving skills.

Evaluative Skills

Competency	Outcome	Example Assessment
Critical Evaluation of AI Tools	Faculty will assess the effectiveness and reliability of various AI tools critically.	Faculty will design evaluation rubrics for AI tools, apply them in reviewing multiple AI applications, and submit comparative analysis reports.
Assessment of AI Impact	Faculty will evaluate the impact of AI on their teaching and research outcomes.	Faculty will conduct case studies on AI integration in their work, presenting findings on its benefits and limitations.
Ethical Evaluation	Faculty will understand and evaluate the ethical implications of using AI in academia.	Faculty will engage in debates and write position papers on ethical issues related to AI, such as privacy, data security, and bias.

Practical Application

Competency	Outcome	Example Assessment
Integration into Teaching	Faculty will effectively integrate AI tools into their daily teaching activities.	Faculty will create personalized learning plans incorporating AI tools for their students, with periodic reviews and adjustments based on student progress.
Research Enhancement	Faculty will leverage AI tools to enhance their research capabilities.	Faculty will complete research projects using AI for data analysis, literature reviews, and the presentation of methodologies and findings with multimodal AI tools.
Course Design and Development	Faculty will apply AI tools to project-based learning to enhance students' critical-thinking and problem-solving skills.	Faculty will work on course design projects addressing real-world problems using AI, followed by presentations and peer reviews.

Ethical Considerations

Competency	Outcome	Example Assessment
Responsible Use of AI	Faculty will use AI responsibly, understanding data privacy, AI bias, and ethical implications.	Faculty will create guidelines for responsible AI use in their courses and conduct peer reviews to ensure adherence.
Development of Course AI Policies	Faculty will develop ethical AI usage policies for their courses.	Faculty will draft and submit AI usage policies for their courses, with feedback sessions to refine and improve them.
Vigilance in AI Application	Faculty will remain vigilant in their use of AI tools, addressing ethical concerns proactively.	Faculty will participate in ongoing discussions and training on their ethical use of AI and ethical dilemmas encountered.

EDUCAUSE

Connect with EDUCAUSE

Subscribe to our emails and hear about the latest trends and new resources.

[Log in or create a profile](#)

The views, information, or opinions expressed by speakers and authors are solely their own and do not necessarily reflect those of EDUCAUSE.

Topics

Analytics

Artificial Intelligence

CIOs and Senior Technology Leaders

Cybersecurity

Digital Transformation

Federal Policy

Presidents and Senior Executives

Student Success

Teaching and Learning

Explore All Library Topics

Insights

Research

Core Data Service

EDUCAUSE Review

Conferences & Learning

Annual Conference

Cybersecurity and Privacy Professionals Conference

EDUCAUSE Institute

Professional Pathways

Face-to-Face

Online

Explore All Upcoming Events

Community

Community Groups

Member Directory

Mentoring

Member QuickTalks

Volunteering

EDUCAUSE Awards

Find or Post a Job

Who We Are

[Discover Membership](#)

[Mission and Organization](#)

[Leadership and Staff](#)

[Member Orientation](#)

[Corporate Participation](#)

[Work at EDUCAUSE](#)

[Contact Us](#)

Copyright © 2026 EDUCAUSE

Privacy Notice

Terms of Use

.EDU Home

Web Accessibility Assistance