

Volume X (2025), pp. 95-100
*American Journal of STEM Education:
Issues and Perspectives*
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<https://doi.org/10.32674/wqp55k81>

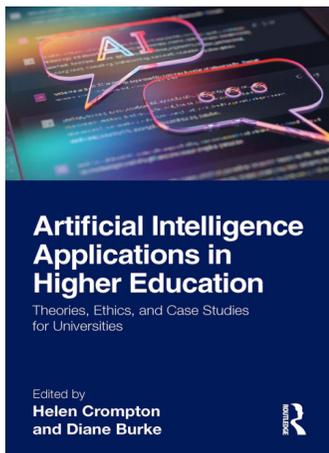
Artificial Intelligence and Higher Education: Reflections on Recent Books

Reviewed by
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As artificial intelligence (AI) technologies become increasingly integrated into the infrastructure of global higher education, a growing body of scholarly literature seeks to understand its pedagogical, ethical, and practical implications.

Four recent edited volumes: *Artificial Intelligence Applications in Higher Education* (Helen Crompton and Diane Burke, Eds., Routledge, 2025), *Artificial Intelligence in Higher Education: A Practical Approach* (Prathamesh Churi, Ed., CRC Press, 2022), *Artificial Intelligence in STEM Education: The Paradigmatic Shifts in Research, Education, and Technology* (Fan Ouyang, Pengcheng Jiao, Bruce M. McLaren, and Amir H. Alavi, Eds., CRC Press, 2023), and *ChatGPT and Global Higher Education: Using Artificial Intelligence in Teaching and Learning* (Xi Lin, Roy Y. Chan, Shyam Sharma, and Krishna Bista, Eds., Star Scholars Press, 2024) together offer a rich, timely, and multilayered contribution to the discourse on AI in education. Collectively, these works frame a comprehensive understanding of AI's present and future role in reshaping educational theory, practice, and policy.

Crompton and Burke's *Artificial Intelligence Applications in Higher Education* adopts a theoretically and ethically grounded approach, emphasizing the complexities of AI integration across academic ecosystems. Its strength lies in a collection of empirical case studies that highlight AI's use in assessment, engagement tracking, curriculum design, and faculty development. The chapters navigate delicate issues of data

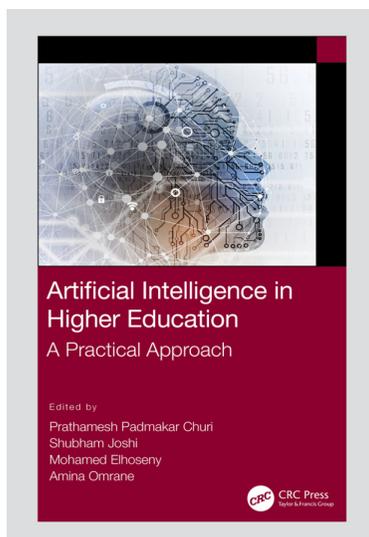


ethics, academic integrity, and epistemic authority, while providing thoughtful frameworks for teaching AI literacy to non-technical learners. The editorial vision is both rigorous and accessible, making this volume essential for scholars examining AI's philosophical and institutional implications.

Artificial Intelligence in Higher Education: A Practical Approach, edited by Churi et al. offers a practitioner-oriented roadmap, focusing on the applicability of intelligent systems in real-world

educational contexts. Its chapters traverse a wide array of technologies—chatbots, robotic agents, adaptive learning systems, and e-assessments—anchored in pragmatic considerations of instructional design and technological integration. While the volume is commendably detailed in scope, it leans heavily on applied perspectives, often at the expense of deeper theoretical or ethical reflection.

In contrast, *Artificial Intelligence in STEM Education*, edited by Ouyang, Jiao, McLaren, and Alavi, positions itself at the intersection of computational advancement and pedagogical design. The book is structured around paradigmatic shifts in STEM education, driven by AI-enhanced teaching tools, personalized learning dashboards, and intelligent tutoring systems. A standout feature is its emphasis on adaptive technologies and teacher orchestration systems, offering a compelling synthesis of educational theory and AI-enhanced instructional design. The volume also contributes meaningfully to the growing discourse on

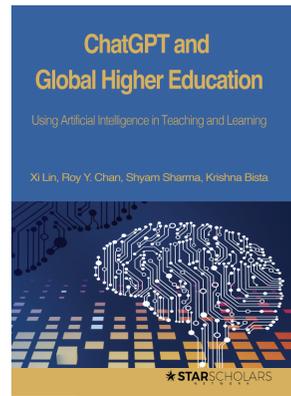




algorithmic bias and the interpretability of AI models in K–16 STEM learning environments.

Lin, Chan, Sharma, and Bista’s *ChatGPT and Global Higher Education* turn the scholarly view toward generative AI, focusing on the pedagogical, ethical, and institutional ramifications of tools such as ChatGPT. Organized around research-based chapters and cross-national case studies, the book advances a critical yet hopeful narrative about the role of generative AI in

decolonizing curricula, enhancing global equity, and transforming assessment practices. It engages thoughtfully with pressing concerns around faculty preparedness, student ethics, and the intellectual property of AI-generated content. The volume’s international scope and intersectional analyses distinguish it within the growing literature on AI in higher education.



Comparative Insights

The four volumes exhibit notable thematic convergence and divergence. Crompton and Lin et al. provide the most sustained attention to ethical inquiry and AI literacy, addressing core concerns around data privacy, algorithmic authority, and responsible use. Both volumes emphasize student agency and critical thinking, with Crompton discussing Socratic AI pedagogy and Lin et al.’s treatment of generative AI’s epistemic risks offering particularly innovative contributions.

Churi and Ouyang et al. lean more heavily on technical implementation and instructional strategy, emphasizing predictive analytics, adaptive learning systems, and the design of AI-supported assessment mechanisms. The technical depth in these volumes is valuable for practitioners seeking concrete solutions and implementation models. Still, the comparative lack of ethical and equity-focused discourse may limit their relevance for broader institutional strategy.

Where Crompton and Ouyang emphasize infrastructure and implementation, Lin et al. and Churi et al. pivot toward global dialogue and policy design. Lin et al.’s volume offers critical perspectives on the

socio-political dimensions of AI adoption, especially as they relate to decolonial pedagogy and equity in multilingual, multicultural educational contexts.

Furthermore, all four texts contribute meaningfully to the ongoing reimagining of assessment in AI-mediated environments. Whether in Churi et al's treatment of AI-driven performance evaluation, Ouyang's automated writing assessments, or Crompton and Lin's discussions of grading integrity and student feedback, the shared recognition of AI's disruptive role in traditional evaluation models is a consistent—and necessary—theme.

Major Issues and Promising Trends in AI Integration in Higher Education

As artificial intelligence becomes increasingly embedded in the core functions of higher education, institutions face a growing set of complex challenges and opportunities. The volumes reviewed in this essay reveal a shared understanding of the multidimensional impact of AI on teaching, research, and academic administration. While AI holds tremendous potential to transform higher education for the better, it also surfaces unresolved questions around ethics, access, equity, and institutional readiness.

One of the most pressing issues is the ethical governance of AI. Concerns around data privacy, surveillance, algorithmic bias, and the transparency of decision-making processes continue to dominate scholarly and policy debates. Faculty and institutional leaders are grappling with questions about accountability when AI is used in grading, admissions, advising, and predictive analytics. The risk of reinforcing systemic inequities through poorly designed or insufficiently tested algorithms is real and calls for robust ethical frameworks and institutional policies to safeguard students and staff alike.

Academic integrity is another area of concern. With the proliferation of generative AI tools such as ChatGPT, educators are reevaluating traditional assessment models and pedagogical strategies. Ensuring that students use AI ethically—without undermining critical thinking or originality—requires a renewed emphasis on AI literacy, digital ethics, and transparent institutional guidelines. Moreover, the authors across the reviewed works highlight the growing tension between innovation and

regulation, as universities struggle to keep pace with the rapid advancement of AI technologies while maintaining academic standards.

There are also institutional challenges related to faculty preparedness and professional development. Many instructors, especially those outside of technical disciplines, express uncertainty about how to integrate AI into their teaching practices. The digital divide among faculty and staff—often exacerbated by generational or disciplinary differences—suggests a need for targeted support, cross-campus dialogue, and structured opportunities for skill-building in AI-enhanced pedagogy.

Yet, despite these challenges, the positive trends highlighted across the volumes are both promising and transformative. AI technologies are increasingly being leveraged to personalize learning, automate routine administrative tasks, and provide timely interventions for student success. Intelligent tutoring systems, adaptive learning platforms, and AI-based feedback tools are helping to individualize instruction and support differentiated learning paths. Faculty benefit from AI-assisted tools that streamline grading, enhance instructional design, and generate analytics for curriculum improvement. These innovations free up time for more meaningful faculty-student interaction and mentorship.

For students, AI contributes to more responsive, accessible, and inclusive learning environments. Chatbots, predictive models, and learning management systems integrated with AI functionalities improve academic advising, career guidance, and mental health support. Notably, when implemented with cultural and contextual sensitivity, AI can support multilingual learners, students with disabilities, and those from historically underrepresented backgrounds—thereby advancing equity and inclusion in higher education.

Staff and administrators also benefit from AI-supported systems in areas such as enrollment forecasting, financial aid distribution, institutional planning, and facilities management. These enhancements improve institutional efficiency, reduce administrative burden, and enable data-informed decision-making. In this sense, AI is both an enabler of strategic management and a driver of institutional innovation.

The reviewed works offer a nuanced and forward-looking perspective on the dual imperative of harnessing AI's benefits while addressing its risks. They emphasize that AI's success in higher education depends not solely on technical implementation, but on deliberate, human-centered leadership. As we advance into an AI-mediated academic future,

institutions must develop guiding principles prioritizing pedagogical integrity, ethical responsibility, and inclusive excellence. The future of AI in higher education is not simply a technological question—it is an educational, cultural, and moral one that demands thoughtful engagement across all levels of the academic enterprise.

Conclusion

Together, these volumes reflect the interdisciplinary breadth and depth of the AI-in-education research agenda. Each offers a distinct contribution: Crompton and Burke provide philosophical and ethical clarity; Churi et al. focus on applied and design-based solutions; Ouyang et al. deliver pedagogically rich STEM-specific insights; and Lin et al. contextualize generative AI within global higher education policy and leadership.

Scholars, policymakers, and institutional leaders will find a valuable synthesis of theory, application, and critical analysis in these works. As AI continues to challenge conventional notions of teaching, learning, and academic labor, these books serve as both guideposts and provocations, reminding us that while AI can augment education, it cannot replace the humanistic values at its core.

Note: Assisted by ChatGPT (OpenAI), used as a drafting and synthesizing tool to enhance clarity and organization. All interpretations, critiques, and final editorial decisions are those of the reviewers.