

Book Review

***Teaching and Generative AI: Pedagogical Possibilities and Productive Tensions* Edited by Beth Buyserie and Travis N. Thurston**

Mehmet Fatih Yigit¹

"Teaching and Generative AI: Pedagogical Possibilities and Productive Tensions," edited by Beth Buyserie and Travis N. Thurston, is a crucial and timely contribution to the ongoing conversation about AI's impact on education. This book thoroughly explores the opportunities and challenges that AI technologies introduce to both traditional and online classroom environments.

This in-depth volume explores the diverse impact of AI on educational practices, offering insights into how these technologies can enhance learning experiences and pedagogical strategies. The editors, Buyserie and Thurston, have curated a collection of essays and studies highlighting AI's transformative potential in personalizing learning, automating administrative tasks, and offering real-time feedback to students.

The book also delves into the complexities and tensions that come with integrating AI into educational settings. It explores ethical considerations, such as data privacy and the digital divide, while also questioning the impact of AI on teacher roles and student engagement. Overall, "Teaching and Generative AI" serves as an essential resource for understanding the changing setting of education in the era of artificial intelligence, prompting readers to consider both the promising possibilities and the significant challenges that await.

The editors have compiled insights from a wide range of contributors, including educators, instructional designers, and researchers, offering a comprehensive view of the integration of AI in educational settings. The book is organized into six sections, each addressing various facets of teaching and learning with AI across its 35 chapters. These sections range from theoretical frameworks to practical teaching and learning strategies. Each section, as outlined below, addresses specific aspects of teaching and learning with AI.

Section 1: Framing Concepts: This section explores foundational theories that underpin AI technologies and their educational applications. This section offers educators a strong framework for understanding both the potential and limitations of AI in the classroom. For instance, constructivist theories can guide the development of AI-driven personalized learning environments.

Section 2: Research Studies: This section includes empirical studies that evaluate the effectiveness of AI tools in enhancing student outcomes. The section also highlights innovative

¹ Independent Researcher, E-mail: fatihyigit6@gmail.com

assessment techniques, such as using AI to analyze student engagement and learning patterns.

Section 3: Race and Indigenous Studies: This section prompts readers to consider how race and Indigenous studies shape our interactions with AI. It examines the cultural biases embedded in AI algorithms and the implications for marginalized communities. Through case studies and theoretical perspectives, this section urges educators to critically evaluate the cultural dimensions of AI and promote more inclusive and equitable AI practices. Topics include the representation of indigenous knowledge systems in AI and the impact of AI on racial equity in education.

Section 4: Humanizing Technology: This section emphasizes the importance of centering student and teacher experiences in AI-related pedagogy. It explores strategies for creating empathetic and supportive learning environments that leverage AI technologies. This section uses narratives and case studies to show how educators can leverage AI to strengthen human connections and build a sense of community in both physical and virtual classrooms. Examples include AI tools that aid in social-emotional learning and personalized feedback systems that prioritize student well-being.

Section 5: Teaching Resources: This section provides educators with a toolkit of resources for integrating AI into their teaching practices. Each chapter includes detailed lesson plans, activity guides, and assessment rubrics that can be adapted to various educational contexts. The section also highlights successful AI implementations in classrooms, demonstrating how these technologies can boost student engagement and improve learning outcomes.

Section 6: Disciplinary Approaches: This section explores how different academic fields, such as STEM, humanities, and social sciences, uniquely incorporate AI technologies into their curricula. By offering examples of AI applications across different disciplines, this section gives educators insights into how they can customize AI tools to address the unique needs and objectives of their subject areas.

The book highlights the potential of AI to enrich learning experiences, such as through personalized learning paths and immersive educational scenarios, while also addressing the ethical dilemmas and challenges that AI presents. Moreover, the book underscores the importance of critical digital pedagogy, drawing inspiration from the influential work of scholars such as Paulo Freire and bell hooks. This pedagogical approach urges educators to interact with AI technologies beyond just technical skills, focusing on ethical considerations and social responsibility. By incorporating the principles of critical pedagogy, the book promotes a teaching practice that is aware of power dynamics, cultural contexts, and the broader societal implications of AI.

The book reflects Freire's focus on dialogue and critical consciousness by encouraging educators to create environments where students can question and challenge AI's role in their lives. Similarly, bell hooks' concept of education as a practice of freedom shapes the book's advocacy for using AI to empower students and promote equity. The book also offers practical

examples and case studies showing how critical digital pedagogy can be applied in different educational settings. These examples demonstrate how educators can use AI to enhance critical thinking, foster collaboration, and support diverse learning needs while considering ethical and social implications.

The book features detailed lesson plans, case studies, and examples of AI applications across diverse disciplines, including composition, music history, chemistry, and social statistics. These resources make the book a vital tool for educators, whether new to AI or seeking innovative ways to integrate it into their curricula.

In summary, "Teaching and Generative AI" is an essential resource for anyone engaged in education today. Its thorough and thoughtful exploration of the subject helps readers develop a nuanced understanding of the opportunities and challenges that AI introduces in educational settings. By emphasizing ethical considerations and critical pedagogy, the book offers a guide for educators who wish to leverage AI's potential in ways that are equitable, inclusive, and transformative for their students.

Reference

Buyserie, B., & Thurston, T. N. (Eds.). (2024). Teaching and generative AI: Pedagogical possibilities and productive tensions. Utah State University. Available at <https://digitalcommons.usu.edu/teachingai/2>