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Book Review: *AI for Teachers: An Open Textbook—Artificial Intelligence for and by Teachers* (2nd edition)

Authors: Colin de la Higuera and Jotsna Iyer (Erasmus+, 2024, 250 pages, <https://www.ai4t.eu/textbook/>)

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AI for Teachers: An Open Textbook adopts an accessible approach, providing educators with foundational knowledge about artificial intelligence (AI) and its applications in education without delving into overly technical details, making it suitable for teachers seeking to integrate AI into their classrooms. The textbook positions itself at the crossroads of theoretical understanding and practical implementation, addressing AI's benefits and challenges in education. The authors, Colin de la Higuera and Jotsna Iyer, bring significant expertise to the topic. At the time of publishing, de la Higuera had been serving as Chief Equality Advocate at UNESCO's International Research Center on Artificial Intelligence (IRCAI) since 2020, while also holding the Academic Chair on Open Education and AI at the University of Nantes (<https://ircai.org/project/ai-and-education>). Likewise, Iyer had been actively involved with the Erasmus+ Artificial Intelligence for Teachers project (<https://chaireunescorelia.univ-nantes.fr/2022/08/11/entretien-avec-jotsna-iyer/>). Collaborating with eleven guest contributors, they have aimed to help teachers use AI “to work in the classroom, and not the inverse” (p. 8). The book acknowledges the contributions of an impressive array of international partnering organizations, including UNESCO, alongside numerous educational, governmental, and research institutions from France, Italy, Ireland, Slovenia, and Luxembourg.

The textbook is an open educational resource designed to be freely accessible to educators, allowing them to download and use the material in various formats. The available formats include digital PDF, print PDF, Pressbooks XML, and EPUB (<https://www.ai4t.eu/textbook/>). The digital PDF is interactive using the Internet, while the print PDF is offline-friendly but lacks interactivity. Pressbooks XML formats are ideal for platform integration, and EPUB is flexible for e-readers. This textbook is available in English, German, Slovenian, Italian, and French.

Chapter 1 opens with a series of questions setting the tone of the textbook firmly on helping teachers who have wondered how AI could be put to good use in their classroom. The textbook targets educators from K–12 to higher education interested in integrating AI into teaching practices. It is also relevant for policymakers, educational technologists, and teacher trainers in developing and implementing AI-driven educational tools and strategies. Even for those who have read the first edition, the numerous improvements in the second edition make it essential to explore this latest version. This edition expands from the original six to eight parts, adding new parts on generative AI and additional content. Part III: Managing Learning includes a more comprehensive discussion of personal identity, bias, and fairness in

data. Part IV: Personalising Learning introduces a new sub-part discussing the flip side of adaptive learning systems. The textbook also features new illustrations and 15 new short videos to enhance understanding.

The book starts with foundational concepts of AI, and then moves into the implications within education, specific AI technologies for educators, reflections on AI's future in education, and additional resources. In each part, the authors discuss AI's pedagogical, ethical, and societal impacts, particularly how AI-driven systems can perpetuate biases, influence human agency, and shape educational practices. This comprehensive approach lends credibility to the text, making the recommendations realistic and actionable. The information is reflecting the educational impact of generative AI (e.g., ChatGPT) and using references to contemporary AI and education research.

I agree with the authors' view that AI is a powerful tool and appreciate that ethics and social impacts are discussed throughout the book. This may resonate with educators who feel overwhelmed by considering using new technologies. The authors present a balanced approach to using AI. For example, cheating is discussed in terms of addressing it when it happens and then an external link presents a range of teacher responses and issues of detecting AI related cheating. The authors briefly note ways teachers are designing assignments that could not be helped by using AI, referencing on page 201 an article by Arvind Narayanan as their source, but mistakenly forgetting to cite it. Perhaps the article they meant to cite is titled "Students are Acing Their Homework by Turning in Machine-Generated Essays. Good." It is published at Narayanan's website *AI Snake Oil* (<https://www.aisnakeoil.com/p/students-are-acing-their-homework>). This oversight notwithstanding, the extensive number of externally linked resources enriches the textbook.

The textbook offers valuable insights into how a Smart Learning Management System (SLMS) that is powered by AI can enhance e-learning by personalizing educational experiences for students, reduce administrative burdens for educators, and provide learning analytics. I was particularly struck by how useful this technology can be, especially in remedial teaching, an additional instruction to support students who are behind or struggling to meet learning standards. Based on my experience, one of the biggest challenges in remediation is efficiently analyzing diagnostic test results and designing personalized learning paths based on each student's needs. It also can be a viable solution for teachers who lack the time for classroom-based remediation. Using plain language, the textbook effectively introduces readers to the lexicon of computer science, skillfully explaining and differentiating key concepts such as machine learning (Chapter 9), deep neural networks (Chapter 29), and search engines (Chapters 7, 8, 10, and 11) to help readers better understand how AI works.

The book's primary shortcoming lies in the roughness of its copy editing, which detracts from the overall reading experience. Additionally, given the rapid pace of change in AI technology, the preface openly acknowledges the potential for any published information about AI to quickly become outdated. While these concerns do not overshadow the book's valuable insights, they highlight the challenges of writing about such a dynamic field. In light of this rapidly evolving landscape, the book avoids specific software recommendations due to the fast-paced evolution of AI tools. Overall, the textbook stands out for its practical guidance on integrating AI into education, particularly through its clear ethical guidelines that help teachers navigate the responsible use of AI. Incorporating interactive elements into the digital format, including embedded videos and clickable links to external resources, is a strong feature. The authors effectively combine diverse perspectives and practical examples, enhancing the book's arguments and

making it accessible to educators without a technical background in AI. I highly recommend this book for any educator looking to embrace AI while maintaining ethical standards in the classroom.

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