

## **Forward: Special Issue - Human-AI Symbiosis: Ethical, Skill-Based, and Philosophical Implications in Higher Education**

**James Hutson, PhD. Editor-in-Chief, Lindenwood University**

The special issue of the International Journal of Emerging and Disruptive Innovation in Education: VISIONARIUM, sponsored by The College of Arts and Humanities at Lindenwood University, addresses the intricate dynamics of Human-AI Symbiosis in higher education. This edition focuses on the ethical, skill-based, and philosophical implications of Generative Artificial Intelligence as it integrates with human capabilities within educational frameworks. The issue draws on Dov Seidman's philosophy that "how we do things matters more than what we do," therefore, the manner in which we accomplish activities is of greater significance than the activities themselves. The articles within this issue do not merely speculate on the potential of AI in education; they provide a deep dive into the necessary ethical frameworks, underscore the irreplaceable value of human skills, and consider the philosophical challenges posed by this technological integration.

Articles in this issue explore various themes, emphasizing the critical nature of human skills such as empathy, ethical judgment, and nuanced understanding, which are deemed indispensable even in an AI-driven educational landscape. Furthermore, the issue examines the concept of 'Fearing the Other', analyzing how AI might either perpetuate or alleviate deeply ingrained biases and fears within educational environments. Insights on the potential uses of AI to develop human and power skills like creativity, leadership, and teamwork are also discussed, highlighting their importance in the rapidly evolving educational sector.

This issue presents a range of interdisciplinary perspectives, shedding light on AI's diverse impacts across different academic disciplines. It challenges existing paradigms and encourages a reevaluation of the boundaries between human creativity and algorithmic precision. Readers are invited to critically engage with the content, reflecting on the broader implications for the future of education in an AI-enhanced world. The academic community is encouraged to navigate this new terrain with knowledge, guided by ethical considerations, and inspired by the boundless possibilities of collaboration between human and artificial intelligence.

In synthesizing these diverse perspectives, the issue aims to contribute to the academic discourse and impact practical AI implementations in educational settings globally. As we move forward, the insights from this issue should inform ongoing dialogues and initiatives, ensuring AI enhances educational outcomes while preserving the essential human interactions that underpin effective learning environments. The commitment to continuous inquiry and ethical consideration is pivotal as we collectively explore the future of education in an AI-augmented reality. This journey promises to transform educational landscapes while adhering to the values that define our humanity.

The first paper by Col. Mayer in this special issue addresses the critical need for higher education institutions to maintain a balance between cultivating human skills and enhancing AI literacy. Amidst a landscape increasingly influenced by artificial intelligence, the emphasis remains on the continuing importance of human skills such as creativity, critical thinking, and

ethical judgment, which are beyond AI's capability to replicate. The necessity for graduates to develop a foundational understanding of AI to stay competitive in the workforce is stressed, highlighting the dual need to preserve humanistic education while integrating technical competencies that meet evolving job market demands and the expanding role of AI in various professional sectors.

The second paper by Vosevich and Hutson explores the role of human creativity within the realm of generative AI, positing that human influence remains a subtle yet powerful force even in seemingly autonomous AI-generated content. This examination is crucial to understanding the philosophical concept of 'Absent Presence', especially in the arts and humanities. By drawing on examples from literature and art, such as Shakespeare's *The Winter's Tale* and Van Gogh's empty chair paintings, the paper argues for the indispensable value of human input in training AI models, highlighting the irreplaceable human touch in an era of digital replication and AI-driven creativity.

Building on the importance of human creativity, a case study by Lively demonstrates the practical application of this concept within the field of education. In a web design class, students utilize AI tools to create text, images, and code, adapting to dynamic changes in client requirements and emulating real-world scenarios. This approach not only showcases the adaptability and problem-solving required in today's digital workspace but also underscores the importance of maintaining human oversight over AI processes, reinforcing the human element in technology-driven domains.

Following this, Hutson offers an enlightening perspective on integrating neurodivergent individuals in the development and application of AI technologies within educational settings. The paper highlights the unique abilities that neurodivergent individuals bring to AI development, such as enhanced pattern recognition and innovative problem-solving, often overlooked in traditional training paradigms. This inclusion promotes a more ethical, inclusive, and effective use of AI in education, enriching its role and broadening inclusivity to reflect the true diversity of human intelligence.

Ghaith's paper addresses the significant role of AI in the preservation of cultural heritage, exploring how technologies like machine learning algorithms, digital twinning, and predictive maintenance can enhance the accuracy and efficiency of conservation efforts. However, it also acknowledges the ethical dilemmas these technologies pose, such as the risks of inauthentic restoration and the potential perpetuation of existing biases, advocating for a balanced approach that emphasizes the need to maintain the irreplaceable human element in these processes.

Ceballos and his team assess the effectiveness of MedMicroMaps, a digital tool designed to aid in the differential diagnosis of infectious diseases. This study, tested among second-year medical students, explores how multimedia resources like animations, illustrations, and case-based tutorials influence learning outcomes across various instructional settings. The research highlights the role of innovative educational technologies in enhancing medical education, particularly in adapting to changes brought about by the COVID-19 pandemic, and underscores

the need for thoughtful alignment of these tools with teaching strategies to maximize their educational potential.

Lastly, Begemann's analysis delves into the integration of AI in video game development, tracing its evolution from philosophical musings to contemporary applications in game design through advanced algorithms like ChatGPT, Midjourney, and Stable Diffusion. The paper uses Marxism, Psychoanalysis, and Cultural Studies to explore the implications of AI in the game development pipeline, discussing how AI can democratize the creative process and potentially alter the labor structure within the industry. This discussion not only enhances understanding of AI's role in content creation but also stimulates ongoing dialogue on the need for ethical frameworks in the rapidly evolving digital landscape.

As we conclude this forward to the special issue, it is essential to reflect on the transformative journey that lies ahead in the realm of Human-AI Symbiosis within higher education. This issue brings together a diverse spectrum of perspective that explores the dynamics between GAI and human interaction within educational contexts. The topics covered in this issue range from the ethical implications and irreplaceable value of human skills to the philosophical considerations of AI as a partner and potential disruptor in educational paradigms. Each contribution meticulously examines different aspects of AI integration—from cultivating human and power skills to navigating the challenges posed by biases and the philosophy of 'Fearing the Other.' Such examinations are crucial as they provide scholarly insights that foster a deeper understanding of how AI can be harnessed to enhance educational outcomes while critically maintaining the human touch that is so vital to the learning process. The relevance of this special issue extends beyond academic discourse; it serves as a beacon for policymakers, educators, and technologists to collaboratively forge pathways that leverage AI's capabilities responsibly. The insights provided herein aim to inspire further research, encourage the development of innovative educational tools, and promote a balanced discourse on the ethical use of AI in education.

In synthesizing these diverse perspectives, this issue not only contributes to the academic landscape but also seeks to influence practical implementations of AI in educational settings globally. As we move forward, let us carry the knowledge and questions posed in this issue into our ongoing dialogues and developments, ensuring that AI serves as a catalyst for educational enhancement rather than a substitute for the genuine human connections that underpin effective learning environments. Thus, with a commitment to ongoing inquiry and ethical consideration, the contributions of this special issue invite readers to engage deeply, reflect critically, and envision the future of education in an AI-augmented world. Together, we embark on this continuing journey of exploration, poised to transform educational landscapes while upholding the values that define our humanity.