The Second International Scientific Conference on Economics, Management and Information Technologies – ICEMIT 2025
CONFERENCE PROCEEDINGS

Improving media education through the application of artificial intelligence

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Article info

Review paper

DOI:
https://doi.org/10.71159/icemit2529S

Abstract

Under the influence of rapid technological advancements, traditional education is undergoing significant transformation and adaptation to meet labor market demands. Personalization, interactivity, and applicability are key factors driving these changes. In this context, media literacy requires an interdisciplinary approach to ensure an understanding of the evolving roles of traditional and digital media on one hand, and the application of artificial intelligence with all its technical, legal, and ethical challenges on the other. Artificial intelligence should contribute to reducing inequalities in access to knowledge and education, while the role of education is expected to create a platform for key AI competencies by fostering shared interests and understanding, maximizing accessibility for teachers and students while minimizing potential risks. The paper emphasizes support for teachers and media creators in their joint efforts to establish higher-quality media education while strengthening future research directions toward the positive effects of the multilayered connection between artificial intelligence, education, and the media industry.
Keywords**:** *education, media literacy, artificial intelligence, law, ethics*

1. Introduction

Artificial intelligence has the potential to address some of the greatest challenges in education, innovate teaching and learning practices, and accelerate progress. Supporting its member states, UNESCO (2024) is committed to achieving the goals of the Education 2030 Agenda while ensuring that its implementation in the educational context is guided by the core principles of inclusion and equity. Additionally, the mandate of the United Nations Educational, Scientific and Cultural Organization is reflected in its efforts to secure a meaningful role for artificial intelligence, which is expected to help address existing inequalities in access to knowledge, research, and cultural diversity while preventing AI from exacerbating technological divides within and between countries. Adopting UNESCO's Global Framework for Digital Literacy and mapping AI skills, Kennedy (2023) proposes a new structure to help avoid the same mistakes identified with digital technologies in terms of lifelong learning and training, emphasizing that people of all ages will need to develop rapidly evolving skills.

The European Parliament and the Council have adopted the first comprehensive legal act on artificial intelligence - the Artificial Intelligence Act (Regulation of the European Parliament and of the Council, 2024). This Act ensures that Europeans can trust what artificial intelligence offers. While existing legislation provides some protection, it is insufficient to address the specific challenges posed by AI systems, recognizing that certain AI models may carry systemic risks. In this regard, the Act's value lies in establishing rules for providers of such models, requiring them to assess and mitigate risks.

The Government of the Republic of Serbia (2025) has adopted the Artificial Intelligence Development Strategy for the period 2025–2030 (Official Gazette of the Republic of Serbia, no. 5/25). The Strategy aims to "enhance primary, secondary, and higher education in the field of artificial intelligence and create conditions for educating the entire population about the opportunities, limitations, and risks of this technology, positioning Serbia as a leader in AI talent." The Law on the Fundamentals of the Education System (Official Gazette of the Republic of Serbia, no. 88/17, 27/18 - other laws, 10/19, 6/20, 129/21, and 92/23) provides the foundation for educating professionals in the field of artificial

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intelligence and its further application. Additionally, it enables the education system to adapt to the changes brought by AI development in the environment where students live.

Figure 1. AI literacy framework

Source: Kennedi, 2023

The Law on Higher Education (Official Gazette of the Republic of Serbia, no. 88/17, 27/18 - dr. law, 67/19, 6/20 - other laws, 11/21 – authentic interpretation, 67/21, and 76/23) sets one of its goals as ensuring a new generation of scientific and professional experts while fostering a creative population that continuously acquires and generates new knowledge. This also opens opportunities for training and advancement in the field of artificial intelligence.

The global AI market is valued at over $184 billion, with projections estimating it will reach $826 billion by the end of 2030. According to a report by the European Commission, artificial intelligence will significantly contribute to the automation of 14% of jobs, while another 32% of occupations will undergo major transformations (National AI Platform, 2025).

2. AI in media education: future trends

Artificial intelligence is rapidly transforming from a futuristic concept into an integral part of everyday life, and education is no exception. AI technologies are revolutionizing the academic landscape by offering unprecedented opportunities for personalized learning, administrative efficiency, and improved educational outcomes. Benefits of AI in the Education Sector: (Univesity of San Diego, n.d.):

- Enhanced Personalized Learning: AI adapts educational content to each student's unique learning style and pace.
- Automated Administrative Tasks: AI automates grading, scheduling, and report generation, significantly reducing the workload for teaching staff.
- More Engaged Students: AI makes learning interactive and engaging through adaptive learning platforms.
- Improved Accessibility: AI-powered assistive technologies support students with disabilities, ensuring a more inclusive learning environment.

- Actionable Insights: AI analyzes vast amounts of educational data to provide teachers with practical insights.
- More Efficient Classroom Management**:** AI tools help teachers manage classroom behavior and student engagement.
- Better Security and Assessment Integrity: AI enhances the security and integrity of assessments through advanced monitoring and plagiarism detection.
- Continuous Lifelong Learning and Professional Development: AI supports ongoing learning and professional growth for educators by recommending personalized resources and courses.
- Greater Scalability: AI enables the expansion of educational programs to accommodate more students without compromising quality.

The Internet and artificial intelligence have sparked hope for a world where education is accessible to all. However, digital divides are becoming even more pronounced. Baltazarević (2024) highlights that the expansion of AI in education could further deepen inequalities, as schools in wealthier areas have access to advanced AI systems for personalized learning, while those in less privileged regions lag behind due to a lack of digital resources.

Artificial intelligence is playing an increasingly significant role in education, making it essential for teachers to develop new competencies to stay informed about AI's potential and be trained in the effective use of AI tools and technologies. Mandić (2024) specifies that this includes understanding how AI algorithms work, knowing AI-powered platforms and applications, using AI-based educational resources, and being trained to analyze and interpret AI-generated data. This allows teachers to track, measure, and evaluate student progress while identifying learning challenges.

In their study "Using Artificial Intelligence-Based Collaborative Teaching in Media Learning," Wang and Liu (2021) state that AI technologies should, in the future, ensure fair and inclusive educational opportunities, promote personalized learning, and enhance learning efficiency. They emphasize that educational institutions must not only adapt their teaching and learning methods but also train students to adjust to AI-driven learning environments.

Chen et al. (2025) emphasizes that the application of AI technologies in education enables rapid detection, AI-driven teaching algorithms, and data-based decision-making. It allows for automated analysis and precise interventions for students, teachers, and educational content. Additionally, AI provides timely and personalized guidance and feedback, supporting and meeting the needs of education and learning.

Generative AI technologies based on large language models are becoming a transformative force reshaping the future of education. While the impact of GenAI on education is a critical issue, Wen et al. (2025) notes that there is insufficient research on the challenges and response strategies of GenAI regarding the sustainability of education from a public perspective.

Their study highlights the public's ambivalence about whether GenAI empowers or disrupts education. The public recognizes the role of GenAI in education, including intelligent tutoring, role-playing, personalized services, content creation, and language learning. However, concerns also arise regarding the impact of user dependence on technology on the development of innovative abilities, the erosion of traditional knowledge production, the undermining of educational equity through potential cheating, and the replacement of students in skill-based assessments.

The development of modern generative AI models based on large language models has been driven by advancements in computing technology, data availability, and improved algorithms. However, the anticipated attention to AI's impact on the workforce and potential risks remains lacking, considering expected changes in workforce quality and the growing need for reskilling. (Vujović, 2024) Hussein et al. (2025) explored the versatility, reliability, and challenges of GhatGPT-a transformative AI tool with widespread global adoption, categorizing their research into six key themes: sustainability, health, education, work, social media, and energy. Their findings highlight its potential to enhance productivity, streamline work processes, and improve access to knowledge, while also revealing critical limitations such as high energy consumption, informational inaccuracies, and ethical concerns.

The implementation of AI education programs in the formal training of media industry professionals is necessary but not sufficient. Therefore, establishing a range of government and other incentives for non-formal education becomes imperative, serving as a true platform for lifelong learning and skill development.

Nonetheless, research by Wang et al. (2024) provides encouraging insights into the rapid adoption of AI in education by both students and teachers. In U.S. educational institutions, 43% of students use AI tools like ChatGPT, while every second instructor integrates AI into lesson development. AI-powered adaptive learning has been shown to improve student test scores by 30% and reduce anxiety by 20%. In this context, it can be observed that university curricula are open to the design of new courses thematically related to the use of artificial intelligence. However, bureaucratization and administrative barriers may hinder the process of introducing revised and improved course units from achieving the desired efficiency. Given that applied scientific disciplines aim to provide students with practically applicable knowledge

and skills, it is essential to strengthen such topics with a wide range of legal and ethical subjects, as well as with teaching approaches designed to sustain attention at the highest level, thereby ensuring learning that is oriented toward research activities.

3. The role of artificial intelligence in the development of media literacy

Media literacy should not be treated merely as a predefined set of skills and knowledge but as a process of critically understanding the media. This involves not only technical competence but also the ability to recognize the complex power dynamics, ideologies, and manipulations within the contemporary media landscape (Vuksanović, 2024). Although media creators can adopt and utilize what generative artificial intelligence delivers, Tomić and Bajić (2024) observe that while AI can produce certain results, it cannot fully replace humans. This is because AI-generated content is derived from existing data and information, whereas novelty, the essence of journalism, emerges through broader and more diverse communication.

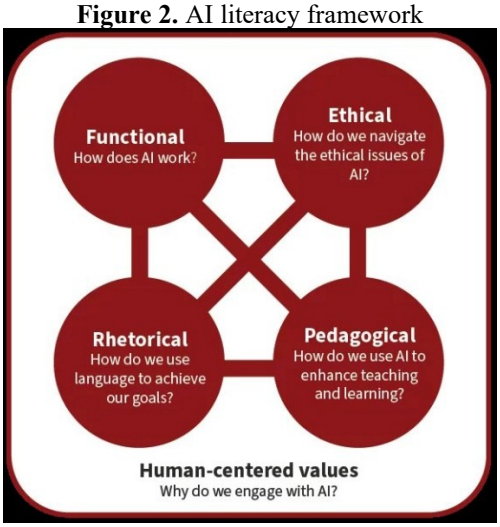
Abdujabbarovna Samigova (2023) highlights that media education exists at the convergence of modern technology and creativity, particularly emphasizing the synergy between AI and graphic design programs in teaching. These technologies facilitate the education of new generations, equipping them with essential skills to work effectively in media and the creative sector while increasing accessibility and engagement in education worldwide.

The growing importance of media literacy in the digital world necessitates a multifaceted approach that combines traditional educational frameworks with modern AI technologies, better preparing individuals with the skills needed for critical evaluation of the information they encounter. In this context, Sarkar and Ghosh (2024) emphasize that AI, with its ability to provide personalized learning experiences and rapidly detect misinformation, serves as a powerful tool in enhancing media literacy and protecting individuals from the harmful effects of disinformation.

At Stanford University (2024), they have created a generative framework for AI literacy that identifies four intersecting domains of understanding:

- Functional literacy: How does AI work?
- Ethical literacy: How do we navigate the ethical issues of artificial intelligence?
- Rhetorical literacy: How do we use AI-generated natural language to achieve our goals?
- Pedagogical literacy: How do we use artificial intelligence to enhance teaching and learning?

Figure 2. AI literacy framework



Source: Stanford University, 2024

The most important reason for applying AI in the media is undoubtedly its financial viability. Automation of various technical phases in media content production addresses issues such as translation, converting audio content into text and vice versa, and video content creation, significantly reducing operational costs. AI in media can generate a large number of standardized articles on various topics within a short time frame, as well as respond to the need for breaking news, which is especially useful during holiday seasons (Petrović, 2024). Answers to questions that have existed for as long as the use of artificial intelligence itself, concerning potential job losses, the erosion of privacy, and possible misuse of media content, should form an integral part of all courses. This must be accompanied by the continuous development of new skills and the enhancement of tools to address the numerous and complex challenges posed by virtual reality. Maintaining professional authority in the media sphere, within a hyperproductive and interactive environment, inevitably shifts the boundaries of traditional media from purely informational and entertainment functions toward educational themes. In the future, this shift may contribute to reducing the existing gap in the labor market between what employers require and what educational institutions provide.

A study conducted by the Journalists' Union of Serbia between January 20 and March 25, 2024, among media professionals revealed that only 29% of respondents actively follow developments in artificial intelligence, while 60% reported being partially informed, and the rest stated they were not informed at all. Additionally, 20% of respondents believe AI will bring prosperity, while 52% fear it could replace them in their current jobs (SINOS, 2024).

Saklaki and Gardikiotis (2024) examined the relationship between students' attitudes toward artificial intelligence (N=310), their views on AI ethics, and their level of media and digital literacy. The study focused on media and digital literacy as key predictors of overall attitudes toward AI. Understanding this relationship is crucial, as the perceived ability of respondents to critically engage with media (media literacy) and navigate digital environments (digital literacy) may influence their overall assessment of AI. The findings revealed that students have moderately positive attitudes toward AI and strongly support its responsible use. Media literacy was positively correlated with responsible AI usage and negatively correlated with negative attitudes toward AI.

The research conducted in the Republic of Serbia in May and June 2025 revealed that as many as 47.8% of respondents believe that the use of artificial intelligence will reduce the quality of media content, while 46% stated that artificial intelligence will partially replace journalists. This indicates a pronounced concern regarding the negative consequences of AI implementation in the media sphere. The frequently emphasized comparative advantages that AI offers to journalism, such as increased productivity and alleviation of monotony in repetitive tasks, are not sufficiently substantiated. A possible solution may lie in recognizing the synergistic benefits of AI and journalism. (Sančanin et al., 2025).

4. Conclusion

A dynamic, ever-changing, and interactive virtual environment, dominated by the hyperproduction and (re)distribution of information, requires responsible media and media-literate consumers. The digital space has enabled the distribution of user-generated content, which, unlike media professionals—journalists—operates with maximum freedom and minimal or, more often, no risk when disseminating unverified, incomplete, or false news. In this context, artificial intelligence plays a crucial role in the automatic detection and prevention of further dissemination of problematic media content, as well as in enhancing personalized education. Artificial intelligence is not a tool for creating new content but rather processes and adapts available media information, supporting the argument that journalism as a profession cannot be threatened by simple substitution. The legislative regulation of artificial intelligence, particularly concerning responsibility for generated content and copyright issues, along with the establishment of global ethical guidelines and continuous inclusive media education, represents the key pathways for its future application. The potential of artificial intelligence in media education is truly revolutionary: educators are given the opportunity to personalize entire educational models, thereby adding a new dimension of efficiency to the learning process and improving learning outcomes. The authors emphasize the necessity of strengthening the regulatory framework, building robust AI practices, and establishing strong interdisciplinary connections to achieve the desired reliability while minimizing potential risks to a negligible level.

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