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The Role of Artificial Intelligence in Developing Digital Skills

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Abstract: The rapid evolution of Artificial Intelligence (AI) is transforming the landscape of digital education and reshaping the competencies required in the modern technological ecosystem. This paper explores the role of AI in developing digital skills, emphasizing how intelligent tools, adaptive learning platforms, and automated assessment systems facilitate personalized learning pathways and enhance students' ability to acquire and refine technical competencies. By integrating AI-driven solutions into the learning process, educators can better address individual learning needs, support problem-solving and critical thinking, and create dynamic and interactive educational environments. The study also highlights the challenges associated with adopting AI in education, including ethical considerations, digital literacy gaps, and the need for continuous teacher training. Overall, the paper argues that AI serves as a catalyst for developing essential digital skills, preparing students for the demands of future professions and contributing to a more efficient and inclusive educational system.

Keywords: Artificial Intelligence, Digital Skills, Adaptive Learning, Educational Technologies, Machine Learning

1. Introduction

In the context of rapidly evolving digital technologies, the acquisition of robust digital skills has become a cornerstone of contemporary education. With the emergence and proliferation of artificial intelligence (AI), educational systems are facing a paradigm shift: the focus is no longer only on delivering content, but on equipping learners with the competencies to navigate, adapt to, and leverage intelligent systems. According to the Organisation for Economic Co-operation and Development (OECD), as AI capabilities begin to outpace some human-performance domains-such as reading, mathematics and reasoning-education must reconsider which skills to prioritise, which to phase out, and how teaching practices must evolve [14].

AI in education is not simply the addition of new technology: it enables fundamentally different processes, such as detecting patterns in learner behaviour, automating decisions about instructional pathways, and delivering adaptive learning experiences tailored to individuals rather than homogeneous groups [13][22]. In this way, AI contributes to the development of digital skills by offering learners personalised support, real-time feedback, and opportunities for practice that align with their current proficiency levels. For example, research has shown that AI systems can assess students' skills and learning needs, then provide customised tasks and resources that promote deeper engagement and knowledge retention [20].

Despite this promise, effective integration of AI into learning environments also raises important questions and challenges. Recent literature emphasises that AI-enabled digital ecosystems require more than tools-they demand organisational readiness, educator training, supportive infrastructure, and systematic attention to issues of equity, ethics, and learner autonomy [7][19]. Moreover, barriers to

developing digital skills persist: teachers may have limited digital competence themselves, institutional policies may lag behind technological change, and students may face socio-economic or motivational constraints [11]. Given this landscape, the present study examines the role of AI in developing digital skills within computing education. The objective is to explore how AI-driven learning tools and strategies can foster digital competence, critical thinking, and adaptive learning in students of informatics, while also considering the institutional and pedagogical conditions necessary for success.

The evolution of artificial intelligence has demonstrated its capacity to process complex visual, textual, and behavioural data in ways that significantly enhance educational systems. As highlighted by Pintea et al. in [16], AI-based algorithms are capable of performing sophisticated tasks such as the automatic pre-classification of psychological test images, proving that intelligent systems can analyse patterns and make decisions with increasing accuracy. This capacity to interpret and evaluate diverse forms of data illustrates the growing potential of AI to support instructional processes, automate assessments, and contribute to the development of essential digital skills. Their findings reinforce the idea that AI technologies can be integrated into educational contexts to facilitate deeper understanding, adaptive learning, and the development of analytical abilities needed in informatics-oriented learning environments.

The rapid progression of computational intelligence methods in domains such as multimedia data analytics and business management underscores the transformative power of artificial intelligence across diverse contexts. In [4] the authors note that intelligence-driven systems are increasingly capable of interpreting vast and complex datasets, automating insight generation and enabling adaptive decision-making. This evolution highlights how AI-based technologies can serve as foundational tools in educational settings, facilitating the development of learners' digital competencies by offering data-rich, interactive, and intelligent learning environments.

2. The Context of Technological Transformations in Higher Education in Romania

Romanian higher education institutions are undergoing significant transformations driven by the need to integrate new technologies such as Artificial Intelligence (AI) in order to increase competitiveness, develop transversal competencies, and align with European policies. The digitalization of education is considered essential for adapting to labor market demands and reducing systemic inequalities [3]. Data from the dataset developed by Petrașcu in [15] provides a relevant perspective on how students perceive the use of artificial intelligence in the educational process.

The *Strategy for the Digitalization of Education in Romania 2021–2027 (SMART-Edu)* explicitly states that adapting the educational and training system to technological evolution is *a complex but necessary process for preparing and improving human resources*, and that *the use of new digital technologies is the direct path toward making school more attractive and more efficient in developing competencies*. The strategy places strong emphasis on developing digital skills, enhancing digital infrastructure and technological resources, as well as promoting intelligent and personalised teaching through emerging technologies in Digital Transformation Strategy for Education in Romania.

In the university context, digitalization in Romanian higher education is beginning to take practical form. Studies on digital transformation highlight benefits for students and academic staff-such as improved communication, secure data storage, enhanced collaboration, and increased access to digital learning materials-while also identifying challenges related to mindset, infrastructure, and the level of teachers' digital competencies. Moreover, research on *The Social Impact of Using Artificial Intelligence in Education* (2022) conducted in Romania shows that the integration of AI systems within universities influences graduates' employability prospects and has broader societal effects, further underscoring the relevance of technological transformation at institutional level.

Another important component is the national strategic framework for artificial intelligence. Romania's *National AI Strategy* (2024) recognises the essential role of AI in education-from leveraging AI-based systems for personalised teaching and learning, to monitoring student progress, and optimising the allocation of digital infrastructure.

At the same time, recent studies reveal a notable gap between the perceived importance of AI and the actual preparedness of learners. For example, research (2025) by the Vodafone Romania Foundation indicates that approximately 70% of Romanian students believe AI will play a vital role in their future professional lives, yet only about 54% feel adequately prepared by the education system to use this technology. Moreover, only 40% of them considered their teachers to be competent in using AI, most

of them say they learned about this technology from their colleagues (72%). This finding suggests that technological integration - particularly at university level - must be accompanied by systematic efforts to develop adequate skills, infrastructure, and institutional support.

Furthermore, recent educational analyses note that universities *are currently required to keep pace* with the rapid evolution of AI and that a *change in mindset and a change in educational approach* are essential for the successful adaptation of higher education [6].

Overall, the technological transformation of Romanian higher education is characterized by clear strategic ambition, concrete digitalization initiatives, and growing integration of AI tools. However, it also faces significant challenges, including insufficient digital competencies, unequal access to technological resources, and the need for cultural and institutional adaptation. These elements provide a relevant framework for examining how AI can contribute to developing digital skills among computer science students and for designing instructional strategies aligned with contemporary technological requirements.

Table 1: Main Romanian Initiatives and Strategies on Digitalization and Artificial Intelligence in Higher Education

Initiative / Strategy	Year	Institution / Source	Key Objectives Related to Higher Education and AI
SMART-Edu – Strategy for the Digitalization of Education in Romania 2021–2027	2021	Ministry of Education	Digital transformation of the education system; development of digital skills; implementation of intelligent and personalized teaching; integration of emerging technologies including AI.
National Strategy on Artificial Intelligence	2024	Ministry of Research, Innovation and Digitalization	Encourages AI adoption in universities; promotes AI-based personalized learning, automated assessment, monitoring of student progress, and improvement of digital infrastructure.
Digitalization in Higher Education – ARIADNA Experiment	2022	Digital Education Initiative	Demonstrates practical digital transformation in universities; focuses on digital resources, secure data storage, improved collaboration, and enhanced access to online learning materials.
The Social Impact of Artificial Intelligence in Education (Romanian study)	2022	*Amfiteatru Economic* Journal	Analyzes the impact of AI on student performance, university processes, and employability; highlights the need for strategic integration of AI tools in higher education.
Vodafone Romania Foundation Study on Students and AI	2023	Vodafone Romania Foundation	Shows that 70% of Romanian students expect AI to influence their careers; identifies gaps in digital preparedness and emphasizes the need for universities to enhance AI-related competencies.
University-Level AI & Digitalization Initiatives (various institutions)	2021–present	Romanian universities (e.g., Poli. Buc, UBB, UAIC)	Introduction of AI-related academic programs; development of digital campuses; smart classrooms; AI research centers; integration of AI tools in teaching and assessment.
Digital Skills Development Programs funded through EU Structural Funds	Ongoing	Romanian Government & European Commission	Support for digital learning platforms, teacher training in digital competencies, AI literacy for students, and digital campus modernization projects.

3. Students' Perceptions of AI in Learning in Western Romania

Students from western Romania display an open attitude toward the integration of AI in the educational process, perceiving it as a technology that can generate benefits for both learning experiences and academic or professional development [9][10]. They identify advantages such as personalized learning pathways, easy access to resources, and the optimization of the learning process [1][9][10].

Research indicates a generally positive perception of AI's potential, while also highlighting concerns regarding possible challenges - ethical issues, academic integrity, data security, and the impact of AI on the role of teachers [9][10].

Factors that positively influence students' and future teachers' intention to adopt AI include confidence in their ability to use AI and the perceived usefulness and multiple advantages associated with AI. Other elements, such as the level of technical knowledge or previous experience with AI, appear to be less relevant than confidence and perceived utility [2][21].

Familiarity with AI and other emerging technologies is increasing among students, and their attitudes are shaped by interest and contextual factors, including the university environment and their field of study [5].

Rad et al. in [18] conducted a comprehensive study in which they predicted preschool instructors' technology adoption behavior using a Radial Basis Function Neural Network (RBFNN). Their approach integrated the Technology Acceptance Model (TAM), a well-established theoretical framework for understanding user acceptance of new technologies. In this study, TAM was operationalized through eight dimensions: perceived enjoyment, perceived usefulness, perceived ease of use, intention to use actual usage, compatibility, attitude toward technology, and self-efficacy. Within this framework, seven of these variables - excluding actual usage - served as strong predictors of technology adoption behavior.

The researchers implemented the RBFNN technique to model how these psychological and behavioral constructs influence the likelihood that preschool teachers would adopt digital tools in their instructional practices. By training the neural network on these TAM-related variables, the system was able to identify complex, non-linear relationships between user perceptions and technological acceptance outcomes. The findings demonstrated that the RBFNN achieved high predictive accuracy, confirming its effectiveness in modeling technology acceptance behavior. This study highlights two important contributions. First, it reinforces the relevance of TAM constructs - particularly perceived usefulness, self-efficacy, and perceived ease of use - in shaping educators' willingness to integrate digital technologies into teaching. Second, it illustrates the value of machine learning techniques such as RBFNN for educational research, especially in contexts where traditional statistical models may not capture intricate behavioral dynamics. As the authors note, neural-network-based approaches can provide more robust predictions and may serve as decision-support tools for policymakers and educational institutions seeking to encourage technology adoption among teaching staff.

In this paper, a quantitative research was used to investigate students' views regarding the integration of Artificial Intelligence (AI) into the learning process, based on the application of an online questionnaire. The tool was implemented through the Google Forms platform, facilitating rapid distribution to students and automatic collection of responses.

3.1. Participants and context

The study was addressed to students enrolled in bachelor's (88%) and master's programs (12%) in western Romania, from 5 universities in Timisoara, Arad and Resita, mainly in the field of computer science, related sciences - information technology, educational sciences with a digital component, industrial computers, medicine, psychotherapy and clinical psychology etc.). Participation was voluntary and anonymous, with students being informed about the purpose of the research and the exclusively academic use of the data. The study was attended by 69% females and 31% males. No personal data were collected that would allow direct identification of the respondents.

3.2. Research instrument

The questionnaire was built based on established models in the specialized literature related to how educational technologies are accepted by users (Technology Acceptance Model and derived models). The items targeted several dimensions of students' perceptions of AI in learning, including *perceived usefulness* - the extent to which students believe AI improves their learning process; *perceived ease of use* - how easily students feel they can understand and use AI tools; *attitude toward AI* - the overall evaluation of AI in education; *intention to use* - the willingness to continue using AI-based tools; *perceived benefits* - such as personalized learning; *concerns and risks* - related to ethics, academic integrity, data privacy, security, and the impact on the role of teachers; and *self-efficacy in using AI* - students' confidence in their ability to effectively use AI tools for educational purposes. Most of the items were formulated as statements to which respondents responded using a 5-point Likert scale, from 1-*Totally disagree* to 5-*Totally agree*. The questionnaire also included some factual questions (year of study, field of study, previous experience with AI) and open-ended items, which allowed for nuanced opinions and concrete examples of the use of AI in learning.

3.3. Data Collection Procedure

The link to the Google Forms questionnaire was distributed through institutional channels (e-learning platforms, discussion lists, student groups) over a limited period of time. Before completing the questionnaire, respondents were presented with an informed consent section outlining the purpose of the research, the voluntary nature of participation, and the fact that they could stop completing the questionnaire at any time without consequences. The responses were automatically collected by the platform and subsequently exported in a format compatible with statistical analysis software (e.g., Excel, SPSS) for further processing.

3.4. Data Analysis

The data analysis included descriptive statistics (means, standard deviations, frequencies, and percentages) for each item and for the main dimensions of students' perceptions, internal consistency checks of the scales (such as Cronbach's alpha) to assess the reliability of the instrument, and group comparisons, where applicable - for example, based on field of study or year of study - to identify potential significant differences in students' perceptions of AI.

The results obtained allow for the identification of a comprehensive profile of students' perceptions from western Romania regarding the use of Artificial Intelligence in the learning process, highlighting both the perceived benefits and the concerns and challenges associated with adopting AI in the university environment.

The analysis also revealed that, although students expressed concerns regarding the impact of AI on the educator's role, they consistently emphasized that the role of the teacher will not be replaced by AI but rather transformed. According to the responses, students perceive that teachers will increasingly act as mentors and facilitators of learning, guiding students in navigating AI-supported educational environments. This perspective aligns with the broader findings regarding attitudes toward AI and highlights the importance of maintaining human involvement within AI-enhanced learning processes.

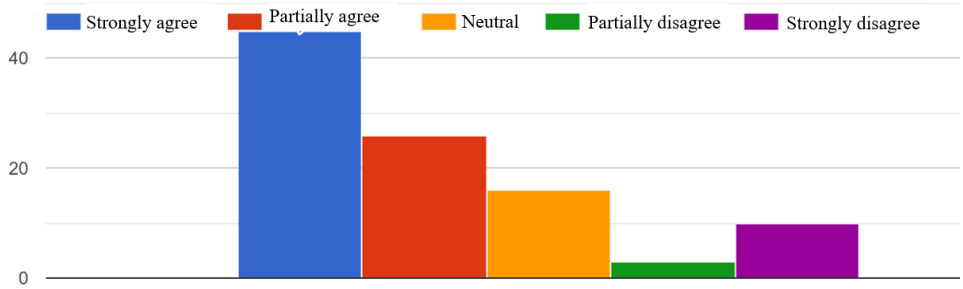

Figure 1. AI technology can be used as a virtual assistant to help them efficiently prepare lessons, answer questions, and evaluate assignments

4. Results and Discussion. Challenges and Areas for Improvement

Among the limitations identified by students and academic staff are the risks related to academic integrity, implementation difficulties, and the lack of a coherent institutional strategy [9][14]. There are also ongoing debates regarding the impact of AI on the development of socio-emotional skills and the potential psychosocial risks [8]. The need to develop digital competencies and to adopt an ethical approach to the use of AI is emphasized, along with the importance of establishing an educational policy framework that addresses students' real concerns [1][8].

The analysis of the data collected through the questionnaire provided a comprehensive overview of students' perceptions with respect to the integration of Artificial Intelligence (AI) into the learning process. The results indicate a predominantly positive attitude toward AI, with moderate variations depending on participants' technological experience and field of study.

4.1. Perceived Usefulness

Most students reported that they perceive AI as a valuable tool supporting the educational process. The relatively high mean score (≈4.2 on a 1-5 scale) suggests that students consider AI useful for improving the quality of learning, offering rapid access to information, clarifying difficult concepts, and increasing the efficiency of study time. These findings are consistent with previous research showing the role of AI in personalizing learning and enhancing academic performance.

Table 2: Descriptive Statistics for Students' Perceptions of AI in Learning

Dimension	Mean	Standard deviation	Interpretation
Perceived Usefulness	4.20	0.61	High perceived usefulness
Perceived Ease of Use	4.00	0.67	A relatively high perceived ease of use
Perceived Attitude AI	4.25	0.58	Strong positive attitude
Intention to Use AI	4.30	0.63	High intention to continue using AI
Perceived Benefits	4.35	0.55	Students strongly recognize AI advantages
Perceived Risks	3.10	0.92	Moderate concerns about ethical issues
Self-Efficacy in Using AI	3.95	0.74	Moderate to high confidence in using AI

4.2. Perceived Ease of Use

Students generally evaluated AI tools as easy to use, with an average score of approximately 4.0. This perception is influenced by growing familiarity with digital platforms, intuitive user interfaces, and technological support available within universities. However, around 15-20% of respondents expressed concerns about the need for additional technical skills to use AI efficiently, reflecting a moderate barrier to adoption.

Table 3: Students' Reported Benefits of Using AI in Learning

Perceived Benefit	% of Students Selecting
Personalized learning pathway	78%
Faster access to explanations/resources	84%
Better understanding of difficult concepts	69%
Improved study efficiency/time management	73%
Immediate feedback	65%
Support in exam preparation	72%

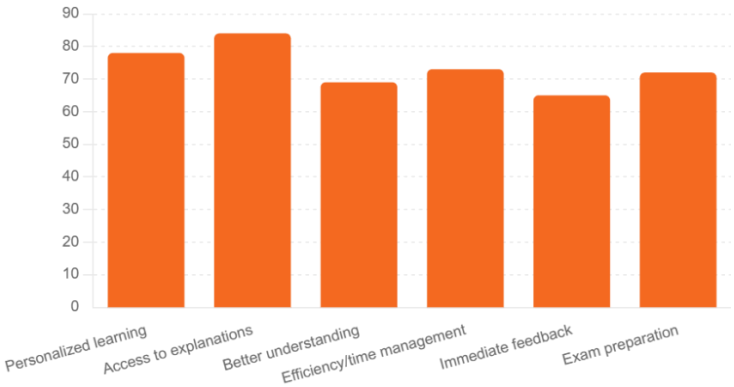

Figure 2. Perceived Benefits of Using AI in Learning

4.3. Attitude Toward AI in Education

Students' overall attitude toward AI is positive, with mean values between 4.1 and 4.3. Respondents associate AI with the modernization of education, quick access to additional explanations, and the ability to personalize learning activities. This aligns with results from European and national studies that highlight the transformative potential of AI in education.

Table 4. Influence of Technical Background on AI Perception

Dimension	IT Students	Non-IT Students	Interpretation
Perceived Usefulness	4.30	4.08	Slightly higher in IT
Ease of Use	4.15	3.74	Higher in IT students
Attitude Toward AI	4.22	4.05	Both positive
Intention to Use	4.40	4.20	High in both groups
Self-Efficacy	4.20	3.62	Much higher in IT group

4.4. Behavioral Intention to Use AI

Students indicated a high intention to continue using AI in the future (M ≈ 4.3). Most respondents stated that they plan to use AI for reviewing course material, generating examples, solving complex problems, and preparing for examinations. Intention to use is strongly supported by perceived usefulness and confidence in one's ability to effectively use AI tools - key variables in the Technology Acceptance Model (TAM).

Table 5. Correlations Between TAM Dimensions

Dimensions	Perceived Usefulness	Perceived Ease of Use	Self-Efficacy	Intention to Use
Stud. Perceived Usefulness	—	0.62	0.48	0.71
Perceived Ease of Use AI	0.62	—	0.55	0.64
Learners' Self-Efficacy	0.48	0.55	—	0.69
Perceived Risks	–0.22	–0.19	–0.24	–0.31

Intention to use is most strongly associated with perceived usefulness (r=0.71) and self-efficacy (r=0.69). Perceived risks are weakly–moderately negatively associated.

4.5. Perceived Benefits

Students identified several advantages associated with the use of AI in learning, including personalized content, immediate feedback, support in understanding abstract concepts, improved autonomy, and more efficient time management. These findings suggest that AI is perceived primarily as a complementary pedagogical tool, rather than a replacement for the human instructor.

Table 6. Students' Perceived Benefits of AI in Learning

Benefit	% Agree / Strongly Agree	Interpretation
Personalized learning pace	82%	Students value tailored explanations
Access to additional resources	88%	Easy retrieval of learning material
Immediate feedback	79%	AI helps clarify misunderstandings quickly
Better understanding of complex topics	75%	AI supports conceptual clarity
Increased autonomy in learning	72%	Students feel more independent

4.6. Self-Efficacy in Using AI

Students reported moderate to high levels of confidence in their ability to use AI effectively (M ≈ 3.8 - 4.1). Self-efficacy emerged as a strong predictor of positive attitudes and behavioral intention, confirming established patterns in models of technology adoption, including neural-network–based predictive studies.

One of the main challenges identified is the uneven distribution of digital competencies among students. While many students - particularly those from IT-related programs - report high levels of confidence in using AI tools, others feel insufficiently prepared to navigate more advanced functionalities. This gap may limit equitable access to AI-supported learning experiences and suggests the need for targeted training initiatives and digital skills development modules.

A substantial proportion of students expressed concerns regarding potential academic integrity issues, including dependence on AI, unauthorized assistance, and the risk of diminishing personal engagement in learning tasks. This indicates a clear need for institutional policies and awareness programs that promote responsible AI usage, ethical guidelines, and academic honesty in the context of emerging technologies.

Students reported apprehension about the accuracy, completeness, and reliability of AI-generated responses. Instances of incorrect or misleading information highlight the necessity for learners to develop critical thinking skills and for educators to provide guidance on verifying and contextualizing AI outputs. Institutions should also invest in AI literacy programs to help students recognize limitations and evaluate the trustworthiness of AI tools.

5. Conclusions and future research directions

The integration of AI is perceived as an effective means of personalizing education, increasing administrative efficiency, and preparing students for the digitalized labor market [1][3][9]. The need for continuous teacher training and the development of subject-specific strategies for the effective integration of AI is noted [8][12].

The development of a coherent strategic vision and dedicated training programs for students and teachers is considered essential for fully exploiting the potential of AI in education [3][2][21]. Idroes et al. in [10] highlight in their study that artificial intelligence has a significant impact on the way students perceive the educational process.

The findings show that students from western Romania generally hold favorable perceptions of AI in education. They recognize the pedagogical benefits offered by AI tools and acknowledge their potential in improving learning efficiency and personalization. At the same time, they are aware of the possible risks, particularly related to ethics, data security, and academic integrity.

This study provides an in-depth analysis of students' perceptions about integrating Artificial Intelligence (AI) into learning, with a focus on higher education institutions in western Romania. The findings indicate that students generally hold positive attitudes toward AI, recognizing its potential to enhance learning efficiency, provide personalized support, facilitate access to information, and improve academic performance. High levels of perceived usefulness, positive attitudes, and strong behavioral intentions suggest that AI is increasingly viewed as a valuable educational support tool.

However, the results also reveal several challenges. Students expressed concerns related to academic integrity, data privacy, misinformation, and the future role of instructors. These concerns highlight the importance of responsible AI integration that preserves ethical standards, ensures transparency, and maintains the essential pedagogical role of educators. Additionally, variations in digital competencies underscore the need for targeted training initiatives aimed at improving AI literacy across academic disciplines.

Overall, the study demonstrates that the adoption of AI in higher education has significant potential but requires coordinated institutional efforts, clear guidelines, and sustained investment in digital competencies to maximize its educational impact.

Future research could explore how students' perceptions and behaviors evolve over time as AI tools become more integrated into learning environments. Long-term studies would help identify changes in acceptance patterns and the sustainability of AI-supported learning.

By addressing these research directions, future studies can contribute to a more comprehensive understanding of AI adoption in higher education and support the development of evidence-based strategies for integrating AI responsibly and effectively into academic environments.

References

[1] Amirov R. A. & Bilalova U. M.. Prospects for the Introduction of Artificial Intelligence Technologies in Higher Education. *Administrative Consulting, Russian Presidential Academy of National Economy and Public Administration. North-West Institute of Management*., Vol. 3, 2020, pp. 80 - 88. https://www.acjournal.ru/jour/article/view/1365

[2] Asim-Ittah Gideon Attach et all. Shaping the future of ai in education: Analyzing key influencers on romanian teacher trainees' willingness to integrate AI. *The American Journal of Social Science and Education Innovations*, Vol.6 No.09, 2024, pp. 158 - 173. https://doi.org/10.37547/tajssei/volume06issue09-17

[3] Bucea-Manea-Ţoniş Rocsana. Artificial Intelligence Potential in Higher Education Institutions Enhanced Learning Environment in Romania and Serbia. Sustainability, vol. 14(10), 2022, pp. 5842 - 5842. https://doi.org/10.3390/su14105842

[4] Computational intelligence revolution in multimedia data analytics and business management. *Multimed Tools Appl* 82, 7969. 2023. https://doi.org/10.1007/s11042-023-14902-3

[5] Enache, Maria Cristina. The Perceptions of Romanian Students on the Adoption of Artificial Intelligence and Emerging Technologies. *Annals of Dunarea de Jos University of Galati. Fasc. I Economics and Applied Informatics*, Vol. 3, 2024, pp. 128 - 133. https://doi.org/10.35219/eai15840409436

[6] Euronews Romania. (2025). *Universities Worldwide Facing the AI Test: Teacher or Processor*

[7] Garzón, Juan, Eddy Patiño, and Camilo Marulanda. Systematic Review of Artificial Intelligence in Education: Trends, Benefits, and Challenges. *Multimodal Technologies and Interaction* . Vol. 9, no. 8: 84. 2025. https://doi.org/10.3390/mti9080084
[8] Geovanny Ruiz Muñoz, El impacto de la inteligencia artificial y las herramientas digitales en las asignaturas básicas de la educación superior, *Revista de Investigación en Tecnologías de la Información*, 2025. https://doi.org/10.36825/riti.13.30.002
[9] Gheție Romina, Rad Dana, Cuc Lavinia D., Rădulescu Dan. The future of teaching and learning: students' attitudes toward the use of artificial intelligence. *Technium Business and Management*, vol. 11, 2025: Multidisciplinary Research in Business and Management, pp. 48 - 54. https://doi.org/10.47577/business.v11i.12455
[10] Idroes, G. M. et all, Student Perspectives on the Role of Artificial Intelligence in Education: A Survey-Based Analysis. *Journal of Educational Management and Learning*, Vol.1 No.1, pp. 8-15, 2023. https://doi.org/10.60084/jeml.v1i1.58
[11] Knyazeva, N., Mikhailova , I., Usmanova, N., & Shindina, T. Overcoming barriers in developing digital skills for higher education teachers: challenges and solutions. *Review of Artificial Intelligence in Education*, Vol. 3, e24. 2022. https://doi.org/10.37497/rev.artif.intell.educ.v3i00.24
[12] Maggie A. Mosher, Lisa Dieker, Rebecca Hines, The Past, Present, and Future Use of Artificial Intelligence in Teacher Education, *Journal of Special Education Preparation*, 2024. https://doi.org/10.33043/8aa9855b
[13] Miguel A. Cardona, Roberto J. Rodriguez, Kristina Ishmael. *Artificial Intelligence and the Future of Teaching and Learning: Insights and Recommendations*. U.S. Department of Education, Office Educational Technology. Washington, DC, 2023. https://www.ed.gov/sites/ed/files/documents/ai-report/ai-report.pdf
[14] OECD. AI and the Future of Skills, Volume 2: Methods for Evaluating AI Capabilities ,2023, *Educational Research and Innovation*, OECD Publishing, Paris. https://doi.org/10.1787/a9fe53cb-en
[15] Petrașcu, Geanina Maria (2024). *Survey on Students' Perceptions of AI in Education*. Kaggle. https://www.kaggle.com/datasets/gianinamariapetrascu/survey-on-students-perceptions-of-ai-in-education
[16] Pintea, F. A., Lacrama, D. L., Musuroi, C., Karnyanszky, T. M., & Toma, C. I. Automatic Pre-Classification of Baum Test Images. *In Proceedings of the 17th International Conference on Recent Advances in Computer Science* (COMPUTE-08), pp. 65-68. ISBN: 978-960-474-311-7. 2013.
[17] Pisica, Alina Iorga, Tudor Edu, Rodica Milena Zaharia and Răzvan Zaharia. Implementing Artificial Intelligence in Higher Education: Pros and Cons from the Perspectives of Academics. *Societies Journal*, Vol.13 No.5, article no.118 (2023). https://doi.org/10.3390/soc13050118
[18] Rad, D., Magulod, G. C., Balaș, E., Roman, A. F., Egerău, A., Maier, R., … & Chiș, R. A radial basis function neural network approach to predict preschool teachers' technology acceptance behavior. *Frontiers in Psychology Journal*, Vol. 13. 2022. ISSN=1664-1078 https://doi.org/10.3389/fpsyg.2022.880753
[19] Rojas, M. Patricia., Chiappe, Andrés. Artificial Intelligence and Digital Ecosystems in Education: A Review. *Technology, Knowledge and Learning. Vol.* 29, pp. 2153–2170. 2024. https://doi.org/10.1007/s10758-024-09732-7
[20] Rosak-Szyrocka, Joanna. The role of artificial intelligence in digital education. *Scientific Papers of Silesian University of Technology Organization and Management Series*. 2024(195). pp. 477-499. https://doi.org/10.29119/1641-3466.2024.195.29
[21] Sămărescu, N., Bumbac, R., Zamfiroiu, A. and Iorgulescu, C.M., 2024. Artificial Intelligence in Education: Next-Gen Teacher Perspectives. Amfiteatru Economic, Vol 26 No.65, pp. 145-161. 2024. https://doi.org/10.24818/ea/2024/65/145
[22] Shan Wang, Fang Wang, Zhen Zhu, Jingxuan Wang, Tam Tran, Zhao Du. Artificial intelligence in education: A systematic literature review, *Expert Systems with Applications*, Volume 252, Part A, 2024, ISSN 0957-4174. https://doi.org/10.1016/j.eswa.2024.124167