



Al-Driven Transformation: Mapping the Course for Future Business Landscapes

MONOGRAPH





TALLINN 2024 **AI-Driven Transformation: Mapping the Course for Future Business Landscapes**: Monograph / Gen. edit. Olha Prokopenko, Marina Järvis, Tallinn: Teadmus OÜ, 2024, 257 p.

ISBN 978-9916-9969-8-0

Editors:

Ph.D. in Economics, Dr. Olha Prokopenko, Estonian Entrepreneurship University of Applied Sciences, Tallinn, Estonia; Academy of Applied Sciences Mazovia, Siedlee, Poland

Ph.D. in Business Administration, **Marina Järvis**, Estonian Entrepreneurship University of Applied Sciences, Tallinn, Estonia; Tallinn University of Technology, Tallinn, Estonia

Reviewers:

Ph.D. in Computer Science, Dr. Ali Gholami, Department of Computer Science, KTH Royal Institute of Technology, Stockholm, Sweden

Ph.D. in Economics, **Krystyna Kovalska**, Liverpool Hope Business School, Liverpool Hope University, Liverpool, UK

AI-Driven Transformation: Mapping the Course for Future Business Landscapes is a comprehensive and interdisciplinary monograph that explores the current and future impacts of artificial intelligence (AI) on various domains of business and society. The book has six chapters covering a different aspect of AI-driven transformation. The first chapter examines how AI can enhance business leadership and entrepreneurship and the risks and challenges of its application. The second chapter analyzes how AI can transform the tourism industry, from improving customer service to creating new experiences. The third chapter discusses how AI can improve the security and efficiency of the financial sector, especially in the context of central bank digital currencies. The fourth chapter addresses the ethical and regulatory issues of AI deployment in companies and social enterprises, focusing on logistics and responsible practices. The fifth chapter explores how AI can enable innovative healthcare and military applications, such as integrating diagnostic models and enhancing civil and military capabilities. The sixth and final chapter looks at the future of technology and its impact on education and responsible innovation, with a particular emphasis on the role of AI in journalism and media. The book offers a rich and diverse perspective on the opportunities and challenges of AI-driven transformation and provides valuable insights and recommendations for researchers, practitioners, policymakers, and educators.

This book is intended for researchers, practitioners, students, and anyone interested in learning more about AI-driven transformation's current and future trends.

Keywords: artificial intelligence, entrepreneurship, innovation, digital marketing, industry transformation, leadership, education, skills, social impact, global perspectives, human-AI collaboration, future workforce, ethical implications.

CONTENT

INTRODUCTION5
Chapter 1. AI-powered business leadership and entrepreneurship transformation
Victoriia Ilchenko, Vladyslav Kiselev ARTIFICIAL INTELLIGENCE AS A PLEDGE OF LEADERSHIP IN BUSINESS AND ENTREPRENEURSHIP AND THE RISKS OF ITS APPLICATION
Nataliia Shmatko, Vasyl Ivchyk UNLEASHING THE CAPABILITIES OF ARTIFICIAL INTELLIGENCE IN MANAGING BUSINESSES
Oksana Okhrimenko DIGITAL TRANSFORMATION OF RESPONSIBLE PRACTICES: RAI & CSR
Olga Maslak, Yaroslava Yakovenko, Mariya Maslak, Natalya Grishko, Victor Zuev INNOVATIVE DIRECTIONS OF DIGITAL BUSINESS DEVELOPMENT USING ARTIFICIAL INTELLIGENCE: FOREIGN EXPERIENCE OF FINTECH COMPANIES
Kostiantyn Zavrazhnyi THE IMPACT OF THE USE OF ARTIFICIAL INTELLIGENCE AND DIGITAL TRANSFORMATION ON SUSTAINABLE BUSINESS DEVELOPMENT
Chapter 2. AI-driven tourism transformation
Tetiana Nych ARTIFICIAL INTELLIGENCE AS AN AGENT OF TOURISM TRANSFORMATION: IMPACT ON TOURISM AND RECREATION
Olha Prokopenko, Stefaniia Mosiiuk, Anzor Devadze, Lela Devadze THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE TOURISM INDUSTRY109
Svetlana Kocerova, Henrijs Kalkis, Zenija Roja CASE STUDY ON POSSIBILITIES OF IMPLEMENTING AI IN THE SERVICE INDUSTRY AUTOMATING INTERNAL AND EXTERNAL COMMUNICATION
Hanna Mashika AI'S INTEGRAL ROLE IN RESHAPING TOURISM AND RECREATION
Chapter 3. AI in the financial sector and security transformation
Artem Koldovskyi LEVERAGING ARTIFICIAL INTELLIGENCE FOR ENHANCED SECURITY IN CENTRAL BANK DIGITAL CURRENCIES

Volodymyr Dubnytskyi, Tatiana Mishustina, Olha Ovcharenko THE CHALLENGES OF PRACTICAL APPLICATION OF ARTIFICIAL INTELLIGENCE TECHNOLOGY IN THE CONTEXT OF DIGITAL TRANSFORMATION
Chapter 4. Ethical and regulatory aspects of AI transformation
Anna Chechel, Anna Odynets, Olena Brazhko, Svetlana Verytelnyk STATE REGULATION FOR SOCIAL ENTERPRISES IN LOGISTICS SYSTEMS AMIDST THE ADVANCEMENT OF ARTIFICIAL INTELLIGENCE DEVELOPMENT
Zdenka Konecna, Kari Joansen, Jan Budik DEPLOYMENT OF ARTIFICIAL INTELLIGENCE IN COMPANIES AND ITS ETHICAL IMPLICATIONS
Chapter 5. AI-enabled healthcare and military applications
Oleksandr Chaban INTEGRATING DIAGNOSTIC MODELS: A REVOLUTIONARY APPROACH IN AI-DRIVEN HEALTHCARE 204
Aleksandr Bokov, Oleg Diegtiar TENDENCIES AND PERSPECTIVES OF THE APPLICATION OF ARTIFICIAL INTELLIGENCE IN CIVIL AND MILITARY SPHERES
Chapter 6. Future impacts of AI and education transformation
Sven Maricic, Antonia Curic, Danijela Blanusa Troselj THE FUTURE OF TECHNOLOGY AND ITS IMPACT ON EDUCATION AND RESPONSIBLE INNOVATION ECO-SYSTEM
Halyna Synorub, Hanna Yordan ARTIFICIAL INTELLIGENCE IN THE PROFESSIONAL ACTIVITIES OF FUTURE JOURNALISTS: ADVANTAGES AND DISADVANTAGES
Larysa Kupriianova, Daryna Kupriianova ARTIFICIAL INTELLIGENCE ON THE FRONTLINE IN THE XXI CENTURY

ARTIFICIAL INTELLIGENCE IN THE PROFESSIONAL ACTIVITIES OF FUTURE JOURNALISTS: ADVANTAGES AND DISADVANTAGES

Halyna Synorub

Ph.D. in Social Communication, Associate Professor
Department Journalism,
Ternopil Volodymyr Hnatiuk National Pedagogical University, Ternopil, Ukraine

Hanna Yordan

Ph.D. in Technical Sciences, Associate Professor

Department of Journalism,
Ternopil Volodymyr Hnatiuk National Pedagogical University, Ternopil, Ukraine

Abstract

This article delves into the transformative landscape of Ukraine's educational sector, specifically focusing on the evolving role of artificial intelligence (AI) tools in shaping the skill set of future media professionals. By exploring the nuances of implementing AI technologies in uncertain conditions, the study conducts a comprehensive review of academic sources from both Ukrainian and international scholars. The relevance of integrating AI in journalism education is justified, highlighting its potential to enhance training, develop competencies, and improve cognitive engagement among higher education students.

The study employs various theoretical and methodological methods, including classification, generalization, analysis, synthesis, statistical analysis, comparative analysis, and modeling. Through observation, induction, and deduction, the current state of journalism and technology is assessed. A survey is conducted to gauge students' attitudes toward AI and its application in the educational process, revealing a notable awareness among participants. However, there is a recognition of the need for deeper study, enhanced technical support, and legislative regulation concerning AI technologies in the media sphere.

Based on the survey results from journalism students, the article emphasizes the importance of adapting the educational process to the contemporary challenges of AI integration. It recommends the inclusion of AI platforms in educational programs, suggesting additional courses, workshops, and expert-involved training sessions. The article underscores the significance of academic integrity, proposing updates to university policies and emphasizing personal responsibility in accordance with current media standards. The study advocates for a forward-looking approach to AI in journalism education, encouraging institutions to address the evolving landscape. The article outlines vectors for further research on AI technologies in education and media professional activities, defining standards for the responsible use of generative AI in editorial work. It is a call to action for educational institutions and professionals to navigate the waves of change and embrace AI as an integral part of the evolving journalistic landscape.

Introduction

The integration of AI into the professional domain of journalism stands as a significant manifestation of technological progress. In an epoch marked by pervasive digitization and rapid advancements, the journalistic landscape is witnessing a paradigm shift with the assimilation of AI technologies. This scholarly exploration aims to dissect the nuanced facets of AI within journalism, discerning the myriad advantages and potential drawbacks that emerge in tandem with this technological infusion.

Against the backdrop of automated news generation and data-driven reporting, the entwinement of AI within journalistic practices heralds a transformative epoch. Future journalists, poised at the intersection of human journalistic prowess and the computational capabilities of AI, confront a terrain ripe with opportunities and challenges. This article undertakes a comprehensive inquiry into the multifaceted implications of AI deployment, probing its potential to redefine conventional news gathering, analysis, and dissemination methodologies.

In the context of this evolving interplay between human agency and algorithmic intelligence, it becomes imperative to conduct a judicious examination of the impact of AI on foundational journalistic principles - accuracy, objectivity, and ethical considerations. By navigating the intricacies of this symbiosis, we aim to elucidate the transformative potential of AI, not only in augmenting operational efficiency but also in broadening the horizons of journalistic endeavors. However, this exploration is not devoid of ethical quandaries, necessitating a rigorous investigation into the ethical dimensions that accompany the integration of machines as integral collaborators in the journalistic pursuit of truth and information.

As we unravel the complexities surrounding advantages and disadvantages, our pursuit extends beyond technological implications to include ethical considerations, thereby contributing to a more profound understanding of the interplay between humanity and machine intelligence in the journalistic sphere. In the wake of the Fourth Industrial Revolution, where the boundaries of human achievement are continually redefined, the comprehension of AI's impact on journalism emerges as a scholarly imperative for individuals, institutions, and societies at large.

Results and discussion

The rapid development of artificial intelligence appears as the next pivotal stage in the history of technological advancement, much like the emergence of the transistor, personal computers, the internet, social networks, and smartphones did in their respective times. Today, in the context of the Russian-Ukrainian war that has affected a significant part of the Ukrainian territory, educational institutions predominantly rely on remote and blended learning approaches. A need to refine teaching methods and principles in order to ensure the effective functioning of the educational process amidst uncertainty has appeared. The goals include providing individually tailored education, creating comfortable conditions for both students and educators, taking into account individual psychological traits, fostering information literacy, and enhancing the utilization skills of pedagogical and information technologies (Kovalova, 2021). There is no unequivocal understanding and a single development strategy for informatization of education. Therefore, the informatization of education should be regarded as changing the content, methods, and organizational forms of student training as it transitions into life in the conditions of an information society. This process involves creating and utilizing information technologies to enhance the effectiveness of activities conducted within the educational system (Yordan H. 2020; Yordan Kh. 2020). Undoubtedly, a socialization of education is taking place in new conditions as well as new innovative approaches, among which the use of artificial intelligence and cloud services is prominent.

Artificial intelligence can be divided into rule-based and machine learning-based artificial intelligence. In the former case, artificial intelligence is used to provide advice or make decisions. For example, an intelligent tutoring system can help with grammar and provide feedback to higher education learners. The capabilities of artificial intelligence based on machine learning are much more potent as they can assist future media professionals in working with large, multi-layered datasets.

The implementation of artificial intelligence and machine learning in the context of educational transformations prioritizes the following applications:

- 1. In the technological component of the methodological system of active and interactive methods aimed at developing general and professional competencies of future professionals.
- 2. To enhance personal engagement and gain experience in solving professional tasks.
- 3. To increase the effectiveness of individualized education.
- 4. In assessment and feedback processes, providing insights into student behaviour and engagement.
- 5. In personalizing user experiences through content recommendations based on user preferences and search history.
- 6. In improving search functionality by providing more accurate and relevant results.
- 7. In enhancing user engagement through real-time interaction with chatbots.
- 8. In analysing user behaviour for the development of targeted marketing campaigns.
- 9. In simplifying the analysis of large datasets and identifying patterns and trends.
- 10. For monitoring and moderating comments by identifying similar content and checking for hostile language.

- 11. In providing audio support for media website publications.
- 12. In automating routine tasks.

In the field of education, artificial intelligence is utilized to develop new technologies and tools (such as IBM Watson Education, SMART Learning Suite, Cognii, ChatGPT, DreamBox Learning, and Midjourney, among others) that facilitate learning and enhance the overall efficiency of the educational process. For example, Google Translate, which offers translation in over 100 languages, can operate through a browser, and automatically provide highly accurate translations. In addition, tools like Siri and Google Assistant, which allow people to ask questions and receive answers, have become integral parts of smartphones. Tools like ChatGPT can rapidly respond to various queries, explanations, and examples, compose poetry or narratives, and summarize text. Examples of tools that allow text input to generate realistic images include Stable Diffusion and Imagen: Text-to-Image Diffusion Models. These innovative practices offer a wide array of tools for personalized education, including data alalysis, personalized learning programs, interactive virtual assistant features, personalized knowledge assessment programs, and the development of individualized educational plans.

The developers have launched the Aixploria website, a catalogue of prevalent artificial intelligence tools. The website features a series of collections organized into categories to facilitate the selection among over 3,400 artificial intelligence tools. Collections are organized into categories such as 'Images and Drawing,' 'Writing and SEO,' 'AI Chatbots and Assistants,' 'Video Generators,' 'Music,' 'Business,' and more (Polikovska, Yu2023).

Artificial intelligence in journalism can be utilized for various tasks directly related to news production and dissemination. Despite its significant advantages for future media professionals, such as the speed and volume of news publication, efficient content analysis and management, content customization, and detailed verification, the implementation of artificial intelligence in the educational process can lead to the following problems:

- Violation of academic integrity rules.
- Reduction in the number of educators due to the automation of many processes (which may exert pressure on the job market).
- Potential social injustice in access to appropriate software.
- Challenges in developing communication skills (Since artificial intelligence is primarily beneficial in online education).
- Ethical consequences in terms of data confidentiality, bias, and transparency.
- Recognition of authorship of created works and establishing responsibility for copyright infringement.
- Diminished role of educators, creativity, and critical thinking skills in students.
- Discrimination, leading to the perpetuation of socio-economic inequality among different population segments and nations worldwide.
- In generating fake content, propagandistic narratives, and disinformation (note: this use may have negative implications).

It is important to remember that due to improper and uncontrolled application, artificial intelligence can become an automated weapon targeting living objects without human operator intervention (Vyshnia H., 2021).

When considering the drawbacks of utilizing artificial intelligence directly in journalistic activities, it is essential to note that these systems effectively address only one type of task - the one for which they were initially designed; they lack the ability to 'context switch' and transition from one type of task to another, as humans can. This limitation can easily and rapidly generate fake texts and audiovisual content to manipulate public consciousness. Furthermore, the support for automated content can lead to job displacement. From June 2020, Microsoft laid off approximately 50 journalists, replacing them with artificial intelligence (Kovalova; 2021).

The production of video reports through artificial intelligence-driven programs may resemble deepfakes in format, diminishing the audience's trust in the media. Additionally, AI systems require a certain amount of time for training and access to a 'ground truth' - a specific set of benchmark data on which the system is trained before being deployed to perform a given task. This also concerns brand new neural networks.

An online survey to investigate the implementation of artificial intelligence for educational and professional tasks in journalistic activities was conducted among students majoring in journalism at the undergraduate and master's levels at Volodymyr Hnatiuk Ternopil National Pedagogical University. A total of 67 respondents participated in the survey, including 33.3% first-year bachelor's students, 22.2% second-year bachelor's students, 8.3% third-year bachelor's students, 11.1% fourth-year bachelor's students, 13.9% first-year master's students, and 11.1% second-year master's students. The online survey aimed to achieve the following objectives:

- Determine whether students use artificial intelligence tools (and which ones) for their educational tasks.
- Assess the students' awareness of the risks and prospects associated with the use of artificial intelligence in educational and professional activities.

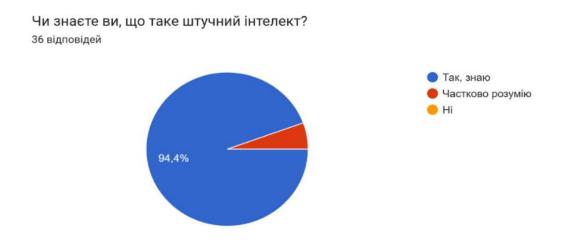


Fig. 1. Understanding the concept of "artificial intelligence" among higher education students

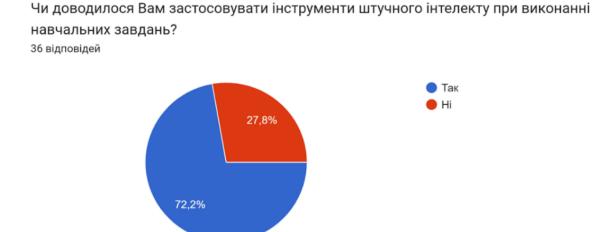


Fig. 2. Utilization of artificial intelligence tools in educational tasks execution

Які інструменти штучного інтелекту ви знаєте? 36 відповідей

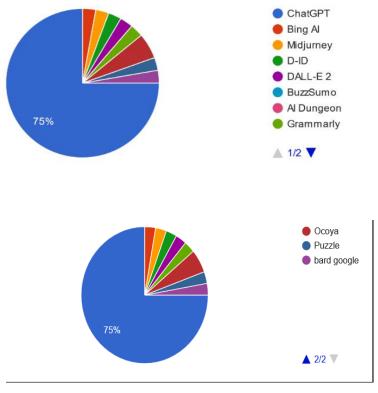


Fig. 3., 4. Artificial intelligence tools used by students

Чи вимагає нова технологія (ШІ) перегляду Кодексу честі, університетських стандартів академічної доброчесності?

36 відповідей

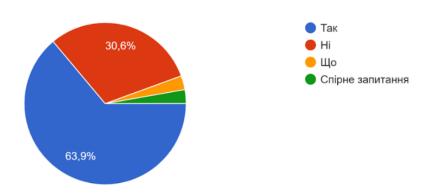


Fig. 5. Students' opinions on whether artificial intelligence technology requires a review of the Code of Ethics and university standards of academic integrity

Як штучний інтелект може змінити професійну діяльність медійника ^{36 відповідей}

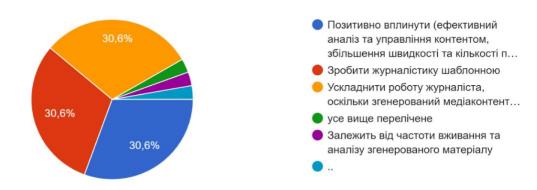


Fig. 6. Students' perspectives on how artificial intelligence technology can change the professional activities of journalists

Therefore, the survey results provide grounds to believe that the majority of students (72.2%) resort to artificial intelligence tools when performing educational tasks. Those who do not use AI programs comprise 28.8% of the respondents.

When asked, 'Which artificial intelligence tools do you know?' respondents mentioned the following: ChatGPT: for information retrieval, content creation, reviews, idea generation, etc. (75%). BingAI: as a language model and a tool for creating graphics (2.8%). Midjurney: for generating photorealistic graphics (2.8%). D-ID: for generating character faces that speak specified text (2.8%). DALL-E2: for image generation and expansion, adding additional elements (2.8%). BuzzSumo: for analyzing popular content and finding new ideas (2.8%). AI Dungeon: for text generation using gamification (2.8%). Grammarly: for text analysis and improvement (2.8%). Ocoya: for content marketing and social media automation (5.6%). Puzzle: for creating, managing, and sharing information and knowledge to enhance collaboration (2.8%). Bard Google: as a chatbot for answering questions, programming, and even creating HTML pages and rating tables (2.8%). So, the artificial intelligence tools mentioned by the respondents help them search, store, and organize information, generate new creative ideas, and create or improve textual, audio, and visual content, thus fostering interactivity with the audience. Students recommend using artificial intelligence most effectively for the following purposes: News search (69.4%), Idea generation (69.4%), Text generation (52.8%), Text translation (52.8%), Creating visual content (graphics, photos, videos, animations, etc.) and music (38.9%), Writing student research papers (5.6%), Creating advertising materials (13.9%) Optimizing production processes (27.8%), Preparing creative projects (16.7%), Working with big data (47.2%), Protecting personal data (11.1%), Transcribing audio recordings (33.3%), Creating presentations (27.8%), Planning and creating content on social media (30.6%), Creating, managing, and sharing information and knowledge to enhance collaboration (19.4%), Building information platforms (22.2%).

According to 63.9% of the respondents, the new technology of artificial intelligence requires a review of the Code of Ethics and university standards of academic integrity. 30.6% believe that the changes are not required, while 5.6% consider it a debatable issue.

Students identify the following main risks associated with the use of artificial intelligence tools in media: Increase in fake content (58.3%), Job reduction (61.1%), Ethical conflicts (36.1%), Dependence on AI (72.2%), Cybersecurity concerns (36.1%). 30.6% of respondents believe that artificial intelligence can positively impact the professional activities of media professionals by facilitating efficient content analysis and management, increasing the speed and quantity of publications. It can make journalism more templated and complicate the work of media professionals since AI-generated media content requires verification, which was equally noted by 30.6% of respondents. The impact of changes in

journalistic activities is believed to be dependent on the frequency of use and analysis of generated material by 2.8% of students. The same percentage (2.8%) mentioned all the above and remained undecided (2.8%).

According to students, the nearest prospects for using artificial intelligence in educational activities include active digitization, the ability to see the thoughts not only of a live person but also of a robotized program, facilitation and acceleration of information search, rapid access and efficient processing of large databases, generation of exciting ideas and non-standard solutions, Optimization of the learning process, Cybersecurity, and more.

In response to the question "Predict changes in the media industry with the use of artificial intelligence," respondents offered answers that indicate negative consequences: template journalism, an increase in fake content, plagiarism, ethnic conflicts, job reductions, uniformity, loss of impressions, and emotions. Positive changes in media activity include improved multimedia quality, increased online media, automated generation of journalistic texts, fast information retrieval, processing of large data sets, reducing template-based content, speeding up publication, and enhancing security. The respondents also noted that significant changes are expected in the near future, especially since journalism professionals are not too trusting of artificial intelligence. Furthermore, these changes will depend on the further development of artificial intelligence, making predictions challenging. Nevertheless, the responses indicate new opportunities and obstacles, requiring adaptability to new demands.

The opinion of higher education seekers is persuasive when it comes to the fact that no technology can replace a human. In the media industry, artificial intelligence can be used for relatively mundane tasks to save time. However, it can never replace the work of a journalist with texts generated by artificial intelligence.

According to the survey results among journalism students at Ternopil National Pedagogical University, named after Volodymyr Hnatiuk, nearly all respondents (94.4%) are aware of and the majority use (72.2%) artificial intelligence tools in their learning process. Additionally, 30.6% combine their education with work in the media. The level of awareness of potential threats associated with using artificial intelligence technologies, especially in the media sector, among respondents, is currently relatively low. However, there is an understanding that implementing artificial intelligence technologies requires deeper study, better technical support for journalists, and legislative regulation.

Having analysed the research results, we can conclude that the modern educational process should consider the challenges of the time and incorporate the study of various artificial intelligence platforms into educational programs to develop the skills for their correct use. Universities can introduce additional courses and workshops, invite experts, and conduct training sessions to help students use artificial intelligence technologies correctly and reconsider academic integrity policies. Future journalists may use artificial intelligence technologies to perform a wide range of tasks while maintaining personal responsibility for the quality of their publications in accordance with current standards.

The international news agency The Associated Press has published standards for the use of generative artificial intelligence in editorial work (Polikovska, Yu2023):

- Consider any output from generative AI platforms as unverified source material.
- Do not allow artificial intelligence to alter photos, videos, or audio.
- Do not use AI-generated images for illustration; if such an image is the subject of the news, label it as AI-generated content.
- Do not place confidential information in AI tools.
- Ensure that the sources used by journalists are 'free from AI-generated content.'
- Avoid accidental use of AI-generated content intended for disinformation.

Considering all the pros and cons, we must realize that artificial intelligence in media opens up new possibilities for journalism, developing its qualitative and quantitative aspects. However, like any complex system, artificial intelligence technology has limitations and carries the risks of uncontrolled application, constituting a genuine danger to humanity. Despite the gradual digitalization of production, the ability to analyse and think critically is increasingly valued in society. Therefore, the work of journalists is unlikely to be replaced by robots.

Conclusion

The study underscores the transformative impact of artificial intelligence on Ukraine's educational sector, particularly within the realm of journalism. The comprehensive review of academic sources and the insights gleaned from a survey of journalism students provide a nuanced understanding of the current state and future potential of AI integration.

The study reveals a significant awareness among students regarding the application of AI in journalism education. However, it also highlights the acknowledged need for deeper study, improved technical support, and legislative regulation to navigate the complexities of AI technologies in the media sphere. The identified challenges, such as the potential for an increase in fake content and job reduction, necessitate careful consideration and ethical frameworks in the integration of AI tools.

The recommendations put forth in the article advocate for a proactive approach, urging educational institutions to adapt their processes to the contemporary challenges posed by AI integration. The emphasis on updating university policies, incorporating AI platforms into educational programs, and fostering a sense of personal responsibility aligns with the imperative of maintaining academic integrity in the face of technological advancements.

The study concludes by envisioning a forward-looking approach to AI in journalism education, positioning it as a catalyst for positive change rather than a threat. It serves as a call to action, urging educational institutions and professionals to proactively engage with AI, define responsible standards, and embrace the evolving landscape of journalism with optimism and adaptability. This research lays the foundation for future explorations into AI technologies in education and media professional activities, guiding the way for ethical and effective integration.

References

- 1. Vyshnia H. Shtuchnyi intelekt i liudyna: zahrozy i mozhlyvosti. URL: https://www.radiosvoboda.org/a/shtuchnyi-intelekt-zagrozy-i-mozhlyvisti/31145992.html
- 2. Yordan H., Yordan Kh. Informatyzatsiia osvity yak osnova rozvytku informatsiinoho suspilstva. Suchasni informatsiini tekhnolohii ta innovatsiini metodyky navchannia: dosvid, tendentsii, perspektyvy: materialy V Mizhnarodnoi naukovo-praktychnoi internet-konferentsii (m. Ternopil, 30 kvitnia, 2020). Ternopil: TNPU im. V. Hnatiuka, 2020. S.115-117.
- 3. Kovalova M. Shtuchnyi intelekt u media: Perevahy ta ryzyky avtomatyzovanoho kontentu. The Lede. URL: https://www.thelede.media/management/2021/02/22/2517/
- 4. Synorub H. P. Asynkhronna komunikatsiia v protsesi dystantsiinoho navchannia: perevahy i nedoliky. Suchasni informatsiini tekhnolohii ta innovatsiini metodyky navchannia: dosvid, tendentsii, perspektyvy: materialy V Mizhnarodnoi naukovo-praktychnoi internet-konferentsii (m. Ternopil, 30 kvitnia, 2020). Ternopil: TNPU im. V. Hnatiuka, 2020. S. 68-70.
- 5. Polikovska Yu. Associated Press vyznachyla pravyla zastosuvannia shtuchnoho intelektu dlia zhurnalistiv. URL: https://ms.detector.media/onlain-media/post/32719/2023-08-17-associated-press-vyznachyla-pravyla-zastosuvannya-shtuchnogo-intelektu-dlya-zhurnalistiv/
- 6. Polikovska Yu. Rozrobnyky zapustyly sait-kataloh populiarnykh ShI-instrumentiv. URL: https://ms.detector.media/internet/post/32452/2023-07-18-rozrobnyky-zapustyly-sayt-katalog-populyarnykh-shi-instrumentiv/