

## THE APPLICATION OF ARTIFICIAL INTELLIGENCE TOOLS IN JOURNALISM IN KAZAKHSTAN

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**Abstract:** This article provides an in-depth, chronologically grounded analysis of the integration of artificial intelligence (AI) technologies into journalism in the Republic of Kazakhstan. Starting with President Kassym-Jomart Tokayev's speech at the National Congress, the study explores the development of the country's digital media infrastructure, the establishment of innovative research centers such as “AI MediaLab” and “LG AI MediaLab,” and the creation of the first AI-powered convergent newspaper, “AI-Tamyz.” It also covers the publication of fundamental popular-scientific works like The Alphabet of Artificial Intelligence. The article discusses international experiences and addresses key issues related to ethics, mental well-being, social responsibility in journalism, inclusivity, and information equality in the context of AI. The findings indicate that Kazakhstan is not only advancing technologically but is also striving to integrate artificial intelligence into journalism in a way that preserves national values. This article offers relevant theoretical and practical conclusions for scholars and professionals engaged in AI integration in media, journalism education, information policy, and digital inclusion.

**Keywords:** Kazakhstani journalism; artificial intelligence; AI-Tamyz newspaper; AI MediaLab; LG AI MediaLab; digital media; generative AI; journalism education; information equality; inclusivity; media ethics; technological transformation; Turkic languages; media modernization; digital domain; regional integration.

In recent years, the rapid spread of artificial intelligence (AI) technologies across all areas of public life has forced a fundamental reassessment of journalistic practices. This process is particularly visible in Kazakhstan. AI tools are transforming not only the technical dimensions of news production but are also reshaping the ideological, aesthetic, and social frameworks of journalism. This

article scientifically examines the stages, practical initiatives, and strategic efforts of AI adoption within the context of Kazakhstani journalism in chronological order.

On March 20, 2025, Egemen Qazaqstan published an article analyzing President Kassym-Jomart Tokayev’s address at the National Congress held in Burabay.<sup>1</sup> In his speech, the president emphasized that Kazakhstan’s economy could advance significantly through digital transformation, with artificial intelligence serving as the main driving force. Based on this vision, the article advocated for the comprehensive implementation of AI technologies in all areas of the information sphere—especially in journalism—as a critical strategic direction.

Following this, the phased integration of AI into Kazakhstan’s media landscape began. In particular, the Qazcontent agency introduced AI-powered newsreading avatars capable of delivering news without human involvement, thereby enabling the automatic dissemination of content via television and online platforms.<sup>2</sup> Editorial offices also began to organize AI-focused training sessions, aimed not only at increasing staff efficiency but also at reducing content production costs, automating information filtering, predicting audience demands, and improving feedback mechanisms.

The article also allocates considerable attention to international experience. For instance, The Washington Post developed the “Heliograf” platform, which automates news writing and publishing. The Associated Press significantly increased content output by automating sports and financial news reporting. Meanwhile, Reuters has enhanced analytical content creation through its “Lynx Insight” platform, improving both data analysis and journalistic expertise.

However, the full integration of AI in journalism also presents several systemic challenges. Key obstacles include a shortage of journalists with technological expertise, underdeveloped infrastructure, and limited financial resources. These issues necessitate a comprehensive national strategy, including the introduction of specialized AI training programs for journalists, innovation laboratories, and academic research centers.

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<sup>1</sup> Tokayev, K. J. (2025). Speech at the National Congress. *Egemen Qazaqstan*, March 20, 2025.

<sup>2</sup> Qazcontent Agency (2025). “AI-powered newsreader avatars” project overview. <https://qazcontent.kz>

In response to these challenges, on May 26, 2025, Al-Farabi Kazakh National University opened a state-of-the-art research laboratory called “AI MediaLab” specializing in artificial intelligence. The project aims to bring journalism into a new stage of scientific and technological advancement by integrating neural networks into media practices. The laboratory is equipped with supercomputers and a centralized data system, allowing students to gain practical experience with AI tools.

The first major outcome of this laboratory was the launch of the AI-Tamyz newspaper. This is the first convergent newspaper in Kazakhstan produced entirely using artificial intelligence. It was developed based on inclusive principles: for example, QR codes lead to YouTube versions of the articles in audio and video formats for individuals with visual or reading impairments. This approach not only demonstrates how cutting-edge technologies can be integrated into journalism but also contributes to reducing information inequality and strengthening the humanistic values of journalism.

The AI-Tamyz project tested the creative potential of AI-generated content. The texts, images, audio, and video materials in the newspaper were all produced through platforms like ChatGPT, Gemini, WhisperAI, DALL·E, and SunoAI. This demonstrated that AI tools can function not only as technical or administrative aids but also as creative agents. Moreover, this project represents an important step toward expanding the use of AI in Turkic languages, particularly Kazakh.

As a result, AI-Tamyz has become one of the most innovative journalism projects in Kazakhstan’s media history. It provided a platform for testing not only technical applications but also concepts of information equality, inclusivity, aesthetic approaches, and ethical standards. Within journalism education, this project was used in practical “data journalism” classes, allowing master’s students to combine independent research with creative activity. Notably, AI tools were applied to a range of genres—including satire, documentaries, poetry, stories, and interviews—highlighting AI’s potential to adapt to human creativity.

Furthermore, the media training seminar “The Future of Content: Journalism in the Age of Generative AI,” held in Astana on July 2, 2025, offered deep insights into the technical, ethical, and psychological impacts of AI on journalism.<sup>3</sup> Supported by Huawei and Kazakhstan’s Ministry of Digital Development, the event brought

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<sup>3</sup> AI MediaLab (2025). AI MediaLab project: Advancing digital journalism. *24.kz*, May 26, 2025.

together leading professionals from journalism, communications, IT, and government sectors. During the seminar, Deputy Minister of Digital Development Rostislav Konyashkin emphasized that AI should not only automate journalistic tasks but also enhance journalists' societal responsibilities.

Economic journalist Rakhym Oshaqbayev analyzed both the positive and negative effects of AI on journalism practice. While AI is proving useful for tasks like transcription, headline generation, and basic news writing, he noted that it still struggles with conveying human emotions, empathy, and tone. He argued that the more AI-generated content increases, the more people will value emotionally resonant and human-authored content. Therefore, AI tools should be seen not as replacements for creative journalists, but as benchmarks that highlight human uniqueness.

The seminar also addressed psychological factors. Psychologist Zhanel Sariyeva introduced the concept of “emotional resilience” as essential for journalists working in fast-paced digital environments. The constant pressure of breaking news, multitasking, and mental strain requires not only technical skills but also psychological stability. This calls for new methodological approaches in journalism education and practice.

Ethics was another central topic of discussion. Anara Tolebayeva, Vice President of Kazakhstan's AI Development Association, stressed the importance of transparency, protection against manipulation, and fact-checking when using generative models. She warned that unchecked use of AI tools could lead to dangerous trends, underscoring the urgent need to maintain a balance between journalism ethics and AI technologies.

On May 27, 2025, another major initiative was launched at Al-Farabi Kazakh National University—the opening of the LG AI MediaLab.<sup>4</sup> This scientific platform focuses on studying artificial neural networks within journalism and communication systems. During the inauguration, LG Electronics executive Hak Hyon Kim and University Rector Zhanseit Tuimebayev emphasized that this project has strategic significance for the development of digital journalism across Central Asia. The lab

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<sup>4</sup> LG AI MediaLab (2025). Launch of the new lab at Al-Farabi Kazakh National University. *KazNU Press Service*, May 27, 2025.

enables research not only in journalism but also in visual storytelling, large language models (LLMs), and “digital twins” technology.

Within this academic environment, the AI-Tamyz newspaper was further refined and became a methodological model for other participants. As part of the university’s digital strategy, a supercomputer infrastructure was launched to support journalism experimentation. Such technical capacity paves the way for the development of new media formats based on various types of artificial intelligence, including multimodal models.

One of Kazakhstan’s most significant public-scientific contributions in the AI field is the book *The Alphabet of Artificial Intelligence*, published in Kazakh for the first time in March 2025.<sup>5</sup> The author, journalist Meirzhan Auelkhanuly, presents AI concepts in a language accessible to readers with no programming background. The book explains prompt engineering—how to give effective instructions to AI—through clear and practical examples. This democratizing approach represents a crucial step toward making AI tools more accessible to a broad audience.

During the book’s launch, the AI-Hub company and the ai-hub.kz platform were also introduced, both aimed at promoting digital literacy, AI, biotechnology, and cybersecurity in Kazakhstan. The creation of TurkAI—a network of AI professionals from Turkic countries—marked a major step toward regional cooperation in the field. Experts from Turkey, Uzbekistan, Kyrgyzstan, and Kazakhstan now collaborate via this platform.

Importantly, *The Alphabet of Artificial Intelligence* has attracted strong interest not only in Kazakhstan but across the Turkic world, including in Uzbekistan, Turkey, and Kyrgyzstan. Based on this book, educational manuals, encyclopedias of AI terminology, and translation projects are being developed. These initiatives contribute to the formation of a shared regional infrastructure for science and information in the field of AI.

In conclusion, the implementation of artificial intelligence tools in Kazakhstan’s journalism represents far more than a technological shift. It marks a deep societal transformation affecting journalism models, education systems, ethical approaches, and aesthetic standards. The AI-Tamyz newspaper, AI MediaLab and

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<sup>5</sup>DKnews.kz (2025). Coverage of the “The Future of Content: Journalism in the Age of Generative AI” media training. *DKnews.kz*, July 2, 2025.

LG AI MediaLab laboratories, The Alphabet of Artificial Intelligence, and the TurkAI network are all examples of high-impact scientific and practical efforts to develop national content, ensure information equality, and strengthen journalism’s social responsibility in the age of artificial intelligence.

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