AI as key technology of innovative management of philology projects in periods of instability & crisis

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Abstract. *Modern philology is undergoing profound transformation under the influence of digitalization and artificial intelligence (AI). Traditional methods of text analysis, translation, and interpretation are increasingly being supplemented or replaced by intelligent technologies such as machine learning, natural language processing, and big data analytics. This shift is particularly critical in periods of instability and crisis, when conventional research and educational practices are limited. AI enhances the sustainability and adaptability of philological projects by enabling automated analysis, intelligent translation systems, adaptive learning platforms, and digital humanities initiatives. A key trend is the hybridization of AI, which integrates symbolic approaches (logic, rules, ontologies) with subsymbolic methods (machine learning and deep neural networks). Such integration allows researchers to account for both structural and statistical features of language, expanding the potential of philological studies. In this context, AI should be considered not only as a supportive tool but as a fundamental technology of innovative management in philology, ensuring resilience, efficiency, and long-term development of projects in times of global uncertainty and crisis.*
Keywords: *innovational management, philology, artificial intelligence, crisis.*

Introduction.

Modern socio-economic systems operate in conditions of increasing turbulence, global instability and frequent crises - financial, energy, environmental, geopolitical and social [1], [2]. In such an environment, traditional management methods lose their effectiveness, since they are focused primarily on stable and predictable conditions [3], [4]. This poses the challenge for organizations to find new management approaches that can ensure sustainability, flexibility and adaptability [5]. In this context, innovative management acts not only as a tool for the introduction of new technologies and methods, such as IT [6], but also as a strategic resource that ensures the survival and development of an enterprise or institution in a crisis [7]. Its essence lies in the combination of classical management principles with modern technologies [8] - digital platforms, artificial intelligence, big data analytics, as well as with innovative adaptive forms of organizing business processes, communications and interaction with the external environment. The main difference between innovation management [9] is its preventive and proactive focus [10]: instead of reacting to a crisis post factum, the organization forms mechanisms for foresight, flexible adaptation, and rapid transformation. Consequently, it is during periods of crisis that innovation management becomes not a temporary anti-crisis measure [11], but a systemic management model of the future, ensuring long-term sustainability, efficiency, and optimal functioning of any organization [12].

The Main Part.

Modern philology as a science and applied field is undergoing a profound transformation under the influence of digitalization and the integration of artificial intelligence (AI). Traditional methods of text analysis, translation, interpretation of literary works and language modeling are gradually being supplemented and in many cases replaced by intelligent technologies based on machine learning, natural language processing (NLP) and big data.

The role of AI becomes especially significant during periods of instability and crisis, when traditional research practices and educational formats are limited [13]. Artificial intelligence provides new opportunities for distance learning of languages, automated text analysis, creation of intelligent translation systems, development of adaptive educational platforms and digital humanities projects. It allows accelerating scientific research, expanding access to cultural and linguistic heritage, and supporting communication in the context of global uncertainty.

Thus, AI is becoming not just an auxiliary tool, but a strategic technology that changes the very paradigm of philological research and educational practices, enhancing their sustainability and adaptability. Artificial intelligence plays a key role in the development of modern philological projects, especially in times of crisis. It allows: to provide a deeper and larger analysis of language data; to create intelligent platforms for translation, linguistic expertise and text analysis; to support educational initiatives and humanitarian research in digital format; to form new models of interaction between science, education and society.

In periods of instability, the innovative potential of AI enhances the sustainability of philological projects, ensuring the availability of knowledge, flexibility in the organization of scientific and educational activities, and also helps to overcome barriers caused by social, economic and political crises.

Conclusions.

Therefore, artificial intelligence can be considered as a basic technology of digital philology and humanities of the future, capable of integrating innovation, efficiency and quality in the context of global challenges. If earlier AI was used mainly in the form of separate tools – machine translation systems, automated text analysis or speech technologies, today the key direction is the hybridization of artificial intelligence. Hybridization is understood as a synergetic integration of various paradigms/technologies [14] – symbolic (based on logic, rules [15], frames, semantic networks – formal ontologies [16]) and subsymbolic (classical machine learning, shallow & deep neural networks [17] with training on big data). Such unification allows to simultaneously take into account the structural features of the language and its statistical patterns, which significantly expands the research and practical possibilities of philological projects. Thus, in periods of instability and crisis, it is AI hybridization that provides a higher

level of sustainability, flexibility and reliability of R&D projects, opening up prospects for their long-term development even in conditions of global uncertainty.

Discussion.

In modern linguistics, there is a growing attention to language as a complex and dynamic system. Verification of critical phenomena in language systems helps to identify points of instability and transformation, while synergistic methods of analysis allow us to trace nonlinear patterns of language change and interactions [18]. These approaches are integrated into the systemic methodology of research in information linguistics under conditions of instability [19], which provides a holistic understanding of the development and adaptation of language in rapidly changing socio-technological contexts [20].

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