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Intelligent management of adaptive education in the era of turbulence

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Abstract. *Intelligent education management based on knowledge and data is a key tool for improving the effectiveness of education systems in the face of multidimensional crises. This approach ensures informed decision-making, risk forecasting and minimization of the negative impact of crisis phenomena. The use of analytics, big data and artificial intelligence allows you to adapt curricula, automate processes and increase the resilience of educational organizations. It also contributes to the development of an innovative culture and strategic thinking.*

Keywords: *innovative management, educational management, intelligent IT, crisis.*

Introduction.

In the current conditions of global economic and social instability, organizations are faced with growing uncertainty [1, 2], which is manifested through economic and political crises, rapid technological changes and unpredictable social processes [3-5]. These circumstances significantly complicate management functions and require managers to apply innovative approaches to decision-making, planning and organization of activities [6]. Traditional management methods in such conditions are not effective enough [7], which necessitates the introduction of innovative and intelligent management practices and relevant information technologies [8]. Innovative management involves the systematic introduction of new technologies, methods and strategies that allow organizations to quickly adapt to changes and increase their own competitiveness [9, 10]. At the same time, intelligent management focuses on the search, presentation and effective use of knowledge [11], [12], analytical tools, appropriate intelligent information systems and technologies [13], which ensure effective risk forecasting, assessment of opportunities and formation of strategic decisions.

Of particular importance in periods of turbulence is the ability of organizations to flexibly manage and respond promptly to changes, the integration of innovative digital and hybrid information systems [14], the application of machine learning methods/algorithms [15] and artificial intelligence systems [16] and for the analysis of big data and support of management decisions. No less important is the formation of an innovative intellectual organizational culture, strategic thinking and team interaction in crisis situations.

The Main Part.

The modern education system has found itself in a situation of multidimensional crisis phenomena, including economic instability, geopolitical and social upheavals, rapid technological changes and new challenges in the field of digitalization. These multi-crises create a high level of uncertainty, which significantly complicates traditional approaches to managing educational organizations and requires rethinking the methods of organizational, strategic and operational management. In such conditions, the effective functioning of the education system is possible only under the conditions of integration of innovative management practices and the use of data and knowledge as the main resource for decision-making.

Intelligent management of modern education, based on knowledge and data, involves the comprehensive use of analytical tools, big data, artificial intelligence systems and hybrid information platforms to support decision-making at all levels of management. Such an approach allows not only to predict risks and assess potential opportunities, but also to form adaptive strategies for the development of educational organizations, to promptly respond to changes in the external environment and to increase the efficiency of the educational process.

Of particular importance is the integration of digital and intelligent management systems, which provides process automation, analytical support for managers and increases the accuracy of decision-making. An important component is also the development of an innovative organizational culture that stimulates strategic thinking, collective responsibility and the ability of teams to quickly adapt in conditions of instability.

Thus, intelligent management of education based on knowledge and data is critically important in multi-crisis conditions, as it combines technological, organizational and analytical resources to ensure sustainability, competitiveness and high quality of the educational process. It creates conditions for the development of educational systems that are able to function effectively even in situations of high uncertainty and complex crisis challenges.

Conclusions.

Intelligent management of modern education based on knowledge and data is a key tool for increasing the efficiency of educational systems in multi-crisis conditions, as it ensures informed decision-making, risk forecasting and minimization of the negative impact of crisis phenomena. It contributes to the formation of flexible and adaptive curricula, integration of digital and hybrid platforms, process automation and analytical support of management decisions. In addition, intelligent management stimulates the development of innovative organizational culture, strategic thinking and

collective responsibility, which increases the stability, competitiveness and quality of educational institutions even in difficult crisis conditions.

Here are the main scientific and practical conclusions in this area of research in a structured way:

1. Increasing management efficiency: intelligent management based on knowledge and data ensures informed decision-making, allows you to effectively plan educational processes and quickly respond to changes in crisis conditions.

2. Forecasting and minimizing risks: the use of analytics, big data and artificial intelligence allows you to predict possible crisis situations, assess their impact on the education system and develop strategies to minimize negative consequences.

3. Flexibility and adaptability of educational processes: intelligent management systems contribute to the formation of adaptive curricula, hybrid learning formats and rapid restructuring of organizational processes under new conditions.

4. Innovative organizational culture: the implementation of knowledge and data-based management stimulates the development of strategic thinking, collective responsibility and the ability of teams to effectively interact in crisis situations.

5. Increasing the competitiveness of educational organizations: intelligent management ensures the sustainability of educational institutions by integrating modern technologies, process automation and analytical support for decisions, which contributes to maintaining high quality education even in multi-crisis conditions.

6. Synergistic effect of technology integration: the combination of digital platforms, analytical systems, AI and management practices creates a synergistic effect, increasing the efficiency, accuracy and effectiveness of management decisions.

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