

РОЗДІЛ VII. ПРОБЛЕМИ ОСВІТИ В УМОВАХ НЕВИЗНАЧЕНОСТІ

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Victor Bytsenko

Sumy State Pedagogical University named after A. S. Makarenko
ORCID ID 0009-0001-6764-5503

Olena Kozlova

Sumy State Pedagogical University named after A. S. Makarenko
ORCID ID 0000-0003-1626-5188

Vasyl Kryzhko

Berdiansk State Pedagogical University
ORCID ID 0000-0002-7144-7892
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PRACTICAL ASPECTS OF IMPROVING THE MANAGEMENT SYSTEM OF GENERAL SECONDARY EDUCATION INSTITUTIONS UNDER DIGITALIZATION CONDITIONS

The article examines practical aspects of improving the management system of general secondary education institutions under digitalization conditions. The aim of the study is to identify effective approaches for the digital transformation of managerial and educational processes in schools. The methodological basis includes concepts of digital and platform-based organizational management. Methods applied include systemic analysis, surveys of administrative and teaching staff, observation, and analysis of internal school documentation. The results demonstrated that the school's technical infrastructure is sufficient for digitalization, including computer workstations, high-speed internet and Wi-Fi, Google Classroom, Zoom, electronic educational resources, and a website. The survey of administrative staff (12 respondents) showed that no approved digitalization strategy exists, although 58.4% reported that it is being developed; 66.6% rated the current level of digitalization as «rather effective». Key obstacles include lack of funding (75%), weak technical infrastructure (41.7%), and insufficient staff digital competence (33.3%). The teacher survey (33 respondents) revealed high usage of digital tools: 100% use LMS and Zoom/Meet, 78.8% use messengers; 72.7% feel comfortable integrating digital technologies into teaching, and 60.6% improve qualifications through self-education. At the same time, 48.5% reported frequent technical failures, 69.7% noted insufficient technical capabilities, 78.8% highlighted teacher workload, 54.5% indicated low student motivation, and 30.3% cited insufficient administrative support. The practical significance of the study lies in the development of «The Digital Management Model of school» and «The School Analysis Framework for Digitalization Implementation», which can serve as tools for strategic planning and the introduction of digital changes in schools. The conclusions emphasize the need for a comprehensive approach, integrating managerial, educational, and technical components, and for continuous enhancement of digital competence among all participants in the educational process.

Key words: digitalization, educational institution management, digital platforms, digital tools, digitalization strategy, school development strategies, educational process, educational technologies.

Introduction. In the modern world, digital transformation has become an essential aspect of the development of any organization. This trend is justified by the rapid pace of technological progress and the global spread of digital innovations across all spheres of life. Within the framework of the new societal development strategy aimed at ensuring accessibility, transparency, and openness of data-digital technologies have become a key instrument for transforming and optimizing the management processes of educational institutions.

The digitalization of an organization, including that of a general secondary education institution, should be viewed as a further stage in the evolution of its structure, processes, culture, and corporate strategy (Strutynska & Markovych, 2019; Vial, 2019). Consequently, traditional management theories developed in the analog era must be adapted to meet the demands of the new digital reality. Effective digitalization is not merely the digitization of data or the automation of workplaces and systems. Above all, it represents digital transformation – a comprehensive process aimed at improving organizational efficiency through the implementation of profound changes in strategy, processes, and modes of activity made possible by the use of modern information and communication technologies and communication tools (Khaprova, 2022; Umants 2023).

The need to transform traditional, non-digitalized school management processes has become a significant challenge for today's educational leaders. This challenge highlights the urgency of finding innovative approaches and effective solutions that correspond to current social and technological demands. From the period of the COVID-19 pandemic to the present time, marked by wartime risks and instability, the issues of practical implementation of digitalization, digital literacy, and security within the digital educational environment have gained particular importance.

Analysis of relevant research. Considering the implementation of the national digitalization strategy in Ukraine, which is defined in a number of regulatory and legal acts – in particular, «*The Concept of Digital Transformation of Education and Science until 2026*» (Ministry of Education and Science of Ukraine, 2024), the Resolution of the Cabinet of Ministers of Ukraine «*Certain Issues of Digital Transformation*» (Cabinet of Ministers of Ukraine, 2024), and the Order of the Ministry of Education and Science of Ukraine «*On Approval of the Instruction on Maintaining Official Documentation in General Secondary Education Institutions in Electronic Form*» (Ministry of Education and Science of Ukraine, 2022) – educational

leaders face an important task. They are required to ensure the integration of digital tools into all aspects of institutional activity: from the educational process and administrative management to the development of an effective system of online communication.

The issues of educational digitalization have received considerable attention in the works of Ukrainian scholars, including V. Yu. Bykov, V. H. Kremen, and O. M. Spirin, who studied innovation management in education; V. I. Luhovyi, S. H. Lytvynova, L. M. Makarenko, and O. P. Pinchuk, who explored the modernization of educational management models; O. Ye. Hrechanyk, A. M. Hurzhii, O. I. Liashenko, O. M. Topuzov, and O. M. Shparyk, who examined the digitalization of the educational environment in general secondary education institutions; and I. A. Verbovskyi and N. V. Morze, who analyzed the digitalization of educational process management in higher education institutions.

However, despite the significant amount of research devoted to various aspects of educational digitalization, the issue of managing general secondary education institutions under conditions of digital transformation has not yet been comprehensively or systematically examined. A clear contradiction arises between the objective needs of the education system for the implementation of digital transformation processes and the lack of methodological support for managing general secondary education institutions within a digitalized educational environment.

This contradiction highlights the need for developing a scientifically grounded and practically oriented management model that would enable school leaders to effectively coordinate digitalization processes, ensure institutional adaptability, and promote the sustainable development of digital competence among all participants in the educational process.

Aim of the Study. The purpose of this paper was to analyze the practical aspects of improving the management system of general secondary education institutions under conditions of digitalization. The study aims to identify key directions, challenges, and opportunities for optimizing administrative processes, enhancing digital competencies of educational managers, and developing a sustainable digital culture that supports innovation and effective decision-making in the educational environment.

Research Methods. The research is based on a comprehensive methodological approach that combines of theoretical and empirical methods, including: theoretical analysis and synthesis – to review academic sources and normative documents related to digitalization in education;

comparative analysis – to evaluate different models and experiences of digital management implementation in Ukrainian and foreign schools; systematization and generalization – to identify key patterns and trends in the digital transformation of educational management; expert evaluation and observation (questionnaire survey) – to assess the level of readiness of school managers for digital transformation and their practical use of ICT tools in administrative processes.

Results. It is important to note that the digitalization of a school as an educational institution and the digitalization of its educational process share a common goal – to enhance the overall efficiency of the general secondary education institution. However, they differ in their content, focus, and scope of implementation. In general, the digitalization of the school as an organization creates the foundation for the effective implementation of the digitalization of the educational process by providing the necessary infrastructure, resources, and organizational framework. In turn, the digitalization of the educational process fills this foundation with high-quality educational content, innovative teaching methods, and interactive learning technologies.

Considering the key principles of the concept of digital management, the methodology and principles of the digital transformation process, as well as the global and regional preconditions of digital societal changes (Cabinet of Ministers of Ukraine, 2024; Vial, 2019), one of the strategic directions of modern scientific research should focus on developing approaches to the implementation of digital transformation within educational institutions.

One of the effective solutions to this scientific challenge is the creation of a model of digital management for educational institutions, which would serve as a «*roadmap*» for adapting schools to the realities of the digital era. Such a model would ensure high-quality education and effective management under digitalization conditions, while simultaneously promoting equal opportunities and inclusive access for all participants in the educational process.

The methodological foundation of the proposed «*The Model of Digital Management for General Secondary Education Institutions (GSEI)*» is based on the concepts of platform-based management and digital organizational governance. In this context, the digital management model of an educational institution is presented as a comprehensive system that integrates modern digital tools, technologies, and management processes. Its main purpose is to

ensure effective administration, optimization of educational and operational processes, and to support high-quality communication among all participants in the educational environment. The structural components of the proposed Model include: a digital environment (such as an LMS platform or an ERP system), digital infrastructure, digital solutions for managing resources, personnel, and information, as well as monitoring and analytics tools. Within this conceptual framework, the central element that unites all managerial, educational, and administrative processes into a single ecosystem is the digital platform.

When selecting the core component of the school's digitalization model, it is important to consider its functionality and compliance with several essential criteria, including:

- modularity and integration with other digital resources;
- transparency and accountability of processes;
- openness and accessibility of information;
- data and process analytics;
- automation of routine operations, administrative and production tasks (such as class scheduling, document management, reporting, and notifications), which significantly reduces staff workload and increases management efficiency.

Such an approach allows the identification of the following key modules within the structure of the Model:

- *organizational and administrative Module* – responsible for planning, documentation, workflow, and coordination of institutional processes;
- *information and communication Module* – ensuring efficient internal and external communication, feedback systems, and digital interaction among stakeholders;
- *educational Module* – supporting the organization, monitoring, and evaluation of the educational process through digital tools and platforms;
- *infrastructure Module* – providing technological support, data protection, and maintenance of digital resources.

The integration of these modules forms a unified digital ecosystem that enhances managerial flexibility, strengthens data-driven decision-making, and promotes sustainable institutional development under the conditions of digital transformation.

The analysis of management systems in general secondary education institutions (GSEI) aimed at implementing a digitalization program requires

the identification of clear evaluation criteria. Considering the proposed «*The Model of Digitalization for GSEI*», such criteria can be defined based on its main components and modules. Accordingly, the determination of key directions for the implementation of digital innovations and the methods of their realization should be grounded in systemic analysis and should take into account the evaluation of educational, technical, organizational-informational, and communication components.

The practical implementation of the proposed theoretical «*The Model of Digitalization for GSEI*» can be represented by the development of a «*The School Analysis Scheme for the Implementation of a Digitalization Program*», which can then be applied to a specific educational institution. This Scheme serves as a comprehensive algorithm for strategic analysis and planning aimed at facilitating the introduction of digitalization within a school. It is structured and encompasses all key aspects of the digitalization process, including technical, organizational, educational, financial, and human resource components.

For the purpose of practical testing of the developed «*The Model of Digitalization for GSEI*» and «*The School Analysis Scheme for Digitalization Implementation*», we conducted an empirical study of the organizational activities in one of the general secondary education institutions in the city of Sumy. The research included a survey of the administrative and teaching staff, as well as an analysis of the institution's internal documentation.

The results of the analysis of the school's material and technical base indicate that its current condition is sufficient for implementing the institution's digital transformation. The school already has an established technical infrastructure (computerized workstations, a high-speed internet and Wi-Fi network), a functioning digital platform (Google Classroom), the use of a video communication service (Zoom), interactive learning formats, electronic educational resources, a website, and feedback channels through email and a contact chat form on the website.

The analysis of the survey conducted among the administrative staff (12 respondents) shows that the institution does not yet have an officially approved digitalization strategy, although most respondents (58.4%) stated that it is currently being developed. About 33.3% of respondents found it difficult to determine the state of the strategy, which may indicate insufficient communication or training in this area. Only 16.7% of respondents consider the school's digitalization «very effective», while 66.6% rated it as «rather effective», suggesting the presence of certain

issues. Most respondents (58.3%) are satisfied with the school's technical base, whereas others (41.7%) consider it insufficient.

The absence of administrative staff who have never received digital skills training can be considered a positive factor for the digitalization process. However, regular training sessions are necessary, as 25% of respondents reported having only a one-time experience of such training.

In digital management and teaching, the most actively used tools are electronic communication systems (100%) such as messengers, chatbots, email, and the school website. Google Docs (83.3%) – particularly for scheduling – is the main tool for organizational processes, and online learning platforms are used by 91.7% of respondents.

Regarding communication about digitalization, the most common format for meetings with the entire school staff is once a year (83.3%), while regular consultations occur less frequently (41.7%), which may lower staff awareness. Only 16.7% of parents are involved in regular discussions about digitalization; most (41.6%) participate once a year, and 25% «upon request», which may indicate insufficient engagement with the parent community.

According to the obtained results, the school's management identified the main obstacles to implementing new digital technologies as the lack of funding (75%), weak technical infrastructure (41.7%), and the insufficient level of digital competence and motivation among staff (33.3% each).

A summary of the administrative staff survey results allows us to conclude that digitalization at the school is well developed but still requires improvement. Specifically, it is necessary to: approve a School Digitalization Strategy; introduce key components for monitoring the educational process (such as electronic gradebooks); expand the digital infrastructure; and establish regular consultations with staff and parents regarding digital processes in the institution. The high level of engagement in digital skills training (75% of staff receive regular training) and the active use of electronic communication tools and online platforms for organizational management can be considered positive achievements.

The results of the teacher survey (33 respondents in total) revealed positive trends in the digitalization of the educational process from the teachers' perspective. These include: 1) a high level of digital tool usage – all respondents (100%) use LMS platforms (Google Classroom) and video communication tools (Zoom/Meet), which demonstrates a well-integrated practice of using modern platforms. A significant portion (78.8%) also use messengers (Viber/Telegram), which facilitates communication; 2) a sufficient

level of teachers' readiness for digitalization – 72.7% of respondents report feeling comfortable integrating digital technologies into their teaching. Self-education (60.6%) is the main source of professional development, indicating high motivation for improvement; 3) awareness of the importance of digitalization – most teachers (57.6%) note that digital technologies significantly enhance learning opportunities. They identify the most important advantages as the ability to teach from any location (87.9%), reduction of paperwork (87.9%), and process automation (78.8%). At the same time, the analysis of teachers' responses revealed several existing technical and organizational issues in the educational process. Teachers reported that frequent technical failures (48.5%) and insufficient technical capabilities (69.7%) affect the effectiveness of their use of digital tools. This is reflected in their view that the main condition for successful digitalization is the improvement of the school's technical infrastructure (75.7% of responses).

According to the survey, the main factors reducing the effectiveness of digitalization include teachers' heavy workload (78.8%), low student motivation to use digital technologies (54.5%), and insufficient administrative support (30.3%). Overall, the teaching staff of the school rate the effectiveness of implemented digital technologies positively, with 54.5% considering the school's digitalization to be «rather effective».

Conclusions. The study of the features of managing a general secondary education institution under digitalization conditions, based on the developed «*The Model of School Digitalization*» and the implementation of «*The School Analysis Framework for Digitalization Program Implementation*», which relies on clearly defined criteria for assessing the current state of the institution's digital transformation, has proven to be an effective and practical tool for improving the process of digital transformation – particularly the educational process itself. This approach allows for a comprehensive evaluation of the institution's capabilities and needs, the identification of best practices, and the determination of problematic areas that become priority tasks for the future development of the educational institution. Our study confirmed that the digital transformation of a general secondary school is a complex, multidimensional process requiring a systematic approach that integrates managerial, technical, and educational components.

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SUMMARY

Биценко Віктор, Козлова Олена, Крижко Василь. Практичні аспекти удосконалення системи управління ЗЗСО в умовах цифровізації

У статті розглядаються практичні аспекти удосконалення системи управління закладом загальної середньої освіти (ЗЗСО) в умовах цифровізації. Мета дослідження полягає у визначенні ефективних підходів до цифрової трансформації управлінських і освітніх процесів закладу освіти. Методологічною основою роботи є концепції цифрового та платформного управління організацією. В дослідженні використовувалися методи системного аналізу, анкетування, спостереження та аналіз внутрішньої документації школи.

Встановлено достатню наявну технічну базу для впровадження цифрових технологій в освітній процес у ЗЗСО та інструментів електронної комунікації: комп'ютеризовані робочі місця, швидкісний інтернет, Wi-Fi, цифрова платформа Google Classroom, Zoom, електронні освітні ресурси та веб-сайт закладу. Анкетування адміністративного персоналу (12 респондентів)

показало, що 67% опитаних оцінюють цифровізацію закладу як “скоріше ефективну”. Основними перешкодами для цифровізації виробничих процесів названо відсутність фінансування (75%), слабку технічну інфраструктуру (41,7%) та недостатню цифрову компетентність персоналу (33,3%). Анкетування педагогів (33 респонденти) показало високий рівень використання ними цифрових інструментів: 100% застосовують LMS та Zoom/Meet, 78,8% – додатково і месенджери; 72,7% педагогів відчують легкість інтеграції цифрових технологій у навчання, 60,6% підвищують кваліфікацію через самоосвіту. Водночас 48,5% відзначили часті технічні збої, 69,7% – недостатні технічні можливості, 78,8% – перевантаженість, 54,5% – низьку мотивацію учнів, 30% – недостатню підтримку адміністрації.

Практичне значення проведеного дослідження полягає у створенні “Моделі цифрового управління ЗЗСО” та “Схеми аналізу школи для реалізації програми цифровізації”, які можуть слугувати інструментами стратегічного планування і впровадження цифрових змін у закладах освіти. Отримані результати підкреслюють необхідність комплексного підходу до цифровізації, інтеграції управлінських, освітніх і технічних компонентів та регулярного підвищення цифрової компетентності учасників освітнього процесу. Перспективи подальших досліджень пов’язані з удосконаленням моделі цифрового управління та оцінкою її впливу на якість освіти і ефективність управління в різних типах закладів освіти.

Ключові слова: цифровізація, управління закладом освіти, цифрові платформи, цифрові інструменти, стратегія цифровізації, стратегії розвитку ЗЗСО, освітній процес, освітні технології.

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Тетяна Григоренко

Національний університет біоресурсів і природокористування України
ORCID ID 0000-0002-4616-6853

Ірина Гонца

Уманський державний педагогічний університет імені Павла Тичини
ORCID ID 0000-0001-9848-045X
DOI 10.24139/2312-5993/2025.04/239-254

ІННОВАЦІЙНІ ТЕХНОЛОГІЇ ТА МЕТОДИ ФОРМУВАННЯ ПРАВОПИСНОЇ КОМПЕТЕНТНОСТІ ЗДОБУВАЧІВ ВИЩОЇ ОСВІТИ

Дослідження спрямовано на обґрунтування необхідності формування правописної компетентності (ПК) майбутніх фахівців у системі вищої освіти, зумовленої зростанням ролі письмового мовлення і модернізації правописних норм. Констатовано, що ПК є інтегративною, функціональною здатністю, що критично впливає на професійний імідж і якість фахової діяльності, вийшовши за межі традиційного розуміння «грамотності».

У межах проведеного дослідження уточнено структурну організацію ПК, що охоплює когнітивний, діяльнісний, мотиваційно-ціннісний і комунікативно-прагматичний компоненти. Визначено критерії її сформованості, серед яких домінантними є нормативність, свідомість, функціональність і здатність до самокорекції. Систематизовано інноваційні методи навчання, що утворюють цілісну дидактичну модель формування професійної компетентності: цифрові (ІКТ-