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Analysis of modern approaches to the management of educational institutions in conditions of digitization (Ukrainian case)

Análisis de los enfoques modernos de la gestión de instituciones educativas en condiciones de digitalización (caso ucraniano)

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Abstract

The purpose of the article is to analyze modern approaches in the management of educational institutions of Ukraine under the conditions of digitalization. The research used general scientific methods. The results of the study highlight the impact of total digitalization on the management of educational institutions, the main trends in the management of educational institutions in conditions of digitalization, approaches to

modern management of educational organizations. The conclusions emphasize that military action wreaks havoc on the management of educational institutions, so the effectiveness of any approach will need to be tested in peacetime as well.

Keywords: management, educational institutions, approaches, Ukrainian case, transformations.

Resumen

El propósito del artículo es analizar los enfoques modernos en la gestión de las instituciones educativas de Ucrania en las condiciones de digitalización. La investigación utilizó métodos científicos generales. Los resultados del estudio destacan el impacto de la digitalización total en la gestión de las instituciones educativas, las principales tendencias en la gestión de las instituciones educativas en condiciones de digitalización, los enfoques de la gestión moderna de las organizaciones educativas. Las conclusiones enfatizan que la acción militar causa estragos en la gestión de las instituciones educativas, por lo que la efectividad de cualquier enfoque también deberá probarse en tiempos de paz.

Palabras clave: gestión, instituciones educativas, enfoques, caso ucraniano, transformaciones.

1. Introduction

The development of the modern information society opens new horizons for further social evolution, but it also poses difficult questions related to the penetration of high technology into our lives. The field of education was on the edge of transformation processes, as the COVID-19 pandemic and the total quarantine restrictions it led to actualize the problem of using distance learning, electronic document circulation, quality self-education, use of digital resources. These problems created a demand for additional competencies and a general change in the educational paradigm, for which not all higher education institutions, teachers, and students were ready.

Especially the digitalization of the educational process became relevant in the reality of Ukraine because the consequences of the global pandemic since February 2022 were added to the consequences of open Russian military aggression. In conditions of war, traditional forms of education were impossible, so at the state level, it was decided to continue using distance learning, and from September 2022 - the mixed form, which combined the processes of forming practical skills and theoretical knowledge. The digitalization of education was the only possible answer to the military challenge and the impossibility of returning to conventional education.

For this reason, the characteristic features of the Ukrainian experience remain an important research problem, which is important for understanding the possibilities and further prospects for the use of digitalization in education. And the focus is on the

possibilities of management of educational institutions, as the ways of management in crisis conditions clearly demonstrate the advantages, disadvantages, and opportunities for further implementation of technological solutions in the field of education.

The purpose of the article is to analyze current approaches in the management of educational institutions in Ukraine under the digitalization.

Therefore, the important issues that need to be resolved are: analysis of digital management in education, research of the main trends of higher education management through the prism of digitalization changes, definition of the main approaches in the management system of modern education

2. Theoretical Framework or Literature Review

Monographs and articles by contemporary authors have contributed to the study of digital education management as a holistic, multifactorial process that affects other components of the educational system. For example, Audu (2022) in his study characterized the importance of entrepreneurship education and vocational education in educational administration. Michael & Elser (2019) in their empirical article characterized the main models of waste management in educational activities. The problem of perspective-taking and the effectiveness of communicative interaction in educational management has been identified by Kosonen & Ikonen (2019). At the same time, Jordan et al. (2022) characterized typical means, models of transition to digital platforms for organizing learning administration activities.

Digital record-keeping is a component of educational administration in the context of large-scale digitalization. Consequently, the empirical works of authors who have investigated the effectiveness of the use of digital document management in education are also important for this article. In particular, Abaci (2022) described the key organizational aspects of shaping the schemes and means of functioning digital documents in a market-driven environment. Regla & Marquez (2020) investigated key types of digital document interactions in organizational systems using innovative cloud services. Lvovich et al.'s (2021) study also focused on analyzing the formation of key optimization decisions regarding the expedient organization of digital institutional support in education. At the same time, Ridei (2021) through the prism of global challenges analyzed the peculiarities of professional competence formation in educators.

For this article, the works of modern Ukrainian authors, in which the importance of digitalization of education in Ukraine is characterized, are important. In particular, Chaplay (2018) studied the innovative potential of education management in Ukraine. She notes that the Ukrainian system needs to develop special programs that could provide a real opportunity to assess the actions of the administration aimed at transforming and improving educational services. At the same time, Batareina & Korobchenko (2022) detailed the role of public policy in the system of education management. Tsekhmister et

al (2022) described current trends and current problems in education manager training. Demchenko et al. (2021) studied the importance of information and communication technologies in the process of professional development of modern teachers.

However, so far there was no synthetic study, which thoroughly characterized the features of digital learning and its digital management based on the realities of Ukrainian higher education.

3. Methodology

Methodological approaches implemented in the framework of this study come from the practice of research analytical search and correlation determination of the most appropriate solutions that have a strong potential for implementation taking into account the peculiarities of the functioning of the education system in Ukraine. For this reason, both general scientific and pedagogical methods of research are used in the work. Among the general scientific we allocate analysis, synthesis, induction, and deduction. The use of these theoretical methods allowed us to carefully consider the main subject and highlight the important elements for the study. At the same time, based on concretization the analysis of the process of management of educational services through the prism of modern digital changes is presented.

The key was the use of a comparative method based on which a comparative analysis of modern approaches to quality management of educational services was carried out. At the same time, based on the predictive method of research outlined the possible ways of further development of digitalized management systems in higher education institutions. The outlined tools and methods of information-analytical research, proposed for use in this work, are the most appropriate for the introduction of the data obtained in the practical plane. These data can be recombined and adapted to the specific territorial conditions and realities of education development in Ukraine.

The main empirical materials are documents of legislative type, relating in general to the digital organization of education:

The main empirical base of this study is legislative-type materials, in particular:

1. Strategy of higher education development in Ukraine. (Ministry of Education and Science of Ukraine, 2022).
2. Order of the Ministry of Justice of Ukraine on the procedure of work with electronic documents in the office work.

This study was implemented in several stages. The first stage was an analysis of modern literature, outlining the little-studied problems, the second - influence of digitalization of education on the features of its management, the effectiveness of the project approach in the management of an educational institution was determined.

4. Results and Discussion

The main aspects of digitization in the education management system: principles, mechanisms

Total digital transformation in the field of higher education affects the formation of fundamental changes in the key principles of organization and the construction of the educational process (Abaci, 2022). This situation requires university management to develop new courses and learning and organizational materials. Although digitization of educational materials is the current educational trend, the active pace of total digitalization affects the development of continuous improvement and modernization of the ways of transferring experience and knowledge (Ministry of Education and Science of Ukraine, 2022). Consequently, the changes in the main paradigms of higher education as a result of digitalization are realized not just on the individual level, but also on the institutional level (Order No. 1886/5, 2014). For this reason, traditional educational institutions will have to compete not only with other distance education institutions but also with informal resources and platforms for obtaining the desired competence. Consequently, in order to maintain demand and credibility, higher education institutions need to focus their main role on finding and implementing new educational forms of management tools and operational modernization.

Education quality management is a large-scale problem that requires scientific and practical solutions. The quality of higher education should be investigated, evaluated not only by using pedagogical parameters but also by factors that are outside the industry of education and are adjusted by categories such as quality of life, the standard of living, etc. (Tsekhmister et al., 2022). The process of educational quality management is a purposeful, comprehensive influence on the state of learning and its basic elements by highlighting specific standards of its course by ways of controlling, planning, ensuring, and improving its quality (Kosonen & Ikonen, 2019). This occurs in order to merit the greatest compliance with the set of features of its functioning and the results of the analysis of the requirements of service consumers.

For this reason, we note that the management of educational services through digitalization is the implementation of purposeful impacts of the object of management on the subject of management, using a variety of innovative methods and means of IT technology in order to ensure the quality of education.

At the same time, the management of educational services in higher education institutions, which takes place through the formation of quality monitoring systems in the institution, based on certain indicators that characterize the state of provision of quality educational services (Demchenko et al., 2021). This system also includes all the key aspects of the education management of an educational institution. We are talking about the implementation of such components as educational, educational, organizational, methodological, extracurricular, financial, economic, medical, etc. However, most modern

scientists note that the key factor in organizing the management of educational services is the creation of a unified information and educational space. The latter is disclosed from the following main positions: operational, technological, organizational (See Table 1).

Table 1.
Key principles for the formation of the Common Information and Education Space

Key principles for the formation of the Common Information and Education Space		Key principles for the formation of the Common Information and Education Space
1.	Operational	The totality of different kinds of information used in the educational process); technological
2.	Technological	The combination of repositories of information tools, their use, accounting, and maintenance of telecommunications systems that operate based on common principles and basic rules that ensure the information unity of all participants in the educational process
3.	Organizational	A set of system units that implement the content and maintenance of information resources

Authors' development

The structural model of higher education institution management distinguishes several mechanisms for managing the development of the institution: the mechanism of development of teaching staff, personnel mechanism, mechanism of payment, mechanism of qualification, mechanism of educational content development, etc. (See Table 2).

Table 2.
The main mechanisms for managing the development of a higher educational institution

The main mechanisms for managing the development of a higher educational institution	
Development of teaching staff	Pedagogical staff is a key factor in the quality functioning of education, the main link that determines the effectiveness of the management of active systems. Separately, the effectiveness of the development of the institution as a whole directly depends on the activity and activities of teachers.
Personnel management mechanism	Criteria for comparing the quality of human capital of employees of educational institutions provide benchmarks for modeling the mechanism of state management of higher education development.
Competency modeling mechanism	Mastery of modern digital competencies, compliance with modern educational standards

Mechanism of educational personnel qualification	It is important to develop methods for the formation of professional development programs for educators based on the results of their professional traits and performance assessment. The legislation of Ukraine in order to stimulate the quality of innovative technologies in the educational system, the introduction of certification of teaching staff, which should be implemented by internships, self-assessment, and study of practical experience.
Mechanisms for the development of educational content and learning environments	Recognizing the global nature of the mechanism of state management of the development of the learning environment, we will limit ourselves to highlighting only three of its important elements for management: a mechanism for preserving the health of students, a mechanism for supporting the state language, a mechanism for managing informatization in education.
Mechanism of educational policy	A course of action, adopted and by the government or other organization, which defines the purpose, methods, techniques, and basic programs used in education.
Mechanism of assessment	We are talking about systematic objective monitoring to make new management decisions.

Authors' development

Trends in the management of higher educational institutions in the context of digitalization

Major current trends in the management of educational institutions demonstrate a situation in which the integrated management structure is gradually abandoning its leading role and being replaced rather quickly by other alternative management models (Das et al., 2021). In particular, even before the global pandemic and its associated quarantine restrictions, educational institutions had strong arguments to pursue more adaptive policies. Financial uncertainties, increased competition, and globalization processes were becoming the basis for a significant renewal of management approaches under rather changing conditions.

Many European educational institutions are now using strategic transformation programs, responding to tangible changes in educational trends, funding policies and in order to improve their own competitive academic advantages. Elasticity in organizational structure has become a fundamental discontinuity in contemporary educational management (Audu, 2022). Rather actively, theories of organizational flexibility began to be used as early as the 1970s and 1980s, as part of more open management models (primarily relevant to institutions of higher education).

The ability of organizations to introduce changes, to transform in accordance with the challenges of external and internal environments is an important component -

organizational flexibility (Arifin, 2022). The flexibility of organizational structures is usually demonstrated by the time dimension, scope, purposefulness, area of influence.

The tools of management of educational institutions in conditions of uncertainty (in the case of Ukraine) must comply with the following principles:

1. Making managerial decisions in a timely manner and communicating them to employees.
2. Comprehensive approach to the solution of crisis moments.
3. Differentiation in management of different structural parts of the institution.
4. Consistency of decisions at all levels.
5. Use of situational managerial staff appointments.

So, the main tools that influence the formation of organizational structures in the educational sector of higher education in the current conditions are available in the Ukrainian realities even during the war.

Approaches to Modern Management of Educational Institutions in universities

The management of educational institutions takes place with shared responsibility, compliance with established standards, legislation, and other normative documents, responsible work of academic staff and administration (Lvovich et al., 2021). Therefore, the necessity and relevance of change is still tied to transformations in organizational management structures, replacing firm bureaucratic subordination with the introduction of autonomy of educational institutions. The effectiveness of organizational structures of educational institutions depends on the integrated work of common structural units, internal cooperation, opportunities to delegate authority, etc.

Recent trends in the management of educational institutions in European countries are based on the use of the project approach as the main latest organizational structure (Chaplay, 2018). The transfer of managerial rights in the educational field stands out in such phenomena as the change of tasks, the importance of the head, and the tasks of the managers. For the European project approach are inherent features of the gradual transition from formalized structures, the application of new principles of distribution of work tasks, the transfer of authority, the renewal of mechanisms of coordination within the team. In particular, certain new specific tasks are outlined and defined in the form of projects, the formation of universal responsibilities, etc. The project approach looks the most suitable for use in the Ukrainian realities.

The implementation of the project approach leads to a thorough study of the external environment, conducting market research in the market of the educational industry. The use of such a management model largely depends on the contingent that the educational institution is focused on (Jordan et al., 2022). Designing is directed to the formation of renewed organizational relationships covering complex issues of labor organization, production, or management. In other words, the use of organizational structure design,

the establishment of cooperation between individual units and subsystems require new management solutions, which will be significantly different from those previously established in Ukraine (Batareina & Korobchenko, 2022).

Coherent management of educational personnel at the level of educational institutions cannot be accomplished without quality organizational design. For better management in educational institutions, there should be a separate administrative unit - a special unit whose task should be the organizational implementation of projects, constant monitoring, and permanent improvement of the existing educational process (Asanova, 2020). Without delving into the strategic details and tactics of the functioning of such a unit in the management structure of educational institutions, let us define the main results of its potential work, which are directly related to human resource management. In particular, we define six main components (See Table 3)

Table 3.

The main components of the project approach in human resource management at an educational institution

The main components of the project approach in human resource management at an educational institution	
Component	Definition
1. Formation of professional-qualified and psycho-physiological requirements to the personnel	Performed through the recruitment of a professional recruiting service capable of attracting specialists in their field to teach and administer.
2. Training and retraining services for personnel	The implementation of projects requires employees to quickly adapt to new working conditions, create new training programs, and update the existing methodological base.
3. Personnel service	The implications of organizational design involve the entire staff to find the greatest and most effective ways to solve problems.
4. Decent wages	The results of the project tasks must become the unit of payment.
5. Work discipline	The relationship between the organization of the educational process and personnel management requires discipline, control of which is delegated to the human resources service.
6. Occupational health and safety care	The results of military design must necessarily take into account the aspect of safety.

Developed by the authors of the article

So, the system of management of learners in a global pandemic had transformed by COVID-19. For this reason, in education to improve the coordination and integration of management decisions should be used to optimize the management structure based on project management. The management model of higher education institutions has operated for many years under conditions of vertical integration largely due to the need for efficiency when the direct involvement of all participants in the educational process

was central to the activities of the institution. However, it is not difficult to see that the project approach is best implemented in higher education and vocational education. The structure of such institutions makes it possible to allocate additional human resources, to make quick and high-quality updates to the educational process, and to respond to today's challenges.

At the same time, Michael & Elser (2019) articulated patterns of other developmental models. Among the key findings, they highlighted the dependence of educational institutions on legislative and generally regulatory frameworks and the lack of one unified approach. According to them, educational institutions must permanently adapt to the changing conditions of today, and the initiative in management decisions must be based on rigorous team decisions (Michael & Elser, 2019, 354). If this is not done, competitiveness will have steep downward trends, with generally devastating consequences for the quality of learning and overall educational performance.

The system-methodical approach to the management of educational institutions (as it is seen at universities) and the education industry as a whole is based on the implementation of a quantitative way to assess the workload of managers in the administrative system, research and teaching staff, performers, support staff, etc. (Regla & Marquez, 2020). In fact, proponents of the system-methodical approach in management provide for the motivation of the economic need for a certain number of employees, justifying their conclusions by taking into account the workload and functions during the whole working day. Proponents of this approach pay special attention to the qualitative method of transforming the methods of management bodies, first of all, the managerial apparatus, methodological training centers, organizational and managerial departments, executives, etc. (Guo et al., 2021). Also in their focus are the updated functions concluded in accordance with the innovative requirements of social development. Thus, the development of organizational tasks for the reorganization of the management system of educational institutions will involve the transformation of organizational work of management structures, where the emphasis will be on the performance of current and regulated functions.

5. Conclusions

The management system of educational institutions is based on certain indicators that determine, among other things, the quality of the educational services provided. Based on this fundamental concept, the management system should cover all the main aspects of educational management. It concerns the implementation of such components as teaching, educational, organizational, methodological, extracurricular, financial, economic, medical, etc. An important factor in organizing the management of educational services is the formation of a unified information and educational space, which reveals itself in operational, technological, and organizational planes. Under martial law in Ukraine, trends towards Europeanization of the management of educational institutions also prevail. In particular, the use of individual tools: timely decision-making and implementation, integrated approach, differentiation, consistency of decisions, the use of

situational management appointments. The most promising in management looks project approach, based on a comprehensive issue of the organization of labor, production, or management, the use of designing the organizational structure, the establishment of cooperation between individual units and subsystems.

At the same time, it should be remembered that military action brings chaos to the management of educational institutions, so the effectiveness of any approach will need to be tested in peacetime as well.

6. Bibliographic references

- Abaci, K. (2022). The efficiency of electronic document management systems: a case study. *Science, Education and Innovations in the context of modern problems*, 5(3), 75–86. <https://doi.org/10.56334/sei/5.3.7>
- Arifin, N. Y. (2022). Document Management System in Ibnu Sina Middle School Administration. *Engineering and Technology International Journal*, 4(1), 38–44. <https://doi.org/10.55642/eatij.v4i01.165>
- Asanova, L. (2020). Organizational and structural support of document circulation in the national anti-corruption bureau of Ukraine. *Knowledge, Education, Law, Management*, 2(4), 3–8. <https://doi.org/10.51647/kelm.2020.4.2.1>
- Audu, A. (2022). Role of entrepreneurship education and vocational education in the management of education. *Journal of Advances in Education and Philosophy*, 6(7), 377–382. <https://doi.org/10.36348/jaep.2022.v06i07.004>
- Batareina, I., & Korobchenko, A. (2022). State policy of Ukraine in the field of education. *Cuestiones Políticas*, 40(73), 919–936. <https://doi.org/10.46398/cuestpol.4073.53>
- Chaplay, I. (2018). Modern potential of state education management in ukraine. *Electronic Scientific Publication "Public Administration and National Security"*, 1. <https://doi.org/10.25313/2617-572x-2018-1-4123>
- Das, M., Tao, X., & Cheng, J. C. P. (2021). A secure and distributed construction document management system using blockchain. In *Lecture Notes in Civil Engineering* (pp. 850–862). Springer International Publishing. https://doi.org/10.1007/978-3-030-51295-8_59
- Demchenko O.P., Lazarenko N.I., Liubchak, L.V. (2021). Information and communication technologies in the preparation of future teachers to work with gifted children. *Information technologies and teaching aids*, 86(6), 123-143. URL: <https://journal.iitta.gov.ua/index.php/itlt/article/view/4570/1947>
- Guo, F., Jahan, C. T., & Turkan, Y. (2021). Electronic document management systems for the transportation construction industry. *International Journal of Construction Education and Research*, 17(1), 52–67. <https://doi.org/10.1080/15578771.2019.1685612>
- Jordan, S., Zabukovšek, S. S., & Klančnik, I. Š. (2022). Document management system – A way to digital transformation. *Our Economy*, 68(2), 43-54. <https://doi.org/10.2478/ngoe-2022-0010>

- Kosonen, P., & Ikonen, M. (2019). Trust building through discursive leadership: A communicative engagement perspective in higher education management. *International Journal of Leadership in Education*, 1–17. <https://doi.org/10.1080/13603124.2019.1673903>
- Lvovich, I., Lvovich, Y., Preobrazhenskiy, A., Preobrazhenskiy, Y., & Choporov, O. (2021). Optimization of the subsystem for the movement of electronic documents in educational organization. 2021 1st International Conference on Technology Enhanced Learning in Higher Education (TELE). (pp.328–332). <https://doi.org/10.1109/TELE52840.2021.9482612>
- Michael, J., & Elser, N. (2019). Personal waste management in higher education. *International Journal of Sustainability in Higher Education*, 20(2), 341–359. <https://doi.org/10.1108/ijshe-03-2018-0054>
- Ministry of Education and Science of Ukraine. (2022). Strategy for the development of higher education of Ukraine for 2022-2023. <https://mon.gov.ua/ua/news/opublikovano-strategiyu-rozvitku-vishoyi-osviti-v-ukrayini-na-2022-2032-roki>
- Order No. 1886/5. On procedure for working with electronic documents in records management and preparation for archival storage. Ministry of Justice of Ukraine, 11.11.2014. <https://zakon.rada.gov.ua/laws/show/z1421-14#Text>
- Regla, A.I., & Marquez, P.S. (2020). Workplace Document Management System Employing Cloud Computing and Social Technology. *Computational Science and Technology. Lecture Notes in Electrical Engineering*, 603, 415–423. https://doi.org/10.1007/978-981-15-0058-9_40
- Ridei, N. (2021). Analysis of professional competencies in the characteristics of the teacher of the future: global challenges of our time. *Futurity Education*, 1(1), 22–32. <https://doi.org/10.57125/FED.2022.10.11.3>
- Tsekhmister, Y., Malatsai, I., Nechitailo, I., Yemelyanova, O., Korol & Statsenko N. (2022). Current trends and current problems of training educational managers. *Financial and Credit Activity Problems of Theory and Practice*, 6(41), 556–563. <https://doi.org/10.18371/fcaptp.v6i41.251532>