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FEATURES OF ENSURING INFORMATIZATION OF HIGHER EDUCATION INSTITUTIONS IN THE CONTEXT OF DIGITAL CHANGES

The article is devoted to the study of the features of ensuring informatization of higher education institutions in the context of digital changes. Scientific approaches to the disclosure of the essence of the definitions of informatization and digitalization are analyzed. In the article, the main internal and external obstacles and threats to the introduction of digital technologies in educational and scientific processes are analyzed. Among the external obstacles, the following are highlighted: high speed of ICT change, uneven access of higher education institutions to modern ICT, the presence of ethical problems of the use of ICT, insufficient awareness of teachers about the directions of using ICT in vocational training, imperfect regulatory framework for the use of ICT in education, cyberattacks, military actions. Internal obstacles include: lack of motivation and responsibility of teaching staff in improving digital skills, insufficient funding for informatization, insufficient training of teaching staff in modern digital technologies, different abilities of teachers in the direction of using ICT, lack of digital technological equipment and software, use of digital skills by students for fraud, insufficient level of digital skills of students. The relationship of obstacles to informatization with its directions, causes of occurrence and levels of responsibility for elimination has been studied.

Keywords: higher education institutions, digitalization, informatization, digital technologies, obstacles, threats, digital changes.

Fig.: 2. References: 12.

Problem statement. Thanks to the accelerated development of information and communication technologies (ICT), the digital economy as a component of the digital society has become a reality, however, it has also caused the emergence of a number of problems, one of which is the need in the labor market for specialists who not only have the appropriate digital skills and knowledge, but are also ready for lifelong personal development. A decisive role in the training of such specialists is played by higher education institutions (HEIs), which must be ready for global digitalization. To adapt to digital technological progress, higher education institutions must update their strategies, introduce technological innovations and optimize the use of the latest digital technologies in order to strengthen their competitive position in the market of educational services.

Analysis of recent research and publications. The problems of ensuring the digitalization of higher education institutions, the use of digital technologies in their activities are devoted to the scientific works of the following scientists: Blanchard K., Kyvliuk O. P., Makarenko L. L., Noskova M. V., Vember V. P., Zigarmi D., Zigarmi P. and others.

Identification of unexplored parts of the general problem. Despite the existing research on these issues, further analysis requires the specifics of ensuring the informatization of higher education institutions in the context of digital transformations.

The purpose of the article. The article is aimed at studying the features of ensuring informatization of higher education institutions in the context of digital changes.

Presentation of the main material. Informatization of higher education institutions in modern conditions is a relevant area of scientific research, since in the conditions of the digital economy the role of information and communication technologies can hardly be overestimated. To date, higher education in Ukraine has not yet reached the desired level of informatization,

as evidenced by a study conducted by the audit and consulting company BDO, according to which, according to the results of a survey of about 60 Ukrainian educational institutions, only 28% showed full readiness for digital transformation, and more than half consider such readiness only partial. The leaders are mostly large national universities of a predominantly technical profile [11].

For a clearer understanding of the problem and the formation of directions of informatization, it is necessary to find out what exactly is meant by the informatization of education.

V. P. Vember notes that the informatization of education is the basis of the informatization of society and should be ahead of the informatization of other areas of social activity. The education system should ensure the ability of a person to independently navigate in the experience accumulated by humanity. The author emphasizes the connection between information and communication technologies and new pedagogical teaching methods [1].

Honorary Director of the Institute of Digitalization of Education of the National Academy of Pedagogical Sciences of Ukraine V.Y. Bykov believes that "informatization and computerization of the educational sector is one of the most difficult and important tasks of the state" and focuses on the differences between the concepts of "informatization" and "computerization" in education. According to the scientist, informatization in education is "a set of interrelated organizational, legal, socio-economic, educational and methodological, scientific, technical, production and managerial processes aimed at satisfying information, computing and telecommunication needs (other needs related to the introduction of methods and means of information and communication technologies – ICT)". Computerization is associated with equipping educational institutions with computer equipment both to ensure the educational process and for its administration. The author emphasizes that "the penetration of ICT into the educational process creates prerequisites for a radical renewal of both the content-target and technological aspects of the training of participants in the educational process, as well as those who manage and provide this process" [12].

O.P. Kivliuk believes that informatization is a process as a result of which an information environment is created, and informatization of education is a complex of socio-pedagogical transformations to saturate educational systems with information products [3].

The normative consolidation of the concepts of informatization and digitalization is carried out in the Law of Ukraine "On the National Program of Informatization", where informatization is considered to be "a set of interrelated organizational, legal, political, socio-economic, scientific, technical, technological and production processes aimed at creating conditions for ensuring the development of the information society and the introduction of information, communication and digital technologies"; and digitalization – "the process of introducing digital technologies into all spheres of public life" [7].

In the above law, digitalization is a component of informatization, which makes modern information and communication technologies dependent on digital solutions. The diversity of scientific concepts of informatization of education is partly caused by the difference in some of the requirements for it depending on the levels of education. Indeed, the requirements for informatization of higher education should differ from the requirements for informatization of other educational levels.

The lack of a unified scientific opinion and legislative support of the definition of informatization of education allows us to provide its own interpretation, according to which, in our opinion, informatization is the process of introducing into the educational process and the system of its provision such information and communication technologies (ICT) that correspond to their modern development, the profile of training of higher education applicants and the requirements of the labor market.

We also consider it appropriate to focus on the requirements for the implemented ICTs, namely the compliance of their level with advanced digital technologies that the labor market will need not only at the moment, but also taking into account future development. It should be noted that the introduction of ICT into the educational process should be supported by appropriate equipment. As an example, in order to train engineers, the use of software for 3D modeling must be available printing equipment, and training in programming machines with numerical control is impossible without practical classes.

Let us analyze the main obstacles to the introduction of digital technologies in educational and scientific processes (Fig. 1).

Let's consider the above obstacles in more detail. The first and most global obstacle to the digital development of higher education institutions is the rapid development of ICTs and their uneven distribution among stakeholders. At the same time, it is necessary to distinguish between general digital technologies that are used in most cases, for example, well-known office suites (Microsoft Office) and highly specialized ones (AutoCAD, Ansys for engineers, SPSS for economists, etc.). The software is constantly being improved and updated, and new software products are introduced. Higher education institutions in Ukraine do not always have the opportunity to quickly update software, especially specialized and expensive ones. The high speed of ICT updates can lead to the threat of higher education institutions lagging behind in the direction of training specialists based on the latest achievements of digital technologies.

In order to meet the needs of the state in personnel in the higher education system, there is a state order for the training of specialists. For 2025, a state order is envisaged for the training of specialists in higher education institutions (including postgraduate and doctoral studies) in the amount of 164753 people, for which the state budget provides for more than UAH 57 billion [6]. Accordingly, the state, as a customer, is interested in high-quality training of specialists and has the right to demand it from higher education institutions. However, there are no clear requirements for the digitalization of the educational process. As L. L. Makarenko notes in his study of informatization of education, various concepts of education reform did not introduce "holistic structural changes, but had a predominantly fragmentary character" [4]. All this slows down the introduction of digital technologies into the educational process.

The rapid spread of ICTs also causes a number of ethical problems in their use. The main ethical problem is academic dishonesty. Modern ICTs, when used inappropriately, help students falsify the performance of individual tasks. The advent of artificial intelligence (AI) significantly expands the possibilities of academic fraud. Even detected AI-generated text can be paraphrased or used by so-called "humanizers" – software that automatically paraphrases text into a human's writing style. Therefore, the correct use of ICT in education partially passes into the field of ethics, since it is impossible to fully identify cases of academic integrity.

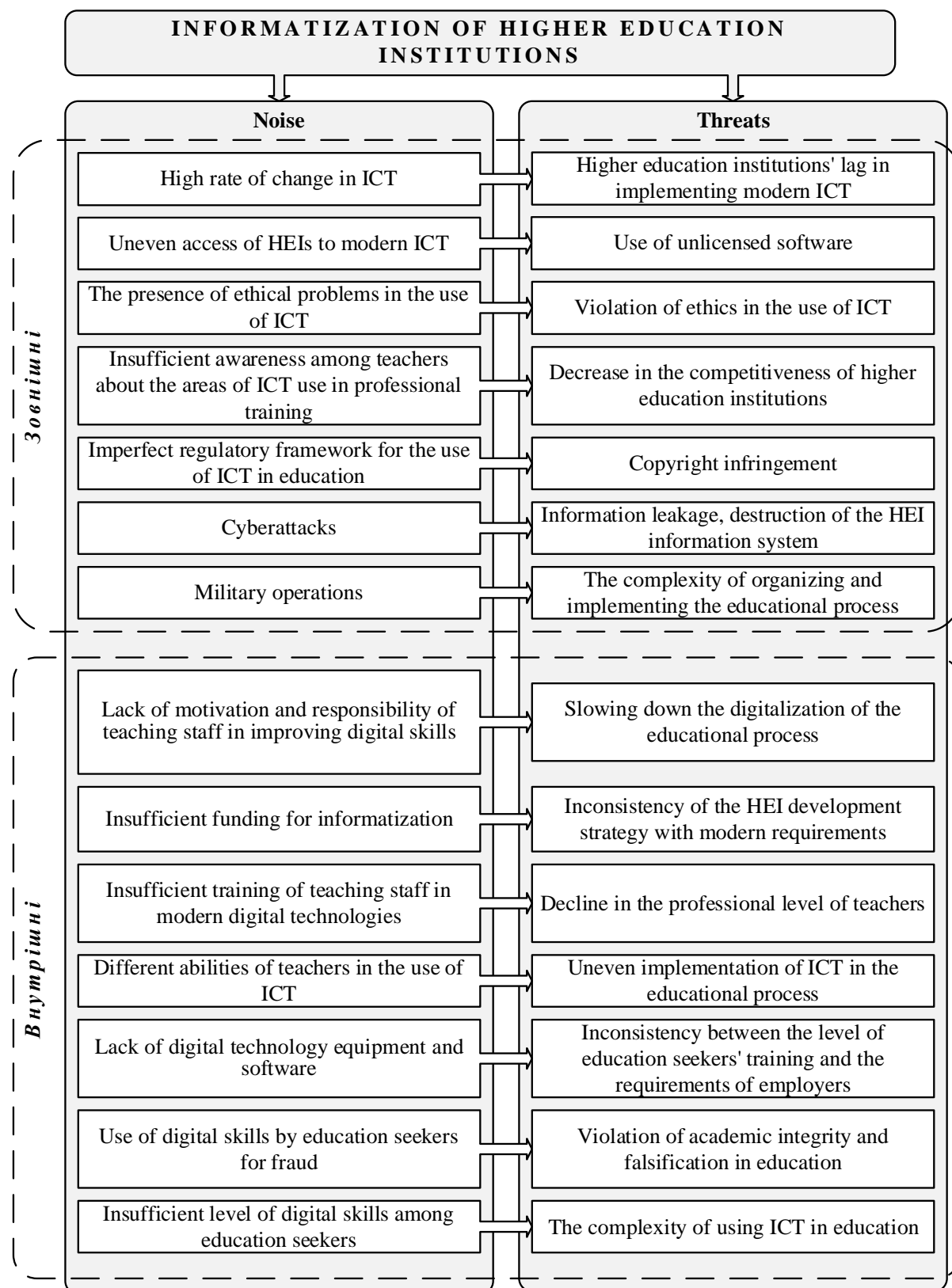


Fig. 1. Obstacles to the digitalization of educational and scientific processes in higher education institutions

Source: developed by the authors.

A significant obstacle to the digitalization of higher education is the lack of awareness of the teacher about digital technologies in education. At the same time, it is necessary to distinguish between technologies of a general nature that improve the perception of the presented educational material by higher education applicants - bright presentations, video materials; technologies that facilitate the organization of the initial process – distance learning systems, electronic timetables, etc., and applied technologies that relate to the essence of the material being taught (software, CAD systems, AR/VR technologies, etc.). At the same time, if awareness of the first two groups of digital technologies does not raise questions, then the last group in most cases is used directly in the educational process, and the use of such digital technologies is the prerogative of the teacher. Accordingly, the search for them depends entirely on how much the teacher takes the initiative in updating the course he teaches. Unfortunately, in most cases, the teacher does not receive external assistance in this direction, which reduces the quality of teaching and the competitiveness of higher education institutions.

The imperfection of the regulatory framework also slows down the processes of digitalization of higher education institutions. As an example, let us cite the comment of M.V. Noskova on the Roadmap of Educational Reform (2015-2025): "... the problem of informatization of educational institutions, the creation of an information environment in them and the introduction of appropriate training of teachers for the use of IT in education and management in the Roadmap is not in priority positions and is more material than intellectual, that is, once again the concept of informatization is replaced by the issue of computerization" [5]. In our opinion, in the first place in the regulatory and legal support for the use of ICT in education should be compliance with software copyrights. Unfortunately, the practice of using unlicensed software is still widespread in Ukraine. Most higher education institutions in Ukraine provide corporate access to some software to teachers, however, students generally do not have such access. At the same time, applicants for higher education at universities in Europe have such access, for example, thanks to the partnership with Microsoft IT Academy MSDN AA.

One of the most important negative consequences of the informatization of society is the use of modern ICTs for criminal purposes, namely cyberattacks, which pose a threat to the safety of personal data and the functioning of the information system of higher education institutions. Not only abroad, but also in Ukraine, there are known cases of cyberattacks on higher education institutions [10]. Fear of cyberattacks and insufficient protection of the information system of higher education institutions can be one of the reasons for the refusal of informatization.

During the hostilities in Ukraine, the vast majority of higher education institutions dealt with cases when education lost its effectiveness due to an imperfect distance education system. However, even the presence of such a system does not guarantee access for students and teachers to the educational process, especially during prolonged power outages and enemy attacks. This is especially true for border regions and the city of Kyiv. There are frequent cases of destruction of buildings of higher education institutions and damage to property. This situation is especially dangerous for the training of specialists in engineering and some other specialties, where distance learning is ineffective due to the impossibility of conducting practical and laboratory classes. Investing in technological ICTs during hostilities may not be feasible due to the risk of destruction. By the end of 2025, 38% of higher education institutions in Ukraine were destroyed or damaged [9]. According to the situation, funding for recovery from damage is a higher priority than informatization.

Let's consider the main internal obstacles to the digitalization of higher education institutions. Returning to the problem of the use of unlicensed software by both teachers and higher education applicants, it should be noted that the latter can not only cause harm due to numerous

computer viruses, but also inhibits the European integration of higher education in Ukraine. It is also noteworthy that not all higher education institutions provide access to modern ICTs for both teachers and higher education applicants.

It is only natural that large universities have better access to licensed software than small institutions of higher education. However, the management of higher education institutions should understand that in the era of digitalization, the use of modern ICTs should be a basic requirement for training specialists, and every higher education institution is obliged to ensure this. In the ranking of higher education institutions of Ukraine for 2025, the National University "Lviv Polytechnic" is in the first place with a licensed volume of 54273 people, the last 334th place is the Zhytomyr Institute of Economics and Humanities of the University "Ukraine" (ZHEGI UU) with a licensed volume of 174 people. In the indicators by which the rating was compiled, there is no digitalization of the educational process [8].

Another important obstacle to digitalization is the low motivation to master modern ICTs. Some software products are mandatory for use according to the organization of the educational process. It is impossible to imagine a teacher who does not have basic knowledge and skills to use the office suite from Microsoft or ZOOM to conduct remote classes. Higher education institutions that provide teachers with enterprise access to Microsoft Office 365 often recommend using Microsoft Teams for classes. The MOODLE educational platform for managing the educational process has also gained popularity. However, there are many alternative software that can improve course teaching. As an example, using Canva instead of PowerPoint to prepare presentations will allow you to get a more vivid result. To prepare visual material, it is useful for a teacher to be able to use video editors, independently carry out video and photography, be able to automate a number of mathematical calculations and even master the intricacies of using office suites. However, all this is in the plane of conscientiousness of the teacher's fulfillment of his duties and mission of the teacher and does not provide for additional material encouragement. It should also be noted that the remuneration of educators in Ukraine is at a very low level, which is a powerful demotivator of professional development.

One of the reasons that create various obstacles to the digitalization of higher education institutions is insufficient funding for the implementation of modern ICTs in the educational process. The situation with the use of modern digital technologies in higher education institutions of technical direction is especially acute, since software products for use in technical calculations, modern computer-aided design (CAD) systems are quite expensive. As an example, the cost of a license for SOLIDWORKS Design Premium engineering software for use in educational institutions is \$60. per year (for comparison, the cost of a license for enterprises exceeds 2.5 thousand US dollars) for two jobs. Highly specialized software, as a rule, does not provide preferential prices for educational purposes. If the software market is quite saturated for doing business and marketing research and users have no difficulties in mastering such programs, then the situation is radically different for specialized software. The ability to use digital technological solutions is now basic for applicants for technical vacancies.

Also, a rather significant obstacle to the digitalization of higher education institutions is the insufficient digital literacy of some teaching staff and the lack of skills in using modern software. A significant obstacle in this direction is the age of the teacher. For example, the average age of professors of the Department of Mathematics and Theoretical Radiophysics of Taras Shevchenko National University of Kyiv is 67 years, associate professors – 53 years [2]. At the same time, it should be noted that there are no uniform requirements for teachers' digital skills and determining the level of such training.

Teaching various disciplines in higher education institutions also requires various digital skills. It is quite understandable that the greatest such skills require teaching IT disciplines, the smallest – humanitarian disciplines. Therefore, the attitude to informatization in higher education institutions may be different. All this can lead to a decrease in the level of teaching, uneven implementation of digital technologies in the educational process.

The lack of digital technological equipment and software may occur as a result of insufficient funding or the reluctance of the conservative part of teachers to make changes in the sustainable educational process. For example, the use of AR/VR technologies in the educational process is quite expensive, not only in terms of appropriate equipment and software. Also, modern pedagogical activity should be provided with appropriate equipment of classrooms with digital means of presenting information, access to the Internet, other technical means, and specialized educational laboratories with appropriate equipment.

An integral part of the educational process in higher education institutions is scientific activity and activities in the direction of training scientific and pedagogical personnel. Therefore, the informatization of higher education institutions should take into account this area of activity. The basis for such activities is the access of scientific and pedagogical staff and higher education students to scientific and technical information and various educational resources.

Another obstacle to informatization may be the insufficient level of digital skills of higher education applicants. Most higher education institutions try to include information disciplines in their curricula as early as possible, however, from the first days of study, a significant part of applicants cannot quickly master the necessary digital skills, which complicates the use of ICT in education. The opposite situation may also occur, when the digital skills of students can be used for the purpose of fraud, violation of academic integrity. For example, insufficient security of electronic information can lead to the introduction of knowingly false data, and it is sometimes quite difficult to prove fraud. According to the traditional system, the teacher approved the grade with a signature in the exam sheet and record book of the student, and even so, there were cases of errors and deliberate fraud. When filling out electronic information remotely, especially with a large number of students in the course of one teacher, it is not always possible to notice fraud. Another variant of fraud can be considered the use of ICT by applicants for higher education in order to pass off other people's works as their own (academic dishonesty). This is especially relevant with the spread of the use of artificial intelligence (AI) for the purpose of generating texts and solving individual problems. In some cases, it is impossible to detect such use of AI in distance education. Accordingly, the use of ICT is moving into the ethical plane.

The above obstacles to informatization should be eliminated or taken into account and reduced as much as possible, based on the available capabilities of each higher education institution. To do this, it is necessary to find out the interrelations of obstacles with the directions of informatization, to identify those responsible for their elimination (Fig. 2).

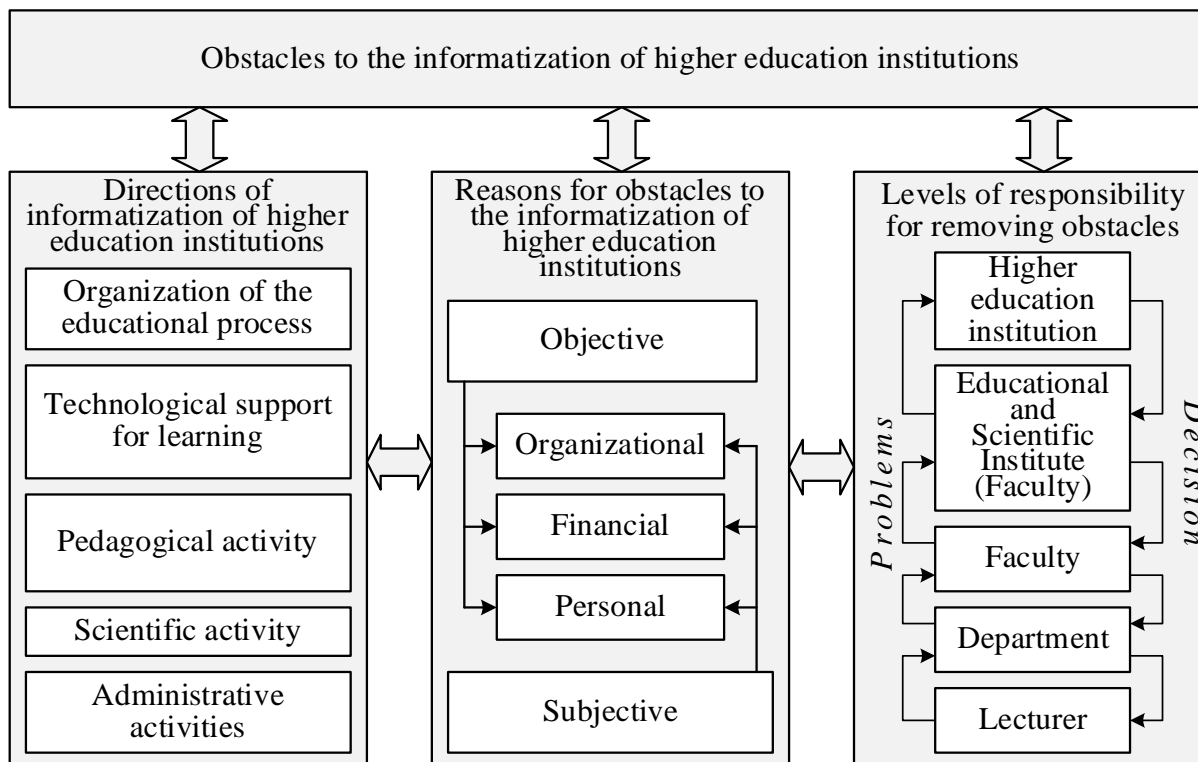


Fig. 2. Relationship of obstacles to informatization with its directions, causes of occurrence and levels of responsibility for elimination

Source: developed by the authors.

It is advisable to consider the obstacles to the informatization of higher education institutions by identifying and grouping the relevant areas, each of which has its own goal. Thus, informatization of the organization of the educational process will allow with minimal loss of time and effort to optimize the educational process, make it more transparent and take into account the interests of both teaching staff, administration of higher education institutions, and higher education applicants. The use of appropriate software will allow you to draw up an optimal schedule of classes in order to achieve simultaneous convenience for both teachers and higher education applicants, to rationally use the classroom fund. Under martial law, the organization of distance learning, the organization of which is impossible without the use of modern information technologies, becomes especially relevant.

In the next group, it is advisable to include the necessary information and technological support. The latter mainly concerns the provision of natural sciences, engineering and similar disciplines with modern ICTs. This applies not only to the innovative intelligent product, but also to the corresponding technological equipment.

ICT in pedagogical activities today should be used to teach each discipline by each teacher, since they have a positive effect not only on the quality of assimilation of the material by higher education applicants, but also make the learning process more interesting and effective.

Since higher education institutions, in addition to teaching, should also carry out scientific activities, the informatization of scientific research should be the key to their effectiveness and relevance. First of all, this group should include measures to ensure access of scientists to the necessary information resources and, if possible, to provide the necessary equipment.

Informatization of administrative activity is aimed at increasing its efficiency, reducing costs. Such activities, especially for large HEIs, are related to financial settlements, economic activities, maintenance of buildings and property in proper condition, provision of sanitary and hygienic

standards, etc. The management system of higher education institutions cannot be aloof from digital technologies in the context of informatization of the economy and technology.

The process of removing obstacles to the informatization of higher education institutions should begin with the identification of the causes of their occurrence, for the clarification of which it is convenient to divide the latter into objective and subjective, which, in turn, consist of organizational, financial and personal. However, it should be understood that the subjectivity or objectivity of such reasons is rather arbitrary and depends on where and why this reason arose. For example, for a teacher, refusal to use certain software in the educational process due to the lack of a license to use it for financial reasons is an objective reason, and at the level of higher education institutions, the same reason is subjective. Conversely, the refusal of the teacher to use modern ICT in the educational process due to insufficient digital skills will be a purely subjective reason.

Conclusions. Organizational, financial, personal reasons for the occurrence of obstacles to informatization of higher education institutions can be both objective and subjective. The main sign of objectivity or subjectivity in such cases should be a comparison of the level of occurrence of the cause with the level of its elimination. If the cause of the obstacle to informatization can be eliminated at the same level where it arose, then it can be considered subjective in most cases. Improving the level of teaching of technical discipline requires equipping the laboratory of the department with modern equipment using ICT, however, there are no funds for this in the plan of higher education institutions and the management of the higher education institution does not want to change the plan, perhaps also for their own objective reasons. However, if the department finds a sponsor to eliminate this objective reason, who will help with charitable financial or technical contributions (donate equipment or finance its purchase), then such an objective reason will be eliminated at the level of its occurrence.

It should also be noted that when grouping causes into objective and subjective, financial, organizational and personal, it is necessary to try to refrain from trying to establish a hierarchical relationship between them. For example, at first glance, financial reasons are higher in importance and scale than personal and organizational ones. However, there are many examples in the history of science when scientific achievements, especially very significant ones, would not have been possible without the talent of a scientist-researcher, despite any funding.

Thus, the objectivity or subjectivity of the causes of obstacles to the digitalization of higher education institutions requires the allocation of levels at which these reasons should be eliminated, in which case the hierarchy of such levels will be appropriate.

References

1. Vember, V. P. (2007). Informatyzatsiia osvity ta problemy vprovadzhennia pedahohichnykh prohramnykh zasobiv v navchalnyi protses [Informatization of education and problems of implementation of pedagogical software tools in the educational process]. *Informatsiini tekhnologii i zasoby navchannia – Information Technologies and Learning Tools*, (3). <http://www.ime.edu.ua.net/em3/emg.html>.
2. Taras Shevchenko National University of Kyiv. (n.d.). *Kafedra matematyky ta teoretychnoi radiofizyky* [Department of Mathematics and Theoretical Radiophysics]. <https://surl.li/egfoeq>.
3. Kyvliuk, O. P. (2014). Hlobalizatsiia ta informatyzatsiia osvity v predmetnomu poli filosofii osvity [Globalization and informatization of education in the subject field of the philosophy of education]. *Humanitarnyi visnyk ZDIA – Humanitarian Bulletin of Zaporizhzhia State Engineering Academy*, (57), 192–200. <https://doi.org/10.30839/2072-7941.2014.24927>.
4. Makarenko, L. L. (2013). Informatyzatsiia osvity yak priorytetnyi napriam modernizatsii osvity v umovakh informatsiinoho suspilstva [Informatization of education as a priority direction of education modernization in the information society]. *Naukovyi chasopys NPU im. M. P. Drahomanova. Seriya 5. Pedahohichni nauky: realii ta perspektyvy – Scientific Journal of National Pedagogical Dragomanov University. Series 5. Pedagogical Sciences: Realities and Perspectives*, (43), 118–125. <https://enpuirb.edu.ua/server/api/core/bitstreams/5a318e0c-82bc-4595-a70a-dca31da95f85/content>.

5. Noskova, M. V. (2017). Normatyvno-pravova baza shchodo vykorystannia informatsiinykh tekhnolohii u osviti Ukrainy [Regulatory and legal framework for the use of information technologies in education of Ukraine]. *Molodyi vchenyi – Young Scientist*, (6), 267–270. <https://surl.li/zluhha/>.
6. Ministry of Education and Science of Ukraine. (n.d.). *Ofitsiyni sait Ministerstva osvity i nauky Ukrainy* [Official website of the Ministry of Education and Science of Ukraine]. <https://mon.gov.ua/>
7. Law of Ukraine No. 2807-IX, *Pro Natsionalnu prohramu informatyzatsii* [On the National Program of Informatization]. (2022, December 1). <https://zakon.rada.gov.ua/laws/show/2807-20#Text>
8. Education.ua. (2025). *Reitynh universytetiv Ukrainy 2025* [Ranking of universities of Ukraine 2025]. <https://www.education.ua/vstup/university-ranking>.
9. The Page. (2025). *Skilky vyshiv poshkodyly abo zruinuvaly ataky rosii* [How many universities were damaged or destroyed by russian attacks]. <https://thepage.ua/ua/news/vijna-poshkodila-38percent-universitetiv-ukrayini-skilki-bez-ukrittiv-u-2025>.
10. Cybersec. (n.d.). *Khakery zlamaly storinku Dniprovskoho natsionalnoho universytetu* [Hackers hacked the page of Dnipro National University]. <https://cybersec.net.ua/kiberzlochyny/945-khakery-zlamaly-storinku-dniprovskoho-natsionalnoho-universytetu.html>.
11. [Author/Organization]. (n.d.). *Tsyfrovizatsiia ukrainskykh zakladiv osvity: hotovnist, instrumenty, ShI ta bar'ieri* [Digitalization of Ukrainian educational institutions: readiness, tools, AI, and barriers]. <https://surl.li/tdejkn>.
12. Blanchard, K., Zigarmi, P., & Zigarmi, D. (1985). *Leadership and the One Minute Manager: Increasing effectiveness through situational leadership*. Morrow.

Список використаних джерел

1. Вембер В. П. Інформатизація освіти та проблеми впровадження педагогічних програмних засобів в навчальний процес. *Інформаційні технології і засоби навчання*. 2007. Вип. 3. URL: <http://www.ime.edu-ua.net/em3/emg.html>.
2. Кафедра математики та теоретичної радіофізики КНУ імені Тараса Шевченка. URL: <https://surl.li/egfoeq>.
3. Кивлюк О. П. Глобалізація та інформатизація освіти в предметному полі філософії освіти. *Гуманітарний вісник ЗДІА*. 2014. № 57. С. 192–200. DOI: <https://doi.org/10.30839/2072-7941.2014.24927>.
4. Макаренко Л. Л. Інформатизація освіти як пріоритетний напрям модернізації освіти в умовах інформаційного суспільства. *Науковий часопис НПУ ім. М. П. Драгоманова. Серія 5. Педагогічні науки: реалії та перспективи*. 2013. Вип. 43. С. 118–125. URL: <https://enpuirb.edu.ua/server/api/core/bitstreams/5a318e0c-82bc-4595-a70a-dca31da95f85/content>.
5. Носкова М.В. Нормативно-правова база щодо використання інформаційних технологій у освіті України. *Молодий вчений*. 2017. № 6 (46). С. 267–270. URL: <https://surl.li/zluhha/>
6. Офіційний сайт Міністерства освіти і науки України. URL: <https://mon.gov.ua/>
7. Про Національну програму інформатизації. Закон України від 01.12.2022 № 2807-IX. URL: <https://zakon.rada.gov.ua/laws/show/2807-20#Text>.
8. Рейтинг університетів України 2025. URL: <https://www.education.ua/vstup/university-ranking>.
9. Скільки вишів пошкодили або зруйнували атаки росії. URL: <https://thepage.ua/ua/news/vijna-poshkodila-38percent-universitetiv-ukrayini-skilki-bez-ukrittiv-u-2025>.
10. Хакери зламали сторінку Дніпровського національного університету. URL: <https://cybersec.net.ua/kiberzlochyny/945-khakery-zlamaly-storinku-dniprovskoho-natsionalnoho-universytetu.html>.
11. Цифровізація українських закладів освіти: готовність, інструменти, ШІ та бар'єри. URL: <https://surl.li/tdejkn>.
12. Blanchard K., Zigarmi P., Zigarmi D. *Leadership and the One Minute Manager: Increasing Effectiveness through Situational Leadership*. New York: Morrow, 1985. 160 p.

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**ОСОБЛИВОСТІ ЗАБЕЗПЕЧЕННЯ ІНФОРМАТИЗАЦІЇ ЗАКЛАДІВ ВИЩОЇ
ОСВІТИ В УМОВАХ ЦИФРОВИХ ЗМІН**

Стаття присвячена дослідженню особливостей забезпечення інформатизації закладів вищої освіти в умовах цифрових змін. Проаналізовано наукові підходи до розкриття сутності дефініцій інформатизація та цифровізація. Проаналізуємо основні внутрішні та зовнішні переешкоди та загрози впровадження цифрових технологій у навчальний та науковий процеси, деталізовано їх зміст. Серед зовнішніх переешкод виокремлено: високу швидкість зміни ІКТ, нерівномірний доступ закладів вищої освіти до сучасних ІКТ, наявність етичних проблем використання ІКТ, недостатня поінформованість викладачів про напрями використання ІКТ у професійному навчанні, недосконала нормативно-правова база використання ІКТ в освіті, кібератаки, військові дії. До внутрішніх переешкод віднесено: відсутність мотивації та відповідальності викладацького персоналу в удосконаленні цифрових навичок, недостатнє фінансування інформатизації, недостатнє навчання викладацького персоналу сучасним цифровим технологіям, різні здібності викладачів у напрямі використання ІКТ, нестача цифрового технологічного обладнання та програмного забезпечення, використання цифрових навичок здобувачами освіти для шахрайства, недостатній рівень цифрових навичок здобувачів освіти. Загрозами зовнішнього характеру визначено: відставання закладів вищої освіти у впровадженні сучасних ІКТ, використання неліцензованого програмного забезпечення, порушення етики використання ІКТ, зниження конкурентоспроможності закладів вищої освіти, порушення авторських прав, виток інформації, руйнування інформаційної системи закладів вищої освіти, складність організації та здійснення навчального процесу. Внутрішніми загрозами визначено такі: гальмування цифровізації навчального процесу, невідповідність стратегії розвитку закладів вищої освіти сучасним вимогам, зниження професійного рівня викладачів, нерівномірність впровадження ІКТ у навчальний процес, невідповідність рівня підготовки здобувачів освіти вимогам роботодавців, порушення норм академічної доброчесності та фальсифікація у навчанні, складність використання ІКТ у навчанні. Досліджено взаємозв'язок переешкод інформатизації з її напрямками, причинами виникнення та рівнями відповідальності за усунення.

Ключові слова: заклади вищої освіти, цифровізація, інформатизація, цифрові технології, переешкоди, загрози, цифрові зміни.

Fig.: 2. References: 12