

The Use of Digital Distance Technologies in Higher Education Institutions in the Context of the Development of a System for Assessing the Quality of Education

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Abstract

Digital education has emerged all over the world with a new wave of learning innovations and opportunities. Higher education institutions need to develop the digital competence of future specialists and train teachers who are creative individuals, have the skills to use digital technologies, and are able to solve problems, make important decisions, effectively manage their own lives, and realize their potential. In this aspect, the strategy for evaluating the results of the educational achievements of future specialists is important. The purpose of the article is to analyze the use of distance technologies in higher education institutions in the context of the development of a system for assessing the quality of education. Methodology implies the application of theoretical methods of analysis.

Keywords:

Digital Technologies, Education, Assessing, Quality

1. Introduction

Previously, the main function of the assessment was to determine the level of assimilation of the acquired knowledge by the student. Under the new educational standards paradigm, the purpose of assessment is to stimulate learning. Therefore, the teacher is faced with the task of finding such a form of evaluation of educational achievements, which would help to increase educational motivation, individualize the educational process and develop independence in learning. This is an assessment, which is understood as an assessment in the learning process, as well as an analysis of the knowledge, skills, and values of students and the establishment of feedback "teacher-student".

Effective evaluation is essential to ensure that these critical questions are answered effectively. Tests and examinations are a classic way of measuring student performance and are integral to the accountability of the education system. To be truly effective, the evaluation must be 'formative', identifying and responding to learning needs. In formative assessment, instructors conduct frequent, interactive assessments of students' understanding of their level of academic achievement. This allows them to tailor their teaching methodology to the individual needs of students and help them achieve high standards. When an assessment is used as a basis for teaching, the ways in which students interact are changed, and teaching situations are simulated that encourage students to pursue their own learning goals. Formative assessment is highly effective in increasing the level of students' progress and increasing their motivation for learning.

University teachers use different digital assessment tools. To develop the digital competence of teachers, in particular such a component as communication and cooperation, the Center for Digital Transformation, together with the Center for Distance Learning, constantly holds seminars, training, and round tables. All this increases the relevance of the chosen topic.

The purpose of the article is to analyze the use of digital technologies in higher education institutions in the context of the development of a system for assessing the quality of education.

2. Methodology

The totalities of the methods we have chosen form the system of the research methodology. To determine the problems of introducing digital technologies into the education quality assessment system, the following methods were applied: induction and deduction, comparison and systematization - when characterizing the education quality assessment system; synthesis and analysis - to determine the content of digital technologies in the education quality assessment system; morphological analysis - to clarify the essence of digital technologies in the system of assessing the quality of education; abstract-logical - for theoretical generalizations and conclusions of the study.

3. Research Results and Discussions

The digital transformation of the field of education should rebuild with the help of digital technologies not only the process of obtaining knowledge and managing an educational institution, but also knowledge itself, to form digital competencies among future graduates. A modern educational institution must go through a digital transformation, otherwise it will not meet market demands.

Digital technologies play an increasing role in education, contributing to its accessibility and openness, improving the quality of education and, accordingly, put forward increased requirements for the digital competence of teachers. The rapid and large-scale spread of digital technologies leads to the transformation of the methods of providing quality education, the system of work in remote mode, the problem of selecting the necessary resources and appropriate technologies, as well as the formation of a favorable environment for learning, arises. The need and efficiency of digital transformation is explained in such a way that most graduates of educational institutions see the use of information and communication technologies not only in professional activities, but also in the field of socialization and communication. In addition, the creation and maintenance of a competitive advantage by an educational institution in the field of educational competencies every year will be increasingly determined by the timeliness of the introduction of new technologies and readiness for

fundamental shifts towards the demanded educational system of the future. The modern education system needs to be adapted to the requirements of the time and the expectations of young people due to the massive and effective use of innovative educational technologies and didactic models based on modern information and communication technologies.

Thanks to the digitalization of education, teachers free up time for research work, the results of which can subsequently not only be included in electronic educational materials, but also transferred to production solutions, new scientific, engineering and management systems implemented in modern market structures and relations. For students and students, the distance education system provides access to the best lecture courses created by experts from all over the world. In addition, an indisputable achievement of digital content is the ability to study relevant materials at a convenient time and place for students and students. However, the lack of direct contacts between the teacher and the student negatively affects the quality of training, which may adversely affect future professional activities.

The era of digital technologies is a transition from the traditional format of working with information to a digital format. This is the era of the total domination of digital technologies. Digital technologies have become unprecedentedly fast and widespread. In recent years, all spheres of human life have already undergone the intervention of digital technologies. Therefore, it is the educational industry that faces the difficult task of moving to a new level of education, where digital technologies will be actively used, allowing convenient and fast work in the information field for more effective training and development of a future specialists.

Quality education is one of the necessary conditions for the successful development of the country; as emphasized in the main provisions of UNESCO, the formation of an educated and competent young generation is the key to a well-coordinated modern civilized society. The quality of higher education in the scientific plane of public administration research is considered as the correspondence of the real educational needs of all subjects of an educational activity (student, regional educational system, state) to the results of their interaction. Ukraine has proclaimed the quality of education as a national priority and a prerequisite for the national security of the state, compliance with

international norms, and requirements of Ukrainian legislation on the realization of the right of citizens to education. Quality education is a tool for economic growth on Ukraine's path to the European Union.

Ensuring quality education, in particular, higher education is one of the main tasks of our time, since higher education is the guiding, system-forming element of the entire education system, since it determines the main social function of training a person as a professional of the highest qualification and as a representative of the highest intellectual thought of society [1-3].

The quality of higher education is ensured by many parameters, including the quality indicator of the professorial staff, the quality of teaching, the state of the material and technical base, laboratory equipment of the educational institution, and financial support. The rating system of assessment contributes to a clear and specific definition of the main areas of activity of higher education, which increases their efficiency, authority, and competitiveness in the market of educational services both in Ukraine and in the European and global education space. This has been heavily influenced by digital technology.

The digital transformation of Ukrainian education aims to improve its quality and achieve new educational results that are adequate to the requirements of the modern digital society. Today, there are new requirements for all participants in the educational process: from personal and professional qualities, creative, creative opportunities to knowledge and skills to operate with them. In a digital society, human education takes place in a digital educational environment, the purpose of which is to develop the digital competence of an individual. Today, the governments of most European countries are making significant efforts to modernize education systems based on the use of digital technologies. The development of digital education initiates the emergence of new educational practices, which contributes to the transformation of the educational system as a whole.

The main advantages of digital technologies for the education quality assessment system are presented in Fig. 1.

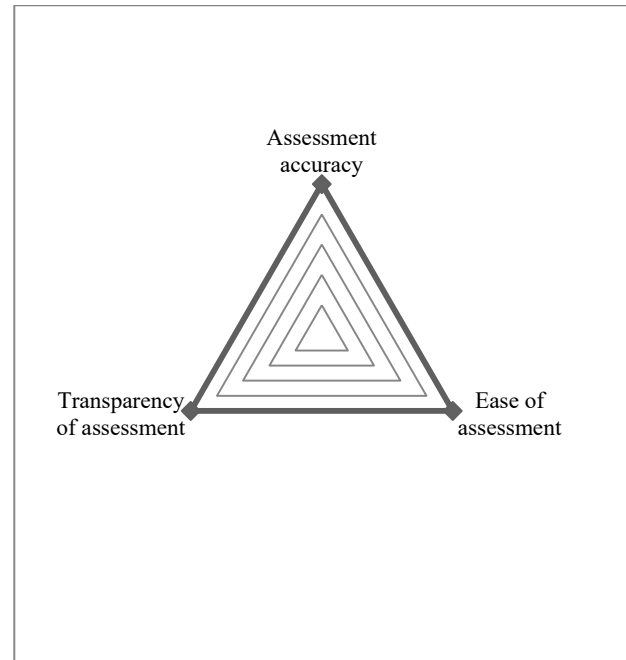


Fig.1. The main advantages of digital technologies for the education quality assessment system

The unique role played by digital technologies in improving the quality of the educational process is based on their ability to effectively contribute to the fulfillment of both necessary and sufficient conditions for ensuring the quality of education. The current level of development of digital technologies significantly expands access to educational resources in the field of education, science, and culture.

The process of learning interaction using digital technologies is becoming more flexible, personalized, and accessible. Especially in the conditions of distance learning caused by the spread of the SARS-CoV-2 coronavirus infection (the causative agent of COVID-19), the need for interaction between the teacher and students, both in the traditional format and using digital technologies, is increasing.

A key role in digital technologies is played in the formation of the digital competence of the teacher, as an element of improving the quality of education in general. The digital competence of a teacher should ensure the development of a wide range of all its components: from media literacy to the processing and critical evaluation of information data, security and cooperation on the Internet to the knowledge of various digital technologies and devices, the ability to use open resources and technologies for professional development, formation in students of

the ability to effectively use digital technologies and services in educational and life situations to solve various problems and tasks, apply innovative technologies to evaluate the results of their educational activities, understand the concept of coding, elements of artificial intelligence, virtual and augmented reality and professional problems using digital technologies [4-6].

The main problems of the integration of digital technologies into the education quality assessment system are presented in Fig. 2.

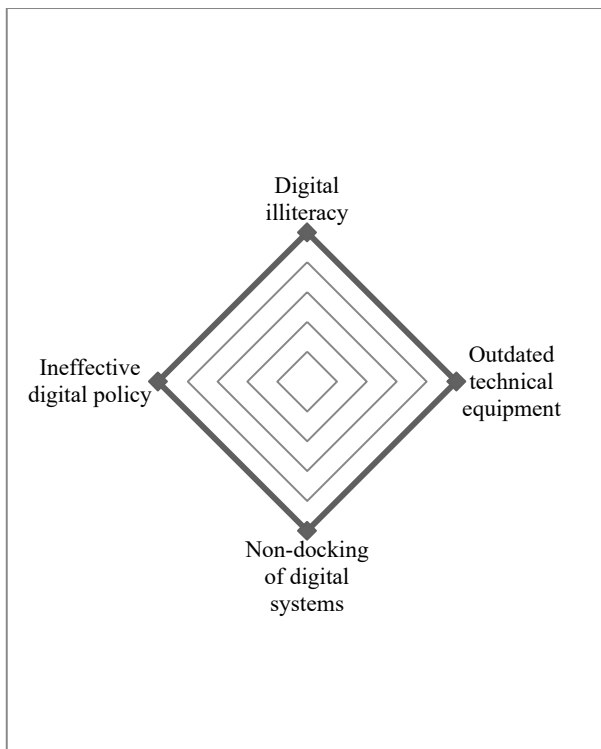


Fig.2. The main problems of the integration of digital technologies into the education quality assessment system

Educators must understand how digital technologies can support communication, collaboration, creativity, and innovation and be aware of their functional features, limitations, consequences, and risks of use; the general principles, mechanisms, and logic underlying the creation of constantly evolving digital services, as well as to know the basics of the functioning and use of various digital devices, computer programs, and networks. Pedagogical workers should critically evaluate the reliability, reliability of information sources, the impact of information and data on the consciousness and development of the individual, on decision-

making, and be aware of the legal and ethical aspects associated with the use of digital technologies.

Currently, there is rapid informatization of society, thanks to which it is turning into a high-tech, digital one. The introduction of digital technologies in the education system opens up opportunities for the development and use of completely new methods of teaching and learning. The development of a teacher's digital competence is one of the key issues of education related to the challenges of the modern information society and fast-moving technical and technological processes. Educators must keep up with the times, respond quickly and effectively to the challenges of the 21st century, be able to use the latest digital tools, create an appropriate environment for their students, know the ways and means of safe behavior on the Internet, and be able to protect personal information in the digital space. . . Therefore, for the teacher, the urgent need is the formation of his digital competence.

The digital competence of a teacher is a complex, dynamic, holistic integrative education of a personality, which is its multi-level professional and personal characteristic in the field of digital technologies and experience in their use, which is due, on the one hand, to the needs and requirements of the digital society, on the other hand - the emergence of a digital educational space that changes the educational (educational) interaction of all participants, is distinguished by the widespread involvement of the Internet, digital storage systems and primary data systematization, as well as automated digital analytical systems (based on neural networks and artificial intelligence), which allows for more efficient implementation of professional activity and at the same time requires (possibly stimulates or needs) constant professional self-development [7-10].

The development of the modern information society imposes new requirements on the educational system for the training and retraining of teachers in the field of education. Knowledge as a key indicator of the quality of education and the qualifications of an employee is not a determining factor in the professional training of a teacher. A modern, competitive, successful teacher must demonstrate sustainable skills in the use of information and digital technologies, critical thinking, strategic planning, and the ability to respond flexibly to changing societal needs. In addition to basic digital competencies

(preparation of text documents, comparative tables, presentations, tests, etc.), the teacher must have innovative practices for the implementation of such learning models as adaptive learning, synchronous and asynchronous learning, blended learning, self-directed learning, distance learning, cloud and mobile learning, virtual classroom, flip classroom, e-learning management system, learning process management system, personalization, digital storytelling, etc. Special attention should be paid to the digital training of such specialists.

4. Conclusions

In summary, assessment should not be limited to measuring student achievement but should be used as a means to improve student achievement. Assessment involves enhancing teacher-student collaboration that provides feedback on the quality of learning achievement and the creation of opportunities to achieve it. Assessment has a social function as a tool of social differentiation based on identified abilities and can be directly linked to objective social incentives not based on learning outcomes, but directly in the learning process. External evaluation should be complemented by self-evaluation and not only the final results, but the entire educational process should be evaluated. Assessment should support the learning process, and not block the independence, creative and cognitive activity of the student due to a decrease in his motivation.

The study is a purely theoretical analysis and tried to reveal the features of the impact of digital technologies on the education assessment system. Subsequent studies should be devoted to the practical aspects of this issue.

References

- [1] Kryshtanovych M., Gavrysh I., Kholobina O., Melnychuk I., Salnikova N. Prospects, Problems and Ways to Improve Distance Learning of Students of Higher Educational Institutions. *Revista Romaneasca pentru Educatie Multidimensionala*. Vol. 12. 2020, No.2, 348-364 <https://doi.org/10.18662/rrem/12.2/282>
- [2] Vorobyova, O., Horokhova, M., Iliichuk, L., Tverezovska, N., Drachuk, O., & Artemchuk, L. ISO Standards as a Quality Assurance Mechanism in Higher Education. *Revista Romaneasca Pentru Educatie Multidimensionala*, 14(2), 2022, 73-88. <https://doi.org/10.18662/rrem/14.2/567>
- [3] Hasiuk, I., Darmanska, I., Mykhaskova, M., Pisotska, L., & Suhovirskyi, O. Assessment of Sustainable Development of the Educational Sphere of Ukraine in the Paradigm of European Integration Processes. *Revista Romaneasca Pentru Educatie Multidimensionala*, 14(2), 2022, 136-155. <https://doi.org/10.18662/rrem/14.2/572>
- [4] Vargas, T. C., Bizelli, J. L., & Santos Cruz, J. A. Quality in education: what's the suitable funding to the basic education?. *Revista Tempos E Espaços Em Educação*, 13(32), 2020, 1-17. <https://doi.org/10.20952/revtee.v13i32.13625>
- [5] Chekhovska, L., Chernysh, N., & Ravchyna, T. Development of project activities for teachers and students of the education system. *Revista Tempos E Espaços Em Educação*, 15(34), 2022, e16973. <https://doi.org/10.20952/revtee.v15i34.16973>
- [6] Navickienė, V., Sederevičiūtė-Pačiauskienė, Živilė, Valantinaitė, I., & Žilinskaitė-Vytienė, V. The relationship between communication and education through the creative personality of the teacher. *Creativity Studies*, 12(1), 2019, 49-60. <https://doi.org/10.3846/cs.2019.6472>
- [7] Bainbridge Frymier, A., & Houser, M. L. The teacher-student relationship is an interpersonal relationship. *Communication Education*, 49(3), 2000, 207-219. <https://doi.org/10.1080/03634520009379209>
- [8] Petrovna Gladilina, I. Creativity in the structure of professionalism of a higher school teacher. *International Journal of Environmental & Science Education*, 11(8), 2016, 1691-1699.
- [9] Cardoso de Sousa, F. Teachers' creativity and effectiveness in higher education: Perceptions of

- students and faculty. *The Quality of Higher Education*, 4, 2007, 21-37.
- [10] Kozak, A., Lavrynovych, L., Sukhareva, S., Iaruchyk, V., & Iaruchyk, O. Modern digital technologies in teaching philological disciplines. *Revista Tempos E Espaços Em Educação*, 13(32), 2020, 1-22.
<https://doi.org/10.20952/revtee.v13i32.14727>
- [11] Kryshchanovych, M., Kryshchanovych, S., Chubinska, N., Khromova, Y., & Sylkin, O. The System of Public Administration in Educational Institutions in Rural Regions in the Context of the Development of Educational Culture. *Revista Brasileira De Educação Do Campo*, 7, 2022, e14140.
<https://doi.org/10.20873/uft.rbec.e14140>
- [12] Helesh, A., Eremenko, O., & Kryshchanovych, M. Monitoring the quality of the work of experts when they conduct accreditation examinations of educational programs. *Revista Tempos E Espaços Em Educação*, 14(33), 2021, e16535.
<https://doi.org/10.20952/revtee.v14i33.16535>
- [13] Zadorozhna, I., Datskiv, O., & Shon, O. Exploring Students' Expectations of the University Course. *Revista Romaneasca Pentru Educatie Multidimensionala*, 12(1Sup1), 2020, 293-303.
<https://doi.org/10.18662/rrem/12.1sup1/236>
- [14] Tolmachev, O. M., Starodumov, L. L., Nesova, N. M., Kotovchikhina, N. D., & Magomedov, R. M. The policy of quality assurance of university e-education in Europe and Latin America. *Revista Tempos E Espaços Em Educação*, 14(33), 2021, e16108.
<https://doi.org/10.20952/revtee.v14i33.16108>
- [15] Klochek, L., Snitsarchuk, L., & Ohar, E. The system for assessing the quality of education in the universities of the leading countries of the world. *Revista Tempos E Espaços Em Educação*, 15(34), 2022, e17086.
<https://doi.org/10.20952/revtee.v15i34.17086>