New Approaches to Quality Monitoring of Higher Education in the Process of Distance Learning

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Summary

The article identifies the problem of monitoring the quality of higher education in three main areas, which are comparative pedagogical systems of education. The first direction is determined by dissertation works, the second - monographs and textbooks, and the third reveals scientific periodicals. According to its internal structure, monitoring the quality of education combines important management components identified in the article (analysis, evaluation and forecasting of processes in education; a set of methods for tracking processes in education; collecting and processing information to prepare recommendations for research processes and make necessary adjustments). Depending on the objectives, three areas of monitoring are identified: informational (involves the accumulation, structuring and dissemination of information), basic (aimed at identifying new problems and threats before they are realized at the management level), problematic (clarification of patterns, processes, hazards, those problems that are known and significant from the point of view of management). According to its internal structure, monitoring the quality of education combines the following important management components: analysis, evaluation and forecasting of processes in education; a set of techniques for tracking processes in education; collection and processing of information in order to prepare recommendations for the development of the studied processes and make the necessary adjustments. One of the priorities of the higher education modernization program during the COVID-19 pandemic is distance learning, which is possible due to the existence of information and educational technologies and communication systems, especially for effective education and its monitoring in higher education. The conditions under which the effectiveness of pedagogical support of monitoring activities in the process of distance learning is achieved are highlighted. According to the results of the survey, the problems faced by higher education seekers are revealed. A survey of students was conducted, which had a certain level of subjectivity in personal assessments, but the sample was quite representative.

Keywords:

quality monitoring of higher education, distance learning, modernization of higher school, higher education institutions, applicants for higher education, approaches, management components.

1. Introduction

The main purpose of education, which follows from modern ideas about the mechanisms of development of human civilization - to ensure the advanced development of social and professional quality of man. The education system is transformed into a kind of social reproduction of human quality, and society must be aware of the role of education as a system that determines the survival potential of mankind.

Currently, quality has become a major factor determining the state, development and improvement of the education system, so the XXI century is often called the century of quality. Modernization of national education takes place in the context of changing the content of education, the formation of new views on the learning process and its results, the invasion of the private sector in the market of educational services, reducing the prestige of the teaching profession and more. Taking into account these factors, the problem of improving the quality management

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process of education becomes especially relevant, covering not only the field of education, but also the associated socio-economic conditions that affect the results of the educational process.

Due to the COVID-19 pandemic, the entire education system, including higher education, has undergone a transformation and the need to adapt to new conditions. The development of new approaches and models of the educational process has become available. Gradually, students and faculty of higher education institutions adapted to distance learning, which involves the acquisition of digital and other skills. Research and teaching staff were forced to develop new online courses and programs, improve pedagogical skills, while taking into account the specifics of distance learning.

Public authorities involved in promoting distance learning, in particular the Ministry of Digital Transformation of Ukraine, have created appropriate conditions for Internet access, overcoming the problems that existed in rural areas.

In modern conditions, distance learning requires the integration and solution of common problems by public authorities, higher education institutions, NGOs and student government to ensure an effective educational process.

The COVID-19 pandemic and related quarantine restrictions have demonstrated the advantages and disadvantages of distance learning technologies and their application in higher education. Three stakeholders in higher education faced problems of rapid adaptation to the pandemic: public institutions; students; research and teaching staff [23].

Each country needs to build its capacity to provide blended learning models. All educational institutions should be better prepared (if necessary) for the transition: from full-time to distance learning. This will protect education and create opportunities for more individualized approaches to teaching and learning, monitoring educational activities and not only during future pandemics, but also during other shocks, such as natural disasters, which is possible in the development of flexible curricula that can be taught in person or online.

In addition, all teachers must be well prepared to manage a wide range of IT devices and guide the reform of the education sector in line with the standards of the European Education Area.

2. Analysis of recent research and publications

The analysis of scientific sources shows that the problem of monitoring the quality of higher education, identified in modern scientific discourse, is revealed in three main areas, which are comparative pedagogical systems of education. The first direction is determined by dissertation works, the second - monographs and textbooks, and the third reveals scientific periodicals.

Within the first direction the works of dissertations of scientists who have focused attention on actual theoretical questions of monitoring of quality of higher education are offered. In particular, in his dissertation L. Petrychenko (2012) considers the quality of education in a higher pedagogical educational institution, reveals the essence and structure of the concept "quality of education in a higher pedagogical educational institution in psychological and pedagogical literature", describes the characteristics of the result of the educational process and substantiates the theoretical and methodological principles of quality management of education in a higher pedagogical educational institution [24].

The work of V. Viktorov (2005) is of great importance in the development of the phenomenon of the quality of education and its management in the structure of a holistic educational state policy. In his work he determines what is the quality of education. In the dissertation the order of the organization and carrying out of monitoring of quality of education, comparison of indicators of quality of education and mechanisms of their definition is investigated. [27]

M. Kisil (2008) in his dissertation "Quality of higher education as a subject of philosophical analysis" analyzed the quality of higher education as an integral product of science and culture, which has its own attributive characteristics and meets the needs of society [11].

The study "Quality of university education: factors and mechanisms of actualization" S. Sadrytska (2011) focuses on assessing the quality of education, which is the basis for improving the quality of educational services both in individual institutions and at the regional and national levels. Having analyzed the existing approaches to the assessment of the quality of education, the author emphasizes the role of monitoring the quality of teaching as a means of assessing the quality of education at the level of a separate educational institution [25].

I. Annenkova (2016) considers theoretical and methodical bases of monitoring of quality of professional activity of scientific and pedagogical workers of higher educational institutions. She developed a model of professional activity of scientific and pedagogical workers of the Institutions of Higher Education. The main tendencies of development of monitoring of quality of professional activity of teaching staff in IHE are outlined [1].

N. Baidatska (2007) devotes her work to theoretical substantiation and experimental verification of the effectiveness of pedagogical conditions for monitoring the quality of students' educational achievements in higher educational institutions. The dissertation defines the essence of monitoring the quality of students' educational achievements, reveals the features associated with the implementation of monitoring the quality of students'

educational achievements, which is reflected in the implementation of the proposed pedagogical monitoring conditions [2].

Touching upon the problem of theoretical and methodological foundations of monitoring the quality of professional training of future skilled workers, I. Gyrilovska (2021) theoretically substantiates the author's concept of monitoring the quality of professional training of future skilled workers, the leading idea of which is the integration of external evaluation into the internal monitoring system, the definition of monitoring as an integral part of the educational process in the institution of professional (vocational and technical) education, as a system represented by a coordinated purposeful interaction of the controlling and controlled subsystems, in which the latter is given a dominant value. The author developed a procedural two-level model for monitoring the quality of professional training of future skilled workers, defined the organizational and pedagogical conditions for monitoring [10].

Models and tools for expert assessment of the quality of knowledge in distance learning systems are considered by V. Muradova (2021). Emphasizes that the goal of her dissertation work is the development of models and tools to increase the effectiveness of expert assessment of the quality of knowledge acquired by students in distance learning systems through subject-oriented technology [21].

So, the thesis works of famous scientists, knowing the problems of the quality of higher education, have acquired a special sharpness in the last decade. The quality of education in the modern period has become the subject of social and scientific debates among a wide range of the public. As a key problem of the modernization of this field of education, the new quality of education in the absence of a mechanism for its achievement states the need for a scientific substantiation of this concept, the development of a system of indicators for its evaluation, a system of measures for its monitoring. Monitoring the quality of education is one of the promising tools for managing the quality of education.

Within the scope of the second direction, the works of domestic scientists who made a significant contribution to the research of monitoring the quality of higher education are offered.

The results of scientific research and practical ways of solving the problem of creating an internal system for monitoring the quality of professional training of future qualified workers in vocational (vocational and technical) education institutions are considered in her monograph by I. Gyrilovska. Presents the author's concept of monitoring, a procedural two-level model of monitoring, a detailed program of monitoring activities, a method of conducting monitoring in professional (vocational and technical) education institutions. [9].

The textbook "Management of Organizations" by L. Dovgan, I. Malik, G. Mohonko, and M. Shkrobot systematizes knowledge in the subject area of organization management, outlines the principles, methods, and tools of anti-crisis management, as well as considers the issues of the systemic model of management, competitive organization policies, management of enterprise efficiency and risk protection, diagnostics of organization management [8].

The considerations of O. Baynazarov and V. Rakcheeva (2009) regarding monitoring studies in the educational sphere are impressive. Scientists emphasize that students should master the skills of drawing up examination programs and the formation of criteria that allow evaluation and monitoring of various aspects of the educational sphere. Also, students should master the skills of compiling and working with basic qualitative models and the use of mathematical statistics methods for statistical data processing [4].

T. Lukina (2020) made a thorough analysis of monitoring the quality of education in her works, where she showed historical aspects, modern scientific approaches and methodological recommendations for measuring and managing the quality of general secondary education at the national and regional levels, as well as at the level of the educational institution. [19].

Therefore, the analysis of research in the field of management and the existing practice of education development shows that monitoring is one of the most important components of information support for management, which in turn requires the identification of the scientific foundations of its construction in modern conditions. To highlight the scientific basis means to reveal the very phenomenon of monitoring the quality of education, to determine the types, functions, components, principles of construction, to develop implementation technologies. The quality of education is one of the priority issues of higher education management both at the federal and regional levels, and at the level of a separate higher education institution. Problems of the quality of higher education concern both the scientific and pedagogical community, as well as students of higher education institutions, school graduates and their parents, but at the same time, each of the interested parties has its own idea about the content of the quality of education and the methods of its achievements. The existing situation requires the formation of a more objective information base for making managerial decisions in the field of education quality and changing the procedure for making such decisions. In order to improve the effectiveness of education quality management, it is necessary to define and organize their monitoring as a key element of quality management in the overall management system of higher education institutions.

The analysis included the works of well-known Ukrainian researchers in scientific periodicals, which

focused attention on topical issues of monitoring the quality of higher education, which constitute the third direction of scientific research. In particular, the article by I. Dobroskok (2008) "Monitoring the quality of higher education: a definitive analysis" is devoted to the problem of the quality of education, the need to assess the quality of the educational process by monitoring the effective activity of a higher educational institution based on specific data. In particular, it analyzes the concepts of "higher education quality" and "higher education monitoring". [7].

V. Bilokopytov in his works (2011) analyzes the activities of the European Association of Universities as one of the main subjects of the process of formation of the European Higher Education Area; examines the main directions of the association's activities and levels of quality assurance in the context of the Bologna process, also traces the relationship between the processes of internationalization of higher education and its quality assurance in the European educational space [6].

V. Zinchenko (2012) highlights the monitoring of the quality of the organization of the educational process of higher education institutions in his article. It defines the essence of monitoring the quality management of the educational process of higher educational institutions as a type of educational and managerial monitoring and establishes the goals, tasks, object, subject, subjects, functions and principles of monitoring [28].

O. Kuchai in his works lights up the conceptual principles of training future teachers using of multimedia technologies and regards ensuring the quality of higher education in the European educational space [14; 15; 16; 17].

Kuchai O., Yakovenko S., Zorochkina T., Okolnycha T., Demchenko I., & Kuchai T. regarding the problems of Distance Learning in Specialists Training in Modern Terms of The Informative Society During COVID-19 [13].

S. Kubitskyi made a thorough analysis of the system of formation and diagnosis of levels of innovation and entrepreneurship competence of the future managers of education in the conditions of the knowledge economy [5; 12].

So, the problem of monitoring the quality of higher education is defined according to three main directions, which represent comparative pedagogical systems of education. The first direction is determined by dissertation works, the second by monographs and textbooks, and the third reveals scientific periodicals.

A detailed analysis of the scientific discourse, which is devoted to the problem of monitoring the quality of education in higher education institutions and reflects the pedagogical systems of education, can serve as a basis for the necessary educational changes in Ukraine, which are aimed at increasing the efficiency and quality of the educational process and educational activities.

3. Research methods

To achieve this goal, the following research methods were used: theoretical (analysis of philosophical, pedagogical, psychological literature), that allows to justify the starting points of the study; interpretive-analytical method, on the basis of which sources are studied using synthesis, analysis, systematization and generalization.

4. Results

Monitoring is related to: the quality of education; with education quality management; with a culture of assessment; with managerial decisions and strategic management. An important condition for the effectiveness of monitoring is the compliance of its procedures with the requirements of the evaluation culture, which is characterized by: the presence of clear evaluation criteria; developed assessment procedures; availability of qualified experts; developed forms for recording information during monitoring; developed time characteristics of the assessment; connection of assessment with the management decision-making system. [20].

According to its internal structure, the monitoring of the quality of education combines important management components (analysis, assessment and forecasting of processes in education; a set of techniques for tracking processes in education; collection and processing of information for the purpose of preparing recommendations for the development of the investigated processes and making the necessary corrections).

Depending on the goals, three directions of monitoring are defined: informational (providing the accumulation, structuring, and dissemination of information), basic (aimed at identifying new problems and threats before they become aware of them at the management level), problematic (clarification of patterns, processes, dangers, those problems that are known and significant from the point of view of management) [3].

Monitoring the quality of higher education is a complex, systematic and complex phenomenon that involves the assessment of the following components: resources invested in education; educational process; outcomes produced by the education system and feedback.

The main indicators of the quality of education in institutions of higher education are: personal performance of the student; general and qualitative success; quality of education; successes in Olympiads, competitions, conferences; admission to master's and postgraduate studies.

Monitoring the quality of education includes a rich set of procedures, which allows you to identify the dynamics of the system's development in a certain period. Because of this, it fits well into the educational services marketing algorithm, is its necessary condition and integral component.

Under such a formulation of the question, monitoring, along with forecasting, appears as one of the most important elements of the information support system, and this makes it possible to consider it as an integral part of the education management system. Therefore, monitoring the quality of education ensures informational stability, prevents the lack of information during the preparation of recommendations and management decisions, increases their validity.

According to its internal structure, the monitoring of the quality of education combines the following important management components: analysis, evaluation and forecasting of processes in education; a set of techniques for tracking processes in education; collection and processing of information for the purpose of preparing recommendations for the development of the researched processes and making the necessary corrections. Monitoring is based on these components, but does not replace any of them, since it cannot be either a control, an examination, or an information support system. Without the functioning of such areas of activity in higher education institutions, the organization of monitoring the quality of education is impossible. [26].

In our opinion, monitoring the quality of higher education is a system that is not limited to the control function and which:

- ensures the implementation of control and analytical activities: carries out constant collection, analysis and processing of information on the functioning of all links of the sphere of education, tracking of any processes and constant planned monitoring of the functioning of this system and their evaluation in order to receive feedback and have the opportunity to identify compliance of the educational process with the desired result, predicting, correcting and improving the management structure of higher education institutions, implementation of the development of scientifically based recommendations for making management decisions in order to increase the efficiency of the functioning of higher education;
- monitors compliance with higher education standards and taking into account current legal documents;
- contributes to the development of a model for assessing the quality of higher education using: modern information technologies, partnership interaction, scientific approaches for making successful management decisions of higher education leaders, positive motivation of students to self-monitor educational achievements for the purpose of self-improvement; increasing and increasing the level of scientific and pedagogical personnel, material and technical support of the institution of higher education for the provision of quality educational services and implementation of the system of competitiveness of the institution of higher education;
- carries out mechanisms for monitoring and monitoring the quality of education, constant monitoring of the educational process in order to identify its compliance with the desired result, the contingent and achievements of students, the development of professional skills of young specialists in order to forecast the main trends and dynamics of the development of the educational sector.

During the COVID-19 pandemic, there is a need to monitor the quality of higher education remotely, which is caused by the necessity of the situation that developed during the COVID-19 pandemic.

As noted by: A. Kuzminskyi, O. Kuchai, O. Bida, A. Chichuk, I. Sigetii, T. Kuchai, one of the priority directions of the higher education modernization program during the COVID-19 pandemic is distance learning, which is possible thanks to the existence of information - educational technologies and communication systems, especially for effective education and its monitoring in higher educational institutions.

Distance education is one of the established forms of education in world practice. The pandemic has led to significant changes in the field of education throughout the planet, it has caused educational problems in Ukraine as well. At the beginning of the quarantine in the spring of 2020, all educational institutions switched to distance learning in emergency mode. Distance education is the most democratic form of education, which allows all strata of society to receive educational services. Distance learning methods are used in institutions of higher education, in school education, in the system of improving the qualifications of specialists, in the system of training management personnel, etc.

In Ukraine, computer and audio-visual technology is being introduced into the educational process, which is necessary to improve the distance learning system, which is what all higher education institutions in Ukraine are currently working on.

The methodical basis for remote learning and monitoring of educational achievements during the COVID-19 pandemic and for the educational process in general requires the maximum involvement of students in active learning and monitoring of their knowledge. Let's note the advantages of this process: it increases the motivation of students to carry out professional training by means of distance learning; speed of feedback; constant presence of the teacher; systematic consultations; creation of a special forum for communication between the teacher and students; interaction between students and students and the teacher, which contributes to quality education - in general, and monitoring activity - in particular.

The effectiveness of pedagogical support of monitoring activities in the process of distance learning is achieved by the following conditions: availability of computer literacy among students; accounting for psychological regularities of perception, memory, attention and age characteristics of students, their individual and personal characteristics; creation of psychological comfort, which includes the teacher's ability to dialogue by means of information

technologies; individual approach to students; implementation of a specially organized self-control of students and systematic monitoring of the teacher based on the generalization of knowledge provided for in the development of relevant training programs for teaching professional disciplines; possession of students' skills of independent work; ensuring effective interaction of all components of the distance learning system.

During the COVID-19 pandemic, the role of the teacher is changing significantly in the educational process. He is entrusted with such functions as coordinating the cognitive process, adjusting the course being studied, advising students during the arrangement of an individual study plan, managing their educational projects, evaluating students' knowledge, and conducting monitoring.

Consideration of the features of distance education from the point of view of communication between the teacher and the student, made it possible to form a number of advantages of distance education in comparison with traditional education and its monitoring: advanced educational technologies; availability of information sources; individualization of education; convenient consulting system; democratic relations between student and teacher; convenient schedule and place of work [18].

In connection with the COVID-19 pandemic, the entire education system, in particular higher education, underwent a transformation and the need to adapt to new conditions. The development of new approaches and models of the educational process became available. The adaptation of students and teaching staff of higher education institutions to distance learning, which involves the acquisition of digital and other skills, was gradually carried out. Scientific and pedagogical workers were forced to develop new online courses and programs, to improve pedagogical skills, while taking into account the specifics of distance learning.

State authorities involved in promoting the implementation of distance learning, in particular, the Ministry of Digital Transformation of Ukraine, created appropriate conditions for Internet access, overcoming problems that existed in rural areas.

In modern conditions, with distance learning, it is necessary to unite and solve common problems by public authorities, institutions of higher education, public organizations and student self-government bodies in order to ensure an effective educational process.

The COVID-19 pandemic and related quarantine restrictions have demonstrated the advantages and disadvantages of distance learning technologies and the possibilities of their application in higher education institutions. Three interested parties in the field of higher education faced the problems of rapid adaptation to the conditions of the pandemic: state institutions; students; scientific and pedagogical workers [22].

Students and teaching staff of higher education institutions had psychological and organizational difficulties during distance learning. The education monitoring system also experienced difficulties. During the pandemic (spring 2020), the State Education Quality Service of Ukraine conducted a survey among students and scientific and pedagogical workers. According to the results of the survey, the problems faced by those seeking higher education were identified: lack of uninterrupted access to the Internet; the risk of biased assessment; insufficient self-organization; irregular communication with the teacher; lack of necessary equipment at home; lack of necessary skills for working with equipment and remote technologies (Information-analytical report on the results of a survey on the state of use of distance learning technologies in higher education institutions of Ukraine: State Education Quality Service of Ukraine, 2020).

A survey of students was conducted, which had a certain level of subjectivity in personal assessments, but the sample was sufficiently representative. The questionnaire, which included questions about the features of distance learning and monitoring activities during the period of quarantine restrictions, included questions about: satisfaction with learning, convenience of monitoring, the level of knowledge acquisition in the conditions of distance learning during the quarantine period; the need for an additional explanation by the teacher of the material submitted remotely; the admissibility of monitoring activities and conducting classes in the mode of video conferences (in particular, through Zoom or another similar resource); acquisition of new or improvement of acquired competencies or deterioration of skills in remote form; changes in the daily routine, spending time on training, evaluation, monitoring and leisure time; advantages and disadvantages of remote learning, assessment, monitoring and leisure during the quarantine period.

In the implementation of the educational function by scientific and pedagogical workers, the level of satisfaction with learning, the ease of monitoring, the level of knowledge acquisition, in general, and in the conditions of distance learning during the quarantine period, in particular, is of great importance. According to the results of the survey, 30% of students indicated their absolute satisfaction with the distance learning process, ease of monitoring, and the level of knowledge acquisition during the general quarantine period, 43% of students considered themselves satisfied, and 17% were dissatisfied. As a result, we can see in the results of the survey that the students highly rated the process of organizing the educational process of assessment, monitoring and leisure during the period of the worldwide quarantine.

Instead, the measure of the quality of the educational process is not just the level of satisfaction, but the ability to perceive information and the level of assimilation of knowledge by the student. A third of students noted a lower level of knowledge acquisition compared to face-to-face learning according to their own assessments. Including:

- 35% of students acquired knowledge at the same level;
- 10% of students improved the level of knowledge acquisition;
- 55% of students needed an additional explanation from the teacher regarding the provided remote material.

Interesting results were obtained on the question "How is information perceived better?":

- 19% of students answered "online";
- 31% - "full-time";
- 50% - "information is perceived equally".

The advantages of quarantine restrictions in the acquisition and development of competencies by students:

- ability to manage time;
- ability to work with information resources;
- ability to self-control;
- ability to self-organize.

But 72% of students noted that they lost communication and teamwork skills, which are key for future managers and public administrators.

Certain changes have taken place in the daily routine, time spent on learning, assessment, monitoring and leisure time. Note that during leisure time, students:

- began to engage in more hobbies - 24%;
- watch movies – 22%;
- do sports - 19%;
- read books – 18%;
- communicate in social networks - 17%.

Students named the following advantages of distance learning:

- flexible study schedule – 34%;
- the possibility of combining work and study - 29%;
- the possibility of learning additional skills, courses, hobbies - 20%;
- increase in motivation for self-study - 16%;
- assessment, monitoring - 1%.

Students consider the disadvantages of distance learning during the general quarantine period:

- technical problems during training and monitoring, inability to access the Internet system – 47%;
- difficulty of learning the material - 36%;
- teachers' possession of information technologies at a low level - 10%;
- students' possession of information technologies at a low level - 7%. [23].

Conclusions

Therefore, a necessary condition for monitoring the quality of higher education is information support, which includes the selection and appropriate processing of materials that adapt to the standards of the educational system.

Information technologies, the purpose of which is to facilitate the monitoring of the quality of education, make it possible to respond qualitatively to the dynamics of the educational sector, to create the necessary conditions for effective monitoring.

It has been studied that the monitoring of the quality of higher education using information technologies is necessary for today, the process of using means and methods of data collection, processing and transmission in order to obtain information on the current state of training of specialists in order to improve the level of their training, to form new qualities necessary for their professional activity. The solution to this problem is possible by monitoring the quality of higher education and the computerized learning process, i.e., the mandatory introduction of professional training in computer technology into the educational process and the monitoring of the quality of higher education with the study of information technologies, because information technologies have great opportunities for development professional skills, increase the intellectual potential of future specialists. That is why it is necessary to use the advantages of information technology.

Monitoring is implemented using a complex of methods and clearly developed procedures. Unlike control, which is directed at new facilities every year, monitoring is directed at the same facilities and is repeated periodically.

These provisions allow us to define monitoring as a system of activities related to the collection and analysis of information for the purpose of studying and evaluating the quality of training and making decisions about the development of the educational process based on the analysis of the identified typical features and trends.

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