Implementation of Quality Control of the Educational Process in Higher Education Institutions Based on Models

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Abstract

Modern Ukrainian society is in a complex process of transformation in various spheres at the present stage of its historical development, including, in the field of education. The humanitarian development of the country and the world sets new tasks for the national education system, the solution of which is inefficient within the framework of the existing methodology. Currently, the issue of analysing the efficiency of the higher education system and its adaptability in the field of training specialists of various profiles to constant and changing processes in various spheres of the society is of particular relevance. The inconsistency of the scientific-theoretical and scientific-practical level of the quality control model of higher education has determined the problem of the necessity to analyse the existing models in order to improve their individual aspects.

The purpose of the academic paper is to study the existing models of quality control of the educational process in higher education and to clarify the practical features of the development of such models from the perspective of participants in the learning process in higher educational institutions.

Methodology. In the course of the research, the analytical-bibliographic method was used to study the scientific literature on the issues of quality control of the educational process in higher educational institutions, as well as a questionnaire survey in order to clarify in practice the certain aspects of developing the models for the quality management of education in higher educational institutions.

Results. Based on the results of the research, the features of implementing the individual models of quality control of the educational process in higher educational institutions were studied, and the main principles and characteristics that should be taken into account when developing such a model for each individual institution of higher education were clarified.

Keywords: performance quality, quality control, educational process, evaluation criteria of education, management of the quality

1. Introduction

The analysis of the theory and practice of education proves the multidimensionality and complexity of the term "quality of education", which reflects the degree of implementing expectations at all levels of social organization – from personal to state ones. Every person should be given the opportunity to obtain a quality education that meets both the internal needs of the individual and the demands of the society as fully as possible.

The substantiation of the process of training students from all disciplines in terms of expediency, thoroughness and professional compliance with the requirements of time should be based on the evaluation of results, analysis of trends, the concept and strategy of training relevant specialists in domestic higher educational institutions. It should

also take into account the best foreign educational experience and new directions of business development nowadays and in the near future.

The evaluation of previous empirical studies allows us to find out the components of the educational system, the main indicators that testify to the quality of the higher education received by students, as well as the shortcomings of the educational process that need to be improved. On the other hand, the conducted surveys do not give an idea of the types and effectiveness of the criteria for the work of the heads of higher education institutions, and the optimal methods of quality control of education, and therefore, these issues are investigated in this paper.

As a result of the analysis of existing studies in this field, it is possible to draw a conclusion regarding the need to develop an innovative approach to the creation of a new educational model for assessing the quality of the process of training specialists in higher educational institutions. This model should be updated, supplemented and enriched at the content, technological, structural and functional level.

In the theoretical part of the present research, the category of quality of education has been considered; the criteria for evaluating the quality of an educational offer have been outlined; the components of the quality of higher education and the categories used to evaluate the quality of education have been distinguished; the purpose of managing the quality of education has been determined.

The practical part of the research includes the study of the most important principles of ensuring the quality of educational activities in higher educational institutions. It contains performance criteria of heads of higher educational institutions from the perspective of their ability to ensure high quality of education, aspects that need the most refinement in order to ensure high quality of higher education, control methods and component models for evaluating the quality of education in higher educational institutions.

2. Literature Review

While studying the scholars' scientific works on the issue of creating the most effective model for the implementation of quality control of the educational process in higher educational institutions, it is possible to note the criteria for evaluating the quality of the educational offer, which are considered as a comprehensive system, and can be divided into ten directions, namely:

− design and goals of the educational process;

− structure and content of the educational process;

− access to the educational program and recognition of educational achievements;

− learning and training in the context of educational process;

− measures of control, assessment of education seekers and academic integrity;

− human resources;

− educational environment and material base;

− internal quality control of the educational process;

− transparency and publicity;

− learning through investigation (González-Zamar, Abad-Segura, López-Meneses & Gómez-Galán, 2020).

J. Abbas (2020) notes, due to the fact that the requirements for the processes of implementation and evaluation of educational activities have changed significantly, consequently, the approaches to the design of educational proposals for each individual subject and to planning of the educational process as part of its implementation should also be changed.

Currently, the quality of education is considered as a category by specialists of various scientific fields – philosophy, management, sociology, pedagogy, psychology, etc. (Kundu, 2017).

The quality of education, like the category of quality in general, is not defined entirely and permanently; it develops in accordance with the level of development of the society and its requirements. The quality of education reflects the development of the education system and the society over a certain period of time and changes over time according to the needs of the individual, the society and the state. Accordingly, the list of indicators by which the degree of education quality is measured has also changed (Boring, 2017).

On the basis of analytical observations, it is possible to propose the following structural and logical scheme of spheres of development of the education quality by stages of education (Jiménez-Bucarey, Acevedo-Duque, Müller-Pérez &   Aguilar-Gallardo, 2021):

Service activity (1st year) → Organizational and production activity (2nd year) → Management and technological activity (first level of responsibility) (3rd year) → Management and analytical activity (4th year). On the basis of the determined structural scheme of the professional self-cognition of the education seekers, it is possible to design a conceptual model of specialist training with the allocation of its essential components by years of study and their thematic orientation (Grindrod, Morris & Killeen, 2020).

In addition to this allocation of professional skills, the implementation of the educational program should ensure the development of students' social skills (soft skills), without which even the most intelligenced specialists in the theory and practice of their field cannot be successful (Askarov, 2022).

The multidimensionality and multi-parametricity of the quality of education determine the definition of the following components of the higher education quality, namely:

− quality of education in the secondary school system as a base of education;

− quality of state education standards;

− quality of the current legislative framework;

− quality of educational programs, their modernity and relevance;

− quality of educational content;

− quality of scientific-methodical and material-technical support of the educational process,

− use of the latest technologies and methods of its organization;

− quality of teaching and scientific staff;

− quality of management;

− implementation of a special mechanism for managing the quality of education (Hadzhikoleva, Orozova, Andonov, Hadzhikolev, Pasheva, Popivanov & Venkov, 2019).

In order to assess the quality of education, the categories "Qualimetry", "Diagnostics of the efficiency of the educational process", "Educational (didactic) diagnostics" are used. They are applied for monitoring and evaluation, collecting statistical data and their analysis, recognizing trends and forecasting the development of results. Self-assessment, tests, questionnaires, expert evaluation and various forms of organizational control of the level of students' universitywide and cognitive activity are significant links in the application of diagnostics and qualimetry. (Guessoum, 2019).

3. Aims

The purpose of the research is to determine the standpoint of teachers and heads of higher educational institutions regarding the features of the selection and application of models for implementing quality control over the educational process in higher educational institutions.

4. Materials and Methods

The practical study of models for evaluating the educational process in higher education was carried out by interviewing 182 chiefs and teachers conducting scientific and pedagogical activities in 23 educational institutions of higher education in the Volyn, Rivne, Zhytomyr, and Kyiv regions of Ukraine, as well as 54 scientists studying the quality of arranging the educational process in educational institutions.

The research was conducted using such methods of data study and processing as comparison, analysis, synthesis of information, historiographical analysis and assessment of the dynamics of the development of individual models of quality control of the educational process in higher education institutions.

During the survey, the respondents were asked a number of questions regarding the main aspects in the application of quality control of the educational process. Survey participants were asked to express their subjective point of view on each question as a percentage from 0% to 100%.
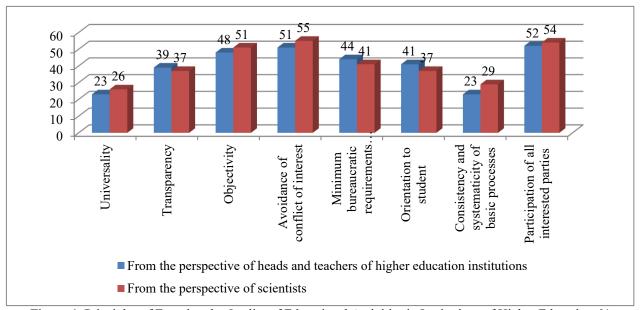
The survey was conducted by the authors of the study taking into account the number, age and gender composition of teachers and scientists in the educational institutions on the basis of which the study was conducted.

All respondents agreed to the disclosure and publication of the information provided by them.

The research was conducted using the Survey Planet service.

5. Results and Discussion

In the process of studying the issue of creating an effective model of quality control over the educational process in higher educational institutions, primarily, the viewpoint of the survey participants regarding the principles of ensuring the quality of educational activities in higher educational institutions was clarified (Figure 1):

Figure 1. Principles of Ensuring the Quality of Educational Activities in Institutions of Higher Education, %

Source: compiled by the authors.

The survey has shown that both teachers and scientists consider objectivity, avoidance of conflict of interests, minimum of requirements (documents, procedures), and student orientation to be the main principles of higher education quality control models.

During the survey, the respondents have also identified the following criteria, indicating the evaluation of the performance assessment of the heads of higher educational institutions from the point of view of their ability to ensure a sufficiently high quality of education in the institution of higher education (Figure 2).

Both in the opinion of the chiefs and from the perspective of scientists studying this issue, the ability to choose forms, methods, technologies of education and training in a higher educational institution, to design an educational process, the ability to determine ways to modernize the educational process, critically evaluate the practical significance of innovations in higher education, independently develop new pedagogical ideas and effectively monitor learning results are of particular significance in order to ensure a sufficiently high quality of education in the higher educational institution.

During the research, the respondents were asked to identify the directions that should be improved in order to ensure the high quality of higher education (Figure 3):
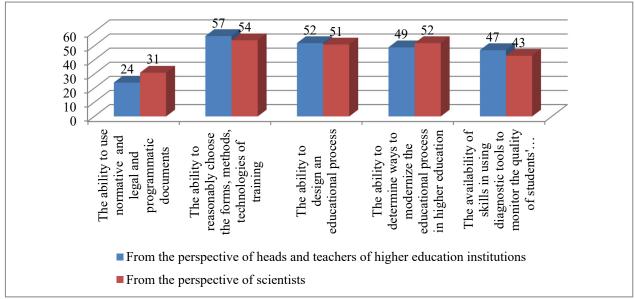
− the correlation of education quality management activities to other activities of the higher educational institution;

− constant study of the requirements of employers and the society towards the quality of higher education.

When creating a model of quality control of higher education, according to the respondents' standpoint, it is necessary to foresee the following methods of control (Figure 4):

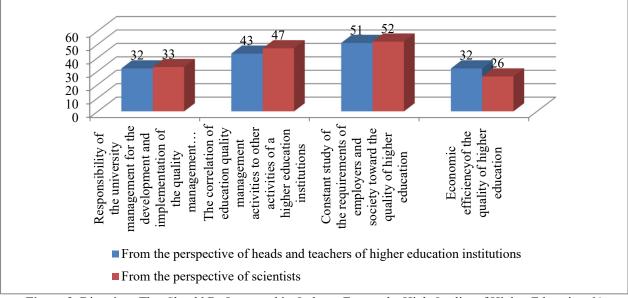According to the viewpoint of survey participants, such methods are as follows:

− regulatory (norms, rules, regulations;

− social (motivation);

− psychological (creation of a favourable psychological climate in the team, psychological action based on positive examples);

− technical methods of quality control.

The respondents have identified the most promising component models of education quality assessment in higher educational institutions, which will be especially popular in the future (Figure 5).

Figure 2. Performance Criteria of Heads of Higher Educational Institutions from the Point of View of Their Ability to Ensure High Quality of Education, %
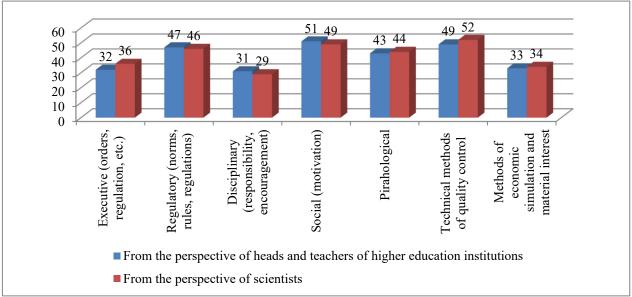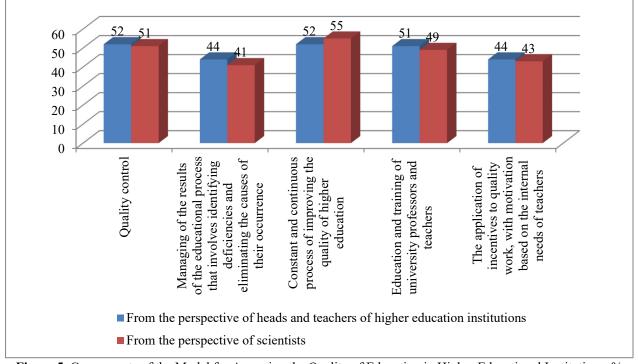
Source: compiled by the authors.

Figure 3. Directions That Should Be Improved in Order to Ensure the High Quality of Higher Education, %

Source: compiled by the authors.

These components are as follows: education and training of professors and teachers of the institution of higher education, verification of the performance quality of the institution, managing the results of the educational process, which includes identifying shortcomings and eliminating the causes of their occurrence, a constant and continuous process of improving the quality of higher education (Núñez, Ramos, & González, 2017).

Thus, it can be argued that the concept of "quality of education" is complex in nature and includes the relevant features of the components of education and the results of the educational process. Each component is considered on a separate basis depending on who acts as an evaluator of the achieved level of quality (students, parents, teachers, the administration of the educational institution, the society, the labour market) (Lee, 2017).

Figure 4. The Most Optimal Methods of Quality Control of Education, %

Source: compiled by the authors.

Figure 5. Components of the Model for Assessing the Quality of Education in Higher Educational Institutions, %

Source: compiled by the authors.

There are different approaches to defining the "quality of higher education" concept.

M. Todorova (2018) claims that the basic methodological principle of revealing the quality category is the principle of external and internal conditioning of the quality of any system, according to which the internal and external aspects of the quality of the system, their functioning and development, which form the system, are effective. In relation to higher education, the principle outlined determines the allocation of external and internal qualities of the educational process in the higher educational institution, through the interaction of which the internal laws of the functioning and development of educational systems interact with the external laws of the functioning and development of their system environment – society, economy, state, and civilization.

Therefore, quality in higher education is considered not only as a result of activity, but also as a process aimed at achieving planned results, taking into account the internal potential and external conditions of the object. Moreover, the defined components of the quality of higher education (result, process, conditions) are perceived not simply as a set of properties, but as a certain hierarchical system (Okoye, Arrona-Palacios, Camacho-Zuñiga, Guerra, Escamilla, & Hosseini, 2022).

The application of models for quality management of higher educational institutions significantly simplifies the solution of complex management tasks of establishments; it makes it possible to reduce the number of variables to be accounted to a manageable number. The advantage of the quantitative approach is the ability to make comparisons, analysis and forecasts in management. European models of education quality management are based on a technological approach, the leading idea of which is that quality is the result of specific activities. Therefore, it is necessary to control quality, influencing over the elements of activity and technology rather than the final result. Such elements are the goals of the educational institution and processes, goal setting, qualifications of teachers and their advance training processes, teaching methods and methodical support, content and mass teaching methods, student motivation, organizational and technical support of the educational process (Bogarín, Cerezo, & Romero, 2018).

Changing these elements of activity, technological solutions for managing the quality of education should be aimed at establishment of the object's educational development strategy, creation of a dynamic organizational management structure that defines the components of this structure and their relationships, transition from the subordination principle of leadership to the principle of horizontal coordination, which involves equal components based on self-organization and self-development, optimal combination of functional and linear quality management structures with a situational approach to management, ensuring the integrity of management functions within the management cycle, targeting of managerial influences, definition of objects and subjects of management, clear delineation of powers, rights, duties and responsibilities of subjects of management, strengthening monitoring, analysis and evaluation of the results of the educational process, selection of reasonable criteria and quality indicators, a combination of various methods of material and social motivation and organizational influence, economic, pedagogical, organizational, psychological and pedagogical methods of management (Abbas, Kumari, & Al-Rahmi, 2021).

The tasks of quality management of higher education include as follows: forecasting and planning of the quality of higher education, evaluation and analysis of the quality of higher education, quality control of higher education, stimulating the quality of educational services and responsibility for its level (Timbi-Sisalima, Sánchez-Gordón, Hilera-Gonzalez, & Otón-Tortosa, 2022; Vesce, Cisi, Gentile, & Stura, 2020).

The leading role in ensuring the quality of higher education belongs to higher educational institutions, which are entrusted with the task of developing their own strategy for quality education, implementing and constantly improving internal mechanisms for its provision, the implementation of the educational mission aimed at promoting the European level of the educational process, establishing academic ideals and values, promoting a culture of quality, involving all interested parties in cooperation. At the same time, it is necessary to maintain a balance of interests and responsibility for quality between the main topics of pedagogical interaction, making it purposeful and constructive (Orellana, Cevallos, Tello-Oquendo, Inca, Palacios, & Rentería, 2019; Tsiligiris & Hill, 2019).

The implementation of the quality system in higher education institutions contributes to recognition of educational benefits by consumers, achievement and stable maintenance of high quality services in order to meet the needs and requirements of consumers, confidence that the expected quality of education has been achieved and will be stably maintained, emphasizing the purpose of the activity and meeting the students' expectations, increasing the performance level and efficiency of the institutions' activities, use of new opportunities in the market of educational services (Yahiaoui, Chergui, & Aissaoui et al., 2022).

6. Conclusions

Therefore, as evidenced by the analysis of the scientific literature on the issues under study and the results of the questionnaire, it can be concluded that the model for assessing the quality of the educational process in higher educational institutions should have a systemic nature; it should be based on a combination of guiding principles and teaching methods. In particular, it should take into account the effective interaction of all interested parties in the training process and provide opportunities for their self-development, which in turn will lead to the formation of a unique, and most importantly, "necessary" specialist in the modern labour market.

Based on the results of the research, conclusions were made regarding the main aspects of the subsequent development of the latest models of quality control over the educational process. In particular, the survey has shown that both teachers and scientists consider objectivity, avoidance of conflict of interests, minimum of requirements (documents, procedures), and student orientation to be the main principles of higher education quality control models. The respondents have also chosen the following performance criteria of the heads of higher educational institutions from the point of view of their ability to ensure a sufficiently high quality of education in the institution of higher education, namely; the ability to choose forms, methods, technologies of training and education in a higher educational institution, design the educational process, the ability to determine ways to modernize the educational process, critically evaluate the practical value of innovations in higher education, independently develop new pedagogical ideas and effectively monitor the results of education. The survey participants consider that the correlation of the activities of managing the education quality to other types of activities of the higher educational institution and the constant study of the requirements of employers and the society towards the quality of higher education should be improved significantly in order to ensure the quality of higher education.

In the process of developing a quality control model of higher education, according to the respondents' viewpoints, it is necessary to foresee primarily regulatory, social, psychological, and technical methods of control.

The components of the model of control and proper support of the quality of the educational process are the relevant education and training of professors and teachers of higher educational institutions, verification of the performance quality level of the institution, managing the results of the educational process, which includes identifying shortcomings and eliminating the causes of their occurrence, a constant and continuous process of improving the quality of higher education.

Thus, the tasks set at the beginning of the work have been completed, the goal of the work has been achieved.

The results of the research make it possible to determine and outline the main prospective areas of modernizing and improving the activities for quality control of the educational activities of higher educational institutions, which in the future can serve as a direction for subsequent scientific research.

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