

MONITORING THE QUALITY OF EDUCATION AS A MANAGEMENT TOOL FOR CHANGES IN HIGHER EDUCATIONAL INSTITUTION

Olena Akilina

PhD, Boris Grinchenko Kyiv University,
e-mail: o.akilina@kubg.edu.ua, <http://orcid.org/0000-0001-9968-4921>, Ukraine

Oleksii Zhylytsov

PhD, Boris Grinchenko Kyiv University,
e-mail: o.zhylytsov@kubg.edu.ua, <http://orcid.org/0000-0002-7253-5990>, Ukraine

Alla Mykhatska

PhD, Boris Grinchenko Kyiv University,
e-mail: a.mykhatska@kubg.edu.ua, <http://orcid.org/0000-0002-8886-7877>, Ukraine

Abstract. The purpose of this article is to elaborate means of intellectualizing management of changes in higher educational institutions, analysis of monitoring components as one of the tools for managing system of higher education, identifying problems of its organization and implementation. In the course of the research, we used the following methods: the method of expert assessments; document analysis; analysis of structural divisions work experience; sociological methods: observation, questioning. Every higher educational institution depending to their self-organization creates the internal monitoring model, that is, in any case, an integral system, which, in our opinion, should comprise the following components: purpose; task; requirements; object and subjects, monitoring criteria. Priority in this research is given to "consumer monitoring".

Keywords: conception of quality, management tools, higher education, monitoring.

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Introduction

Changes in higher education (introduction of a competence approach, implementation of innovative educational technologies, practice-oriented approaches to learning, organization of distance learning, etc.) require effective management. Introduced changes are defined by their key characteristics: time; scale of the involvement of participants in the educational process; complexity of changes in their technical dimension.

The concept of organizational development technology comprises two aspects: structure and human resources. In the context of a structural approach, encouraging framework conditions are created to achieve organizational development goals through changes in administrative regulation. Human resources approach focuses on the progress of employees, stimulating their willingness to accept and provide changes. Implementing successful administrative changes for both discussed aspects requires the introduction of such an important organizational development tool as monitoring quality, which is in focus of our research.

The purpose of our research is to elaborate means of intellectualizing management of changes in higher educational institutions (further HEI), analysis of monitoring components as one of the tools for managing system of higher education, identifying problems of its organization and implementation.

In the course of the research, we used the following methods: the method of expert assessments; document analysis; analysis of structural divisions work experience; sociological methods: observation, questioning.

Conceptual approaches to monitoring in higher education institutions

Based on classical fundamentals of management that carrying out any strategy is a process of continuous changes varying in scale and complexity, it can be declared that organizational changes are always associated with procedures of implementation and amendment of the activities strategy.

The evaluation of the effectiveness of HEI in current conditions of the educational environment is relevant in terms of competitiveness and the importance of setting up strategies of the development of educational activities. The definition of appropriate indicators and indices is a necessary tool for creating an information base for monitoring the effectiveness of higher education institutions.

We entirely agree with the idea of researchers T. Bondarenko and D. Volkov (*Bondarenko, & Volkov, 2017*) that the assessment of HEI should be submitted to the purpose of further use of evaluation results.

Resuming outcomes of the research conducted by T. Bondarenko and D. Volkov, we must admit that they distinguish several approaches to the assessment of HEI, which reflect all current views on evaluation process. First of their iconic approaches to the assessment of HEI is economic, when the institution is assessed as a subject of entrepreneurship. Second is regulative involving the assessment of the quality of educational process and educational services in HEI taking into account the compliance of the above said with the minimum state and regional requirements. Besides, it contains indicators of control procedures. Another approach is rating and the last is parametric that involves the development and implementation of a quality management system based on ISO 9000.

Thus, concluding the analysis of the results of scientific research we encourage that the existing methods of assessment are mainly based on study of one of the factors that are the source of obtaining a competitive advantage (financial, scientific, technical or qualitative).

The ability of higher educational institutions to encourage internal reserves and effectively manage them creates the opportunity to draw up their competitive advantages. Therefore, the development of scientifically based methods forming a system of the efficiency of institution entrepreneurship indicators gives the access to a higher level of quality management and increases competitiveness of the university, but this entrepreneurial aspect goes beyond our research. However, we appreciate the view of the researchers that, in this context, the design of assessment profile characterizing the degree of educational institution activity in reaching the goals is vital.

It is clear that the basis of effective monitoring should be arranged with correctly chosen criteria. We consider them two types: first, accreditation, assisting the procedures of state assessment of education quality, and second - sociological. The latter are formed on the basis of consumers expressing views on the educational process. It is one of feedback methods, which can be called the criteria of "consumer monitoring". This group of HEI criteria is designed to conduct consumer monitoring, which is carried out through sociological research and local polls of certain groups of participants in the educational process.

Accreditation, as one of the important quality assurance procedures in higher education, exists in many countries, including Vietnam. Recent studies of institutional

accreditation impact on the University's assessment (*Pham, 2018*) were provided to prove this fact. As of May 2018, 80 higher education institutions in Vietnam were officially assessed and recognized using national quality standards. However, we in this study are interested in the important issue of monitoring organization and control costs in terms of their effectiveness. The authors of the above-mentioned study came to the conclusion that monitoring and control process is burdensome, time-consuming and, investments funded in it do not lead to significant changes in the educational institution. In their times, well-known researchers in the field of quality management, J. Juran and A. Feigenbaum, were the first to draw attention to the economic aspect of meeting standards of proper quality. Then, for the first time, the term "cost of quality" appeared in practice correlated with costs on warning of poor quality, monitoring and control and repairing poor-quality products. J. Juran and A. Feigenbaum's approach to accounting and analysis of quality has been widespread, but it has generated many dilemmas and mistakes. However, basic concepts of quality management (Edwards Deming, J. Juran and A. Feigenbaum) were formed in the practice of manufacturing companies. As a result, there is a question about the possibility of their application to the educational sphere. In 1996, the W. Edwards Deming's philosophy of quality management was studied as for its adaptability to higher education institutions (*Winchip, 1996*).

Three data sources were created during the study comprising quantitative results with 44 points included in survey questionnaire; qualitative conclusions of two open questions in the questionnaire; qualitative results of thematic analysis of the relevant literature. Correlation of the results at triangulation revealed five major Deming themes that can be adapted to higher education: purpose, cooperative systems, improvement, leadership and proceeding methods.

Approximately, at the same time, a thematic study was conducted in the context of New Zealand Educational Institution, namely, Auckland Institute of Technology, to review the impact of quality monitoring on improving and accomplishing students learning through two undergraduate curricula (*Horsburgh, 1999*). This study considered that in a rapidly changing world, the relevancy on quality should be made with the attributes of graduates, where the transformation of the learner significant. Quality monitoring should be linked to improvement of student learning. However, in this study, the processes of quality monitoring had a rather narrow impact and did not affect the complexity of the entire curriculum or issues such as leadership or culture as students learning environment, which a basis for example, for the Kyiv Borys Grinchenko University.

The concept of our university is most closely related to the authors of the article (*Belash et al., 2015*), which is dedicated to quality support of the university education and preparation of graduates successfully demanded in the labor market. This shows the role of the research conducted under the DPCA cycle (Deming-Shuhart cycle) for continuous improvement of educational programs. The most important component of the assessment and quality assurance of the educational program is monitoring of stakeholders' satisfaction with education. However, reflexive teaching practices are often announced as a pillar of effective learning, as stated in one of the most recent studies of this subject (*Aoun, Vatanasakdakul, & Ang, 2018*). Nevertheless, the perception of multiple forms of students' feedback and their contribution to reflexive learning has not attracted much attention yet, especially in the context of informational systems (ICs). This study examines previous components of the feedback and how they contribute to the overall perception of feedback.

Accepted analysis confirmed that, in order to affect student learning with quality control, the emphasis should be focused on curriculum, training, teaching and assessment.

However, we should not forget about the practice-oriented component of the educational process, which was under consideration in the following study Cuttance (1994) regarding a system of indicators developed to monitor the effectiveness of the practice.

Our main guidelines on the World educational standards included selection of standards and recommendations for quality assurance in the European Higher Education Area (ESG) adopted in 2015 on the proposal of the European Higher Education Quality Assurance Association (ENQA) in cooperation with the European Student Union (ESU), the European Association of Higher Education Institutions (EURASHE) and the European University Association (EUA). An interesting and most closely related to Ukrainian realities research was carried out by Russian scientists (*Dugarova, Starostina, Kimova, & Kazachek, 2016*). It is useful due to provided comparison of monitoring methodologies based on the International Standard ISO 9001: 2015, documents of the Copenhagen and the Turin Process.

Our analysis of the World researches has shown that in spite of monitoring methods have been widely used in the education system for a long time, the opportunities arising from their direct impact on the quality of education were not sufficiently taken into account. When using monitoring as a tool of the quality of higher education assessment, different problems arise. Monitoring in this case is not always a universal tool. This fact is proved by the opinions of other researchers (*Bazhenov, Bazhenova, Khilchenko, & Romanova, 2015*).

The Results and Discussion

The concept of managing changes is based on the idea that changing and provided not only in the organization of the structure. Specific people who should understand, accept and implement these changes are changing too. The concept presupposes the creation of reproducible models of successful changes, describes specific processes and tools that allow us to implement changes efficiently. Observing the process of organizational changes in educational institutions distinguish several consecutive stages in accordance with the concept of Kurt Levine:

1. "Defrosting" is characterized by the emergence of misbalance between driving and stabilizing forces in the organization. At this stage, it is necessary to find and combine driving forces of the organization, as well as to identify and minimize restraining forces. Conflicting parties can represent those forces within the educational institution (administration and human resources, various scientific creative groups etc.). They can act either as conflicting parties or, destabilizing influences can be provided from the outside (as, for example, the introduction of new educational standards).

2. "Change" is characterized by active disintegration and transformation of values, and norms of activity. At this stage, it is typical to involve key staff in setting new goals and developing transformation programs, as well as training passive majority.

3. "Freezing" is fixation of the state of an educational institution at a new level. New state of the organization should become relatively stable and protected from accidental changes.

In our opinion, the key areas of changes in HEI are strategy, specialties, technologies of education, roles and relationships, people, economy and the focus on the institution. The strategy of changes in our University is called "New Education Strategy". It is necessary to indicate the following aspects in the area of the New Education Strategy, which is University priority:

- development of a strategic plan of the University;

- conquering new markets of educational services;
- professional development of employees;
- application of new assessment criteria and procedures.

Necessary changes in the field of education technologies in our University are:

- strengthening practical orientation of education;
- distribution of distance learning;
- applying of information technologies;
- implementation of current systems of knowledge monitoring and control.

Internal monitoring is carried out in any HEI to determine the quality of implementation of educational programs, rating and other valuation procedures in order to further developing and implementing a complex of measures aimed at increasing the competitiveness and quality of educational programs implemented by the University.

The internal monitoring model is created by HEI in terms of self-organization, but in any case, it is an integral system, which in our opinion should comprise the following components:

1) the purpose of monitoring - the arrangement of database for the analysis of information about the state of education in the HEI and main indicators of its activities;

2) monitoring tasks:

- collection of data containing information about conditions, organization, content and results of educational process;

- assessment of the educational process quality, identification of changes in the direction of achieving final results;

- management activities to increase the effectiveness of the educational process and forecasting trends of HEI development;

3) requirements for monitoring system that is to be economic; objective; continuous, prognostic, stimulating all participants of the educational process to improve the quality of their own activities;

4) the objects of monitoring are all components of the internal HEI system from the analysis of the needs of stakeholders to the assessment of consumers satisfaction;

5) the entities of monitoring are all those who conduct monitoring studies and evaluations: functional services, senior management, lecturers and students. The entities can be other persons who are not directly involved in the educational process, but engaged in its implementation (scientists, representatives of educational authorities, employers, etc.);

6) monitoring criteria:

- the degree of compliance with the norms (established in documents of different levels), first of all, with standards of higher education quality and licensing requirements;

- the degree of conformity with the requirements of the stakeholders;

- changes in the state (trends).

As previously pointed out, the priority value in our University is given to "consumer monitoring", the purposes of which may be defined as:

- which competences do students and graduates lack for;

- what are the complaints of graduates to the educational program and how to change it;

- what are the employers' claims to the graduates, impeding their career from those who identify this career, and so on.

Our University conducts sociological research. Main focus groups are:

- applicants and students of the first year;

- students and graduates;
- lecturers and University staff.

The content of the questionnaires is designed to provide qualitative evaluation of the investigated events and processes. Along with surveys, the University actively conducts feedback monitoring and supervisory measures, in particular:

- Rector's meeting with the students, lecturers and Heads of departments;
- annual meeting of University lecturers;
- analysis of complaints, comments and suggestions of the educational process participants and stakeholders submitted to the Rector, Vice-Rectors and Deans.

To assess the monitoring results, two types of requirements are established:

- 1) threshold, that is, minimum acceptable values that are set as performance indicators;
- 2) comparative, aimed at improving the position in the ranking compared with objects and entities that occupy a higher position.

Due to the World trends in the development of higher education, we should admit that rating system of evaluation is very perspective. Though, prerequisites for creating an effective monitoring system is the organization of an interactive educational process where the Lecturer and students are partners in the path to gaining new knowledge, as well as the proper organization of student self-training.

Recently, the practice of combining the results of intermediate and final attestation into the integrated assessment of a student's success in studies during the semester has become widespread. This assessment includes the level of attending classes, the results of intermediate attestation (tests, control works, current tasks, scientific work) and final attestation (credits, examinations, coursework, practices). The integrated assessment of a student's success in semester studies is equal to (Bodnenko, Zhylytsov, Leschynskiy, & Mazur, 2014):

$$IAS = P1*CA + P2*RIA + P3*RFA,$$

where P1, P2, P3 are major factors for the assessment of the classes attendance (CA), the results of the intermediate attestation (RIA) and the final attestation (RFA).

Similarly, the rating system should evaluate the activity of lecturers and other University staff (Bodnenko, Zhylytsov, Leschynskiy, & Mazur, 2014):

$$IAS_t = P1*SSR + P2*RMW + P3*RSA,$$

where P1, P2, P3 are major factors of the student survey results on the quality of teaching (SSR), expert assessment of the methodological work results of the lecture (RMW), expert evaluation of the results of scientific activity (RSA).

The introduction of a rating system in the educational institution can be based on the use of developed indicators and their scaling (maximum) in scores for the rating of an employee. Scaling is a set of measuring methods for evaluating information collected during the process of questioning, observing or analyzing documents; scale is an algorithm to assign a certain number to the object under study. We consider when proceeding monitoring studies of the effectiveness of structural units activities, as well as employees in the educational institution, it is necessary to use a hierarchical structure for building a system of rating indicators.

Month	Events	Organizers/ Participants					
		Center of Quality Certification	Guarantor of Academic Educational Program	Head of the Department	Lecturer	Director/ Dean	Laboratory of the Education Information Supply
March	Coordinating meeting: Discussion of the Standardized document on the Description of Academic Educational Program	Questions for discussion: 1. Current (Standard) requirements for Academic Educational Program Description 2. Approaches to the Description (Definition) of the results of training/ Program results 3. Means (Models) of defining the results of training (Integrated activity of Departments / Lecturers involved in the preparation (Supplying Structural-logic Curriculum of education) 4. Procedure of introducing changes					
Questionnaire on the knowledge of legal base of the University activity: the Law “ On the Higher education”, Orders, Majors on the Organization of Educational process and its components. Majors on Department. Job instruction. Code of Corporate Culture.							
August	Development/approbation of electronic version of Individual Plan of Lecturer work						
Distribution (specification) of academic curriculum accounting applicants and HR changes							
September	Entry Control for Applicants			Groups formation, equality of dividing into groups. Changes in EP(content/ types of training procedures)			
October	Monitoring of Centers activities						
November	Monitoring methodical supply for Postgraduates Qualification Attestation						
Accreditation Master’s degree Academic Educational Programs							
December	Coordinating Meeting	Questions for discussion: 1. Effectiveness of entry control and equality of dividing into groups results 2. Results of Accreditation procedures. Perspectives of the development and transformations of specialties (Academic Programs) 3. Centers of Competences activities (existed and new)					

Fig. 1. Our Pathway Quality Card 2018

Particularly, we present the vertical and horizontal components that are used at Borys Grinchenko Kyiv University. Vertical hierarchy with the components of rating model of evaluation is designed as follows: employee rating; ranking structural unit (department / cycle commission); rating the Head of the department (department / cycle commission); rating the Institute (College); rating the Director of the Institute (College). Horizontal component of the rating system of evaluation consists of rating results among structural units of the University of one category (employee, Department (Chair), Head of the Department (Chair), Institute (College), Director of the Institute (College)). We should notice that every HEI designs its unique structure and technology for monitoring the quality of educational institution.

In order to implement the quality management tasks into practice our University has developed Pathway Quality Card, the example of it is given below. We also tried to apply the above-mentioned Edward Deming Quality Concept to evaluate the quality of pathway at our University, particularly, at the Faculty of Information Technologies and Management. Similar studies were carried out by postgraduate students within the discipline «Quality Management». The results of the studies showed positive assessment of the pathway by the students and their complete conformity with the principles of the quality management concept of Edward Deming.

Conclusions and suggestions

Thus, we consider monitoring the education quality as a tracking the quality of the educational process at any related time with the objective assessment of the effectiveness, which main function is "feedback" that allows to react promptly to the current situation within developed educational process in the HEI and manage it.

Among the priority tasks for the Borys Grinchenko Kyiv University in 2019 as a highlights of this research, issue:

- Realization of the model of the practice-oriented training of students (Class - Centers of Competences – Practice bases - Workplace) within the first three years of the Undergraduate (Bachelor's) degree;
 - Monitoring of students' academic achievements (semester, final attestation, work in the Centers of Competences). Ensuring compliance with the standard requirements of indicators of students' success and the quality of education in all specialties and educational (educational-qualifying) levels;
 - Monitoring of supplying distance learning and postgraduate curricula with correspondent electronic training courses;
 - Updating Bachelor's and Master's Degree Academic Educational Programs;
- Improvement of the regulatory framework for the organization of the educational process. Designing, discussion and approval of the Majors:
- about crediting (definition of academic difference), which were established during training in other educational programs;
 - participants of the educational process compliance with the principles of academic integrity, the procedure for identifying and establishing the facts of violation of academic integrity;
 - Introduction of Master's Theses examination in plagiarism;
 - Introduction of the assessment system of graduates of the University, who started work on a specialty by the employers;
 - Planning Accreditation of Academic Educational Programs.

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