

**Some peculiarities and issues of monitoring learning process
at higher educational institutions**

**Деякі особливості проблеми контролю навчання у
вищих навчальних закладах**

**Некоторые особенности проблемы мониторинга
обучения в высших учебных заведениях**

В статье рассматриваются основные подходы к проблеме мониторинга качества образовательного процесса в украинских высших учебных заведениях, подчеркивается важность и необходимость дальнейшего исследования в этом направлении в свете усиливающейся конкуренции на мировом рынке образовательных услуг, На основе анализа исследовательской литературы и собственного педагогического опыта сформированы основные направления в области дальнейшего совершенствования качества образовательного процесса на всех его уровнях.

Ключевые слова: учебный процесс, методы мониторинга, шкала мониторинга, образовательная программа, стандарты, качество образовательного процесса, уровень образования.

У статті розглядаються основні підходи до проблеми моніторингу якості навчального процесу в українських вищих навчальних закладах, висвітлено важливість та необхідність подальшого дослідження у цьому напрямку у світлі зростаючої конкуренції на світовому ринку освітніх послуг. На підставі аналізу дослідницької літератури та власного педагогічного досвіду є сформованими основні напрями в галузі подальшого вдосконалення якості навчального процесу на всіх його рівнях.

Ключові слова: навчальний процес, методи моніторингу, шкала моніторингу, освітня програма, стандарти, якість освітнього процесу, рівень освіти.

The article deals with the main issues concerning monitoring systems of functioning of a higher educational institution as a unit that is its economic, administrative and educational guide paths as well as monitoring work of the faculty and directly of students' studies.

According to the definition of quality of an educational process by UNESCO criteria main variants and comparative characteristics of existing monitoring scales of evaluating work of higher educational institutions, their confrontation with Ukrainian realia and further possibilities of applying such evaluation scales at the national system of higher education are presented.

Thorough analysis of scientific researches in this field have been carried out by the authors and certain suggestions as for possible directions of improvement and modernization of quality of monitoring educational process at a higher educational institution are made based on their analysis and own pedagogical experience.

The article points out that it is the 'internal' (variable) component of monitoring, that can be both organized and realized directly based on the needs of a higher educational institution itself, which is more important and more flexible. And modernization of this very part can provide the most immediate and most significant results which will allow to take into account, monitor, improve and develop all sides of future specialists' training.

Key words: educational process, methods of monitoring, monitoring scale, educational program, standards, educational process quality, level of education.

Introduction: topicality of the researched issue

In contemporary context most Ukrainian higher educational institutions received considerable autonomy in terms of implementing various educational programs and choosing an educational path in the learning process. But on the

one hand, liberty of choice may not always be a positive factor, whereas the result of the learning process should be a competitive specialist, that is why the freedom in choosing curricula throws into sharp relief the problem of introducing the system of monitoring learning process. It is also obvious that it (the system of monitoring) cannot be the same for all educational institutions due to the variety of curricula, teaching methods and techniques; however some of its fundamental principles should have a common base.

Any system providing control of the learning process quality, first and foremost, is a complex of regulatory documents which specify the techniques, ways and methods of work of all the participants of this process: teachers and students on condition of further enhancement and increase of educational process quality as well as professional competence of all educators at the system of higher education. Furthermore, the system of monitoring should ensure continuous increase of the level of education, meet the needs not only of students and teachers, but first of all take into account the demand from future employers and the labour market.

On the one hand each educational institution undergoes periodical licensing and re-credentialing – this part of monitoring belongs exactly to that standard part which does not often change at different times and is practically the same for most universities. Indeed, universities periodically report about the standards of the learning process, but this form of report is mainly based on formal characteristics: counting up the number of professors and associate professors, the number of applicants and students, the capacity of the library stock, technical equipment of university.

The ‘variable’ part of monitoring that has to be more flexible and adjusted directly to the educational institution itself should be paid much attention. What is more, it is the variability and autonomy of higher educational institutions in developing curricula and syllabuses which should provide constant feedback in the system “monitoring-learning-monitoring”.

Aim and tasks of the research is to analyze the state of the problem of monitoring the quality of education as well as to specify further areas of research.

Analysis of publications on the problem. Main body: peculiarities of monitoring educational process at higher educational institutions: Ukraine's educational system does not differ practically from multistage educational systems of other countries. It includes the following stages: preschool education, school, the system of field-specific and higher education, and postgraduate education. Our publication deals with the problems of monitoring the quality of education in the higher education system since this stage is the most important.

This statement is justified by the fact that a student is a former school pupil who set sail 'free floating' having lost the familiar school monitoring, that is why his/her adaptation to the new conditions is complicated on its own , besides, selling educational services of high standards (the increasing number of foreign students in modern higher educational institutions) is not only proceeds to the country's budget but also its ratings at the world's market.

Indeed, even today, education in such fields as medical-biological, pharmacological and technical engineering areas is quite popular with foreigners, however, one can periodically hear about various problems foreign students face about recognizing equivalent Ukrainian diplomas. And the main attractive factor about education for foreigners is not a high level of acquired knowledge but cheap education. Very few Ukrainian higher educational institutions can boast of making the best higher educational institutions lists, and if they do, they are, unfortunately, far beyond the first ten or even hundred.

Article 11 of UNESCO world declaration defines the quality of a learning process as a complex structure based on the interaction of many processes: a learning process, a process of interaction between teachers and students etc. However, the standard of a learning process depends, first of all, on the level of

teachers' qualification, students, post-graduates, as well as material support of higher educational institutions [1].

As it was mentioned above, the system of monitoring the quality of the learning process can be divided conventionally into two parts: a standard and a variable one. The standard part of monitoring can also be conventionally defined as external monitoring because it can include all kinds of monitoring the quality of the educational process in a higher educational institution on the part of the state: syllabuses, standards, which form the requirements for education, the availability of licenses, monitoring on the part of the Ministry of Education, attestation and certification of higher educational institutions [2].

Although, this part of monitoring is standard and it does not take into account the main problems of a higher educational institution, it has to exist, as any state or private educational institution works at the same market and trains specialists by the same demands.

It is such external or standard monitoring that forms the 'appearance' of a higher educational institution – its ratings, popularity, level, strategy and areas of development. One cannot but notice that such external system of monitoring is not ideal and has considerable drawbacks. First of all, it is the selectiveness of monitoring i.e. all higher educational institutions, faculties and years of study cannot be monitored at the same time. Secondly, this monitoring system is more global and comprehensive, consequently less flexible, so it does not allow to find drawbacks quickly and adequately and react to them. Therefore, we can say that external monitoring is of more stimulating and correcting character for higher educational institutions and guides their development within a more or less unified educational system on the whole.

More attention should be paid to the process of forming the internal monitoring of education standards. Such internal or, as it was mentioned above, 'variable' monitoring enables the educational institution itself to spot its weak points, carry out various kinds of diagnostics with the purpose of eliminating the drawbacks. That is the approach to the system of monitoring that corresponds to

the main requirements of Bologna educational system which clearly states that they are the principles of autonomy of each educational institution and responsibility for the level of students' training that each educational institution should rely on.

Thus, internal monitoring of the system of education quality is the type of monitoring that should be worked out by the educational institution itself, it should be carried out more or less on a regular base and its main area of focus should be determining the dynamics and strategy of the development of a higher educational institution.

European Foundation for Quality Management (EFQM) based on the TQM (total quality management) can be taken as a basic model of evaluation of education quality at the modern market [3,5,10].

According to this scale the quality of education at a higher educational institution should be evaluated and controlled through the following components:

- 1) quality of applicants' schooling (input component);
- 2) dynamics of quality of changes of all entry stages: bachelor's degree, specialist, master's degree with evaluation of the changes at each of the corresponding stages (output or intermediate component);
- 3) quality of resources: from quality of faculty members to quality of financial and logistic support;
- 4) quality of educational process: textbooks, syllabuses, number of hours per subject, interrelation of hours for work in class and autonomous work, scholarly traditions and a lot more;
- 5) monitoring of the employment process, demand at the market of graduates from higher educational institutions for several years.

It should be mentioned that the problem of monitoring quality of education is not new in the system of the Ukrainian higher education either.

Some key moments of it are reflected in the researches of V.Bespal'ko, Korolyov, O. Ivashchenko, G. Lavrentyev, V. Simonov, V. Sokolova [4,6,7]

where existing difficulties in the development of such 'variable' system of monitoring of knowledge quality are emphasized.

For instance, it is impossible to use the same evaluation scale for a first year student and a third year student. When developing an evaluation and monitoring scale it is necessary to take into account regional inhering of a higher educational institution and the level of its material and technical facilities. The field of education itself is equally essential in formation of requirements to the monitoring system of the quality of educational services. It is impossible to evaluate students in the same way if one of them studies to be a History teacher and another – a surgeon-doctor. It is obvious that the difficulty is about the formation of such an evaluation scale, it should be dynamic and should take into account a specific component not only of every higher educational institution individually but also its specialization, territoriality, financial and material means. Such scales may not have strictly fixed content and may differ by forms and kinds. But their main requirements include feedback with the purpose of getting data about the level of academic performance and effectiveness of educational process. The monitoring system or structure itself should not only be focused on a student, but also on a teacher and its functions should not include only control but also help for a teacher in determining the main areas of work with a student. For instance, one of the suggested models could be a model which comprises:

entrance control which is performed to find out initial knowledge and diagnose a student's readiness for studying one or another subject;

current control which is performed to monitor students' knowledge at each learning stage;

theme-based control to evaluate the level of knowledge on one topic or another;

midterm control that can be performed both at the end of each module and at the end of a semester or upon completing studying a subject;

summative control which can be both a credit, an examination, diploma or research work, besides, such form of control can include more than one subject;

remaining knowledge control which is performed after a while after studying the subject.

According to its forms and kinds control can also be quite different: oral questions, written tests, combined tests, tests, research, training and work experience internship results.

It is also worth paying attention to the falsity of a very common viewpoint that this is the student's progress which is the direct consequence of teachers' high qualification, and vice versa – his/her failure is faculty members' poor work. When developing the system of internal control it is necessary to take into account the fact that students have to act not only in the 'teacher-student' environment, but they are also interrelated to the 'student-student' and 'student-surrounding community' environment. Therefore the problem of 'poor academic performance' of an individual student is quite often the result of a different social component that has nothing to do with the learning process at a higher educational institution. There can be a great number of reasons 'not to study' or 'not to do well': from not being able to study as a result of lacking inborn aptitude and not being interested in studying to some unsolved personal problems or family problems and material difficulties.

That is why when developing the evaluation and monitoring scale it is necessary to take into consideration the influence of this component as well and to ensure statistical adequacy of the evaluation, that is being performed, the selection of teachers and students should be quite wide. Some scholars, while developing monitoring scales, believe that they should not be limited only by the field of learning activity but should take into account all types of students' activities including community work [9]. This viewpoint has a rational part since a qualified specialist is not only the person who possesses a certain

range of professional knowledge but also can organize work of colleagues and is sociable, friendly and communicative, however, priority is given to professionals by employers, therefore, it is the monitoring process that should be preferred.

Taking into account the fact that specialists of the same profession are not trained only by one educational institution, the scale of evaluation and monitoring should also consider both the peculiarities of an individual higher educational institution and general specificity of training various specialists. For such comparison, that is for work of one-field educational institutions it is rational to use exactly requirements of ministerial standards and programs.

Results of the research and their discussion Generalizing all the above mentioned, we can say that the main task of such a system of internal monitoring of education quality is formation and development of such personality qualities among students as motivation, self-motivation, activating mental performance. Monitoring systems should not only perform monitoring but also help faculty members, find optimal ways of developing educational process, substantiate and develop new syllabuses, areas of research, methods and techniques, control and correct the level of knowledge acquired by students in a timely manner as well as develop students' both personality and professional competences.

Particular attention should be paid to summative forms of monitoring, such as examinations, defending diploma papers, evaluating work experience internship etc. In this case it is very convenient to use two evaluation scales in parallel with each other: a standard five-point scale and an additional one in the form of different points which should take into account not only professional significance of the completed work but also such additional characteristics as material presentation by the student himself, layout and style, depth of insight into the problem and a lot more.

Besides, the monitoring system itself can be divided into several basic modules, so to say by the type of controlled areas:

-Introductory part: use and implementation of a monitoring system into the educational process by means of various methods, forms and approaches;

-Second stage: using those methods of control which allow to monitor students' work;

-Third stage: evaluation of teacher's work;

-Fourth stage: evaluation of the joint work of all the participants of the learning process [8]. The next question, which is no less important, is the question of formation and development of mathematical assessment of obtained results, i.e. answers to the questions 'How to assess? What criteria and characteristics to use?'

For building models that cover all the aspects of teaching and educational process various means of mathematical apparatus can be used: the theory of waiting lines, linear, non-linear and dynamic programming, statistical research methods, elements of correlation-regression analysis etc. Certain quantitative grades of individual parameters of the teaching and educational process should be taken as output data. Input data can be obtained as a result of a pedagogical experiment or research while following the essential structures, for example: faculty-speciality-group or educational institution-faculty-speciality. There could be a great number of such structures and they depend on what and how is necessary to evaluate. As it was mentioned above, the specificity of rating higher educational institutions is especially noteworthy.

Therefore, when forming experimental groups it is necessary to form them by types, i.e. take into account one-field education, state of facilities and resources, region, those factors that allow to compare higher educational institutions and divide them into groups with approximately the same characteristics. Clear formulation of output criteria is equally important, in this regard it is also necessary to possess a wide statistical base for carrying out preliminary empirical observations.

As it was mentioned before, teaching and educational process at a higher educational institution is quite a complicated process whose success and results

are influenced upon by a lot of factors. That is why it is impossible to create some consistent, let alone. universal model. Good results can be achieved only in a direct combination of mathematical methods, empirical researches, experiments and logical inferences. According to the conducted observations, the development and realization of such monitoring systems not only at the level of a higher educational institution, but also at the level of a faculty or department considerably improves the results. In this case, given 'weak' and 'strong' points, their duplication occurs which highlights credibility of obtained results and completed work. Such a model will allow to make more weighty and valid decisions on some changes and improvements of the educational process at all its levels which will provide a better quality of the educational process at a higher educational institutions.

Conclusions: the problem of developing a good-quality system of educational process monitoring is of paramount importance for Ukraine nowadays. In this regard it is all-round use of such a system that can not only monitor the educational activity of an individual educational institution but also determine the direction of its progressing as a whole.

One of the main modern problems is that existing monitoring systems are of testing character and the use of modern monitoring scales can only give the result which, it should be fairly noted, does not always correspond to reality. Mainly they are just formal checks. Another considerable drawback is the isolation of such monitoring systems from real participants of educational process – teachers and students who might just know and get the result but cannot influence it at all. As far as a formal structure of such educational monitoring programs, they should be definitely based on standard documents: standards for a chosen speciality, standards and requirements to higher education in general, taking into account peculiarities of a region, speciality, and a higher educational institution, student cohort and more.

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