

# **Monitoring of the Quality of Preparation of Students in Higher Education**

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*This article is devoted to a challenging aspect of education – monitoring the indicators of the quality of the training of students. Three typologically various systems of monitoring, function, criteria and monitors of educational process in higher education institution are considered.*

The problem of monitoring the quality indicators of the learning ability of students is one of the most difficult parts of the system of control in relation to the quality of education. The complexity of this problem is defined by several objective contradictions in the educational environment, namely:

- 1) between the data of monitoring and results of certification (cases when average results of monitoring significantly differ from the estimates received during intermediate and total certification in this connection objectivity and productivity of both systems are called into question are frequent);
- 2) between a productive orientation of the educational activity and a stating orientation of monitoring (traditionally costs of the organization and carrying out monitoring are considered as unproductive);
- 3) between the need of the differentiated correction of educational process by results of monitoring and unity of standards and requirements of total certification;
- 4) between the need of the state for objective character of received information and individual interests of subjects of education for demonstration of higher quality indicators of monitoring, etc.

Overcoming these contradictions and the solution of the arising problems connected with monitoring of quality indicators of learning ability of students in higher education institution, represents the difficult educational activity including all subjects of education and based on certain norms and structures. As fixed assets of this activity act:

- situational supervision of the teacher over behavior, communication, activity of students (especially in the event of conflict, decision-making, doubts, etc.);
- check lists; it is supposed that teachers fill in these lists by results of comparison of supervision over personal manifestations of students; characteristic example of a check list are forms of the analysis of

studies on which visitors of occupations put down mark marks of extent of manifestation of these or those qualities;

- rating scales (it is supposed that the teachers acting as experts, range students on extent of manifestation of significant qualities);
- role-playing games, debate (assessment of logicality, structure, validity, use of modern sources, etc.);
- structuring material (assessment of compliance of a logical and graphic method of representation of concepts and concepts);
- the analysis of the matrixes given with use and lattices (an assessment of completeness and correctness of arising structures);
- essay writing (assessment of substantial, literary and formal advantages of texts), etc.

Besides, within the monitoring of the educational processes it is possible to use "teaching tests", including: tasks for classification (structuring) the contents; tasks for material representation in the form of tables; tasks for comparison; test tasks of a multiple choice; test tasks with the free answer; test tasks of an alternative choice. Finally, highly effective systems of monitoring have to provide possibilities of alternative and additional ways of estimation (for example, the combination of an oral colloquium and written testing, formal rating estimates, methods of interviewing and direct supervision). It is obvious that no set of the isolated procedures of monitoring of quality indicators of the learning ability of students can provide neither improvement of the quality of professional, focused education; nor receiving a little solid and reliable information. In this regard we will consider three typologically various systems of monitoring of the educational processes of the institution, used in system of monitoring of indicators of learning ability. The first system (formative models of monitoring) is based on scrupulous application of the methods of objective supervision, scaling and other techniques for determination of productivity of the educational process. The main result of estimated procedures such are the "academic profiles", allowing very precisely to define as common problems of education in the relevant age group, and individual problems and difficulties.

The second system (summative monitoring, or rating systems of an assessment) assumes the importance of authentic estimates, and also the use of accumulative estimation. Systems of portfolio diagnostics belong here. Use of these systems is justified in cases when educational process produces a large variability of results of education and promotes manifestation of individual and personal features and formation of an individual educational trajectory. At last, the third system (the educational contract)

assumes the maximum extent of self-updating as students, and teachers as the subjects of educational activity capable to effective interaction. Now we will consider each of systems, proceeding from the following parameters, namely: the name of the model of monitoring; short description of a method of application of a technique; model context (where and under what conditions the model is effective); internal opportunities of optimization of the model; management (instructions on technique development and deployment); integration of the model of estimation (the instruction on use of the current estimates on intermediate or total certification); basic advantages and model shortcomings.

The concept of a formative assessment is rare in the Russian educational theory and practice, it is a question of an activity assessment as that, i.e. estimates of degree of compliance of real practical actions of the student to the format established in advance. Speaking generally, formative estimates represent the most effective remedy of diagnostics of implementation of educational standards: each of personal qualities (literacy, tolerance in communication, high level of reflexivity, etc.) it can be presented in the form of the sum of adequate ways of behavior and the communication being the object of a formative assessment. One more advantage of formative estimates is the possibility of creating a complete formative system of estimating the quality of education. In particular, the teacher makes a formative assessment of the activity of the students, the overseer makes a formative assessment of activity of the teacher, at the same time the administration of the institution's faculty has opportunity in a uniform format to reveal the pros and cons of the functioning of the divisions of faculty. Told emphasizes importance of administrative providing formative estimates, differently - formative model of monitoring.

The cycle of development for the formative model of monitoring begins with definition of the main phases of an assessment, among which are the: preparatory phase; preliminary estimate (receiving "crude" estimates); diagnostic phase (comparison of "crude" estimates and standard indicators, construction and substantial interpretation of the academic profiles); finishing phase (an estimation reflection, and also design of changes and additions in educational process in connection with the revealed shortcomings and problems). Despite seeming auxiliary character, the preparatory phase plays the most significant role in efficiency of estimation. Within this stage there is a formative self-assessment of the teacher, a formative assessment of the educational program, the contingent of students. Criteria of a self-assessment of the teacher can be: extent of acquaintance of the teacher with the contents, basic principles of its constructions, ways and activity methods; degree of compliance of individual experience of the teacher to the purposes and problems of a taught subject; level of individual ideas of ways, forms and manifestations of activity of students; a system to provide information about students; knowledge of difficult subjects and ways of necessary consultation; possession of methods of stimulation of the educational activity; ensuring adaptability of the contents in relation to individual needs of the students; creation of opportunities for independent (including, distant) course studying by students; degree of

compliance of individual process of training in the general norms and requirements; use of modern technologies in planning and monitoring of the educational process, etc. In organizing the diagnostics for the quality of the training program the following positions appear significant: the importance is focused on whole programs and the degree of their compliance to standards and the educational needs of students; clarity of structure of the contents, its compliance to the purposes, including on level and width; the availability of resources and efficiency of the educational environment; the formation of the concept of educational activity and level of its tool embodiment. During preliminary estimation activity of pupils becomes object of a formative assessment. Methods of an assessment also vary. Among them are: supervision over activity (including introspection, mutual supervision in groups, etc.); graphic schematization and visualization of representations and concepts (creation of schemes, models, computer images); recording of processes (where as criteria stages of the corresponding processes appear), etc. The resulting mark values represent only intermediate result of formative estimation. Generally speaking, the need to use an academic profile to characterize the results of an educational activity is a direct consequence of insufficient informational content and efficiency of traditional estimates. As it was already repeatedly noted, the mark quite meets requirements of the state certification, however, from the point of view of participants of the most educational process, it doesn't provide sufficient information concerning shortcomings and problems of students; the analysis of estimated points doesn't allow to reveal "weak" points, characteristic for all, individual problems and difficulties. The academic profile represents a set of components (in mathematical sense – the vector), each of which characterizes level of manifestation of these or those abilities, qualities or skills. Graphically academic profile can be presented in the form of the chart or the range of frequencies that allows to give evident sense to "tops" and "failures" of competence of the examinee. Construction procedure (including selection of the corresponding components), the subsequent analysis and interpretation of the academic profile represents very serious scientific and practical problem demanding purposeful consideration. First, in relative sizes of various qualities at the same examinee we can draw preliminary conclusions on the existence of difficulties and problems. Secondly, when averaging the academic profiles on rather large selection (for example, all students of one parallel or group) we can reveal as the common features characterizing these pupils, and difficulties for the teacher in conducting the corresponding course. The matter is that, as a rule, in any rather large selection which representatives are selected in a random way, individual merits and demerits are mutually compensated. Respectively increasing or decreasing the average characteristics of the academic profile indicates some general tendency caused by features of selection of students or features of teaching. Thirdly, not only absolute values of each characteristic of the academic profile can testify to features of competence of the student, but also to ratios between components. It opens a field of very interesting researches allowing not only to optimize creation of academic profiles, but moreover – to receive information about internal (personal and cultural) education determinants. Problems of traditional

ways of estimation of quality indicators of learning ability of students caused numerous attempts of reforming of the organization of educational process and change the system of its estimation. Rating systems became one of the most widespread options of system of the current certification. Introduction of rating systems of estimation of knowledge in modern education is connected with the solution of several basic tasks:

- 1) unification of criteria of an assessment of educational activity (including development and justification of quantitative mark estimates of all elements of educational practice);
- 2) development of uniform taxonomy of estimates for all possible forms of student's activity (universal rating formula or URF).

The methodology of development of rating system of an assessment of knowledge (the current certification) includes some stages. It should be noted also that on the condition of the full realization of rating systems of estimation the difference between the current and intermediate certification practically disappears; more precisely, results of the current certification appear as a sufficient basis for carrying out the intermediate certification for discipline. The starting point of development of the system of a rating assessment of knowledge is establishment of the so-called maximum rating point (MRP) on each of taught disciplines. MRP somewhat represents an approximate assessment of the importance and labor input of the corresponding course. MRP corresponds to ideal mastering by a material of a course and is equated to 100% for result. In MRP ideal at all courses studied in a higher education institution it has to be brought to the attention of all participants of educational process prior to the beginning of each following grade level.

According to the certain indicators of MRP approved by MO of an appropriate level, the working group develops the universal rating formula (URF), i.e. model of the measuring the main achievements of students and transfer of the relevant information to a mark form. The main difficulties when developing URF are connected with need of justification of system of the weight coefficients, allowing to consider not only qualitative features of performed work (for example, visit of occupations or paper writing), but to estimate its labor input. It is important to note that qualitative URF assume not only the accounting of achievements of students, but also mark expression of the "penalties" imposed for unfair work (groundless admissions of occupations, a systematic improper tasks, etc.). Besides, it is obvious that the concrete type of URF will vary taking into account specifics of lyceum, the educational module, etc. The renormalization of initial URF has to become the final stage of development and realization of the rating system. In other words, specification of all URF elements by results of each intermediate and total certification is inevitable. In this process weight coefficients, and also "penalties" and additional points

are reconsidered. Need of such recalculation is dictated by several significant factors: first, estimated level of labor costs at different performance of works very seldom coincides with their real values in this connection some types of works of students can be "overestimated" or "underestimated"; secondly, in a situation of reforms at all levels of educational system there can be some new directions or forms of activity of the students, not found due reflection in URF; thirdly, it is necessary to consider the possibility of changes of the institution's educational policy consisting in giving a larger importance to various subjects (change of ratios between MRB of different courses), or increase of the importance of various types of work. Thus, the rating system of estimation can't be developed once and for all, but demands constant scientific and methodical efforts to maintain it in "a working condition". To manage an institution's educational process the teacher needs to have a system of obtaining information on its productivity to see deviations or positive dynamics in this process.

But any control is not only a source of the return information. It possesses still a number of the major functions, and first of all – didactic. It is a control basis as assumes an analytical cut and an assessment of a condition of quality of knowledge on the basis of comparison with level of requirements to assimilation of a specific question. It is necessary to pay also attention that control has to have training character, and this function carries out either the teacher, or the consultant, or the student.

Control is capable to play a large role in training if to lean on the self-knowledge which is carried out on the basis of a reflection. The reflection provides training improvement of quality because each participant of educational process, having estimated the reached level, can define itself a further trajectory of the movement to the purpose: the student - to higher level of assimilation of knowledge and developments, the curator - to increase of the professional skill, the head - to improvement of quality of administrative activity. The system of monitoring of quality indicators of learning ability of students in higher education institution has to be based on the provisions considered above. It is built not from above (as it often happens), and goes from the student. It is possible to allocate five levels of system: The first level – most and mutually control. This process is carried out on all studies. Especially brightly it is shown when using modular technology and technology of a collective way of training. The big role in a self-assessment of level of knowledge is played by successfully found form of a high school or faculty marathon in which all students in all subjects take part. The second level is a control of the teacher. In higher education institution control planning with use of the technological card which is formed on all subject is carried out, and even prior to subject studying the teacher makes texts of examinations. Management of pedagogical system at the level of educational occupation demands a constant assessment of its efficiency which is defined by such indicators as scientific validity of the pedagogical system built by the teacher on educational occupation or system of occupations; the level of achievement planned by the triune purpose of occupation; realization of educational occupation as pedagogical system, high level

of integrity. Let's remind that level of integrity of system depends on a sufficient set of the elements entering into it, and narrowness of interrelation between elements. Monitoring of quality indicators of learning ability of students is carried out in higher education institution at four levels with the assistance of heads of higher education institution, teachers and students, the role and which place in this process changes. But always there is a uniform orientation on creation and realization of conditions for development and self-development of the student, satisfaction of his educational requirements, and, as a whole, creation of educational process with their account.

#### Literature

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