

## Innovative Approaches to Assessment of Results of Higher School Students Training

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### ABSTRACT

The basis of assessment tools selection for performance of control and evaluation of training results subject to requirements of modular-competence approach has been disclosed. The experience in implementation of assessment tools during "General and professional pedagogy" course has been observed. The objective of the study is rationale of assessment tools selection for evaluation of results of students' training. The methodology basis is modular-competence approach, which determines the review direction of all components of education process and the system of control and evaluation of specialists training, which is of major importance. The basis for assessment tools choice for control and evaluation of students' training results was offered and analytically substantiated. Results and experience in implementation of assessment tools in pedagogical disciplines can be used in institutions of professional-pedagogical education. Development of educational and research project "The law of future professional education" demonstrated students' creativity as well as formation of analytical and research skills.

### KEYWORDS

Modular-competence approach; training results; competences; professional competence; national qualifications framework.

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## Introduction

Today the higher education in Russia is undergoing a qualitatively new development stage which implies changes in priorities of higher education and the ideas of professional training of competent and competitive specialist ready for constant professional growth and professional self-realization. New standards of professional education define the increase of training quality of future specialists. Professional education aimed to development of social and personal, general scientific and broad professional competences in chosen professional sector allows to carry out design, research, production and administration activities in nearest future (Medvedeva and Marik, 2015). Implementation of new generation of Federal state educational standard of the Russian Federation in pedagogical education implies systematic transformation and upgrading of objectives, contents and

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methods of education and assessment procedures. Development of new control materials which allow to measure and evaluate the level of formation of common cultural and professional competences of graduates is actual.

Modular-competence approach being the methodology basis of new generation of Federal state educational standards of the Russian Federation determines the review direction of all components of education process and the system of control and evaluation of specialists training, which is of major importance (Markova et al., 2014). At the foreground is the evaluation of achievements of educational results which include knowledge, skills, experience in practices, common cultural and professional competences, which are implemented in appropriate professional activities (training, research, educational and designing, organizational and technological, etc.) (Bobienko, 2012). Modular-competence approach sets the importance of development of assessment tools which allow to prove the achievements of declared educational results in the form of competencies.

In the context of the integration of the domestic to the international scientific and educational space of learning and teaching at a high level, it is not just a part of the fundamental education, and has become a key to meet such requirements of the Bologna Process, as an extension of the mobility of professionals, students and other staff for the mutual enrichment of the European experience; increase the competitiveness of graduates in the internal European and global labor markets. Improving the quality of teaching in higher education should be provided in support of motivational direction, providing increased interest in gaining knowledge. Control of students' knowledge is an integral part of the learning process. Control - this is the ratio of the results achieved with the planned training objectives. Checking the students' knowledge should provide information not only about the rightness or wrongness of the final result of activities performed, but also about himself: according to this form of action mastering stage. Correctly organized control of educational activity of students allows the teacher to assess their knowledge, skills, time, and provide the necessary assistance to achieve the goals of education. All this together creates favorable conditions for the development of cognitive abilities of students and enhance their independent work in the classroom. A well-organized control allows not only to properly assess the level of assimilation of the material by students, but also to see their own achievements and shortcomings in the teaching methods. So, the choice of quality control forms learned knowledge is extremely important.

## Materials and Methods

The whole range of educational results is adopted to be slitted into intermediate and final. The intermediate result is the result which is the basis for further learning and formation of higher result (Challenger *et al.*, 2016). For example, from knowledge to skills and then to experience in practices and competences. The final result is the conclusive for basic educational program and is the complete evaluation of graduate competences (Ferritto, 2016).

In modern education to improve the quality of training can be provided not only a substantial improvement of teaching methods (use of interactive technologies, computerization of the educational process, introduction of the latest achievements in pedagogy), but also a reliable feedback that is realized through educational, creative and practical activities of students. The training system in higher education - a multi-faceted process that consists of a number of interrelated elements. Among

them occupies an important place control of knowledge, that is, the organization of feedback as an educational process controls (Chen, 2016). This issue is particularly relevant in our time due to the fact that the whole system of higher education to be complete organizational restructuring.

External and internal assessment are distinguished which allow to evaluate final educational results and to determine dynamics in individual development of students (Bobienko, 2012).

For intermediate and final certification of students the funds of assessment tools are created which include control materials allowing to determine a correspondence of planned and achieved results (Goulão *et al.*, 2016). The basis for assessment tools development is the competences defined in examined form as well as planned educational results based on it (knowledge, skills, experience in practices) (Shevchenko *et al.*, 2014).

In the context of the transfer of emphasis on the mastery of self-knowledge becomes very important to study the control role in shaping students' motivation exercises, develop their cognitive independence, self-identity. In this regard, in the course of the study, considerable attention is paid to the study of works devoted to the problems of development of the individual, its value orientations, cognitive abilities (Hermanowicz, 2016).

The selection of assessment tools should be based on fundamental provisions of estimation theory: validity of assessment (methods and results of evaluation should be appropriate to the objectives of learning); reliability of assessment (measure of correctness of educational results determination by evaluation system); standardization of assessment (similar content of evaluation procedures, similar time and rules of assessment for all subjects) (Robutti *et al.*, 2016).

Assessment tools selection should rely on qualification level which corresponds to basic educational program in a higher school. National qualifications framework of the Russian Federation is a tool for such analysis providing general description of all qualification levels and common methods of its achievement on a territory of the Russian Federation (Bradford *et al.*, 2016). It has been developed in accordance with Agreement on cooperation between the Ministry of education and science of the Russian Federation and Russian Union of Industrialists and Entrepreneurs dated 25th of June 2007 taking into account international experience in development of similar documents (Nguyen *et al.*, 2016).

National qualifications framework is represented in a form of table and includes characteristics of qualification levels disclosed by indicators of professional activity such as "breadth of powers and responsibility", "activity complexity" and "science intensity of activity" (Guzey *et al.*, 2016). Thus, the descriptors of level 6 qualification describe characteristics of knowledge (science intensity of activity) which should demonstrate a graduate as following: "Synthesis of professional knowledge and skills (including innovative). Unassisted search, analysis and evaluation of professional information" (Blinov *et al.*, 2010).

Thus, assessment tools should include design assignments with missing information that should be found in different information sources (Dennis *et al.*, 2016).

Assessment tools should take into consideration the requirements of professional standards (to be as close to professional activity as possible); to be of a high level of reliability (objectivity), consist of various quantity and quality

indicators; to be developed based on integration of qualitative and quantitative assessments (Ghosh *et al.*, 2016). Competence-oriented assessment tools have specific requirements and the major of them are: objectivity, reliability, fairness, validity, timeliness, effectiveness.

When forming the competence model of students' training innovative assessment tools must be applied that allow regular and systematic monitoring of educational results (Gladkova and Gladkov, 2015). The emphasis is on activity components of learner's qualifications which are observed during competences demonstration or of their application in solving professional tasks in specific situations (Kazantseva and Perova, 2015). This makes important the application in educational process of practice-oriented tasks, solving of situational professional tasks, integrated tasks of professional orientation, presentations of teaching, research and creative projects. Priority is the use of complex assessment methods.

## Results and Discussion

Development of system of complex assessment methods for control of the level of competences acquirement by students in accordance with new generation standards requirements is quite complicated and multicomponent problem. It is important to highlight the planned levels of formation of common cultural and professional competences. It can be a split into elementary level (threshold, minimum and obligatory), functional (increased relative to elementary level) and competence level (the highest possible degree of competence, is a quality benchmark for self-improvement) (Vaganova and Ermakova, 2015).

Let's consider the experience of assessment tools application in Nizhny Novgorod State Pedagogical University named after Kozma Minin (Minin University) during process of graduates training on the example of discipline "General and professional pedagogy". This discipline includes 14 modules and is responsible for the formation of three competencies: OK-19 is the possession of scientific research technology; PC-1 is an ability to carry out professional-pedagogical functions to ensure the efficient organization and management of pedagogical process of workers (specialists) training, and PC-4 is an ability to organize professional pedagogical activity on the legal basis (Kogan, 1989).

For example, in the structure of the training module "Legal basis of professional education" includes components such as objective, content, methods, means and results. During lessons of this module the implementation of the knowledge component of competence provided through disclosure of the theoretical bases of legislation of the Russian Federation in the field of education relative to the most important international legal acts in this field. Formed an idea about the legal status of the educational institution, main requirements to organization of educational process, status of its main participants - student, his legal representatives and teacher. Main regulatory documents of professional education were analyzed (Universal Declaration of Human Rights, the Convention on the Rights of the Child, the Constitution of the Russian Federation, Federal law "On Education in Russian Federation" and others).

During training on this discipline besides traditional assessment tools (report, oral questioning) innovative tools were used. Training discussion allowed to involve students into ideas exchange on current problems of regulatory support of professional education in the Russian Federation and to evaluate students' skills in competent expression of thoughts and arguing for the point of view. Development of

educational and research project "The law of future professional education" demonstrated students' creativity as well as formation of analytical and research skills. Solving of situational tasks revealed the ability of students to find solutions for complex and non-standard tasks.

Increased attention to monitoring the employment problem is caused not only by the desire to determine the degree of preparedness of students, but also the desire to improve the entire educational system. Control in high school - is a way of identifying and evaluating the results of the joint activity of the student and the teacher. Testing and assessment is performed at least eight functions: control, training, educational, organizational, developmental and methodical, diagnostic stimulating. The most important function of inspection and assessment is the control. With the number of main control functions to provide feedback, in which it appears the degree of compliance achieved results of functioning of the educational system of the projected goal. Performance monitoring of students' knowledge is the only basis for judging the results of the training, and consequently to control the function of students' knowledge. Learning function - this is a test and evaluation of students' knowledge. Their proper organization not only serves the purposes of control, but also the objectives of training, is always to some extent depend on the pedagogical skills of teachers. Test your knowledge closely associated with reproduction and repetition of previously studied. Acquired in the course of studying of a knowledge of the subject, the student may appear to be correct and sufficiently complete, in fact, they fall far short of requirements. It was only as a result of testing and evaluating student learns what he knows and does not know or knows enough that he had to do to improve the quality of knowledge. This leads students to independent conclusions about the necessity of adopting more sustainable methods of educational work. This importance is the awareness of the positive experience of educational work of the best students. On this basis, the student decides which content and methodology should be further his academic work, what you need to pay more attention to that in the future a significant impact on learning. The process of verification and evaluation of students' knowledge and its results are very important for the teacher himself, for his later work as a teacher in the process control at the same time evaluate their teaching methods and content of training.

In the educational process of all the functions are closely linked and intertwined, but there is a form of control, when one leading function predominates over the others. Control of students' knowledge - it is an integral and important part of the learning process, important stage on the path from ignorance to knowledge, from incomplete knowledge to more accurate and more complete. Every teacher needs to develop a knowledge of the control system, that in general, it best serves the fulfillment of its functions. By controlling the learning process, the teacher must not only inform students of certain information or organize the perception of this information from other sources, but at the same time and must have reliable information about how to perform this work. And the more complete will this information, the more students will be covered by them than adequate and timely control, the qualified teachers will be able to manage the process of assimilation, the more opportunities to make learning manageable.

Depending on the didactic purpose of using different kinds of knowledge control: diagnostic, preventive and warning, current, repetitive, periodic, thematic, final.

Diagnostic (provisional) control should be aimed at determining the level of educational competence of students with specific problems. It allows you to determine the existing level of knowledge to be used as a teacher orientation in the complexity of the material and is held at the beginning of the study of the subject on the 1st course to assess the reality of school grades and to identify the basic level of knowledge of students.

The current control provides quality control of mastering of knowledge in the study of specific topics and educational process management is possible only on the basis of monitoring data. The task of monitoring are reduced to, to identify the scope, depth, and quality of experience (assimilation) studied; identify gaps in knowledge and identify ways to address them; determine the degree of responsibility of students and their attitude to work, setting obstacles to their work; identify the level of mastery of the skills of independent work and identify ways and means of development; stimulate student interest in the subject and their activity in knowledge.

Repeated control aimed at creating conditions for the formation of skills and abilities. Retesting is the best promotes the transfer of knowledge in a short-term to long-term memory.

Thematic control is associated with checking the level of knowledge and skills within the scope of the section or topic specific discipline, while periodic monitoring provides to determine how much knowledge the students have with certain problems regarding the program requirements.

The final control is the task to find out the level of Learning students at the end of the semester or after studying the discipline. It is held, usually in the form of tests, exams.

Methods of control - it means activity of the teacher and students, during which identifies the Learning and mastering the knowledge of students, abilities and skills. The total value of these methods is the best way to ensure a timely and comprehensive feedback between students and teachers, on the basis of which is determined how students perceive and absorb the material.

In modern didactics the following methods of control are distinguished: daily monitoring of the educational and informative activity of students in the classroom, allows the teacher to get an idea of how they perceive and comprehend the training material, showing the extent to which the independence, creativity, etc .; oral questioning is staged in front of the students questions on the content of the material studied and the assessment of completeness, consistency and reasonableness of their answers; Written control of knowledge and skills by means of written works and reveals the ability to consistently present the material, to express their thoughts in writing.

The purpose determines the choice of control methods, it should be borne in mind that these methods can be applied in all kinds of control. Keep in mind that only complete their application makes it possible to regularly and objectively identify the dynamics of the formation of the system of knowledge and skills of students. Each control method has its advantages and disadvantages, scope, none of them can not be the only one able to diagnose all aspects of the learning process. Only the correct and pedagogically suitable combination of techniques improves the quality of the educational process.

Consider the most common method for the control of knowledge of students, namely oral questioning. When the control is set oral direct contact between teacher and student, during which the teacher gets ample opportunity to study the individual characteristics of the students mastering the material. There are front, individual and combined survey.

Front-end survey conducted in the form of a conversation with the teacher group. It is organically combined with the repetition, it is a means to consolidate the knowledge and skills. Its advantage lies in the fact that an active mental work can involve all groups of students. With the help of his teacher has the opportunity to demonstrate the readiness group to study new material, to determine the Maturity of the basic concepts, learning new material, which was dismantled in the lesson.

Individual survey suggests meaningful, coherent responses of students to the question concerning the studied, so it is a means of learning language development, memory, thinking of students. To perform this check deeper, it is necessary to set the students a clear, understandable questions requiring a detailed answer.

Interpreting control greatly simplifies the evaluation process: in the process of speech or oral exercises immediately tested language skills, language competence, home preparation of students estimated studied the lexical and grammatical material

The written test along with oral is an important method of control of knowledge, abilities and skills of students. This method makes it possible in the shortest possible time at the same time check the assimilation of the material by all groups of students, identify areas for individual work with each. The written test is used in all kinds of control and is carried out both in the classroom and extracurricular work.

An effective means of organizing writing language control is tested. Test control can ensure the successful implementation of the goals and all monitoring functions, as well as meet the requirements for quality control. The main difference from the traditional test of control work is that it always involves the measurement, and therefore the main distinctive feature of the test - the objectivity that is guaranteed by measuring. Therefore, the evaluation, are exposed on the test results, is more objectivity and independence from the possible subjectivity of the teacher than the estimate for the implementation of the traditional control work, which is always subjective. The test method is particularly effective when the synthetic task that allows a short time to check the understanding of the problem. Also, the test should be combined with traditional forms of control. Writing control can consist of various exercises to test various aspects. Monitoring should be close to the real conditions: the productive and reproductive skills should be checked with the help of authentic materials.

Under the category of written control subject tests, take the form of various tests, works on the same topic. In recent years, higher education has become a widely used standardized control of knowledge during the entire period of the study courses. The standardized control has been widely used test method with the alternative choice answers. alternative selection method consists of answers that include questions and answers at the same time offers, which should be properly assessed.

Monitoring, checking and evaluation of learning outcomes is a component of the educational process, without which it is impossible to imagine teaching

interaction between student and teacher. Only an objective assessment provides students with a deep moral satisfaction and is a powerful motivating factor in education is of great educational value. Systematic as the control principle is regularly identify knowledge and skills, connecting with the educational process and influencing its course. Commitment sets a certain approach to the selection of the material to be inspected, according to the choice of forms and methods of verification and assessment, learning outcomes, taking into account the individual characteristics of students. case-control principle is ensured by checking the knowledge of the basic concepts of each topic that should be learned by students. The student learns the material is not a continuous stream, and certain parts, they must be meaningful after an active perception, and then systematized in his memory. Storing quality depends on a certain number of repetitions of the acquired material and its practical application.

Only after these steps, you can check the psychological quality of understanding and memory, move on to the next part of the study material. The principle of thematic in the control system is of great importance, since the identification of the level of knowledge of the material allows the teacher to control the assimilation process.

## Conclusion

Thus, assessment tools application in pedagogical disciplines closely connected to implemented educational technologies and is oriented on evaluation of common cultural and professional competencies regulated by the standard.

The systematic control of knowledge and skills of students - one of the main conditions on which depends the improvement of the quality of education. The task of the teacher is that the process of verification and assessment of knowledge to reveal the true state of knowledge and skills and thus help students to rationally organize the training activities in the future. Teacher's work should be used not only conventional forms of control, but also systematically invent, deploy their funds. If the control and inspection are built correctly, they contribute not only to the timely identification of gaps in knowledge and skills of students, repetition and systematization of the material, the establishment of the level of readiness to assimilate new material, the formation of the ability to use the techniques of self-examination and self-control, but also raise the quality of training of future specialists.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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