

Evaluation of students' educational results in the process of psychological and pedagogical training

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Abstract. The article is devoted to the procedural analysis of the evaluation of the educational results of students in the process of psychological and pedagogical training of personnel. An analysis of the problems of this process, its advantages and disadvantages is carried out. The significance and effectiveness of the use of authentic types of student assessment, the possibilities of their use in Russian universities and higher educational institutions of the Republic of Kazakhstan of a non-pedagogical orientation are revealed. The experience of using authentic types of assessment in foreign countries is analyzed, their difference from the practice of assessment in domestic practice is emphasized. The experience of conducting pilot projects in a number of universities in Russia and the Republic of Kazakhstan is presented and analyzed. Attention is focused on such integrative types of authentic assessment as testing, practice-oriented tasks, focused and direct paraphrasing, analytical reports, compiling a reference collage scheme based on lecture materials, and characterizing the Chest of Regalia methodology. On the basis of the monitoring study, the problem of the competence of teachers and the importance of their training in the aspect of evaluating the educational results of students are analyzed. Keywords: Assessment, Educational Results, Authentic Types of Assessment, Students, Professional Competencies.

1 Introduction

In modern conditions, issues related to the development of effective, and at the same time authentic measures of pedagogical assessment and control of learning outcomes are increasingly on the agenda in higher education. The system of evaluation and control of learning outcomes consists in establishing the degree of conformity of quality standards between the goal and the learning outcome. Traditionally, in the practice of higher education, the student's learning result was evaluated, and not the process of his activity

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itself. Together with the controlling function, the assessment system should also perform informational (orienting) and motivational (stimulating) functions, thereby motivating students to search for and assimilate knowledge, the ability to apply theoretical skills in practice. Hence, modern higher education strives to shift the emphasis from the teaching activity of the teacher to the cognitive activity of students.

An analysis of the historiography of the issue of evaluation and evaluation activities in higher education indicates their insufficient elaboration, since a significant amount of research on this problem lies in the field of general education schools [1].

The ongoing changes in the educational process of higher education in an environment where the share of information technologies is increasing, new opportunities for access to information resources are emerging, ways of working with information are changing, the control and evaluation system is being rethought, the role of evaluation and control as an incentive to further self-education is being strengthened, as an element that supports the quality of educational process management. However, as the analysis of studies by I.N. Yemelyanova, O.A. Teplyakova, G.Z. Efimova shows, that reproductive assessment methods still prevail "and interactive diagnostic methods remain unclaimed: on average, 66% of respondents participating in the survey have never used in their practice evaluation methods and tools of this group, which, of course, is a deterrent to the implementation of a practice-oriented approach to learning" [2].

The problem of assessing educational results in the context of competence formation is actively discussed in Spain. Scientists of the Open University of Catalonia conducted research on the subject of "developing a methodology for assessing competencies, which they consider as proven abilities to use acquired knowledge, skills and abilities in a work or study situation, as well as professional or personal development" [3].

Italian scientists of the University of Salerno focus their research on the problems of assessing competencies in accordance with the set of skills on which, in their opinion, the formation of competencies is based [4]. In turn, Finnish researchers have proposed a scale of innovative competencies as updated tools for measuring human potential [5].

Professor D. William of the University of London, in order to optimize the final and formative control, developed the concept of "assessment for learning", which contributes to receiving constant feedback from the teacher to the students. The scientist believes that "... an assessment for learning is any assessment for which the first priority is to serve the purpose of facilitating student learning, and not for the purposes of reporting, ranking or recording learning outcomes. Evaluation activities can help in learning if the evaluation provides information that teachers and students can use as feedback when evaluating themselves and each other and to change teaching and learning" [6].

Modern research is devoted to the issues of educational assessment and their significance for educational practice (J. Baird, T. N. Hopfenbeck, P. E. Newton, A. T. Steen-Utheim [7]); a comparative analysis of formative assessment and summative assessment was carried out in publications (R. E. Bennett, A.M. Lau) [8, 9]; the problem of using information technologies in these types of assessment was worked out in research (J. W. Gikandi, D. Morrowa, N. E. Davisa, M. A. Bodonyi [10,11]); problems of assessing competencies and skills of the XXI century are described by (D. Pepper, H. Siarova, D. Sternadel, R. Mašidlauskaitė [12, 13]).

Noting the features of modern evaluation tools characterized by a focus on a specific product, the ability to determine the conformity of planned and obtained results, the availability of evaluation tools, Russian experts highlight the central problem faced by educational organizations. It consists in not understanding the specifics of the competencies of a significant part of the teaching staff, and as a result of obvious difficulties in their formation and evaluation, thereby positioning a negative attitude towards the introduction of innovative evaluation tools.

The Russian scientific community has long and widely studied the role of interactive and active assessment methods in teaching, the importance of methods related to authentic assessment of students' productive activity is debated. "Its forms such as projects, cases, abstracts, essays, web quests are considered as ways of developing the competence of teamwork and working with information resources" [14], which do not lose relevance today, and require further study in the context of the requirements of modern education in the process of psychological and pedagogical training. The problem of assessing the educational results of non-pedagogical students is also quite acute and requires additional methodological and methodological resources to solve it.

2 Objectives and methodology

The purpose of the work is to analyze authentic types of student assessment and the possibilities of their use in the process of psychological and pedagogical training in Russian universities and higher educational institutions of the Republic of Kazakhstan of non-pedagogical orientation.

The main drawback of the traditional system of assessment at the university in the form of tests and exams is reflected both in the quality control of the final result of education and its intermediate justification, since the assessment and control of students' competencies is not brought closer "to the conditions of their future professional practice" [15, p. 170], and the present procedural subjectivism gives rise to conflict situations, thereby reducing the motivation for learning, causing it to shift from the motives of achievement to the motives of avoiding failures.

"In modern conditions, the system of assessment of educational achievements should answer two fundamental questions. Are the goals set by the subjects of the educational process being achieved, and does this achievement correspond to external requirements (standards, requests of society, employers, etc.). Therefore, it is necessary to focus on authentic assessment, which, as a type of assessment, is usually used in practice-oriented education, providing for the assessment of the formation of skills and abilities of students in conditions of placing them in a situation as close as possible to real life - everyday or professional. In teaching based on the competence-based approach, authentic assessment is aimed at identifying the levels of competence formation" [16, p. 309].

3 Discussion of research results.

Let's turn to the analysis of foreign experience. Analyzing the experience of American education and the organization of evaluation of educational results using authentic assessment, we note that the American Association of Colleges and Universities (AAC & U) within the framework of the national LEAP initiative (Liberal Education and America's Promise), has developed and supports the VALUE project (Valid Assessment of Undergraduate Education), which provides the necessary tools for evaluating student learning outcomes in various fields and fields of study, educational institutions to determine how well students achieve the level of academic achievement in learning outcomes that employers and teachers consider necessary [17]. Educational institutions in different countries of the world have shown interest in the VALUE categories.

In Japan, the VALUE rubrics have been translated into Japanese for ease of use in colleges and universities. The main types of control and evaluation of learning outcomes are: an oral exam (oralexam), a written exam with a closed book (closedbookexam), an exam using a certain number of books (openbookexam), a form of exam in which two or three questions are brought to the student in advance, as a rule, per week, and the final

control of knowledge, assessed by the quality of the written essay in class (openpaperexam), exam-thinking, which reflects the analytical abilities and the student's ability to link together the various elements of the course (thinkingexam), testing (shot - questionexam), exam work at home (takehomeexam), a practical exam (practicalexam), where the student needs to show their skills and abilities by conducting an experiment, designing, creating a portfolio and other forms of a creatively oriented nature using various methods of general scientific knowledge [18].

Due to the fact that a significant part of the learning process abroad is implemented through the use of distance learning technologies, didactic means of distance learning and means of evaluating student learning outcomes are built using the technology of synchronous interaction (on-line) of students and teachers. For this purpose, distance learning system chats, video conferences, various forums and technologies that contribute to the achievement of learning goals and results can be used. Assessments can be preliminary and final. The preliminary assessment is announced by the teacher to motivate the student to improve it. To do this, the teacher can request the draft material of the written assignment - a full or partial draft of the work, sketches for the project written work, a preliminary list of references, etc.

Evaluation of the given works, projects in the process of their processing by the student forms feedback between the teacher and the student, students receive valuable comments and feedback that they can use to revise their work. Assignments with a preliminary assessment have less weight in the final assessment of the discipline being taught, but they usually reflect the skills and abilities that students must acquire to pass the final exam, coursework or other final project.

In general, early feedback is one of the most important contributions that teaching staff can make to help students succeed in their studies and achieve positive dynamics in learning outcomes. Assessment does not become the end result of a student's academic performance, but is a continuous process aimed at motivating and improving students' competencies.

The main difference between the European control and evaluation practice from the domestic one is the widespread use of permanent academic assessment, the main purpose of which is to diagnose difficulties and find ways to overcome them, which implies a subsequent orientation to successful learning. Foreign practice particularly encourages independent research activities, assuming a system of additional bonuses for the high quality of the work performed and "fines" for violating the deadlines for certain tasks. A student can be admitted to the session and use only intermediate control without taking into account the current control, or combine both forms of control: current and intermediate for successful completion of the examination session and for obtaining a certain number of credits. In the domestic system, conducting only intermediate control (test or exam) is not enough to obtain credits, and therefore for the successful completion of the session.

Analyzing the pilot projects conducted from 2013 to 2020 to evaluate the educational results of students in a number of universities in Russia (Krasnodar University of the Ministry of Internal Affairs of Russia, Kuban Agrarian University, Omsk State Agrarian University, Ulyanovsk State University) and the Republic of Kazakhstan (S. Seifulin Agrotechnical University, S. Amanzholov EKSU, D. Serikbayev EKTU.), we note the following.

Thus, in the practice of almost all higher educational institutions, pedagogical testing is used by 90%. The tests of training and tests of educational achievements are mainly used, which allow you to diagnose past experience, the result of mastering certain disciplines or their sections. Much less often, which is 20% in percentage terms, widely oriented tests are used, which are aimed at evaluating individual skills and abilities, for example, the skills of working with a textbook, thematic tables, encyclopedias and dictionaries.

Tests aimed at assessing the impact of training on the formation of logical thinking, the ability to reason, draw conclusions based on the analysis of a certain range of data, etc. are practically not used in the practice of pedagogical activity of teachers.

Testing as a type of authentic assessment has its own strengths and weaknesses, and not all educational results can be evaluated by means of testing. This means that it needs to be integrated with other assessment technologies, such as a rating system for assessing knowledge. It is also considered as one of the methods of authentic assessment that allows to obtain objective dynamics of knowledge acquisition not only during the academic year, but also for the entire time of study, to differentiate the significance of the grades received by students for performing various types of work, as well as to reflect the current and final assessment of the amount of work invested. In the universities we have named, this type of university assessment is implemented only in the work of individual teachers by about 45-50%.

Carrying out active work in the direction of authentic assessment, we note the importance and effectiveness of using in practice such methods as analytical reports and drawing up a reference scheme-collage based on lecture materials. The specificity of analytical reports lies in the possibility of describing the content of the problem of the discipline or topic being studied, the means of its implementation, the expected difficulties, and ways to solve this problem. The use of this technique helps to assess the student's ability to analyze problems and facts related to the subject of the course. Before offering a topic or problem, the teacher should instruct students how to write reports and show how to work with them, using specific examples. Usually, a week is given to prepare a report. The student's task is to describe the problem and plan ways to overcome it. The significance of this technique lies in the development of research skills, the formation of critical thinking.

"The advantages of collage as a form of evaluation include the fact that it does not take much time, teaches students to quickly analyze the text, and then integrate it into a short message through a reference scheme. Making collages helps to establish and realize the connections between the whole and the parts, the common and the one. It is well known that a collage is a schematically fixed representation of some part of the subject content, united by a key concept or problem. The task of the student, after studying the materials of the text of a book chapter or lecture, is to make a collage on some topic defined by the teacher" [16, p. 69].

Another kind of authentic assessment of students' educational achievements is the "Chest of Regalia" method. It is compiled by the students themselves, placing there all their achievements for the previous years of study, marked with any documents. The "chest" can be filled with documents on education, certificates of completion of courses; characteristics given by teachers or social partners; membership certificates of institutions and organizations; recommendations, letters of thanks, certificates, diplomas; performance charts as a list of achievements in the acquisition of training for a given period; printed works, abstracts, projects, sports achievements and certificates. The list is open, and everyone can add to it at their discretion. The analysis of such materials allows the teacher to see the sphere of students' interests, and the student the opportunity to evaluate their skills and abilities.

As a result of such consideration of the identity of each student, it is possible to trace their personal victories and failures in the assimilation of educational material; to see the work of each student and teacher on the formation of special competencies, as well as, together with curators and tutors, to trace the dynamics of changes in the sphere of students' interests. All this, in turn, will allow making appropriate adjustments to the curricula, developing a variety of test tasks, correlating the data of pedagogical and psychological diagnostics with the results of observations made in the educational process.

The first type of work is a "hidden" assessment and can be carried out both before and after the study of the topic. The established time limit of 1-2 minutes and the limit on the number of points or problems allows the student to choose from a variety of the most significant ones. Either all items or the most significant ones are discussed and commented on, it all depends on the availability of a set time. The teacher can supplement some points that students have missed, but are important for solving the problem.

Sometimes this type of work changes. It is proposed to compile a list of concepts related to the topic or problem, and give their definition or interpretation. The advantages of the method include immediate feedback, training in cause-and-effect relationships, the logic of highlighting the main thing, preparing students for brainstorming. As disadvantages, we highlight the fact that collective work makes it difficult for individual assessment and allows some students to "sit out".

As experience shows, the method of direct paraphrasing is also quite effective, which is used to convey in your own words a lecture, a chapter from a book, a text. This type of assessment can be both open and hidden, both oral and written. Its purpose is to establish the degree of understanding of the lecture, book, text, i.e. mandatory feedback. It is especially good to use paraphrasing after a series of texts or documents on a single issue. When writing, it is advisable to set a time and space limit on the number of words or pages. The task of the teacher is to select the best answers and give them to the students as an example or a sample.

Each work should be evaluated not only from negative, but also from positive positions. You can invite students to exchange paraphrases to add something, if possible. This method makes it possible to fully and accurately assess the quality of knowledge of each student, but also develops the skills of abstracting, annotating, teaches introspection and self-assessment. The disadvantages include the fact that checking written papers, preparing questions or problems takes a lot of time from the teacher.

A new methodology for monitoring and evaluating learning outcomes was tested at the Kazakh-American Free University. It was based on the borrowed experience of foreign countries (DePaul University, Harvard University) and pursued goals aimed at preliminary and final evaluation of learning outcomes in order to improve the professional competencies of students and motivation to get a higher grade. Tasks with a preliminary assessment were used that have less weight in the final assessment of the discipline being taught, but they usually reflect the skills and abilities that students must acquire to pass the final exam, coursework or other final project.

Such an assessment system for students with a not very pronounced leadership character, even if he is a very capable young man, but there are problems with discipline and perseverance, reinforces a psychologically incorrect statement of fact about their own self-esteem. Therefore, the preliminary assessment of the teacher and his proposal to finalize the tasks with an indication of what requires additions and adjustments was ambiguously accepted in the study group. Only 40% of the students expressed a desire to raise their mark.

Before including practice-oriented tasks in the learning process, a survey was conducted among students to choose the types of forms of their assessment. At the same time, it should be noted that 91% of students noted that they are well aware of the main points of the Regulation "On the control and assessment of students' knowledge". So 68% of students still prefer test-type tasks, 20% - written test papers, and only 12% preferred the colloquium. To the question "How do you assess the impact of active learning methods on the evaluation of learning outcomes?" The answers of the students were as follows: I do not understand their benefit in the assimilation of knowledge - 28.6% of respondents; I think that the lecture material gives me the best result in the assimilation of knowledge - 54.9%

of students; I think that my grades have decreased due to active teaching methods - 13.5% of people; I find it difficult to answer - 3%.

This survey is confirmed by the results of a study conducted at Harvard University regarding the impact of active teaching methods on the assessment of learning outcomes and self-assessment of the knowledge acquired by students. A study conducted by Louis Deslaurier, head of the department, senior lecturer in physics and a group of his colleagues showed that "attempts" to evaluate learning based on students' perception of learning can inadvertently advance traditional pedagogical teaching methods. In the course of the experiment, students who studied using active learning methods actually studied more, but at the same time felt that they were learning less than their peers in a lecture-oriented group. This is partly due to the fact that active learning is more difficult for students than lecture training.

One of the main conclusions of the study based on the results of the experiment is the conclusion that when students experience increased cognitive efforts associated with active learning, they initially perceive these efforts as an indicator of poor learning. And this can negatively affect their motivation, involvement and ability to independently regulate their learning.

Based on this, an important understanding of why active learning has not taken root in the academic environment has been determined, despite many studies that previously determined its effectiveness in comparison with traditional lecture teaching methods. The reason lies in the perception of students. That is, although professors are often considered the biggest obstacle to innovative learning, the study describes students' doubt about active learning, which can reduce the effectiveness of knowledge acquisition and its effectiveness. Compared to students in traditional lectures, students in active classes felt that they learned less, while in reality they learned more. The students also highly appreciated the quality of teaching at the lectures and expressed a preference that "all their subjects in the course were taught in this way", despite the lower results of control educational tests.

Another significant point in the aspect of considering the theory and practice of educational assessment is the problem of the competence of teachers and their role in evaluating educational results, as well as their training in this direction. According to the research of Russian and foreign scientists, this is a significant factor that threatens the reliability of the assessment of educational achievements of students [18]. J. Hill, H. West [19] and B. Randel and colleagues [20] associate the problem of insufficient level of competence of teachers in this aspect, firstly, "with limited awareness of the role of assessment as a basis for making various kinds of pedagogical decisions aimed at solving the problem of improving educational achievements of students; secondly, ignorance of the conceptual foundations of the use of assessment for teaching; thirdly, lack of a complete understanding of the diversity of effective assessment practices: many evaluators have such an idea it is based solely on personal evaluation about experience" [18, p. 69].

It is gratifying that the importance of this aspect has recently found a response in many empirical studies. So J. Hill, H. West [21], I. N. Yemelyanova, O. A. Teplyakova, G. Z. Efimova [22] believe that in order to change this situation, "it is necessary to rethink the training of teaching staff in the context of implementing a more integrative approach, in which evaluation is considered not as a separate stage of the teacher's activity, but in unity with all components of the educational process, as well as to develop other areas: to organize the work of professional communities as a platform for the exchange of experience of effective evaluation practices; to provide teachers with multidimensional feedback based on the analysis of evaluation results at national and regional levels ; ensure continuous professional development.

It is the implementation of a complex of various initiatives that will help teachers not only to master specific theories and practices of assessment in all their diversity, but also to

move towards the level of generating ideas and ideas for further improvement of educational assessment" [23].

Based on the classification of forms and methods of assessment developed by I. N. Emelyanova, the basis of which was the criteria of "mental activity, involving conscious work with information to create new knowledge, as well as activity activity, involving the student's involvement in group interaction, in real or simulated professional activity" [24, p. 12], we undertook a comparative analysis of the results of a pilot study in the institutions we named, regarding the attitude of teachers to reproductive, productive, active and interactive methods of assessing students and their levels of mastery of these methods.

A generalized summing up of the results of the survey showed "disappointing" results. The vast majority of teachers (94%) demonstrated their commitment to reproductive assessment methods. The main arguments for this preference were voiced: lack of time to master other assessment methods, confidence in previously tested methods that clearly, in their opinion, give positive results, low wages and a very tight schedule of classes that does not give the opportunity to improve their competence in this issue. In addition, one of the arguments for this priority was the statements that it is precisely such assessment tools as a test, a written exam, an oral exam, a survey that supports students' motivation for learning activities, the development of their speaking and literacy, stimulates discipline, which is so necessary, especially in recent years of the pandemic.

Analyzing the attitude of teachers, especially those with less than 10 years of work experience, to productive assessment methods, we note the overwhelming unanimity in the choice of abstracts (80%), a critical attitude towards essays and, especially, portfolio technology (89.2%) due to its time consumption, the reluctance of students to collect a lot of materials and process them. On the other hand, teachers are reluctant to see the merits of this method and, accordingly, study it in depth in order to use it in their teaching work.

Among active assessment methods, the overwhelming majority of teachers (92.4%) prefer discussions, almost the same percentage of respondents do not see any advantages in forums, case studies, web quests, because they are sure that they do not stimulate the search for information. As we can see, being in the "traditional captivity" teachers do not seek to recognize the merits of active and interactive methods for assessing students' competencies.

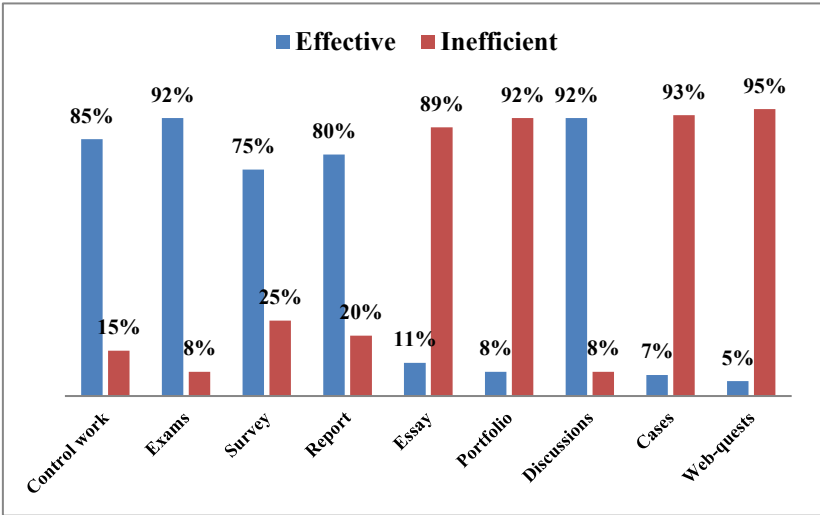


Fig. 1. Teachers' attitude to assessment methods.

Often, teachers are mistaken in their methodological reflections on active and interactive methods of assessment, for example, opposing problem situations and a case

that is inherently close to them, they speak negatively in relation to the second, as not stimulating students to find new resources to solve the task. The attitude of teachers to assessment methods is shown in Figure 1.

4 Conclusion

Thus, to ensure the effectiveness of the learning process, it is advisable to use frequent and diverse forms of knowledge control, which, under certain conditions, can cause a desire for competitiveness, which in itself is a strong incentive for student self-improvement [23]: cumulative (intermediate) assessments, rating, tests, non-standard examination procedures, based on the results of self-completion of tasks, assessment for preliminary preparation of a student for practical training, for example, by express testing (closed-form test tasks) for 5, maximum 10 minutes, portfolio and case stage. It is necessary to carry out and voice the diagnosis of errors based on the results of control, independent work, testing, evaluation of the results of educational activities, explaining to students about the essence of the mistakes made.

In addition, careful preparation and reorientation of the consciousness of the teaching corps to the use of not only productive, but also active and interactive methods of assessment are needed, which reveal the possibilities of authentic assessment. By not recognizing the merits of interactive assessment methods, teachers demonstrate their methodological incompetence, thereby creating already complex and contradictory situations in interaction with students in the context of a true, "truthful" assessment procedure, increasing the gap between the requirements of the Federal State Educational Standard and the readiness of teachers to assess the success of their students.

Therefore, purposeful methodological training of teachers is needed aimed at improving assessment procedures, forming their modern understanding and meaning of assessment, its focus on possible prospects for the development of the student's personality, and not just fixing their mastery of certain knowledge.

It gives us an answer to two main questions: whether the goals set by the subjects of the educational process are achieved, and whether this achievement meets the external requirements reflected in the standards, the demands of society, employers, and so on.

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