Сущность формативного оценивания как дидактического концепта высшего образования

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Аннотация. Цель исследования — раскрыть дидактическую сущность формативного оценивания в контексте его концептуализации в вузовском педагогическом процессе. В статье рассматривается проблема совершенствования педагогического процесса через использование образовательных технологий формативного оценивания. В исследовании предпринята попытка проследить эволюцию формирования понятия «формативное оценивание» в отечественной и зарубежной педагогике, выявить его сущность и содержание, охарактеризовать формативное оценивание в современном образовательном процессе вуза как педагогическое явление, способствующее повышению качества обучения. В результате исследователи уточнили сущность понятия «формативное оценивание» и определили его на основе проведенного комплексного анализа генезиса его концептуализации в мировой педагогической науке. Новизна предлагаемого исследования заключается в представленной характеристике формирующего оценивания в современном педагогическом процессе высших учебных заведений, раскрытии его сущности через дидактические функции и стратегические принципы. В заключение статьи подчеркивается дидактический потенциал формативного оценивания, акцентируется внимание на его основной характеристике регулятор образовательной деятельности, обеспечивающего непрерывное развитие и адаптацию педагогического процесса к индивидуальным способностям и образовательным потребностям обучающихся с целью повышения качества образования. Практическая польза работы заключается в том, что в ней предложены тактики и стратегии внедрения технологий формативного оценивания в образовательный процесс вуза.

The essence of formative assessment as a didactic concept of higher education

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Abstract. The purpose of the research is to reveal the didactic essence of formative assessment in the context of its conceptualization in the university pedagogical process. The article refers to the problem of improving the pedagogical process through the use of educational technologies of formative assessment. The study attempts to trace the evolution of the formation of the concept of formative assessment in Russian and foreign pedagogy, to identify its essence and content, to characterize formative assessment in the modern educational process of the university as a pedagogical phenomenon that contributes to improving the quality of learning. As a result, the researchers clarified the essence of the concept "formative assessment" and defined it on the basis of the conducted comprehensive analysis of the genesis of its conceptualization in global pedagogical science. The novelty of the proposed research lies in the presented characteristic of formative assessment in a modern pedagogical process of higher education institutions, revealing its essence through didactic functions and strategic principles. The paper concludes by highlighting the didactic potential of formative assessment, focusing on its essential characteristic as a regulator of educational activity, which provides the continuous development and adaptation of the pedagogical process to the individual abilities and learning needs of students in order to improve the quality of education. The practical advantage of the paper is that it proposes tactics and strategies for the implementation of formative assessment technologies in the university educational process.

Introduction

Modern social, economic, political conditions of development of domestic higher education actualize the research aimed at studying innovative ways to improve the quality of education, providing intensification of pedagogical
processes. The initiatives taken by the state and enshrined in the National Doctrine of Education in the Russian Federation direct the efforts of the pedagogical community to the creation of a democratic system of education, guaranteeing the necessary conditions for a full-fledged quality education, as well as individualization of the educational process, taking into account the interests and abilities of students (Национальная доктрина образования в РФ до 2025 года. https://www.consultant.ru/law/podborki/nacionalnaya_doktrina_obrazovaniya_v_rf_do_2025_goda/). The concept of formative assessment meets the set demands, as it has innovative specificity aimed at improving the pedagogical process on the basis of analyzing the current learning achievements of students and the corresponding adjustment of both the content of education and the educational activities of its participants. At the same time, one of the most important features of formative assessment is its construction on the basis of conscious involvement of both teachers and students, assuming their active interaction and co-operation. This significantly changes the functions of the teacher, shifting him/her from the role of a carrier and controller of knowledge to the role of a mentor in learning, developing the subjectivity of students, which leads to the formation of a democratic model of the educational process.

Thus, there is a contradiction between the created need to use didactic possibilities of formative assessment to improve the quality of learning and the insufficient study of the essence of the formative assessment concept, the processes of its formation and development for its effective implementation in the educational process of the university, which determined the problem of the study.

The research problem is defined by the following questions: how did the conceptualization of formative assessment take place in Russian and foreign pedagogy, what are the essence and content of the concept "formative assessment", what are essential characteristics of formative assessment in the modern university educational process?

To achieve the above-mentioned purpose of the research, it is necessary to solve a number of tasks:

- to analyze the genesis of the formative assessment conceptualization in domestic and foreign pedagogy;
- to identify the essence of the concept of formative assessment, clarifying its content;
- to characterize the concept of formative assessment in the modern pedagogical process of the university, revealing its didactic functions and strategic principles.

Research methodology. The purpose and objectives of the presented work determined the set of research methods used, among which we can highlight the following: theoretical and thematic analysis, generalization of scientific literature on the problems of formative assessment in the pedagogical process, synthesis and pedagogical interpretation of scientific information concerning the conceptualization of formative assessment in the Russian-language and English-language pedagogy, methods of qualitative and content analysis of modern research publications revealing the essence of formative assessment, tabular presentation of the results of a comparative analysis of summative and formative assessment specifics, a structural and functional analysis of the findings to present the characteristics of formative assessment in the contemporary university pedagogical process.

It should be noted that in order to address the third task of the study, a thematic analysis of research papers exploring the key aspects of formative assessment published between 2020 and 2023 was conducted. The search for publications was carried out using the keywords “formative assessment”, “formative evaluation”, “informative feedback” in the Web of Science, Scopus and Russian Science Citation Index scientific citation databases. The selection of scientific works was made using the methods of descriptive and bibliometric analysis, content comparative and aspect analysis.

The theoretical basis of the study is formed by works of Russian and foreign researchers revealing the issues of formative assessment in learning, among which we should highlight the works that laid the foundation for the concept of formative assessment in the global pedagogical theory and practice (Bloom, 1968; Scriven, 1967; Black, William, 1998; 2009; 2010; Hattie, 2003; 2011; Пинская, 2010); studies examining the conceptualization of formative assessment in higher education (Агапов, Белолуцкая, Крашенинников и др., 2022; Никитин, Белолуцкая, 2021); papers presenting the main theoretical approaches and practical technologies of formative assessment (Воронцов, 2018а; 2018б; Stiggins, 2005; 2007; Petty, 2009); scientific publications devoted to the types of evaluation in education (Шмигилова, Рванова, Таджигитов, 2022; Шмигилова, Рванова, Григоренко, 2021; Stiggins, 2002; 2017; Суворова, Бондаренко, 2023; Масленникова, Будахина, 2021), empirical studies investigating the didactic potential of formative assessment in the school and higher education systems (Прияткина, Шорникова, 2021; Вилкова, Грибова, 2022; Canadas, 2023; Morris, Perry, Wardle, 2021; Емельянова, 2022; Мысина, Агапов, Львовский, 2021; Юрченко, 2025).

The practical significance of the research lies in the possibility of using its results in planning, developing and organizing the educational process of a university in order to intensify it. In addition, the data obtained can be included in courses for studying pedagogical disciplines, teaching methods, as well as in the content of advanced training courses for teachers.

**Discussion and results**

As shown by the conducted research of the genesis of the formative assessment conceptualization, the concept of formative assessment is at the stage of discussion and formation in Russian pedagogical theory and practice. An important feature of this concept is the absence of its generally accepted unified formulation in the Russian-language educational space. In Russian pedagogy, the Russian-language terms ‘формативное оценивание’, ‘формирующее оценивание’ and ‘оценение для обучения’ are equally used to denote the concept generally accepted
in the English-language pedagogical literature as "formative assessment". Although it should be noted that according to I. V. Nikitin and A. K. Belolutskaya (Никитин, Белолуцкая, 2021), in the modern Russian-language scientific publications among the above-mentioned synonyms the use of the term 'формативное оценивание' prevails and, therefore, it is preferable.

The concept "formative assessment" was introduced into the global scientific pedagogical discourse by the American educational psychologist B. Bloom (1968) and the Australian educational philosopher of British origin M. Scriven (1967) in the late 1960s. In their research on assessment theory and practice, they view formative assessment as an intermediate, derived from corrective feedback and used to enhance learning.

In the late 1990s, a significant contribution to the shaping of the concept of formative assessment in pedagogical theory and practice was made by the British scientists P. Black and D. Wiliam (1998), who proposed its methodological justification and provided extensive empirical evidence of the high effectiveness of formative assessment technologies in teaching. According to the comparative-correlative analysis data provided by them, the strategies and tactics of formative assessment in educational activities have the most powerful didactic potential in improving students’ learning achievements compared to any other technologies and methods used to optimize the learning process.

P. Black and D. Wiliam (2009) believe that assessment can be called "formative" only if information about students’ learning achievements is collected, analyzed and used by teachers and students themselves to improve the results of the pedagogical process. At the same time, methods and pedagogical technologies that ensure the obtaining, accumulation, interpretation of this information are defined by the authors by the term "feedback", which is established between the assessed (student) and the assessor (teacher) (Никитин, Белолуцкая, 2021). The student can also act as the assessor, in this case feedback is formed on the basis of peer assessment or self-assessment (Кодрле, 2022).

Summarizing the main ideas of P. Black and D. Wiliam, formative assessment can be interpreted as an assessment activity performed by a teacher or learner in order to obtain feedback that provides information used to improve learning and teaching processes. At the same time, the authors consider peer assessment and self-assessment as the most effective type of assessment activity within formative assessment because it is carried out by learners, involving them in all aspects of the formative assessment process (Black, Wiliam, 2010).

Properly organized formative assessment uses each individual piece of work completed by a student to provide informative feedback to identify learning outcomes already achieved, diagnose weak and strong aspects of that work and set further individual learning goals to improve learning achievement.

Thus, as our research shows, formative assessment is based on feedback, which has an informative function in the process of adjusting the didactic process to increase its effectiveness. In this case, feedback is a continuous flow of information that combines three interrelated components (Кодрле, 2022; Petty, 2009):
- information about the student’s academic achievements, which is a detailed evaluative judgement containing information about specific elements of work successfully completed, indicating the level of formation of certain skills and abilities; this information states the dynamics in learning outcomes, but is not used for summative assessment;
- information on further actions to be taken by the student to adjust his/her learning activity, representing an individual trajectory for improving the learning process in order to increase its quality;
- clear and achievable objectives for each subsequent stage of learning, which are set in advance and include criteria for future assessment.

According to the approach proposed by the concept of formative assessment, learning achievements are learning goals that have been already attained. The way to reach new learning goals for a student is to adjust his/her learning activity on the basis of information generated through feedback, to build his/her own individual learning trajectory.

In Russian and foreign pedagogical theory and practice, formative assessment is regarded as informal and considered in opposition to summative assessment (Никитин, Белолуцкая, 2021; Шмигирилова, Рванова, Таджигитов, 2022; Black, Wiliam, 1998; 2009; 2010; Petty, 2009), which provides formal, final control of learning outcomes. The object of both summative and formative assessment is the quality of learning, but it is the aspect of goal-setting that determines the essence of these types of assessment. Thus, the purpose of the former is to assess the quality of learning and the purpose of the latter is to improve it.

There is no doubt that both summative and formative assessment play a crucial role in teaching, ensuring and analyzing the progress of students’ learning and cognitive activities. It is important to understand how each of these types of assessment is used by teachers and students in educational activities. Table 1 summarizes the comparative analysis of the main characteristics of summative and formative assessment.

**Table 1. Comparative characteristics of summative and formative assessment**

<table>
<thead>
<tr>
<th>Summative assessment</th>
<th>Formative assessment</th>
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<tbody>
<tr>
<td><strong>Objective</strong></td>
<td><strong>Function</strong></td>
</tr>
<tr>
<td>Evaluate the quality of training.</td>
<td>Providing informative feedback whose objectives are as follows: to set learning goals, state learning achievements and provide ways to improve learning.</td>
</tr>
<tr>
<td>Providing a mark or sum of points.</td>
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</table>
Carried out by the teacher who gives a mark/point or makes an evaluative judgement.

Performed by both the teacher and students who apply peer-to-peer assessment or self-assessment based on pre-defined learning goals.

Leads to a conscious or unconscious comparison of one student’s academic achievements with those of another.

Provides information about a particular student’s academic achievements and suggests specific ways to improve them.

Compares students with each other, forces them to compete.

Excludes the comparison of one student with another, provides a comparison of the student’s current learning results with his/her previous results, which makes it possible to track the dynamics and evaluate the efforts made by him/her to improve his/her educational achievements.

The fear of getting a low score makes students nervous. Trying to protect their self-esteem, they avoid difficult and problematic tasks. As a consequence, interest in learning, self-esteem and emotional involvement in learning and cognitive activities decrease. At the same time, the self-esteem of students with high academic achievements increases.

Students realize that their successes are recognized, their academic achievements are taken into account, and their efforts are appreciated which forms their readiness for challenging, problem-solving assignments. As a result, self-esteem, interest in learning and emotional involvement in the educational process increase.

Focus on getting a high grade.
The process of educational activity is often superficial, not aimed at the conscious acquisition of deep knowledge.

Focus on achieving the set learning objectives, matching the learning outcomes to the assessment criteria, leading to the realized goal of gaining in-depth knowledge.

It is characterized mainly by external motivation, which does not stimulate the student to improve his/her educational and cognitive activities.

Provides for constant conscious work of the student to improve their learning and cognitive activity, which leads to high efficiency of the didactic process.

Focus on the idea: “It’s embarrassing to make mistakes, they lead to low grades”.

Errors are seen as the key to achieving the learning goal: they form informative feedback that provides concrete recommendations – ways to improve learning and cognitive strategies and techniques to achieve the learning goal.

### Specifics of a student’s learning activity

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In the early 2000s, the New Zealand pedagogue, Professor J. Hattie (2003), who continued the study of the concept of formative assessment, developed the ideas proposed in the scientific works of P. Black and D. Wiliam and came to the conclusion about the highest didactic potential of formative assessment, especially for weak learners. According to J. Hattie (2011), the level of learning quality increases significantly as a result of using a variety of formative assessment technologies, among which he singles out self-assessment and peer assessment technologies as the most effective in providing feedback. The concept of formative assessment was further developed in the research works of the British pedagogue G. Petty (2009), the Russian scientists A. B. Vorontsov (Воронцов, 2018а; 2018b), M. A. Pinskaya (Пинская, 2010), A. M. Agarov, A. K. Belolutskaya, E. E. Krasheninnikov et al. (Агаров, Белолуцкая, Крашенинников и др., 2022), who put forward specific strategies and tactics for implementing the concept of formative assessment in the educational process. The following theses summarize the proposed ideas and conclusions:

1. The teacher should avoid assessment in the form of points and grades. Research (Hattie, 2011; Petty, 2009) has shown that assigning points and grades for the completed work significantly reduces the motivation of both weak and strong students. In addition, there is no need to mark absolutely every student’s work; one should do this only if it is really necessary.

2. It is essential to use self-assessment actively and more often, both on the basis of assessment criteria provided by the teacher and on the basis of criteria developed in advance with the students. The regular use of self-assessment stimulates reflection, teaches students to take responsibility for their learning outcomes, focuses their attention on the criteria for success, increases motivation and forms subjectivity towards their own education (Мысина, Агапов, Львовский, 2021).

3. The teacher ought to provide conditions for feedback to be truly informative, aimed at adjusting learning and cognitive activities to improve their effectiveness.

4. It is highly recommended to employ a variety of formative assessment tactics. Formative assessment methods that provide the best quality feedback for both the student and the teacher include: peer assessment in pairs, peer assessment in groups, peer explanation of learning material in pairs and groups, self-assessment based on jointly developed criteria; a series of learning achievement tests for interim progress monitoring (held regularly every three to four weeks and providing an opportunity to retake the material for those students who are dissatisfied with their previous results); double assessment (involving self-assessment based on defined criteria followed by assessment by the teacher); triple assessment (involving self-assessment followed by peer-to-peer assessment plus teacher assessment). Below, as an illustration, we offer a model of the triple assessment protocol of essay writing in the discipline “Foreign Language”, which provides effective feedback in the implementation of formative assessment technologies.
Thus, the conducted study of the genesis of the formative assessment conceptualization in pedagogy allowed us to summarize the most valuable approaches to the interpretation of formative assessment as a didactic concept (Aragov, Beloluchka, Kraseninnikov and others., 2022; Nikitin, Beloluchka, 2021; Shmygirlova, Rvano, Grygorenko, 2021; Black, Wiliam, 2009; Bloom, 1968; Lui, Andrade, 2022; Stiggins, 2017), to identify its essence. In accordance with the obtained results, the content of the concept of formative assessment was clarified in the following formulation: “formative assessment is an educational technology of interactive assessment built on the basis of continuous informative feedback, which aims to improve the didactic process by identifying learners’ current progress, their learning needs and contributing to the achievement of educational goals by adjusting learning activities, teaching methods and educational content”.

The study of the latest scientific pedagogical literature published in 2020-2023, performed to address the third research objective, demonstrated that the concept of formative assessment today is in a state of constant development, is relevant and attracts the scientific interest of modern researchers. The obtained data allowed us to characterise the concept of formative assessment, identify its essential characteristics by shedding light on its main strategic principles and didactic functions in the modern pedagogical process of higher education institutions.

As the results of our study show, formative assessment strategies in the modern pedagogical process are based on the following principles:

- formative assessment, when incorporated into the didactic process, significantly transforms it and becomes an essential and integral part of it (Irons, Elkington, 2021);
- formative assessment is the process of generating and interpreting information about intermediate learning outcomes in order to adjust tactics and learning content (Kyttälä, Björn, Rantamäki et al., 2022);
- formative assessment should be cyclical, conducted regularly in order to improve the educational process and increase its effectiveness (Wolterinck, Poortman, Schildkamp et al., 2022);
- formative assessment represents a detailed qualitative evaluative conclusion based on an analysis of the student’s completed work, which contains information about specific educational achievements and recommendations for optimizing educational activities;
- formative assessment does not imply an assessment in the form of points or grades, which excludes situations when one student is compared with another;
- formative assessment should be focused on learning outcomes and objectives, oriented to the current learning process and its future stages (Pallotti, Rosi, Borghetti, 2021).

According to the results of the conducted research, it was revealed that in the pedagogical process of higher education institutions, formative assessment fulfils the following main didactic functions:

- provides effective feedback used to adjust both the student’s learning and cognitive activities and the teacher’s pedagogical activities aimed at achieving intermediate learning objectives in order to improve the quality of learning as a whole;
- stimulates active and conscious participation of students in the improvement of their learning activities, promotes the formation of students’ subjectivity in relation to their own education (Myshina, Aragov, Lvovsky, 2021);
- teaches students to correct their actions to overcome errors and failures in the educational process, which contributes to their further continuing education;
engages students in self- and peer assessment based on clear and precise criteria provided by the teacher or developed jointly with students;

- assists students in enhancing the effectiveness of their academic activities, provides an individualized route to improve their academic performance (Lui, Andrade, 2022);
- provides regular monitoring of students’ progress, which helps to keep learning objectives in priority, allows the teacher to promptly eliminate emerging problems (Юрченко, 2023);
- demonstrates recognition of students’ academic achievements (Lutovac, Flores, 2021);
- provides students and teachers with high-quality information about educational results and ways to improve them (Баклагова, 2020);
- has a positive impact on students’ motivation and self-esteem (Zemlyanskaya, 2020);
- contributes to the acquisition of communicative experience, development of creative and analytical abilities (Хаи, Жуматова, 2021);
- stimulates reflection, dialogue, pedagogical interaction between the teacher and the student, leads to democratization of the educational process;
- develops collective interaction in a study group (Кодрле, 2022);
- adapts the content of education, educational process to the educational needs and requirements of students, promotes its individualization (Мысина, Агапов, Львовский, 2021);
- develops students’ abilities of self-assessment based on their own educational needs (Агапов, Белолуцкая, Крашенинникова и др., 2022);
- activates their participation in defining their subsequent learning goals, building their own educational trajectory, laying the foundations for lifelong learning.

Thus, the results of the conducted research allow us to conclude about the highest didactic potential of the concept of formative assessment in the organization of the pedagogical process built on its basis. In this case, formative assessment becomes a regulator of educational activity of all its participants, ensuring continuous improvement of its performance.

Conclusion

In conclusion, it should be noted that the research findings demonstrate the unique didactic essence of formative assessment as an educational concept, which basically shapes the university pedagogical process, provides its constant development, adapting it to the individual abilities and needs of students and, therefore, leads to the optimization of educational activity and increasing its productivity.

The results of the conducted multilateral analysis of the genesis of the formative assessment conceptualization in Russian and global pedagogical science allowed the authors to identify the most valuable approaches to formative assessment presented in the Russian-language and English-language research papers, which made it possible to define the essence of the concept of formative assessment and clarify its content in the following way: formative assessment is an educational technology of interactive assessment built on the basis of continuous informative feedback, the purpose of which is to improve learning by identifying the current learning outcomes of students, their educational needs and helping them to achieve the intended educational goals by adjusting learning activities, teaching methods and educational content.

As a result of the research, the data obtained have been systematized to characterize the essence of the formative assessment concept by defining its didactic functions and strategic principles in the modern university educational process. Accordingly, the findings indicate that the basic component of the formative assessment concept is qualitatively organized informative feedback, which is a flow of information that provides material for analysis, on the basis of which the university didactic process is continuously adjusted in order to improve its quality and meet the educational needs of students. The research results proved the most effective technologies for organizing feedback within the framework of the concept of formative assessment to be self-assessment, peer assessment (the latter can be carried out both in pairs and in groups), as well as triple assessment, when first the work is assessed by the student who has completed it, then the peer assessment is carried out and then the teacher assesses the work.

We see the prospects for further research on the proposed topic in the development of models for the organization of the educational process based on the implementation of the concept of formative assessment in various disciplines of secondary and higher vocational education.

Источники | References
1. Агапов А. М., Белолуцкая А. К., Крашенинникова Е. Е., Леван Т. Н., Мысина Т. Ю., Шиян О. А., Щербакова Т. В. Формирующее оценивание в высшем образовании: подходы и технологии. М.: НП Авторский клуб, 2022.
3. Вилкова Л. В., Грибова П. Н. Организация формирующего оценивания обучающихся на старшем этапе средней школы // Мир науки. Педагогика и психология. 2022. Т. 10. № 3.

6. Емельянова Т. В. Формирующее оценивание в контексте практико-ориентированного обучения в вузе в рамках формирования медиакомпетентности будущих педагогов // Педагогика. Вопросы теории и практики. 2022. Т. 7. Вып. 5. https://doi.org/10.30853/ped20220082


11. Пинская М. А. Формирующее оценивание и качество образования // Народное образование. 2010. № 1.


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