

## FORMATIVE ASSESSMENT AS DEVELOPMENT IN PROCESS TOOL

### ФОРМУЮЧЕ ОЦІНЮВАННЯ ЯК РОЗВИВАЮЧИЙ ЗАСІБ В НАВЧАЛЬНОМУ ПРОЦЕСІ

*Testing has always been an indispensable part of an education process, that is why there always has been extensive interest in this field of education science. The current research has been brought to life by the lack of publications dedicated to evaluation and assessment problem in Ukrainian scientific circles, on the one hand, and the urgent need to implement new standards into national educational environment on the other hand, due to new requirements on the career marketplace and approaches to modern education system. Modern society, including the stakeholders, authorities, schools and parents is interested in educating its young members so that they possess academic, professional, personal and life skills necessary to compete and succeed under modern circumstances which have been highly challenging these days. This paper sheds light on different types of assessment and focuses on assessment for learning or formative assessment. The article gives an overview of what lies in the heart of formative assessment and its key features and approaches to evaluation students' learning behaviour as seen by a range of native and foreign scholars. It also reveals the main discrepancy between the summative and formative assessment. The authors tried to investigate the organizational basis of this type of assessment, its relationships with summative assessment as well as its implementation challenges and biases. It also advocates the new role of students and their teachers in evaluation process, which involves acquisition of learning to learn skills and promotes the idea of life-long learning focusing on development in collaboration. The authors are interested in the benefits of implementation of formative assessment in the area of the English language teaching as students at higher education institutions of Ukraine are trained mostly online. They believe that formative assessment can be successfully implemented in a digitalized format, although there are certain concerns about this evaluation form, security of test items and reliability of test results in particular, which is going to be the next step in the current research.*

**Key words:** *formative assessment, learner-centred, life learn learning, learning to learn skills, implementation and challenges.*

*Тестування завжди було обов'язковою частиною освітнього процесу, тому завжди був великий інтерес до цієї галузі науки про*

*освіту. Дане дослідження викликане відсутністю в українських наукових колах публікацій, присвячених проблемі оцінки та оцінювання, з одного боку, і нагальною необхідністю впровадження нових стандартів у національне освітнє середовище, з іншого боку, та зумовлене новими вимогами до ринку праці та підходами до сучасної системи освіти. Сучасне суспільство, включаючи зацікавлених сторін з боку бізнесу, органів влади, школи та батьків, зацікавлене у вихованні своїх молодих членів, щоб вони володіли академічними, професійними, особистими та життєвими навичками, необхідними для конкуренції та досягнення успіху в сучасних умовах, які стають дуже складними в наші дні. Ця робота проливає світло на різні види оцінювання та зосереджується на оцінюванні для навчання або формульованому оцінюванні. У статті дається огляд того, що лежить в основі формульованого оцінювання та його ключових особливостей та підходів до оцінювання навчальної поведінки учнів, як це бачить низка вітчизняних та іноземних науковців. Вона також виявляє основну розбіжність між підсумковою та формулюючою оцінкою. Автори спробували дослідити організаційну основу цього типу оцінювання, його взаємозв'язки з підсумковою оцінкою, а також проблеми та упередження його реалізації. Автори також виступають на підтримку нової ролі студентів та їхніх вчителів у процесі оцінювання, який передбачає набуття навичок 'навчання для навчання' та пропагує ідею навчання впродовж усього життя, зосереджуючись на розвитку у взаємодії. Автори цікавляться перевагами впровадження формульованого оцінювання у сфері викладання англійської мови, оскільки студенти вищих навчальних закладів України проходять навчання переважно онлайн. Вони вважають, що формульоване оцінювання може бути успішно реалізоване в оцифрованому форматі, хоча існують певні побоювання з приводу цієї форми оцінки, безпеки тестових завдань і достовірності результатів випробувань зокрема, що стане наступним кроком поточного дослідження.*

**Ключові слова:** *формульоване оцінювання, середовище, орієнтоване на учнів, навчання впродовж життя, навчання навичок вчитися, реалізація та виклики.*

УДК 378.096:004.738.5  
DOI <https://doi.org/10.32782/2663-6085/2023/57.1.9>

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**Formulation of the problem.** In the information society knowledge outdates very fast, so students need to develop new skills to reach their learning goals. Technologically affected instruction delivery methods demand a different type of measuring learners' achievements. That is why one of the key features in an online English as a foreign language (EFL) learning / training process is the evaluation phase, whose purpose is to measure the efficiency and effectiveness of a training solution and identify how it can be carried out better to develop and improve learners' competences in four language

areas (reading, listening, writing and speaking) and ensure high quality of knowledge. In the period of COVID-19 and further events in Ukraine educational institutions introduced remote studying, which made instructional time shorter and learners' knowledge worse. In that situation teachers needed dependable assessment information to evaluate learners needs, address potential learning loss and elaborate individual learning plans. In addition to the above, ever-increasing demand for engineering specialists in Information Technologies with a high knowledge of the English language in Ukraine makes it a

nationwide priority to provide an appropriate level of foreign language training which meets diverse learners needs and makes them (the learners) successful and compatible players on the job markets. In the modern higher education institution students need to be taught not only cognitive skills, but also soft skills, such as, collaboration, critical thinking, abilities to express their own opinion, analyse facts, look for alternative solutions, take on responsibility for their learning or resolve conflicts, which are essential in education worldwide, because these skills enable learners to be effective and successful in the 21st century. Students may acquire various competences throughout language courses and the problem arises, how to assess their results in achieving the skills mentioned above. The existing national evaluation system, in which students complete series of tests at the end of each term or a year and are graded according to their results against certain standards, is not suitable today, due to its demotivational nature, ability to increase the level of anxiety and not reflecting students' overall knowledge, skills and competences; and it does not provide feedback on how to improve.

**Publications analyses.** The analysis of modern Ukrainian literature dedicated to the topic of assessment shows that not much has been done to research this area. The existing research papers are committed to formative assessment, which is contrasted to that of summative. Theoretical foundation for implementation of formative assessment is presented in a range of scientific publications by Ukrainian scholars Kanivets T. M., Lokshyna O.I., Morse N.V., Barna O.V., Poliakova O., Kaban L. V., Shcherbak O.I., and etc.

O. Lokshyna has analysed innovations in assessment practices in the European Union and stated the important changes in the assessment of students' academic achievements such as transition from dominating control and selection functions to those facilitating learners' development, disclosure of their potential, and ultimately forming their ability to learn. She distinguishes a forming function of assessment which is mainly used in ongoing evaluation and is referred to as formative assessment, being interactive assessment of learners' progress enabling the teachers to identify students' needs, adjusting their teaching techniques to best meet those needs. In the course of education transformation assessment must also become a motivation developing tool and an indispensable element in career development. At the national level assessment should be aimed at measuring students' acquisition of key competences which may be formed with the help of such subjects as Mother Tongue, Foreign Language, Mathematics, Science and Information Communication Technologies [1, p. 222, 263, 264].

L. Kaban suggests an algorithm for teachers' activities succession aimed at formative assessment organization, including the following steps:

1. Stating accurate objective academic aims (learners need to clearly understand them);
2. Creating effective feedback;
3. Providing learners' active participation in the cognitive process;
4. Familiarising learners with assessment criteria;
5. Providing possibilities for reflection (learners as well must be taught to analyse their own activities);
6. Teacher-students collaboration in adjusting teaching and learning depending on assessment results.

She concludes that formative assessment is a goal-oriented continuous process of observation of students; it is a necessary part of interactive teaching. In its course the culture of mutual discussion is formed, critical and creative thinking are developed and finally, an enquiry surrounding is build, which is extremely important in an online training process. Formative assessment fosters students' belief that everyone can improve their results [2].

The research on the basics of pedagogical assessment by T.V. Kanivets may extend the algorithm presented above as follows:

1. Making the learning process itself a priority of assessment (not only results of learning should be tested);
2. Ensuring students' taking responsibility for their learning based on clear criteria;
3. Assessment of students' achievements independently of their significance if those achievements present learners' true efforts;
4. Offering individual and group tasks to complete independently through research, selection, critical analysis and generalization;
5. Initialising discussions which may encourage the learners to build own opinions and modify them;
6. Supporting initiatives and ideas presented by the learners [3, p. 14, 15].

Ukrainian scholars agree that formative assessment is a reciprocal process of learners' achievements evaluation to identify and eliminate the gaps in their knowledge of the content in the most effective way. It is feedback for students making it possible for them to understand what measures they should take to improve their achievements. On the other hand, teachers may see connection between the learner's mark and their individual academic growth [4, p. 48].

O.I. Shcherbak argues that formative assessment is extending its horizons and serves not only controlling functions, but is considered a part of learning itself. Teachers must treat assessment as a part of their teaching and use it not only at the end of the course. More frequent regular assessment is less stressful for learners and provides them with timely

information, which, in its turn, improves learning. Formative assessment provides feedback so that students can see their own progress or professional growth, it works for the future helping to complete the course successfully and achieve desirable results [5, p. 24].

On the contrary, American and European sources, apart from studies on ultimate achievements evaluation, provide a wide variety of research on competences approach and the approach, which focuses on peculiarities of learner's progress assessment. They draw attention to the impact that a positive and negative mark can have on the ability of the learner's brain to acquire knowledge (indicating that negative feedback may block learning and vice versa), as well as on motivation, which can either increase or decrease. That is why this issue is of great interest today. **Topicality** The relevance of this research builds on the need to reconsider the requirements, approaches and attitudes to the assessment and control activities in the modern web-based environment as the ways of delivery of knowledge as well as assessment means have been continually changing. Although assessment is a reciprocal process which impacts both teachers and learners, it is still ill-treated and underestimated by both these groups and only seen as a way of punishment or influence. It is also looked at as an isolated measuring tool which precedes or finishes learning process. However, in this research we are trying to confirm the fact that assessment is a part of learning in itself, which can motivate the learner and help them achieve solid knowledge and skills.

**Formulating the goals of the article.** This paper aims at making an overview of existing native and foreign literature on the essence of formative assessment, identifying the key features of formative assessment which can benefit the learning process, points to the challenges related to its implementation, focuses on the best practices in this field and provides evidences of the effectiveness of this assessment format.

**Presentation of the main material of the study.** Different scholars were and have been involved in the assessment research and provided their definitions for this term. Clarence Edward Beeby's definition of assessment is considered classical. He concluded that assessment is a systematic collection and interpreting facts, followed by the judgement of their value and corresponding planning of further actions [6, p. 66-78]. Carol Mutch distinguishes three common types of effective assessment – assessment for learning, assessment of learning and assessment as learning [7, p. 375]. Assessment for learning is also called formative assessment (our particular interest in this paper), which is formulated by Black and Williams as 'all those activities undertaken by teachers, and by their students in assessing themselves, which provide information to be used as feedback to

modify the teaching and learning activities in which they are engaged. Such assessment becomes formative assessment when the evidence is actually used to adapt the teaching work to meet the needs [8, p. 7; 9, p. 187] Allan D. sees "assessment" as a general item, which consists of methods and techniques used to gather information about student ability, knowledge understanding and motivation [10].

The term "formative assessment" was suggested by Michael Scriven in 1967. He pointed out two roles assessment plays. First, "it may have a role in the on-going improvement of the curriculum" [11, p. 41]. On the other hand, "the evaluation process may serve to enable administrators to decide whether the entire finished curriculum, refined by use of the evaluation process in its first role, represents a sufficiently significant advance on the available alternatives to justify the expense of adoption by a school system" [11, p. 41-42]. Further, he suggested "to use the terms 'formative' and 'summative' evaluation to qualify evaluation in these roles" [11, p. 43]. Scriven M. and then Bloom B. both argue that formative assessment as opposed to summative assessment makes a difference if it is not a part of grading; its distinguishing feature is that it is applied to make alterations in the curriculum or students' achievements: 'Quite in contrast is the use of "formative evaluation" to provide feedback and correctives at each stage in the teaching-learning process. By formative evaluation we mean evaluation by brief tests used by teachers and students as aids in the learning process. While such tests may be graded and used as part of the judging and classificatory function of evaluation, we see much more effective use of formative evaluation if it is separated from the grading process and used primarily as an aid to teaching' 1969, [12, p.48] William D. confirms the main property of formative assessment; 'what makes an assessment formative, therefore, is not the length of the feedback loop, nor where it takes place, nor who carries it out, nor even who responds. The crucial feature is that evidence is evoked, interpreted in terms of learning needs, and used to make adjustments to better meet those learning needs [13, p. 284]. He adds that: 'Assessment is formative to the extent that the information it provides about student achievement is elicited, interpreted and used by teachers, students or their peers to make decisions about next steps that may be better or more informed than those they would have made in the absence of these data' He emphasizes the active role of students in improving learning [14, p. 157].

Foreign scholars discriminate between three types of assessment – diagnostic (to measure the baseline knowledge of a learner for their correspondent placement for further training), formative as opposed to summative, which have been already successfully practiced for several decades. In educational

institutions summative assessment is seen as the most significant type of evaluation. English language teachers, for instance, use this type of assessment at the end of each unit to measure what students have achieved and if it satisfies a required standard. Schools use summative assessment to certify students, grade them or select for further training.

However, frequent, interactive classroom assessment may help identify learners' needs and adjust teaching methods. This type of assessment is referred to as formative, where teachers are better aware of diverse learners' needs and can expect better and relatively equal outcomes through adaptation of teaching. This analysis reveals the ways formative assessment promotes lifelong learning, provides levels of learners' performance, larger integrity of outcomes and improves learning to learn skills. Assessment as a component of classroom activity is crucial in promoting learning and eventually achievement. Learners' motivation also increases. In the student-centered approach to teaching and learning the student needs to understand the aim of the learning, a reason to learn something, their current location on their way to achieving the aim and the ways to achieve that aim. As long as students are aware of these principles the quality of their learning improves, because together with the teacher they take on shared responsibility for their learning and develop ownership of the learning aims.

Formative assessment can increase the level of achievement on the whole. Extended research in this area has shown that this type of assessment is highly beneficial for raising the level of students' performance. In 1998 Black and William made a conclusion in their review of the literature on formative assessment, that, '... formative assessment does improve learning. The gains in achievement appear to be quite considerable, and as noted earlier, among the largest ever reported for educational interventions. As an illustration of just how big these gains are, an effect size of 0.7, if it could be achieved on a nationwide scale, would be equivalent to raising the mathematics attainment score of an 'average' country like England, New Zealand or the United States into the 'top five' after the Pacific Rim countries of Singapore, Korea, Japan and Hong Kong.' This citation calls for more extended research on effective teaching, learning and assessment strategies. Teachers through formative assessment navigate learners to acquire their 'learning to learn skills' [15, p. 61]. Formative assessment may develop students' "learning to learn" skills in the following ways: it puts emphasis on the teaching and learning process, and engages students in this process; shapes learners' skills to widely use peer- and self-assessment; facilitates students' understanding their own learning, and building appropriate strategies for "learning to learn". In that way students can develop skills necessary

for "life-long learning". Derek Rowntree's definition proves that assessment is seen as significant part of educational activities, it is about getting to know our students and the quality of their learning. Quality of assessment is one of the key features of good teaching. Setting appropriate assessment tasks should question students in a way that demands evidence of understanding. It is also important to use a variety of techniques for discovering what students have learned [16, p. 5]. Two main actions in formative assessment are obtaining information about the gap between the actual level and the reference level of a system parameter and using it to alter the gap in some way [17, p. 4]. Sadler broadens this definition, saying that formative assessment is beneficial for both teachers and students' the first use feedback to make programmatic decisions with respect to readiness, diagnosis and remediation. Students use it to monitor the strengths and weaknesses of their performances, so that aspects associated with success or high quality can be recognised and reinforced, and unsatisfactory aspects modified or improved [18, p. 121]. For many years many scholars have been trying to identify the relevance between the way the learning is assessed and the processes and strategies that learners utilize in the course of assessment. They agree that formative assessment can enhance development of learners' autonomy, confidence in themselves, it may raise awareness of being participants in the learning process, enforce the feeling of self efficiency in completing the learning tasks and ensure achievements of learning objectives. (Andrade & Brookhart, 2020; Boud, 2000; Smith, Gamlem, Sandal, & Engelsen, 2016) [19, 20, 21]. More research has been done to determine social manner of formative assessment, id est, the distribution of roles between the participants of learning process – teachers, learners and their peers – which results in the strong belief that assessment is not something isolated, directed to the learners, but an activity, performed collaboratively with the students (Pryor & Crossouard, 2008; Hayward, 2015; Swaffield, 2011) [22, 23, 24, 25]. In some research papers formative assessment is seen as a panacea for all challenges in education as it offers effective tools to meet high-performance aims, high quality outcomes, which are characterized as equal for most of students, who may acquire knowledge and skills for life-long learning.

Foreign scholars have worked out six elements of formative assessment to form their approach to learning and teaching:

- Establishment of a classroom culture that encourages interaction and the use of assessment tools. Dialogue in the classroom and peer assessment are central in a learning process. International reviews recognize five elements, important for effective learning: 1) Building rapport and creating a "safe" environment. 2) Using dialogue to promote

participatory and democratic learning. 3) Negotiating learning goals and methods. 4) Structuring dialogue to meet specific learning goals. 5) Using dialogue to establish what learners do and do not know and to adjust teaching to meet identified learning needs.

Instructors have found out that it is important to assist learners feel secure about taking risks and making mistakes in the classroom – ‘learners who feel safe to take risks are more likely to reveal what they do and don’t understand, an essential feature of the formative process. Research also highlights the importance of focusing students’ attention on mastering tasks, rather than on competition with peers, and in developing emotional competencies.

Emotional competencies, such as self-awareness, self-control, compassion, co-operation, flexibility, and the ability to make judgments on the value of information serve students well in school and throughout their lives [26, p. 6-7].

- Establishment of learning goals, and tracking of individual student progress toward those goals. Identifying clear learning goals is extremely important as students need to know exactly what they are working on, what they are going to achieve, how they will know if they have achieved the goal, what to do with the results as they progress.

- Use of varied instruction methods to meet diverse student needs. One of the teacher’s responsibilities is to provide high-quality tasks of reasonable difficulty levels, suitable for particular learners’ abilities. Motivating formative assessment tasks should be different in terms of content and difficulty level, so that learners could be fully involved in the activities, stay focused, progress at their own pace and show improvement of skills.

- Use of varied approaches to assessing student understanding. Types of learning tasks may contain quizzes, assignments, homework, test, short discussions, summarizing the main points in a lecture, questioning strategies, one-minute papers, exit cards, in-class games, group presentations, problem-solving challenges, projects, etc.

- Feedback on student performance and adaptation of instruction to meet identified needs. If students receive constructive comments on their activities, they learn to estimate their needs, develop critical thinking, adapt learning habits and strategies, foster reflective skills and perform in a much more productive way, becoming more autonomous learners. Clear, positive, low-stakes feedback affirms the ways in which students are on the right track and where they have improved, while guiding them to correct their misperceptions, plan next steps, or think about alternative strategies. In-the-moment feedback is most useful because it is offered while the student is still focused on the learning goal and motivated to reach it [27, p. 3].

- According to Susan M. Brookhart, the purposes of feedback in formative assessment are: to describe

specific qualities of the work in relation to the learning targets; to make observations about students’ learning processes and strategies that will help them figure out how to improve; to foster student self-efficacy by drawing connections between students’ work and their mindful, intentional efforts; to avoid personal comments [28, p. 22].

- All students are different. They have different skills, learning habits, psychological features, needs and goals. Following the same instruction pattern would impact every student differently, and would not advantage everyone’s needs. In formative assessment teachers continually observe their students in the course of their completing various learning tasks and obtain necessary data from those learning activities, which enables them to re-tailor their tasks, if necessary, re-direct students, revise the goals and show students what to do further.

- Active involvement of students in the learning process [26, p. 6] .

There are also challenges in formative assessment application. This type of assessment is aimed at learners’ needs, whereas summative assessment focuses on students’ performance. In the situations where teachers need to prepare students to taking summative tests they are bound to “teach to test” neglecting learning goals. The predominance of the grade is an additional and no less important challenge. This seems to be a major obstacle to giving formative evaluation the important place it deserves in teaching practice. In the opinion of some teachers, this stems from the fact that all the actors ultimately emphasize the grade [29, p. 232].

The teachers used to old practices find it difficult to identify ‘competence development’ and consequently, make judgement on development, so they tend to use old evaluation practices. Sometimes they do not have enough information support or documentation. Instructors need to be more flexible in adjusting learning materials and curriculum. Formative assessment is usually backed up by feedback that facilitates learning. The students do not always want to change their learning habits and their parents do not understand the new approach as well as the methods used, which is another challenge. Some teachers still do not understand the new pedagogical approach. In the learner-centered environment students decide what is important for them, which is not welcomed by some educators as they are sure that their students cannot decide what is good for them.

Teaching to large groups of students will demand the teachers to spend additional time to provide timely and effective feedback, use diversity of learning activities and differentiate support given to each student, which depends on the forms of students’ multiple intelligences. Learners, on the other hand, also play important role in increasing their knowledge, they need to be aware of sharing responsibility for

their learning which they usually reluctant to do. Lack of students' commitment can make teacher's efforts useless. Teachers and learners have to learn some new skills to conduct formative assessment, especially if it is digitalized.

**Conclusion.** It has been found out that formative assessment is effective in the learning process and together with summative assessment brings to successful knowledge acquisition. Effective formative assessment model gives the learners possibility to answer the questions as to in what direction they are moving, at what point they are now and how to bridge the gap. A range of factors facilitate successful formative assessment process in which we distinguish four key elements: clear learning goals; varied, high-quality learning activities based upon the level of difficulty and goals; timely feedback; adjustment of teaching materials to better meet students' needs. It is necessary to remember about the challenges that go alongside implementation phase and if not addressed properly may disrupt the whole process.

The last but not the least, fostering and holding students' involvement in the assessment process is of great importance as well.

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