UDC 378.147:372.881.111.1

INTEGRATING INFORMATION TECHNOLOGY INTO ESP CLASSES: USE OF DIGITAL LEARNING TOOLS TO SUPPORT FORMATIVE ASSESSMENT

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Abstract. The article is focused on organizing formative assessment by using up-to-date digital learning tools. The study describes the peculiarities of implementing formative assessment while studying ESP by indicating that formative assessment is a process intended to yield information about learning of students. The information obtained during formative assessment is used to shape teaching methods, guide instruction or learning trajectory to meet students' needs which will result in students' better understanding and advancing their learning. The authors insist on the need to implement formative assessment as the intermediate one in the system of balanced assessment of students' achievements, since it helps identify what misconceptions students have and what skills they are missing.

The article also explores a set of digital learning tools that can be used to support formative assessment classifying them by purpose, analyzing their special features and giving the examples of their use in ESP classes based on their teaching experience. The most valuable tools for the authors to organize formative assessment in ESP classes were Eddpuzzle, Flipgrid, ISLCollective, Liveworksheets, Nearpod, Google Forms, Wizerme, Pear Deck, Recap, VoiceThread, Kahoot!, Quizizz, Formative, Mentimeter, Quizlet, Padlet, Memrise, etc.
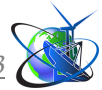
Key words: formative assessment, ESP class, IT, digital learning tool, feedback.

Introduction.

The 21ˢᵗ century is the age of rapid changes and progress in the field of information technology (technological innovations such as AI, IoT, robotics, social media, etc), globalized access to information, and highly competitive labour market. To make a successful career in the fast-changing world, a university graduate needs to have developed hard and soft skills and be ready for lifelong learning. Nowadays all universities use technologies in one way or another to make their students competitive in the global labour market. The effectiveness of the use of information technology (IT) is ensured by the balanced combination of traditional and innovative teaching methods [1, p. 131].

Having become an integral part of the educational process, IT greatly supports distance learning as the alternative one for providing students with virtual learning environment at universities especially in the current conditions. When implementing distance learning, IT plays a key role in facilitating interaction and communication to ensure a non-stop learning process.

IT also has changed the role of the teacher who needs the increased level of digital competence for organizing effective distance learning in synchronous and asynchronous modes, the ability to organize both formative and summative

assessment of students with the help of modern digital learning tools, as well as the ability to teach students to "acquire knowledge on their own" (for instance, to find and analyze information, acquire, integrate and apply knowledge in practice [2, p. 353].

Digital learning tools provide a lot of opportunities to get instant feedback from students and adapt teaching strategies to meet their needs.

The function of assessment in the new paradigm of educational standards is not only to assess students' learning outcomes and achievements, but also stimulate their learning. In this case not only the "outcomes" but also the learning process and students' learning experiences are valued. Therefore, the teacher should find such assessment forms that would contribute to the individualization of learning, increase students' motivation and develop their independence in learning. One of the ways to achieve these is to use formative assessment in addition to the summative one.

The issue of applying formative assessment in teaching at universities was studied by Ukrainian and foreign researchers (B. Bell, B. Cowie, P. Black, D. William, F. Perrenau, G. Noiset, J.-P. Caverny, N. Morse, N. Orlova, etc.). The analysis of their studies has shown that there are different definitions of the notion "formative assessmen", but most of the researchers agree that formative assessment is "a two-way process between a teacher and a learner in order to optimize the learning process" (B. Bell and B. Cowie) [3, p. 101], "the activity of the teacher and students, which gives information that can be used as the feedback for the correlation of learning" (P. Black) [4, p. 7]. According to N. Morse, formative assessment is used in the process of students' analysis of their learning trajectory while processing the learning material [5, p. 49].

Thus, formative assessment is a quick feedback for students that allows them to understand what actions should be taken to improve their own results. And "the innovations aimed at implementing the practice of formative assessment contribute to improving learning outcomes" [6, c. 35]. Therefore, such an approach may change the assessment goals, methods and tools of evaluation.

Despite the thoroughness of the above-mentioned studies, the selection of effective digital learning tools for organizing formative assessment and the analysis of their use in order to improve the effectiveness of students' training requires further study.

The purpose of the article is to investigate the special features of organizing formative assessment of higher school students when learning English for specific purposes (ESP) and to analyze the digital learning tools selected for such assessment.

Main text.

The assessment of students' achievements at the end of the term, module, or course is an integral component of the educational process at university. Yet more balanced assessment system is required that provides the teacher with helpful information that can shape ongoing instruction in the class and modify teaching and learning activities to meet the students' needs. Therefore, not only summative assessment matters where students' achievements are measured, but also formative assessment is critical which focused on the learning process and students' performance while learning. Such assessment can be interpreted as "systematic

collecting and interpreting facts, followed by the next stage – the judgment about their value and appropriate planning of further actions" [5, p. 45]. Formative assessment identifies misconceptions, struggles, and learning gaps along the way and assess how to close those gaps. It includes effective tools for helping to shape learning, and can even bolster students' abilities to take ownership of their learning when they understand that the goal is to improve learning, not apply final marks [6].

The goal of formative assessment is to monitor students' learning, track their progress, diagnose and adjust educational progress with the help of critical remarks in the form of written feedback, comments, and dialogue with them [7, c. 26]. Such assessment is carried out during the whole process of learning the academic discipline (from beginning to end) and is accompanied by constant monitoring and ongoing feedback, leading to the improvement of both teaching and learning. This is an assessment of learning process and students' performance when knowledge and skills are analyzed and quick feedback is given. Formative assessment is focused on comparing the current students' achievements with their previous achievements. Feedback helps to identify their strengths and weaknesses, and it also contains recommendations for further learning and contributes to the development of their individual educational trajectory [8, c. 14].

In our opinion, the important elements of formative assessment are as follows:

- specific and measurable goals, as they guide students, make educational requirements clear to them and are the basis for feedback;

- intermediate indicators of goal achievement;

- feedback, which is the basis of forming an assessment (the opportunity for students to receive information about their success at each stage of training). Formative assessment make a great contribution to students' self-reflection and understanding "where they are now and where they need to go", thus helping them identify their strengths and weaknesses.

Digital learning tools of formative assessment help teachers monitor students' learning by recognizing where they are struggling as well as personalize learning. In addition, they help motivate students to practice learning goals as a natural and permanent part of their routine life.

The practice of teaching a distance ESP course to bachelor students demonstrates the impact of formative assessment on the improvement of students' achievements. The use of digital learning tools motivates students and provides teachers with important information about their performance and progress. The digital tools for assessment that are listed below have proven to be effective in formative assessment of undergraduates while learning ESP.

According to the purpose, they can be classified into several groups:

1. tools for creating interactive worksheets, interactive lessons and tasks to check reading comprehension, listening comprehension, understanding of grammar, etc: *Eddpuzzle, ISLCollective, LearningApps, Liveworksheets, Nearpod, Wizerme, Zaption, Classmaker, Pear Deck;*

2. tools for recording video or adding audio and text comments: *Flipgrid, Animoto, AudioNote, Recap, Explain Everything, VoiceThread;*

3. tools for vocabulary learning: *Quizlet, Memrise, StudyStock;*
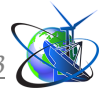
4. tools for making polls, quizzes, tests and getting quick feedback: *Kahoot, Quizizz, Google Forms, Poll Everywhere, Socrative, FreeOnlineSurveys, Gimkit, Formative, Mentimeter, Plickers;*

5. tools for collaborating, brainstorming, creating a mental map: *Mentimeter, Miro, Padlet, AnswerGarden, Conceptboard.*

Let's consider some of these digital learning tools and how they can be used to organize formative assessment in ESP classes. The first option of formative assessment while watching a video is when students watch the video on their own and complete the tasks to it, and the teacher's task is to monitor this process.

One example of such digital learning tool is **Edpuzzle**, a free service for creating or editing video extracts and adding interactive content to them (text notes, multiple-choice options, open questions) to achieve specific learning goals. This service helps to transform video watching into the interactive formative assessment. Videos can be found in the Edpuzzle library, downloaded from YouTube, Vimeo, KhanAcademy, TED-Ed, National Geographic, Crash Course, LearnZillio or uploaded from Google Drive. Then an interactive quiz with open-ended questions or multiple-choice options can be created. Teachers can share videos with their students, assign tasks and set deadlines, as well as monitor students' results. Students can watch videos on their own asynchronously or in a real-time mode as a group activity during the online class. The data from the embedded interactive tasks are demonstrated on teachers' Edpuzzle dashboard, and can be exported and incorporated into other course management systems. Edpuzzle can be integrated into Google Classroom, Canvas, Moodle, which makes the use of this service easier and more convenient.

Edpuzzle transforms the content into the form that make students think critically, reflect, and respond. Although passive watching videos requires only lower-level thinking skills, the ability to encourage students' engagement by expressing their thoughts about the most important aspects of the video increases content relevance and learning depth, especially if the teacher adds additional resources and links. Moreover, critical thinking skills such as analyzing and searching for information can result in knowledge transformation.

Zaption and **ISLCollective** are similar tools, which allow using ready-made videos or create your own videos, as well as publish interactive lessons and monitor students' performance. Similar to Edpuzzle, these resources provide two modes: synchronous and asynchronous. The "Live" mode can be used during online classes in Google Meet. In order to organize students' self-study, they are provided with a link by following which they can perform the tasks on their own any time.

The above-mentioned services allow the teacher to monitor the work of every student in the group while watching the video and their progress, which is vital in large groups during distance learning. We used this resource mainly for students' self-study by selecting video materials that would complement professional texts.

But a more engaging method of formative assessment while using video is to ask students to record their videos to demonstrate productive skills (speaking). In our opinion, this method is effective because it significantly saves the time of an online class. The teacher can provide feedback on the completed work after the ESP class.

Tools that can be used to organize such assessment include *Flipgrid, Let's Recap, Explain Everything.*

Flipgrid is a video discussion platform that allows students to respond the questions by recording their video, as well as give comments. This digital learning tool allows teachers to initiate discussions during an online ESP class when students record and post their own video responses, as well as it allows encouraging video discussions.

Because of its asynchronous nature, Flipgrid is a great tool for any mode of study – from distance learning to classroom classes. Flipgrid can be used to facilitate discussions in ESP classes, assigning questions as homework to continue the discussions in the class that follows. Therefore, Flipgrid offers a convenient, flexible virtual space for teachers to communicate with students. In addition, students learn how to develop their opinions and consider alternative points of view by listening to the responses of their peers. Using pauses, cutting and additional recording helps students record their best effort. Thus, the use of this digital tool contributes to developing students' creativity and the culture of a citizen of a digital society while recording a video [9, p. 50].
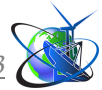
Recap (https://app.letsrecap.com), a video-based learning tool for formative assessment, offers students to respond to the given question in the form of a short video recorded on a mobile phone and provide feedback or share the videos.

VoiceThread allows discussing video clips, audio as well as text, presentations by adding the recorder audio or video responses.

The online service for creating interactive worksheets that is worth mentioning is **Liveworksheets**. It is widely used to work with audio or video materials, but we applied it more effectively for converting textbook pages or self-developed tasks to professional materials (texts, audio, video) into interactive ones. It turned out to be very efficient, taking into the account the lack of interactive materials that are more narrowely focused on specific topics of students' majors.

An interactive worksheet is a web page on which the learning materials and exercises can be posted. This service allows converting any traditional materials into interactive online tasks with the possibility of self-check or monitoring the work of each student in the group [10]. Liveworksheets make it possible for teachers to create interactive worksheets with a variety of tasks: check boxes, multiple-choice options, matching, drag-and-drop, listening, open-ended questions, etc. MP3 files, YouTube videos, and other links can be added to the assignments, so that an entire interactive lesson can be created instead of a single task.

The service offers two modes of completing the tasks: "Self-check mode" when the student presses the "Finish" button after completing the tasks and receives an immediate feedback and grade, or the "Send to your teacher" mode, in which the applicant presses the "Finish" button after completing the assignments, then chooses the option "Send to your teacher" by entering the appropriate code. The second mode turned out to be more efficient for organizing ESP classes, as it made it possible to monitor the work of all students simultaneously. This was especially useful for organizing formative assessment in large groups where it is very difficult to ask all students. Besides, when the problems with the Internet arose, students could complete

this task in asynchronous mode and send it to the teacher. In this way, all students were involved, which made it possible to implement informational interaction of all participants of the educational process in a virtual learning environment.

The use of this online service allowed creating educational and methodical complexes, which can be used in both synchronous and asynchronous modes. The links to the tasks were posted in Google Classrooms, so that every student of the specified group had access to it.

Nearpod (www.nearpod.com) and **Pear Deck** (www.peardeck.com) are two more digital resources that engage students in interactive lessons and allow implement the elements of interactive formative assessment. We used these services to create presentations with embedded quizzes, interactive tasks, interactive whiteboards, etc. For example, Nearpod virtual reality lessons allowed students majoring in "Architecture and Urban Planning" visit the world-famous cathedrals, palaces, museums virtually, widen their horizon and learn key concepts or professional terminology at the same time. They also allowed the students majoring in "Cybesecurity" and "IT-design" develop their digital citizenship skills with the help of pre-created lessons on cyber hygiene and Internet safety. These resources allow the teacher to interact with students by reviewing their responses, and allow students to take responsibility for their learning rather than passively watching a presentation led by the teacher.

A set of digital tools, for instance, Kahoot, Google forms, Quizizz, Wizerme were used in our practice to check grammar, reading and listening comprehension and became a valuable tool for the formative assessment of students. We would like to single out **Kahoot**, the platform which allows creating and sharing educational games that can be played in different formats and modes. In our ESP classes, we used Kahoot to check the knowledge of terminology in the format "term – definition", grammar, reading comprehension, etc. **Quizizz** and **Socrative** are similar tools for formative assessment. Instant feedback ensured by these three resources is great for formal assessment of learning and data analysis.

Another easy-to-use digital tool is **GoogleForms** for creating surveys, tests, quizzes and different types of tasks. These tasks can be adapted to a specific topic and for specific students. The form can be emailed to respondents, integrated into GoogleClassroom, or embedded into web pages or sites. GoogleForms offers open-ended and closed-ended questions, multiple-choice options, checklists, and fields with short answers. GoogleForms are popular among teachers because they help quickly create a test and automatically grade it after filling out by students. In addition, the data can be saved in the form of a spreadsheet making it even more convenient for teachers.

Formative assessment assists in understanding how to adjust teaching to achieve specific goals, shape instructions, modify learning, stimulate learning methods and promote the development of students. It also contributes to differentiating different learning styles, levels of learning, and ultimately helps foster the development of a student through constant feedback.

Summary and conclusions.

Formative assessment has been considered in the article as one of the types of

assessment, which facilitates student's development while learning. It reflects a different model of relationships during the educational process, which is based primarily on the personal values, interests, and ability to make independent decisions. Unlike summative assessment, which demonstrates the result of students' academic achievements, formative assessment gives the opportunity to improve the learning and teaching by identifying how teaching or learning should be adapted to advance students' understandings.

In the era of innovations in IT, the impact of digital learning tools on organizing formative assessment is undoubtful. They can assist the teacher to check reading and listening comprehension, check knowledge of grammar and terminology, to get instant feedback from students, to encourage collaboration, to develop productive skills (e.g. while recording videos by students), meanwhile making learning more engaging and interesting for students. On the one hand, the use of digital tools for formative assessment helps the teacher to assess the current state of learning and determine the ways of further development of students, and on the other hand, they promote interest and greater involvement of students in learning, increasing learning motivation and self-development.

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Article sent: 13.02.2023
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