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ENHANCING MOBILE-ASSISTED ESL LEARNING AT SECONDARY SCHOOL: ADAPTING THE EXPERIENCE OF CENTRAL AND EASTERN EUROPE

ABSTRACT

It is substantiated that the mobile-assisted learning in the process of teaching English as a second language (ESL) at secondary school is becoming one of the key elements of education digitalization in Central and Eastern European countries. Poland, Romania, the Czech Republic and Hungary demonstrate similar trends in the introduction of mobile technologies into foreign language education, while maintaining national characteristics of educational policy and methods of ESL teaching. A number of mobile applications (Duolingo, Busuu, Quizlet, Kahoot!, Wordwall, LingQ, WocaBee, Memrise, Mondly, Lucidchart, MindMeister, Canva, GoConqr, Socrative, Zoom and Google Meet, Anki, WordUp.common etc.) used for ESL learning at schools of Poland, Romania, the Czech Republic and Hungary are analyzed and their main features are defined (gamification; personalization and adaptability; combination with traditional educational resources; formation of digital and language literacy; educational approaches of microlearning).

Advantages of mobile-assisted learning in schools of Central and Eastern Europe are outlined: accessibility; interactivity; variety of teaching tools and forms of learning (from audio and video materials to interactive games and online exercises); enhanced motivation to learning. Nevertheless, disadvantages are also found: dependence on technical means (Internet connection and its quality); lack of control over the use of mobile devices; distraction of students from the main learning process; ambiguity of the content (not all materials in applications may be of high quality or meet academic requirements).

While using mobile applications teachers must ensure the implementation of four fundamental principles: informational; technological; procedural and activity. The latter is determined by the ability to organize active educational and cognitive activities of students through the processing of information resources.

It is proved that under proper organization and supervision mobile applications are an invaluable tool for ESL teaching as they provide adapted content, interactivity, variety of exercises, enhanced motivation, resources for independent study, multi-level approach and easy accessibility.

Key words: *secondary school, mobile applications, mobile-assisted learning, ESL learning, Central and Eastern Europe, digital education, technologies.*

ОПТИМІЗАЦІЯ ПРОЦЕСУ НАВЧАННЯ АНГЛІЙСЬКОЇ МОВИ ЯК ІНОЗЕМНОЇ У СЕРЕДНІЙ ШКОЛІ ШЛЯХОМ ВИКОРИСТАННЯ МОБІЛЬНИХ ЗАСТОСУНКІВ: АДАПТАЦІЯ ДОСВІДУ ЦЕНТРАЛЬНОЇ ТА СХІДНОЇ ЄВРОПИ

АНОТАЦІЯ

Обґрунтовано, що використання мобільних застосунків у процесі викладання англійської мови в середній школі стає одним із ключових елементів цифровізації освіти в країнах Центральної та Східної Європи. Польща, Румунія, Чехія та Угорщина демонструють схожі тенденції у впровадженні мобільних технологій у шкільну іншомовну освіту, зберігаючи при цьому національні особливості освітньої політики та методів викладання англійської як іноземної (ESL). Проаналізовано низку мобільних застосунків (Duolingo, Busuu, Quizlet, Kahoot!, Wordwall, LingQ, WocaBee, Memrise, Mondly, Lucidchart, MindMeister, Canva, GoConqr, Socrative, Zoom та Google Meet, Anki, WordUp.common тощо), що використовуються для вивчення англійської як іноземної в школах Польщі, Румунії, Чехії та Угорщини, та визначено їхні основні переваги (персоналізація та адаптивність; поєднання з традиційними освітніми ресурсами; формування цифрової та мовної грамотності; базування на освітніх підходах мікронавчання та гейміфікації; доступність; інтерактивність; різноманітність навчальних засобів та форм навчання (від аудіо- та відеоматеріалів до інтерактивних ігор та онлайн-вправ); підвищення мотивації до навчання. Водночас виявлено й недоліки: залежність від технічних засобів та якості інтернет-з'єднання; складність здійснення контролю за використанням мобільних пристроїв не за призначенням; відволікання учнів від основного навчального процесу; неоднозначність змісту (не всі матеріали в застосунках можуть бути високої якості або відповідати академічним вимогам).

З'ясовано, що використовуючи мобільні застосунки, вчителі повинні забезпечити реалізацію чотирьох фундаментальних принципів: інформаційного; технологічного; процедурного та діяльнісного. Останній визначається здатністю організовувати активну навчально-пізнавальну діяльність учнів шляхом обробки інформаційних ресурсів. Доведено, що за належної організації та контролю, мобільні застосунки є безцінним інструментом для викладання англійської як іноземної, оскільки вони забезпечують адаптований зміст, інтерактивність, різноманітність видів діяльності, високу мотивацію до навчання; ресурси для самостійної роботи; багаторівневий підхід; легку доступність.

Ключові слова: середня школа, мобільні застосунки, навчання англійської як іноземної, Центральна та Східна Європа, цифровізація освіти, технології, викладання.

INTRODUCTION

Recently, much attention has been paid to learning English as a second language (ESL) by means of using modern technologies and particularly mobile applications. This is due to the fact that learning based on modern technologies is more interesting and informative for learners. The use of mobile applications makes it possible to effectively and quickly learn educational material, allocate time more efficiently, and train language skills during lessons or self-study. At the same time, the variety of existing applications is somewhat confusing, since there is no clear algorithm for their use by secondary school

students. Thus, it is necessary to optimize the process of learning English using applications. In Ukraine, mobile-assisted learning is becoming more and more popular among schoolchildren and teachers and significant steps are being taken to use it efficiently. Still, there is a need to turn to the experience of neighboring countries, which are in roughly the same conditions as Ukraine with regard to ESL learning but are making steps in optimizing the process. It has been found that Poland, Check Republic, Hungary and Romania are successfully implementing mobile-assisted learning, so we consider it necessary to study and adapt their experience.

THE AIM OF THE STUDY

The purpose of the article is to analyze the experience of Central and Eastern European countries in optimizing the process of ESL learning based on the use of mobile applications, to identify their advantages and challenges for secondary school.

THEORETICAL FRAMEWORK AND RESEARCH METHODS

A considerable number of scientific works and fundamental research contributed to the popularization of the use of modern technologies in the educational process. Among them special attention should be paid to H. Alisoy (2024), J. Kic-Drgas (2024), M. Rosenberg (2010), N. Zemlianska (2014). Mobile-assisted learning is the subject of scientific interest to A. Baczkowska (2021), K. Bienkowska (2021), K. Gajda (2024), A. Kukulska-Hulme (2005), V. Morgana and O. Viberg (2012). Peculiarities of mobile applications use for ESL learning in Polish schools were studied by O. Aleksandrowska & D. Stanulewicz (2020). Mobile-assisted learning of ESL in Czech Republic was studied by L. Sanda & B. Klimova (2021). Works of I. Bardus, Yu. Nalyvaiko & O. Rozumna are dedicated to mobile-assisted learning of ESL in Romanian schools.

The experience of Central and Eastern European countries, such as Poland, the Czech Republic, Romania and Hungary, is useful for Ukraine, since ESL learning is at approximately the same level in all these countries, but innovative methods, in particular digital technologies, are used more frequently and effectively in the neighboring countries, which deserves attention and possible adaptation in Ukraine.

Research methods include literature review, content analysis, comparative analysis of mobile-assisted learning of ESL in schools of Hungary, Czech Republic, Poland and Romania, systemic review.

RESULTS

The introduction of modern technologies in teaching ESL means that students can develop digital skills along with learning a foreign language. Gadgets and mobile applications are ideal for implementing an interactive approach to language learning, based on the use of smartphones and other mobile technologies and are highly appreciated by users, as they allow for learning on the principle of "anywhere, anytime". Thus, the role of the teacher changes: they become a generator of ideas, tasks, etc. (Alisoy & Sadiqzade, 2024). There is a need to find new approaches to mobile-assisted learning and optimal methods of its assessment, including peer-assessment, increasing motivation, organizing activities that promote interaction among students (Bardus et al, 2021). The use of these technologies is a necessary condition for successful ESL learning and an important indicator of teacher competence.

The use of mobile applications in the process of teaching English is becoming one of the key elements of the digitalization of education in Central and Eastern European countries. Poland, Romania, the Czech Republic and Hungary demonstrate similar trends in

the introduction of mobile technologies into school language education, while maintaining national characteristics of educational policy and practice.

In Polish schools, mobile applications are integrated into the study of English as a part of the state program of digital transformation ("Cyfrowa Szkoła" (Digital School)). Applications are used as an auxiliary tool for the development of lexical and grammatical skills as well as listening. Duolingo, Busuu, Quizlet and platform mobile versions of "e-podręczniki" (e-coursebooks) are most often used. Polish teachers emphasize the importance of adapting applications to educational goals and use them as short practical tasks that complement the textbook. Considerable attention is paid to inclusivity and equal access to digital resources (Aleksandrowska & Stanulewicz, 2020).

In Romania, the widespread introduction of mobile applications in ESL teaching is associated with teacher digital competence programs and EU projects. The applications are used primarily to personalize learning and increase student motivation. Romanian teachers actively use Duolingo, Kahoot!, Wordwall, LingQ and other mobile microlearning tools. A special feature is the combination of mobile applications with the blended learning format, which has become especially developed in the post-pandemic period (Bardus et al., 2021). Schools encourage the development of autonomous learning and the development of digital literacy.

Czech schools traditionally demonstrate a high level of education digitalization, which is also reflected in English language teaching. Mobile-assisted learning is implemented within the framework of interactive learning focused on the development of communication skills. The most common applications are WocaBee, Duolingo, Quizlet, as well as special mobile versions of interactive textbooks. Teachers use the applications both for individual work and for class activities, especially during vocabulary review and formative assessment (Sanda & Klimova, 2021). A characteristic feature is the emphasis on gamification and interactive test exercises.

In Hungary, mobile applications for learning English are used as a part of the Digital Education Strategy reform. The applications WocaBee, Duolingo, Memrise, as well as local educational platforms with mobile support are quite common. A feature of Hungary is the use of mobile applications to prepare for national English exams, which stimulates the development of lexical and grammatical skills. Hungarian teachers emphasize the positive impact of applications on the individualization of the educational process and the ability to track students' progress (Baczkowska, 2021).

Therefore, we can see that there are many mobile applications for learning English in Central and Eastern Europe schools. Beside those mentioned before, we should also highlight other applications widely used in schools of Hungary, Poland, the Czech Republic and Romania:

– Mondly – an application that enables virtual travel;

– Lucidchart, MindMeister, Canva, GoConqr – allow communication in text and voice chats on social networks, creation of lexical-associative mind maps;

– Quizlet – an application for creating one's own vocabulary learning sets and studying them using tests, games and virtual cards;

– Socrative – an application for creating various types of tasks for studying lexical units;

– Zoom and Google Meet – allow to participate in international competitions, Olympiads in the format of a video conference;

– Anki is a word revision program based on flashcards, where you can create your own learning sets;

– WordUp is a mobile application that uses video and interactivity to learn vocabulary.

All these applications help to develop vocabulary, improve pronunciation skills and understanding of new words through various tasks and games. Despite differences between their functions mobile applications are characterized by common features:

– gamification of learning, which increases student motivation;

– personalization and adaptability, which allow to take into account the individual pace of language acquisition;

– combination with traditional educational resources (when mobile applications serve as an additional tool);

– development of digital and language literacy;

– availability of short exercise formats, which correspond well to modern educational approaches of microlearning (Viberg & Groenlund, 2012).

Based on the analysis of Eastern and Central European countries, we have highlighted several advantages of using mobile applications, namely: accessibility (applications allow to learn anywhere and anytime, which makes the learning process more flexible); interactivity (they create the opportunity for students to actively participate in the learning process through quizzes, tests, interactive tasks, etc.); variety of teaching tools and forms of learning (from audio and video materials to interactive games and online exercises – the variety of materials allows to choose teaching tools for different learning styles and individual needs); motivation (using applications can increase motivation to learn, especially for those who are interested in using technology) (Kukulska-Hulme & Traxler, 2005).

When creating ESL learning programs, developers take into account audio and visual content, which greatly contributes to memorizing new words. This is the principle of visualization and the ability to listen to the correct pronunciation, as well as learners' own pronunciation. Learners using these applications show more interest and desire to improve. Using mobile applications increases the opportunities for expanding vocabulary through a variety of authentic materials. This allows students to choose their own learning path, which helps to accelerate the process. Therefore, teachers should develop a strategic approach to replenishing vocabulary.

However, it is important to consider that the use of mobile applications in teaching must be methodologically justified and combined with traditional teaching methods in the lesson (Morgana & Kukulska-Humle, 2021).

It is important to note that increased efficiency in learning vocabulary using mobile applications is possible thanks to a variety of resources. This is not only the opportunity to familiarize oneself with transcription and studying one's own pronunciation, but also access to grammar materials, additional content in the form of films, music or books, tests to assess the level of knowledge, the ability to choose specific goals in language learning, as well as a system of incentives and tracking personal achievements. The interaction of all these elements contributes to the more complete development of foreign language lexical competence.

However, despite many advantages, there are also disadvantages, namely: dependence on technical means (bad quality of Internet connection can make it difficult to access materials); lack of control (the use of applications can lead to less control over student activity and can be difficult for the teacher); distraction (improper use can lead to the distraction of students from the main learning process); ambiguity of content (not all

materials in applications may be of high quality or meet academic requirements) (Rosenberg, 2010).

Despite the existing disadvantages, the use of mobile applications in the educational process is rapidly gaining popularity, turning into a new form of learning in schools, combining classroom and extracurricular activities, as well as individual and group learning. One promising direction for the use of mobile-assisted learning is the support of the traditional learning process by means of providing students with access to educational information through applications. These resources can be used by students for independent preparation for lessons, work on group projects and tasks, homework and self-assessment of knowledge through tests. Scientist Gajda points out that the use of mobile devices requires the teacher to constantly improve the methodology, improve their own information competence and a new perspective on modeling modern classes (Gajda, 2024). In the process of preparing for classes using gadgets, the teacher must ensure the implementation of fundamental principles for organizing educational activities:

1) informational, which involves the development of practical skills for effective processing of information in various forms of its presentation;

2) technological, which is determined by the skills and abilities of working with mobile devices and software;

3) procedural and activity, which is determined by the ability to organize active educational and cognitive activities of students through the processing of information resources to solve the tasks set (Kic-Drgas & Kilickaya, 2024).

According to researcher Zemlianska, the introduction of mobile-assisted learning into the educational process will allow to ensure the continuity and integrity of the latter due to the possibility of continuous access to reference materials and educational resources; improve the quality of teaching through the prompt implementation of feedback (for example, by conducting a short test at the end of the lesson, which will allow teachers to receive prompt information about students' assimilation of the material (what educational material is better learned by them, what sections of the material should be given more attention to and how much contact with the learners is maintained)). Based on the information received, the teacher can adjust the presentation of the material; provide informational and methodological support for lessons; provide better services in terms of organizing the learning (Zemlianska, 2014).

Summarizing the conducted research, we can assert that the use of mobile-assisted ESL learning has several features:

1. Adapted content: mobile applications are developed based on the needs of learners and the program material, adapted to the age characteristics of students.

2. Interactivity: applications often contain interactive exercises and games aimed at the active participation of students (quizzes, quest games, role-playing exercises, dialogues, etc., which interest and stimulate students to actively learn new words and expressions).

3. Variety of exercises: applications can contain a variety of exercises to develop lexical skills, such as listening to audio or watching videos, completing written tasks, reading and discussing texts, exercises for reproducing and understanding vocabulary.

4. Increasing motivation: interactive and interesting content helps to increase students' motivation to learn the language, as the emphasis is on a playful and interesting approach to learning.

5. Independent work: some applications may be used for independent study of students, when they can complete tasks or exercises on their own gadgets, study the material at home, check their knowledge, etc.

6. Multi-level approach: mobile applications can include tasks of different levels of complexity, which allows students with different levels of language acquisition to engage in at the level appropriate for them.

7. Online accessibility: many applications can be accessed online, allowing students to learn the language at any time and from any device with Internet access (Bienkowska et al, 2021). These features make mobile applications effective tools for ESL learning.

It is important to note that mobile-assisted learning in the educational process is a necessity. However, in practice, in most cases, the practice of using mobile technologies directly in the classroom remains unrealized, since students are often forbidden to use them. This may be due to various factors, such as the possibility of students being distracted by smartphones, the possibility of cheating, the risk of theft, or using a smartphone as a status symbol, etc. However, most students are ready to use mobile applications as a learning tool. The teacher's task in this case is to choose the right and interesting applications that would help to improve ESL learning.

CONCLUSIONS AND PROSPECTS FOR FURTHER RESEARCH

As a way of organizing the learning process, the use of mobile applications and other online tools has many advantages. First, it speeds up and optimizes the learning process, motivates learning, perhaps even more than audio and video materials, allows the teacher to apply an individual approach, as well as automate the assessment of completed work, which allows students to immediately see and analyze their own mistakes. Mobile-assisted learning is an excellent way to study foreign lexical material and assimilate what has already been learned. In the process of using mobile applications, a number of tasks are performed: developing interest in the English language; "transferring" students to a real-life use of the language; visualization of educational material (combining the sensory, auditory and visual components of the perception); expanding students' knowledge on a specific topic; providing a lot of interesting and useful illustrated information on topics that are usually not presented in an interesting enough way in ordinary textbooks; self-assessment of acquired knowledge and skills through applications.

Thus, advantages of using mobile applications for ESL learning outweigh the disadvantages but to make the process smooth and effective it is necessary to pay special attention to challenges related to mobile-assisted learning.

Prospects of further research are related to looking into the ways to overcome the challenges of mobile-assisted learning based on the experience of Central and Eastern European experience.

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