



STUDENT SESSION

# INTEGRATION OF DIGITAL TOOLS IN TEACHING ENGLISH AS A FOREIGN LANGUAGE

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## Abstract:

The research presented in this paper provides an overview of the most important elements associated with the integration of digital tools in the teaching of English as a foreign language. The rapid development of digital technologies has led to the emergence of numerous tools based on these technologies, which can significantly enhance all aspects of English language teaching. The application of digital tools and their effective alignment with pedagogical elements of instruction represent one of the fundamental prerequisites for the successful implementation of English as a foreign language teaching within contemporary educational systems. The subject of this research is the use of digital tools in education and their integration into English as a foreign language instruction. The aim of the study is to highlight the importance of integrating various digital tools into English language teaching. The research methodology is based on the use of secondary sources that examine topics related to the integration of digital tools in English as a foreign language instruction. The study contributes to a better understanding of the importance of integrating digital technologies into the teaching of English as a foreign language.

## Keywords:

Digitalization, Digital Tools, Teaching English as a Foreign Language, Integration of Digital Tools, Teachers' Digital Competencies.

## INTRODUCTION

The rapid development of digital technologies has led to digital transformation across all segments of contemporary society. The teaching of English as a foreign language represents one of the areas within the educational system where the use of digital tools generates numerous positive effects and improvements that can significantly enhance the quality of the teaching process and learning outcomes. Technological advancements and methodological changes enabling the application of digital tools such as Computer-Assisted Language Learning (CALL), Virtual Reality (VR), and mobile-assisted learning provide substantial improvements in student engagement by offering dynamic and interactive learning experiences that are not possible within traditional forms of instruction.

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The numerous advantages associated with their use have resulted in the increasing adoption of various digital tools in teaching English as a foreign language. The intensive development of information and communication technologies has led to the emergence of a wide range of digital tools, whose integration enables significant improvements in English language teaching. The integration of digital tools into instruction also creates a need to strengthen teachers' digital competencies, without which the use of modern technologies cannot achieve desired outcomes, such as improved learning results, increased attractiveness of teaching content, and enhanced student motivation.

## 2. DIGITAL TOOLS FOR LANGUAGE LEARNING

In contemporary English language teaching, a wide range of digital tools is utilized, most commonly in the form of platforms, applications, and multimedia content. The primary objective of integrating digital tools into the teaching of English as a foreign language is reflected in the development of students' language skills, which can be enhanced through improvements in pronunciation, reading, writing, and listening. The application of digital tools enables active student participation in the teaching process, higher levels of learner autonomy, and the improvement of English language proficiency [1]. A large number of digital tools can be used in teaching English as a foreign language, which can be grouped into five main categories:

- Computer-Assisted Language Learning (CALL) tools,
- Mobile-Assisted Language Learning (MALL) tools,
- tools for listening and pronunciation practice,
- platforms for interactive language learning, and
- gamification-based tools.

The emergence and development of Computer-Assisted Language Learning tools have enabled numerous significant improvements in English as a foreign language instruction. CALL is based on the use of digital technologies with the aim of enhancing the teaching process. This concept refers to the use of computers, digital technologies, and internet resources for teaching and learning foreign languages [1]. Within the framework of CALL, a wide range of approaches is employed, ranging from traditional methods based on lectures and teacher-student interaction to interactive approaches that rely

on web-based tools and the use of smartphones. These tools significantly increase the level of personalization in learning, thereby improving learning outcomes. CALL platforms promote collaborative models through virtual classrooms, discussion forums, and multimedia group projects. One of the key advantages of CALL is the wide availability of authentic materials, which expose students to diverse linguistic contexts, cultural differences, and real-life scenarios. In this way, learning experiences are enriched, and students' intercultural competencies are further developed [2].

Mobile-Assisted Language Learning (MALL) has brought about substantial changes in the accessibility of education. Through the use of interactive applications, online communities, and information-sharing platforms, mobile-assisted learning enables students to practice and use the language, acquire vocabulary, and explore various cultural aspects related to the English language. MALL provides opportunities for personalized and adaptive learning experiences, allowing students to modify their learning approaches in accordance with their individual goals, interests, and proficiency levels. This leads to improved learning outcomes and enhanced learner autonomy. One of the most significant advantages of mobile-assisted language learning is the seamless integration of language into students' daily lives, achieved by eliminating the boundaries between formal and informal learning contexts through the use of learning tools beyond the classroom.

Tools for listening and pronunciation practice include various types of digital resources, such as podcasts and tools based on artificial intelligence (AI). Podcasts are widely accessible and user-friendly digital tools designed for learning foreign languages through listening. The most significant advantages of using podcasts in English language teaching include improved comprehension, vocabulary acquisition, and mastery of new language structures [3]. AI-based tools employ a variety of technologies, among which text-to-speech and automatic speech recognition are the most commonly used. The use of these tools enables the generation of natural-sounding speech and the analysis of students' spoken output. AI-based tools have proven to be particularly effective in areas related to pronunciation learning and practice. Digital tools for listening and pronunciation represent a crucial component of modern English language teaching, contributing to higher levels of flexibility and interactivity in instruction.



Platforms for interactive language learning enable students to develop reading and writing skills through the use of content characterized by high levels of interactivity and authenticity. Blogs and collaborative platforms are among the most commonly used tools in teaching English as a foreign language. Blogs are digital platforms that allow the publication of written content and user comments, thereby significantly enhancing interactivity in English language instruction [4]. Collaborative platforms provide opportunities for teachers and students to work together on writing and editing texts, thus promoting collaborative learning approaches. The practical application of these platforms can significantly improve both the quality and outcomes of English language teaching [5]. Furthermore, these platforms contribute to the development of students' communication skills and strengthen teamwork.

Gamification refers to the use of game elements in the teaching process, with the primary goals of increasing student motivation and encouraging active participation [6]. This category of digital tools is increasingly applied in English as a foreign language teaching, particularly in areas related to grammar and vocabulary acquisition. The advantages of gamification-based tools are reflected in their ability to create various games, quizzes, and tasks through which students actively engage in language learning. These tools have demonstrated the greatest effectiveness in teaching grammatical structures and expanding English vocabulary.

### 3. ADVANCED TECHNOLOGIES IN LANGUAGE LEARNING

Digitalization has also led to the development of a wide range of advanced technologies, which have proven to be highly effective in learning English as a foreign language in practice. Among the most significant advanced technologies with strong potential in English language teaching are virtual reality, augmented reality (AR), and artificial intelligence. These technologies enable learners to access additional information and enhance their knowledge by placing learning content within real-life contexts.

Virtual and augmented reality are technologies that provide learners with opportunities to acquire foreign language knowledge spontaneously through the exploration of real-world contexts and to develop communication skills. Augmented reality refers to situations in which the context of the real environment is dynamically overlaid with various location-based or context-

sensitive virtual information [7]. It represents an immersive technology that integrates digital and real-world content. Augmented reality systems can be defined as systems that allow users to see virtual elements superimposed onto the physical world or integrated with it in real time.

The more significant application of augmented reality in English as a foreign language learning began during the second decade of the 21st century. Initially, its use was reflected in location-based systems through which students engaged in various forms of outdoor, gamified learning activities aimed at task completion [8]. During the past decade, there has been a noticeable trend of increasing use of augmented reality in formal educational contexts, enabling students to learn languages in real-life environments such as airports, restaurants, or shopping malls [9].

The use of virtual and augmented reality leads to significant positive effects in English as a foreign language teaching, among which the most important are:

- increased student motivation, satisfaction, attention, and engagement,
- improved learning outcomes across multiple language skills,
- strengthened interaction among key stakeholders, and
- applicability across a wide range of areas in English language teaching.

The application of artificial intelligence in education involves the simulation of human intelligence behavior through computer systems. The aim of these simulations is to perform tasks that require human-like reasoning. The use of generative artificial intelligence enables significant positive effects in English language teaching. These effects are primarily the result of AI's ability to efficiently process large volumes of data. The application of artificial intelligence enables personalized teaching approaches, allowing instruction to be adapted to individual learners.

Effective implementation of artificial intelligence in English as a foreign language teaching requires more than just equipment and technical knowledge. A key prerequisite is a critical understanding of how teachers can practically use AI tools. There are numerous areas of English language teaching in which artificial intelligence enables significant improvements, among which the most important include automated feedback and assessment, vocabulary acquisition, improvement of grammatical accuracy, and the development of listening and speaking skills [10].



The introduction of artificial intelligence into English language teaching is also associated with certain challenges that must be addressed. One of the most significant barriers is the insufficient level of infrastructure development and inadequate levels of teachers' digital competencies. The use of artificial intelligence in education is also associated with issues related to data privacy protection and ethical concerns. Another major challenge is the misalignment of certain AI tools with higher-level pedagogical objectives [11].

#### 4. LEARNING MANAGEMENT SYSTEMS AND DIGITAL LEARNING ENVIRONMENTS

Learning Management Systems (LMS) enable the planning, implementation, administration, and evaluation of educational activities in a digital environment. These systems represent specialized platforms designed specifically for various forms of distance learning [12]. The main advantages of Learning Management Systems include centralized management of instructional content, monitoring of student progress, efficient communication, and the automation of administrative tasks. Through these systems, teachers can create different types of learning materials in accordance with their instructional needs. Higher levels of student engagement and improved learning outcomes are also identified as key benefits of Learning Management Systems [13].

Virtual classrooms represent an extension and enhancement of the LMS concept. They primarily focus on synchronous, real-time interaction between teachers and students [14]. Virtual classrooms are based on

the simulation of traditional classroom-based teaching. A wide range of platforms can be used as virtual classrooms, and they are often integrated with Learning Management Systems. In such integrated models, synchronous teaching sessions are conducted within virtual classrooms, while LMS platforms are used for distributing learning materials, assigning tasks, and evaluating student performance [15].

The use of Learning Management Systems and virtual classrooms enables significant improvements in English as a foreign language teaching. These systems support the application of constructivist and connectivist learning theories, which can substantially enhance English language acquisition. Constructivist approaches are based on the active involvement of learners in all stages of the teaching process, which can be achieved, for example, through discussions or group project work [14]. Connectivism emphasizes the digitalization of education, highlighting the importance of networks and the interconnectedness of information.

The use of Learning Management Systems and virtual classrooms can lead to significant positive effects in English as a foreign language instruction. The most important among these effects include increased accessibility and flexibility of teaching, as well as its personalization. The main challenges associated with the application of these digital tools include insufficient technical infrastructure, inadequate digital competencies of teachers and students, and issues related to data privacy and security [14].

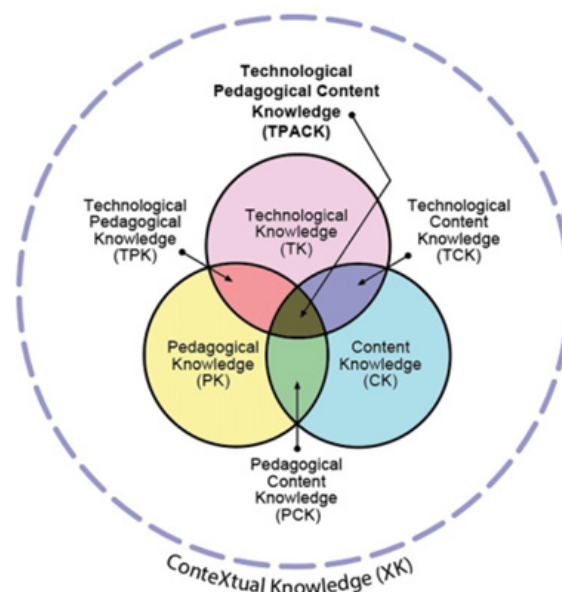


Figure 1. Components of the Technological Pedagogical Content Knowledge (TPACK) Framework [17]



## 5. TECHNOLOGY INTEGRATION STRATEGIES

Contemporary pedagogy is undergoing significant changes as a result of the increasingly intensive integration of artificial intelligence into all segments of teaching. The pedagogical potential of digital technologies and artificial intelligence is considerable; however, it can only be effectively realized through the abandonment of traditional approaches and the transition to modern teaching methods. The implementation of digital technologies enables the adaptation of instruction to individual learners, which was not feasible within traditional teaching approaches [16].

The Technological Pedagogical Content Knowledge (TPACK) framework forms the foundation upon which the process of integrating digital technologies into teaching is based. This framework is grounded in the concept that teachers must possess knowledge in three core domains: technological knowledge, pedagogical knowledge, and content knowledge [17]. The components of the TPACK framework and their interrelationships are presented in Figure 1.

The Technological Pedagogical Content Knowledge (TPACK) framework emphasizes the concept that digital technologies can be effectively integrated into teaching only when all three domains of knowledge are simultaneously applied. This framework describes the knowledge required by teachers for the effective use of digital technologies, as well as the complex relationships

among these knowledge domains. When applying the TPACK model, particular emphasis must be placed on connecting pedagogical knowledge with real-life contexts, while also respecting the constraints defined by the current level of development of the digital technologies being used.

The Substitution, Augmentation, Modification, and Redefinition (SAMR) model represents a four-level approach to the selection, use, and evaluation of modern technologies in teaching [18]. Figure 2 illustrates the four basic levels of this model. The SAMR model is widely applied in educational practice, producing numerous positive effects, among which the most significant are increased student motivation, greater collaboration among students, as well as enhanced interaction between students and teachers [19].

## 6. PSYCHOLOGICAL AND PROFESSIONAL ASPECTS OF INTEGRATING DIGITAL TOOLS INTO ENGLISH AS A FOREIGN LANGUAGE TEACHING

Continuous professional development of teachers is, under contemporary conditions, an essential element without which the effective functioning of the educational system cannot be ensured. Teachers' professional competencies are no longer viewed as a static set of knowledge and information acquired during formal education. Instead, they represent a dynamic combination of knowledge, skills, and attitudes that enable continuous improvement of the teaching process. The

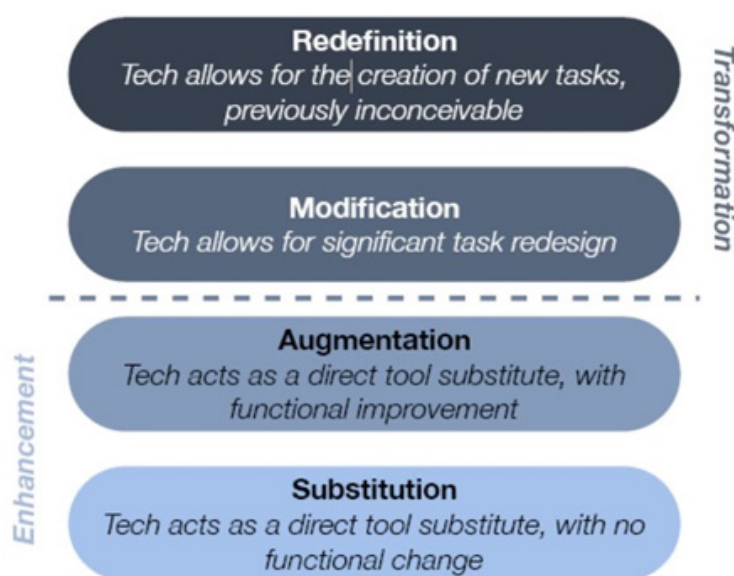


Figure 2. The Substitution, Augmentation, Modification, and Redefinition (SAMR) Model [19]



competencies that teachers possess must encompass pedagogical, didactic-methodological, subject-specific, and digital domains. The development of teachers' subject-specific competencies ensures mastery of the content they teach, while strengthening pedagogical competencies enables the implementation of instruction focused on fostering active learning.

Teachers' work experience has traditionally been perceived as synonymous with professional maturity, methodological stability, and pedagogical confidence in practice. Teachers with many years of experience possess rich methodological knowledge and a deep understanding of students' cognitive development. Younger teachers, who were educated and professionally trained with the use of the internet and mobile technologies, naturally demonstrate higher levels of technical competence and greater readiness to apply digital technologies in teaching [20]. For this group of teachers, digital tools are not an obstacle but a natural environment they use on a daily basis. In contrast, older teachers often possess what is less developed among younger generations—namely, the ability to use technology as a tool for achieving clear pedagogical goals, without allowing digital tools to dominate or negatively influence the teaching process.

Continuous Professional Development (CPD) aims to ensure the ongoing enhancement of teachers' knowledge and skills throughout their entire professional careers [21]. Unlike formal education, which teachers acquire before entering their professional careers, CPD is carried out continuously until retirement. The purpose of this process is to improve the quality of teaching and to adapt it to contemporary trends in digital technologies and new pedagogical approaches applied in education. Research findings indicate a direct positive correlation between teaching quality and teachers' competencies, which is why continuous professional development represents one of the most important factors influencing the quality of national education systems [21].

## 7. CHALLENGES AND BARRIERS TO THE INTEGRATION OF DIGITAL TOOLS IN ENGLISH AS A FOREIGN LANGUAGE TEACHING

The integration of digital tools into English as a foreign language teaching is also associated with various challenges and barriers that need to be addressed. The most significant challenges and obstacles in this area include technical and institutional barriers, pedagogical challenges, the digital divide, and digital inclusion.

One of the most common technical challenges faced by teachers in developing their digital competencies is the inadequate technological infrastructure in schools. These issues include disparities in access to technology, as well as insufficient internet connectivity, which often results in a chronic level of uncertainty that directly affects teachers' willingness to experiment with digital tools [22].

One of the main pedagogical challenges in the application of digital tools in teaching is the insufficient level of teachers' digital literacy. A large number of teachers use only basic digital tools in their practice, such as email, word processing software, or presentation tools. A significant challenge is the fact that only a small number of teachers possess the competencies required to use more complex digital tools, without which it is not possible to ensure pedagogically meaningful integration of technology in teaching [23].

The digital divide is a complex phenomenon caused by differences in digital capital. Digital capital refers to the ability to translate the use of technology into real educational benefits. Accordingly, the digital divide does not exist only in contexts where computers are unavailable, but also in situations where there is a lack of pedagogical vision or adequate professional support. Digital inclusion in education implies ensuring equal access and opportunities for all participants, regardless of their geographical location or socioeconomic status. In the context of professional development, inclusion means establishing a system in which every teacher, regardless of years of experience or school budget, has access to quality infrastructure and meaningful professional training.

## 8. THE FUTURE OF LANGUAGE TEACHING

From the perspective of English as a foreign language teaching, the use of artificial intelligence-based tools is becoming increasingly significant, particularly in areas related to the development of new teaching strategies, the creation of personalized instruction, and the support of students' linguistic competence development [24]. The application of artificial intelligence increases the interactivity of English as a foreign language instruction, enhances its efficiency, and promotes greater student engagement in the learning process while enabling its personalization.



Contemporary English as a foreign language teaching is characterized by various contextual challenges related to student engagement, personalized learning, and the provision of timely feedback. The emergence and development of artificial intelligence have provided opportunities for effectively addressing the limitations of traditional teaching models through the use of adaptive learning systems, intelligent tutoring systems, and real-time feedback mechanisms [24]. Digital technologies enable simple and highly efficient adaptation of instruction to individual learners, thereby facilitating the implementation of the concept of personalized learning, which produces numerous positive effects in English as a foreign language teaching.

## 9. CONCLUSION

Effective integration of digital tools into English as a foreign language teaching can only be achieved through the development of both technological and pedagogical elements related to the teaching process. Its fundamental prerequisites include the development of teachers' digital competencies and their pedagogical ability to use digital technologies as a means rather than as the central element upon which the teaching process is based. Investment in the development and application of digital tools in teaching, as well as in teacher professional development, represents an imperative in all modern societies. Only competent, motivated, and institutionally supported teachers can contribute to the development of generations capable of critical thinking, empathy, and professional growth. The development of artificial intelligence will fundamentally transform the ways in which English as a foreign language teaching is conducted. In all aspects of digital tool integration, it is necessary to emphasize the establishment of an optimal balance between the technical characteristics of these tools and the pedagogical requirements that must be met in order to ensure their effective use and maximize the benefits of modern technologies.

Despite the fact that the application of digital technologies offers significant opportunities for improving English as a foreign language teaching, important barriers still exist that negatively affect both the extent of implementation and the effectiveness of their use. The most significant technical and institutional barriers to the integration of digital technologies in English as a foreign language teaching include inadequate infrastructure development, insufficient digital competencies of teachers, financial constraints, and a lack of institutional support.

Overcoming these barriers can only be achieved through investment in infrastructure, continuous development of digital competencies, and the alignment of national curricula with contemporary teaching approaches.

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