



DOI: 10.54919/physics/55.2024.216kb1

Integration of traditional and digital educational technologies: points of contact and differences in teaching a foreign language

Nargiza Babaniyazova*

Uzbekistan State World Languages University
100138, 21A Kichik Xalka Yoli Str., Tashkent, Republic of Uzbekistan

Abstract

Relevance. The use of digital educational technologies can lead to more effective and interactive learning, offering new opportunities for teachers and students. In light of the introduction of digital technologies in education, the Government of the Republic of Uzbekistan is actively developing new initiatives, issuing decrees and resolutions, which emphasizes the importance of carefully studying the integration of traditional and digital teaching methods in the country's educational system.

Purpose. Thus, the purpose of the current article is to identify common ground and differences between traditional and digital educational technologies in teaching a foreign language in order to create the most effective educational model.

Methodology. The methodology of scientific work is based on analysis and synthesis, as well as comparison.

Results. The results of the work showed that, in the modern world, knowledge of a foreign language is necessary, and understanding how best to use existing educational resources in the process of teaching languages is crucial for both self-study and for private teachers and educational institutions. While digital technologies offer several benefits, including increased access to education, instant feedback, and personalization of learning paths, traditional methods still retain their value in creating and implementing the educational process. The study shows that the most optimal educational model is a balanced approach that combines the strengths of both traditional and digital technologies. Understanding the common ground and differences between the analysed technologies makes it possible to create a more effective and attractive learning environment, which ultimately increases the educational level, improves the quality of foreign language proficiency.

Conclusions. The study acts as an additional tool for studying the current issue, for developing curricula and teaching methods for foreign languages, which optimize the learning of languages in the digital age, thus determining the significance of the results obtained.

Keywords: pedagogical activity; comparative analysis; Internet; professional development; efficiency; innovations.

Introduction

With the advent and development of the World Wide Web, all spheres of human life began to improve. At the same time, the development of the Internet has made it possible to greatly simplify the process of obtaining education for representatives of all segments of the population of our planet. Thus, the development of digital technologies has ensured the availability of education [1]. Digital education, also known as e-learning, refers to the use of digital

technologies to provide educational content and provide more learning opportunities [2].

Of course, at the moment, digital education is widely used, mainly in developed countries. However, there are countries that are unable to provide their citizens with a quality education, but people have the opportunity to gain knowledge on their own. This is what the African researcher J.F. Kalolo [3] affirms in his work. The author argues that digital technologies can help overcome some

Suggested Citation:

Babaniyazova N. Integration of traditional and digital educational technologies: points of contact and differences in teaching a foreign language. *Sci Herald Uzhhorod Univ Ser Phys.* 2024;(55):2161-2173. DOI: 10.54919/physics/55.2024.216kb1

*Corresponding author



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)

problems faced by educational institutions in developing countries, in areas with low income and limited resources, as well as in areas where there is poor infrastructure.

At the same time, in order to ensure the educational process using digital technologies, it is necessary to resolve the issue with some related problems. Authors N. Guppy *et al.* [4] argue that while digital technologies can improve learning outcomes in these communities, there are also significant barriers that need to be addressed. These include lack of access to technology and inability to connect to the Internet.

Overall, these studies and articles highlight the potential of digital technologies to improve learning outcomes in countries with low levels of education, and also recognize the challenges that need to be addressed to make these technologies accessible and effective for all learners.

If the main problems associated with the introduction of digital technologies in the educational process are solved, they can have a positive impact and significantly increase the availability of knowledge for a wider range of students, regardless of their location, financial situation or personal circumstances. Moreover, digital technologies and the development of the Internet have made it possible to overcome the crisis caused by the coronavirus infection, which led to the cessation of all face-to-face educational activities. In his scientific work, the Chinese researcher A. Cheung [5] talks about increasing the level of access to education. She notes that Internet technologies have made it possible for students to study from home, which helped solve the issue of providing education during the global lockdown caused by the COVID-19 pandemic (for example, through the use of video conferencing software such as Zoom).

However, digitalization is not only about improving educational channels and using open educational resources. Digitalization also provides an opportunity to modernize the traditional educational process. The development of digital technologies has provided the emergence of additional tools for the implementation of the educational process. Little by little, many traditional methods of teaching languages began to become obsolete and less effective [1].

Researcher from Uzbekistan S.R. Velieva [6] notes that digital educational technologies are increasingly being used in the modern educational process. She says that many educational institutions in Uzbekistan are not ready to reform the educational process, both in terms of resources (due to insufficient technological provision) and morally (students and teachers still do not trust digital technologies).

So, saying about Uzbek experience reforming educational process, it is worth mentioning the Decree of the President of the Republic of Uzbekistan “On the development strategy of the new Uzbekistan for 2022-2026” [7], and also, Decree of the President of the Republic of Uzbekistan “On measures to develop the system of higher education” [8]. The decree covers the development of digital technologies in the country, including the process of their introduction into the education system. The importance of digital education and the need to improve the quality and accessibility of online education are emphasized. The documents highlight the main areas of

development, which include: the development and implementation of e-learning systems that will provide equal access to education and training for all citizens, regardless of their location and social status; expansion of digital libraries and online resources to support distance learning; promotion of the use of digital technologies in the educational process, such as interactive whiteboards, tablets, and laptops; creation of centres for the development of digital skills and teacher training in the field of digital education; development of a national e-learning platform to facilitate the creation and sharing of educational content.

Uzbek researcher I.E. Zhukovskaya [9], as part of her scientific article, came to the conclusion that digital educational tools demonstrate high results in improving the efficiency of the entire educational process in Uzbekistan. The author notes that, at the moment, in Uzbekistan, there are some problems and needs that accompany the process of teaching foreign languages. These problems include: limited access to technology and an insufficient number of qualified foreign language teachers.

Thus, taking into account everything described above, the study of the issue of integrating digital educational technologies into the traditional education system is extremely relevant. The need to develop the education sector in Uzbekistan is also mentioned in legislative documents. Thus, the current research topic has a high potential and is of interest for further study.

The aim of the scientific work is to study the integration of digital educational technologies into the educational process, by analysing the points of contact and divergence between traditional and digital teaching methods, as well as determining how these differences can be used to optimize the process of language learning.

Literature Review

The modern educational process includes not only traditional approaches to learning (full-time learning from textbooks and manuals, lectures and exams, homework, etc.), but also the latest digital technologies (video lessons, educational games and applications) [1].

Researchers M. Rifai *et al.* [10] speak in their work of the need to change approaches to the construction of the educational process. In their study, the authors determine the need for interaction between developed and developing countries, thanks to digital technologies. The development of education allows for the growth of the quality of knowledge, supports the development of skills and contributes to some socio-cultural changes. Uzbek researcher Z.Yu. Abdurakhmonova [11] believes that digital technologies make it possible to build the educational process in such a way as to cover and work through possible and non-standard situations as much as possible.

A study by D.N. Hidayat *et al.* [12] showed that the use of mobile applications in teaching English can significantly improve students' vocabulary and reading comprehension. Researchers say that digital educational technologies can improve language learning outcomes by providing students with a more interactive and personalized learning experience.

A similar study by P. Rong Lim & N.M. Noor [13] describes the effectiveness of the introduction of digital

technologies in the educational process. The results of the study demonstrate that the inclusion of digital tools in the teaching of a foreign language improves the writing skills of students and has an impact on the development of creative thinking. Researcher Y.M. Jobirovich [14] notes that digital technologies can increase the level of student interest and positively affect their motivation.

However, all of these studies demonstrate that while digital educational technologies have many benefits, it is important to understand that they should not completely replace traditional teaching methods (such as classroom and textbook learning), as they still play a role. an important role in the educational process, including teaching foreign languages.

Several studies have shown that traditional teaching methods give learners a solid foundation for language learning and help them develop important language skills such as grammar and syntax. For example, a study by Yu. S. Styrkina [15] demonstrates that classroom learning is effective in helping students master the grammar and vocabulary of a foreign language.

Thus, a combination of traditional and digital teaching methods is likely to be the most effective approach to teaching a foreign language. By combining traditional teaching methods with the latest digital educational technologies in the educational process, teachers can provide students with a comprehensive learning experience that meets both their cognitive and affective needs. In addition, the introduction of digital technologies makes it possible to diversify the educational process and increase the interest of students.

In addition, the integration of traditional and digital educational technologies in the teaching of a foreign language can also improve not only the assimilation of information by students, but also improve pedagogical work. For example, a study by T. Meirovitz *et al.* [16] showed that the integration of digital technologies in teaching English helped teachers become more flexible and creative in their approaches to learning.

Thus, the integration of traditional and digital educational technologies in the teaching of a foreign language has many advantages for both students and teachers. Combining the strengths of both traditional and digital learning methods, teachers can provide students with a comprehensive, high-quality, and highly effective learning experience.

However, it is important to understand that digital educational technologies should be used as an additional tool, in combination with traditional teaching methods, and not as their full replacement.

Materials and Methods

The theoretical base of the research work is based on the scientific works of Uzbek, Ukrainian, American, English, Chinese, and Malaysian scientists studying the issue of integrating digital educational technologies into the traditional educational process. The analysed scientific papers include abstracts and articles that are in the public domain.

The research methodology includes analysis, synthesis, and comparison. The method of analysis involves dividing complex topics or systems into smaller parts in order to make it easier to understand their main elements. In the

context of studying the integration of traditional and digital educational technologies, the analysis was used to study the features, functionality and existing limitations of their use. Thus, within the framework of this method, various pedagogical approaches were analysed, which are usually associated with traditional and digital educational technologies (for example, traditional lectures in full-time format and the use of mobile applications as part of the educational process). The method made it possible to evaluate various types of learning outcomes that certain educational technologies are intended to achieve (for example, increasing the vocabulary of students and preserving knowledge in the process of improving their skills).

An analysis of the educational system of the Republic of Uzbekistan, as part of determining the degree of integration of digital technologies, was carried out on the basis of Tashkent data State University of Law [17] State Pedagogy University named after Nizami [18], Samarkand State University named after Sharof Rashidov [19].

In the context of studying the integration of traditional and digital educational technologies, synthesis has been applied to explore how these technologies can be combined to create a more effective educational process (i.e., what impact does it have on the work of teachers) and increase the quality of education (i.e., how these technologies affect students). As part of the current study, this method made it possible to identify the main differences and similarities between the studied educational technologies, which gave rise to proposals and recommendations regarding the transformation of traditional pedagogical approaches using digital educational technologies.

Thus, in this research work, synthesis and analysis acted as the basis for the formation of recommendations for creating a hybrid learning model that can include the best aspects of both technologies in order to increase the efficiency of the educational process.

The comparison method served as an additional method to reinforce the results and demonstrate the similarities and differences between the studied educational technologies, which made it possible to obtain a complete picture of the feasibility of their integration, taking into account their strengths and weaknesses. In the context of studying the integration of traditional and digital educational technologies, a comparison was used to evaluate the effectiveness of each educational technology. For example, the comparison was applied in the process of conducting a comparative analysis of the effectiveness of traditional and digital educational technologies that affect the change in critical thinking skills or the development of students' creative approach to solving non-standard problems. Also, the comparison method allowed to determine the main advantages of each technology in terms of such factors as student involvement, teacher workload and resource allocation.

The selected research methods allow generalizing the results obtained, in the process of identifying the differences and points of contact for learning with the use of each of these technologies. This, in turn, allows creating a comprehensive learning structure that covers different types of skills and knowledge. In general, the chosen methodology fully complies with the goals of the research work, allowing a comprehensive study of both digital and

traditional technologies, and the prospects for their integration.

Results

Educational technologies in the modern world

Improving the education system does not stand still; over the past decades, approaches to education have changed to a large extent [20]. Today, in the world practice of teaching foreign languages, many educational technologies are used. These tools and resources help improve the learning experience by making it more personalized, interactive, fun and effective.

The use of technology to facilitate language learning has a long and rich history. In recent years, language learning has become increasingly mobile, as learners use smartphones and tablets to access apps and resources for language learning [21]. Mobile learning offers students a more flexible and personalized learning experience and can reach a wider audience than traditional classroom learning.

In turn, traditional educational technologies include textbooks, workbooks, and face-to-face lectures [22]. Textbooks are also often used to learn grammar rules, sentence structure, and word learning. Workbooks are usually used in conjunction with textbooks and may contain additional exercises and activities for students to practice and reinforce what they have learned.

It is important to note that although traditional educational technologies can be useful in the modern educational process, they should not be the only means of learning a foreign language. It is necessary to build the educational process in such a way that it combines other effective methods.

In general, the development of educational technologies in the field of language teaching is driven by the desire to provide students with a more engaging, effective and personalized learning experience. As technology continues to evolve, it is likely that language learning will continue to be transformed in the coming years by new innovations.

Thus, in recent years, the integration of traditional and digital educational technologies has become a topic of increased interest in the field of teaching foreign languages. This trend has become particularly noticeable due to the abrupt cessation of in-person education during the COVID-19 pandemic [5].

International experience in the use of educational technologies in the context of language teaching

The international experience of integrating digital educational technologies into the learning process demonstrates the effectiveness of the implementation of these technologies. Based on the experience of developed countries, it becomes possible to form an optimal policy for the introduction of digital education in Uzbekistan.

So, for example, in the modern educational process, German universities are increasingly using mobile applications in the study of German and foreign languages at universities. Mobile apps are believed to allow students to learn anytime, anywhere, improve accessibility, and increase motivation to learn a language. For example, such German universities as the University of Heidelberg and the University of Berlin actively use digital tools in the

educational process [23]. Digital technologies such as online platforms, virtual classrooms and multimedia materials make language learning more interactive and engaging for students. They also stimulate the active interaction of students with educational materials and support the individualization of the educational process.

The Italian educational system also includes the widespread use of digital technologies. For example, some Italian universities (for example, the University of Bologna, the University of Padua and the University of Rome "La Sapienza") have introduced virtual reality (VR) into the educational process in order to create a more realistic language environment for students [24]. With the help of VR technologies, students can immerse themselves in a virtual space that simulates real situations of communication in the language being studied. They can participate in virtual dialogues, take virtual trips and practice their skills in a variety of scenarios, which allows students to improve their speaking and writing, as well as develop a cultural understanding of the country where the language is used.

Another country that uses advanced technologies in the educational process is China. In Chinese universities (for example, Peking University), mobile applications play an important role in the language learning process [25]. These apps offer a variety of exercises, games, dictionaries, audio materials, and other resources to help students improve their reading, writing, grammar, and listening skills. Mobile apps provide the flexibility and accessibility of language learning, which is especially important for students who have limited time or are unable to attend traditional classes. Also, universities in China widely use virtual reality and augmented reality (AR) for educational purposes. The use of VR technologies allows the creation of immersive environments in which students can interact with language situations and cultural contexts.

The study of international experience in improving the educational process through the integration of digital technologies is an important step for the development of more effective and innovative approaches to learning in Uzbekistan, identifying trends and innovations in the field of educational technologies, as well as determining the methods and tools that are most effective in learning languages, increasing student motivation and achieving learning goals. This knowledge should lead to an increase in the quality of language education and improve student outcomes.

The history of the use of traditional and digital educational technologies in the universities of Uzbekistan

The beginning of the use of traditional educational technologies in the universities of the Republic of Uzbekistan is associated with the creation of universities in the country and providing students with access to libraries, lectures, and other traditional educational resources. Traditional technologies have been used from the very beginning of building the educational system of the country.

Starting in the 1990s, many universities introduced computers and Internet connections, which made it possible to access electronic resources and online tools [26]. Thus, with the development of information

technologies and the digital revolution, it became possible to use digital educational technologies in the universities of Uzbekistan.

In the 2000s, universities in Uzbekistan began to actively introduce digital educational platforms and electronic learning management systems (LMS). These systems allow educators to upload learning materials, conduct online quizzes, create discussion forums, and assign electronic assignments to students. They also provided an opportunity for distance learning and independent work of students [26].

Today, many universities in Uzbekistan are actively using digital technologies in the educational process. They offer online courses, webinars, virtual labs and other digital tools to enrich the learning experience and make it more interactive. Recently, universities in Uzbekistan have begun to pay attention to the development and

implementation of modern technologies, such as artificial intelligence (AI), big data, the Internet of things, and others [27]. The introduction of such technologies occurs through the introduction of specialized programs and the creation of laboratories where students can gain practical skills in the field of the latest technologies. Also, it is important to note that these initiatives are supported by the state [8].

Classification of digital educational technologies

The most common digital educational technologies used in the process of learning foreign languages include: mobile and computer applications, online courses, interactive websites, digital language cards, speech recognition and pronunciation tools, and much more. Some of the most widely used digital educational technologies are listed in Table 1.

Table 1. Digital educational technologies for learning foreign languages

Technology	Characteristic
Language learning apps	They are based on interactive lessons, quizzes, and games that help students practice vocabulary, grammar, and pronunciation. These apps often include progress tracking and adaptive learning features to personalize the learning experience. These applications include: like Duolingo, Babel, and others.
Online language courses and platforms	They are structured language courses from educational institutions. These courses typically include video lectures, assignments, quizzes, and forums where students can interact with instructors and peers. Prominent examples are language sites and platforms such as Memrise, Coursera, Lingvist, and FutureLearn.
Digital cards and spaced repetition systems	They allow students to create, share, and view digital flashcards. Spaced repetition algorithms help optimize repetition schedules, ensuring that students focus on the material they need most for quality language practice. <i>Quizlet</i> is a prime example of this kind of educational technology.
Virtual language exchange platforms	Act as a link between language learners and native speakers who want to help or are teachers. Often, thanks to such platforms, a language exchange can be carried out, where both sides of the dialogue act both as teachers and as students. Such platforms are most effective for conversational practice and cultural exchange, for those who have been learning the language for a long time. These platforms often include text, audio, and video chat features, as well as tools for text correction, pronunciation feedback, and language translation. Prime examples of such language platforms are Tandem, iTalki, and HelloTalk. Also, it is worth noting that quite often, people use other means of virtual communication for language practice. For example, applications based on anonymous communication with a randomly selected interlocutor are often used (Camsurf, Omegle and others). However, it should be noted that the use of non-specialized sites can be quite inefficient, the interlocutors can be aggressive and not interested in gaining knowledge.
Interactive websites	Provide authentic language content such as videos, news articles, and podcasts with interactive subtitles, quizzes, and vocabulary lists to help students immerse themselves in the language they are learning (FluentU, Language Learning with Netflix). It is worth noting that often, various video platforms and streaming services (for example, YouTube and Netflix) are also used as a resource for learning a language, since these resources provide a variety of entertainment, educational and documentary content with the ability to connect subtitles.
Speech and pronunciation tools	Uses speech recognition technology to provide instant feedback on pronunciation and intonation, helping students improve their speaking skills. Can be presented as a software or browser extension, such as SuperMemo, Rosetta Stone, or as a standalone application, such as ELSA Speak (AI powered).
Learning Management Systems (LMS) and digital classrooms	Designed for teachers and building a convenient educational process. Tools like Google Classroom and Blackboard allow teachers to create, manage, and deliver language courses online, making it easier for students to communicate, collaborate, and evaluate students.

Source: created by the author

The main convenience of using digital educational technologies is their availability and adaptability. Numerous language sites and applications are freely available and provide free content (sometimes in a limited format).

Among other things, in recent years, technologies based on artificial intelligence have become increasingly used. Such tools for learning foreign languages include chatbots and intelligent learning systems. They offer personalized feedback and an adaptive learning process, helping students learn more effectively [28]. These technologies, combined with traditional teaching methods, have greatly improved the way foreign languages are taught and learned, making the process more enjoyable and effective for learners all over the world.

Also, for quite a long time, the educational process uses digital technologies that are used directly in full-time education and serve as an additional tool in the traditional educational process.

Information and communication technologies (ICT) in education refers to the use of digital and technological equipment, tools, and resources to improve teaching and learning in classrooms and classrooms [29; 30]. ICT includes a wide range of tools such as computers, tablets, smartphones, interactive whiteboards, projectors, e-readers, educational software and online learning platforms.

Information and communication technologies help teachers create engaging and interactive lessons that

accommodate different learning styles, and help students develop digital literacy skills, interact with other students, and access a variety of educational resources outside the classroom.

Thus, traditional educational technology refers to the use of physical materials such as books, blackboards, and printed assignments to facilitate learning. On the other hand, digital educational technologies rely on electronic devices and online resources to support teaching and learning [29].

Main differences and similarities between traditional and digital educational technologies

These two types of educational technologies have both common and distinctive features (Table 2). The main points of contact should include the goals of education and pedagogical approaches. Thus, the goals of education are achieved both through the use of both traditional and digital educational technologies. They are aimed at facilitating the learning process and helping students achieve their educational goals.

In turn, in terms of approaches to education, both traditional and digital educational technologies can support various pedagogical approaches, including direct, problem-based and collaborative learning, and much more [31; 32]. Despite the fact that both technologies are aimed at simplifying student learning, they have significant differences in their approaches to providing the educational process.

Table 2. Main differences between digital and traditional educational technologies

Criterion	Traditional technologies	Digital technologies
Availability	May be limited by factors related to physical characteristics, distance (for example, for those who live in areas with poor infrastructure) or opportunities (for example, for students with disabilities), and high cost.	Offer significantly greater access to educational resources and materials for students, regardless of their geographic location, physical ability or economic status.
Interactivity	They have a low level of interactivity.	Have more opportunities for interactivity and interaction (for example, through simulation tools, gamification and online discussions through video conferencing platforms).
Personalization	More difficult to adapt to the needs of individual students. The educational process is unified and clearly regulated.	Capable of providing a more personalized learning experience (for example, through adaptive learning and providing feedback to each student as needed).
Grade	Students are assessed through written examinations and assessments, and they receive personal grades based on the results of these tests.	Technology offers new ways to evaluate learning. Assessment is carried out throughout the entire educational process. These tools include: online quizzes, contests, and simulations.
Technical skills	In the vast majority of cases, they may not require such skills. The educational process is built on the basis of traditional educational tools – face-to-face lectures, learning from printed materials, etc.	Requires students and teachers to have basic technical skills such as computer use, digital whiteboarding, or navigating online platforms.

Source: created by the author

So, thanks to the analysis, it can be concluded that, in general, digital educational technologies can provide a number of benefits for language learners. Understanding the main characteristics inherent in these technologies makes it possible to build the most effective educational

system by integrating both traditional and digital technologies into it.

Advantages and disadvantages of using digital educational technologies

Digital educational technologies can play an important role in teaching and learning foreign languages. The use of digital technologies can be extremely relevant in solving such problems as providing expanded access to educational resources for learning languages. As digitalization has increased the availability of language learning resources (such as online courses, language learning apps, podcasts, video courses, and language exchange platforms), students have greater access to learning materials that can improve their language skills and simplify the learning process; individualization (personalization) of the learning experience. Digital technologies can be used to personalize the learning process, as students can work at their own pace and focus on areas of the language they feel they need to improve. Adaptive learning platforms can also tailor learning activities to the student's language proficiency and learning style; increased engagement. Digital technologies can make language learning more fun and interactive, as well as encourage students' creative thinking. For example, gamification elements such as leaderboards, badges, and awards can motivate students to keep learning and create a sense of accomplishment, greatly improving motivation levels; improved communication and collaboration. Digital technologies can facilitate communication and collaboration between educational institutions in different countries, between students and teachers, as well as between students themselves. For example, online discussion forums and video conferencing tools can provide students with the opportunity to practice their language skills with others, providing opportunities for hands-on experience.

However, it should be noted that in addition to advantages, digital educational technologies also have their drawbacks. Thus, the main problematic aspects of the use of digital technologies in the educational process include the following: digital inequality, since not all students have equal access to digital technologies, especially in rural areas; excessive use of digital tools can lead to a lack of interaction between teachers and students, which is an important aspect of language learning [4; 27]. Digital learning environments can be isolating and students may miss out on the social interaction that takes place in traditional classrooms; technical issues such as connectivity, hardware compatibility, and system errors can lead to learning failures; Insufficient resources and supplies make it much more difficult to integrate digital

technologies into the curriculum of educational institutions. Digital devices can be distracting, and students may be tempted to check social media or engage in other non-academic activities during class. This can lead to decreased attention and poor academic performance; the lack of clear state regulation and educational programs aimed at simplifying the process of integrating digital educational technologies and the low level of teacher training in terms of the use of digital technologies. Teachers may not be adequately trained to use digital technology effectively in the classroom. Despite all the advantages of using the latest technologies in the educational process, they should only be used in combination with effective pedagogy and teaching methods. To do this, it is necessary to provide teachers with additional education and improve their qualifications.

Integration of digital technologies in the modern educational system of the Republic of Uzbekistan

With the advent of digital technologies, the traditional study of languages was called into question, and integration with digital technologies became necessary. It is reflected in the V Decree of the President of the Republic of Uzbekistan “On measures to develop the system of higher education” [8]. In turn, the study of foreign languages is an important aspect of education in Uzbekistan.

In recent years, several government initiatives have been introduced in the context of integrating digital education. These initiatives include the following: the creation of the National Digital Educational Architecture HEMIS, which provides an opportunity to create a high-quality developed educational ecosystem; the launch of the Moodle educational program in May 2020 [33]. The program was launched with the onset of the COVID-19 pandemic, as well as the launch of the Ziyonet portal, containing educational content accessible from all devices.

At the moment, some large universities of the Republic of Uzbekistan are building their educational programs, integrating digital technologies into them. To determine the degree of integration of digital educational technologies, some universities of the Republic of Uzbekistan were analysed, including Tashkent State University of Law [17], State Pedagogy University named after Nizami [18], Samarkand State University named after Sharof Rashidov [19] (Table 3).

Table 3. The use of digital educational technologies in the universities of the Republic of Uzbekistan

University	Digital educational technologies
Tashkent State University of Law	E-learning platforms (e.g. Moodle); in web conferences and video lectures; interactive online courses and tutorials; electronic textbooks and resources.
Tashkent State Pedagogic University named after Nizami	Virtual classrooms and online learning (for example, through the NAPA e-learning system); electronic diaries and educational process management systems; multimedia presentations and video tutorials; interactive online platforms and educational portals (e.g. Moodle, Ziyonet).

Samarkand State University named after Sharof Rashidov	Electronic educational platform (Samiweb); e-learning system (Sami-e); interactive whiteboards and electronic diaries; electronic libraries and databases.
--	--

Source: created by the author

Yes, Tashkent State university of law [17] uses various educational technologies, including online platforms, web conferences and electronic resources, to teach students foreign languages. Tashkent State Pedagogy university named after Nizami [18] actively uses information and communication technologies and online platforms to organize language learning. Students have access to e-learning materials and interact with teachers through virtual classrooms and forums. Samarkand State University named after Sharof Rashidov [19] also uses educational technologies such as electronic textbooks, multimedia materials and online platforms to facilitate the process of language learning and increase students' active interaction with language materials and educational information.

Thus, based on the information received, it should be concluded that more attention should be paid to the study of the integration of traditional and digital educational technologies in the teaching of foreign languages. Since digital educational technologies have a high potential for improving the quality of education, if a high-quality educational model is developed, including their integration into the traditional approach to learning. When integrating digital technologies into the process of teaching foreign languages, Uzbek universities should pay more attention to the international experience of using such technologies. In addition, it is necessary to continue the development of state initiatives to improve the quality of education in the Republic of Uzbekistan.

Discussion

As part of the work, both empirical and theoretical studies were studied. Thanks to this, it became possible to conduct a comprehensive analysis, taking into account the point of view of teachers and students on the integration of traditional and digital educational technologies in the teaching of a foreign language. Scientific works aimed at studying this topic were published by such authors as S. R. Velieva [6], M. Rifai *et al.* [10], P. Rong Lim & N. M. Noor [13] and many others.

A study by L. Rueda *et al.* [22] analyses how technologies can be effectively integrated into teaching a foreign language, and how they affect the perception of information and the results of students. The study showed that students in the advanced technology group showed significantly greater progress in language acquisition and were more involved in the learning process compared to the traditional technology group. In addition, the study found that students in the augmented technology group perceived their language learning experience more positively and were more likely to continue learning the language.

Thus, the researchers proved the effectiveness of integrating digital educational technologies into the process of teaching foreign languages. Similar results have been obtained by other researchers, including

Z. Yu. Abdurakhmonova [11], P. Rong Lim & N.M. Noor [13], Y. M. Jobirovich [14] and others.

The results of these studies are consistent with the results of ongoing scientific work, which also confirms the importance of integrating digital educational technologies. However, it should be noted that at the moment, traditional educational technologies prevail in the universities of the Republic of Uzbekistan. Thus, the current work indicates the need for change and innovation in the use of educational technologies in Uzbek universities.

The main advantages of digital educational resources include the availability of information and the ease of access to the use of educational technologies [34; 35]. Thanks to this, language learning becomes possible at any time, without the need for the direct presence of students in an educational institution. Personalization is also a benefit, as digital educational technology has made it easier for teachers to tailor learning to the individual needs of each student. In addition, digital educational technologies have made language learning more fun and interactive, ensuring a high level of student engagement [36; 37].

Thus, one of the main advantages of integrating digital technologies into the teaching of foreign languages, as noted by researchers A.R. al-Matrudi & A. al-Rubayan [38], is the possibility of increasing the involvement of students in the educational process and a significant increase in their motivation. In their study, the authors say that digital technologies provide a more interactive and dynamic learning environment that can stimulate students' interest in language and increase their involvement in the learning process. At the same time, the researchers say that the introduction of digital technologies in the teaching of foreign languages is also fraught with some difficulties. One of the main challenges is the need for teachers to acquire new skills and adapt their teaching methods to make effective use of digital technologies [39-41].

As the analysis showed, one of the most significant problems in the process of integrating digital educational technologies into the learning process is the inadequate qualifications of teachers. The conducted research showed that in order to eliminate this problem, it is necessary to introduce programs for retraining teachers and improving their qualifications.

Spanish researchers A. Vallejo & A. Gonzalez [42] talk in their work about the high efficiency of training for teachers of foreign languages. Trainings should be aimed at training teachers in interactive digital technologies. So, they propose to implement a free-to-use tool system called H5P (HTML5 Published), which is an addition to the Moodle educational program. H5P makes it possible to create various interactive tools (quizzes, presentations, games, etc.) based on educational programs.

It is worth noting that this system can be effective within the framework of the Uzbek educational system. Based on what the Moodle program was introduced into

the educational process relatively recently, it may need to be optimized and expanded. For this, it is necessary to conduct additional research on the merging of Uzbek higher educational institutions. It is also worth noting that the use of digital technologies in the universities of the Republic of Uzbekistan is not yet a widespread practice, which means that it may be difficult to determine the optimal directions for optimizing the use of such educational tools.

Researchers A. Nugroho & A.E.P. Atmojo [43], as part of their research work, talk about the prospects of introducing more digital technologies to ensure the transition from classroom (full-time) learning to online learning. Scholars point out that digital English learning outside the classroom could potentially be done through accessible social networking sites such as YouTube, WhatsApp, Instagram, Google Classroom and Facebook.

However, the results of the research work, thanks to the information studied, emphasized the inappropriateness of a complete rejection of traditional educational systems, and also identified the risk of using non-specialized resources for educational purposes.

In recent years, in Uzbekistan, there has been a growing interest in the integration of traditional and digital educational technologies in the teaching of foreign languages. This approach is based on the idea that combining the strengths of both traditional and digital learning methods can improve language learning outcomes.

The use of an optimized educational system, including both traditional and digital technologies, can significantly increase the efficiency and quality of language learning. This becomes possible by identifying the main positive aspects of both technologies [44-46]. Also, one cannot ignore the fact that traditional educational technologies are better suited for teaching certain aspects of the language (such as pronunciation and grammar). Since digital technologies based on artificial intelligence are rather poorly developed and can work with numerous errors [28; 47; 48]. On the other hand, digital technologies, such as online language exchange platforms, are better suited for developing oral communication skills by providing the opportunity to gain hands-on experience using the language. Thus, the current research work highlights the need for the development and implementation of digital educational technologies in Uzbek universities to improve language education.

In general, the results of the current work largely coincide with other studies on the chosen topic. However, it should be noted that the educational system of the Republic of Uzbekistan is at the stage of transformation and, unfortunately, in many ways lags behind the best practices of developed countries. Thus, the analysed scientific works, within the framework of the current study, highlighted a number of topical problems in the Uzbek educational system. An analysis of international experience made it possible to identify several of the most common digital technologies used in universities in other countries. Examples of such technologies include virtual reality, interactive online platforms and educational portals, electronic textbooks and resources, multimedia materials, computer programs and language learning applications. These technologies are actively used in

educational institutions of the world, analysed, studied and optimized, but still remain unexplored and inaccessible in many universities in Uzbekistan.

Using digital tools can improve learning outcomes and increase student engagement [49; 50]. However, for this it is necessary to provide students with equal access to technology, the necessary level of digital literacy of teachers, state support, as well as the necessary resource provision. In addition, it is critical to strike a balance between traditional and digital learning methods and use them together to achieve optimal learning outcomes.

Considering everything analysed above, there is no doubt that digital educational technologies will continue to have a significant weight in the modern educational system. As technology continues to evolve and become more widespread, it is likely that teachers will continue to explore new and innovative ways to integrate digital tools into their teaching practice. However, it is important to carefully study the potential advantages and disadvantages of these technologies and to have confidence that they are used in a way that promotes learning and student well-being.

A positive factor in the development of the educational system of the Republic of Uzbekistan, in terms of integrating digital educational technologies into the traditional learning process, is the government's understanding of the need to introduce initiatives and improve the current system. After all, education is the driving force behind the development of the entire state.

Conclusions

The results of the current research work have demonstrated that there are both similarities and significant differences in the use of traditional and digital educational technologies. Thus, lectures, work on textbooks and practical notebooks are among the traditional educational technologies. Digital technologies include: information and communication technologies (tablets, computers, interactive whiteboards, projectors, e-books), as well as digital resources (educational software, online learning platforms, digital cards and spaced repetition systems, applications), speech recognition tools and pronunciation (based on artificial intelligence) and much more.

It has been determined that traditional methods of teaching and learning can be improved through the integration of digital technologies. Thus, a combination of traditional and digital teaching methods can probably be the most effective approach in the process of teaching foreign languages. By combining traditional teaching methods with digital educational technologies, teachers can make learning more fun, accessible, and effective for students.

The main advantages of introducing such systems include the following: expanding learning opportunities (access to more educational content, content interactivity, experience in solving non-standard tasks); increasing the accessibility of education (the absence of time restrictions, the provision of education for students living in remote areas or for students with disabilities); providing personalized learning (access to personalized content and adaptive learning tools that meet the individual needs and learning styles of students); the possibility of collaboration (facilitating collaboration between students and teachers,

which allows them to share resources and work on projects together, as well as interuniversity collaboration).

Thus, the obtained results of the study emphasize the importance of integrating both traditional and digital educational technologies into the teaching of a foreign language. By understanding the common ground and differences between these approaches, educators can create a more effective and engaging learning environment, which ultimately leads to improved quality of education and increases students' foreign language proficiency.

By understanding the key similarities and differences, traditional and digital learning technologies can work well together to create a more effective and engaging language learning environment. However, at the same time, it is necessary to clearly define the strengths and weaknesses of each of the technologies.

The weaknesses of using traditional educational technologies include: low level of interactivity, lack of personalization and low adaptability, can be limited by factors related to the physical characteristics of students, distance and accessibility, and also have a high cost. In turn, the weaknesses of digital technologies include: digital divide (if students do not have access to the Internet), technical problems, lack of resources and material support in educational institutions, low level of teacher training,

distraction (digital devices can create digital noise, distracting from learning), a decrease in the level of interaction between the teacher and the student, the lack of clear government regulation and educational programs. Thus, given all the opportunities and threats of using traditional and digital educational technologies, it is important to ensure that they are used in combination with each other, without replacing each other.

In conclusion, it should be noted that the government of the Republic of Uzbekistan is clearly aware of the prospects of reforming the education system and approaches to learning. As part of the introduction of digitalization, initiatives are being developed, decrees and resolutions are being issued, which indicates the relevance of a thorough study of the integration of traditional and digital educational technologies into the educational system of Uzbekistan.

Acknowledgements

None.

Conflict of Interest

None.

References

- [1] Sayaf AM, Alamri MM, Alqahtani MA, Alrahmi WM. Factors influencing university students' adoption of digital learning technology in teaching and learning. *Sustainability*. 2022;14(1):493. DOI: 10.3390/su14010493.
- [2] Zawacki-Richter O, Jung I, editors. Handbook of Open, Distance and Digital Education. Singapore: Springer; 2023. Marin VI, Castaneda L. Developing digital literacy for teaching and learning; p. 1089-1108. DOI: 10.1007/978-981-19-0351-9_64-1.
- [3] Kalolo JF. Digital revolution and its impact on education systems in developing countries. *Educ Inf Technol*. 2019;24:345–58. DOI: 10.1007/s10639-018-9778-3.
- [4] Guppy N, Verpoorten D, Boud D, Lin L, Tai J, Bartolic S. The post-COVID-19 future of digital learning in higher education: Views from educators, students, and other professionals in six countries. *Brit J Educ Technol*. 2022;53(6):1750–65. DOI: 10.1111/bjet.13212.
- [5] Cheung A. Language teaching during a pandemic: A case study of zoom use by a secondary ESL teacher in Hong Kong. *RELC J*. 2021;54(1):55–70. DOI: 10.1177/0033688220981784.
- [6] Velieva SR. Foreign experience in digital educational technologies. *Eur J Innov Nonform Educ*. 2021;1(2):152–4.
- [7] President of the Republic of Uzbekistan. Decree “On the development strategy of the new Uzbekistan for 2022-2026” [Internet]. 2022 [cited 2024 Jan 21]. Decree No. UP-60. 2022 January 28. Available from: <https://lex.uz/docs/5841063>.
- [8] President of the Republic of Uzbekistan. Decree “On measures to develop the system of higher education” [Internet]. 2017 [cited 2024 Jan 21]. Decree No. PP-2909. 2017 April 20. Available from: <https://lex.uz/docs/3171590>.
- [9] Zhukovskaya IE. The main trends in improving the activities of a higher educational institution in the context of digital transformation. *Open Educ*. 2021;25(3):15–25. DOI: 10.21686/1818-4243-2021-3-15-25.
- [10] Rifai M, Anwar K, Isma A. Modern and simple society education in dealing with socio-cultural changes, modernization and development. *Int J Educ Vocat Soc Sci*. 2023;2(1):99–109. DOI: 10.99075/ijevss.v2i01.142.
- [11] Abdurakhmonova ZYu. The role of modern pedagogical technologies in improving the quality of the educational process. *Econ Soc*. 2022;3(94):12–6.
- [12] Hidayat DN, Lee JY, Mason J, Khaerudin T. Digital technology supporting English learning among Indonesian university students. *Res Pract Technol Enhanc Learn*. 2022;17(1):23. DOI: 10.1186/s41039-022-00198-8.
- [13] Rong Lim P, Noor NM. Digital storytelling as a creative teaching method in promoting secondary school students' writing skills. *Int J Interact Mobil Technol*. 2019;13(7):117–28. DOI: 10.3991/ijim.v13i07.10798.
- [14] Jobirovich YM. Effectiveness of using digital technologies in educational system. *Eur J Mod Med Pract*. 2022;2(4):124–8.
- [15] Styrkina YuS. Modern and traditional teaching of a foreign language: advantages and disadvantages. *Aesthet Eth Pedagog Action*. 2019;20:161–70.

- [16] Meirovitz T, Russak S, Zur A. English as a foreign language teachers' perceptions regarding their pedagogical-technological knowledge and its implementation in distance learning during COVID-19. *Heliyon*. 2022;8(4):e09175.
- [17] Tashkent State Law University [Internet]. TSUL; 2023 [cited 2024 Jan 21]. Available from: <https://tsul.uz/en>.
- [18] Tashkent State Pedagogical University named after Nizami [Internet]. TSUL; 2023 [cited 2024 Jan 21]. Available from: <https://new.tdpu.uz/catlist/2>.
- [19] Samarkand State University named after Sharof Rashidov [Internet]. Samarkand State University; 2023 [cited 2024 Jan 21]. Available from: <https://www.samdu.uz/>.
- [20] Kharatova SK. Use of innovative technologies in the educational process. *Sci Educ*. 2022;3(3):713–8.
- [21] Almaiah MA, Ayouni S, Hajje F, Lutfi A, Almomani O, Awad AB. Smart mobile learning success model for higher educational institutions in the context of the COVID-19 pandemic. *Electron*. 2022;11(8):1278. DOI: 10.3390/electronics11081278.
- [22] Rueda L, Benitez J, Braojos J. From traditional education technologies to student satisfaction in Management education: A theory of the role of social media applications. *Inform Manag*. 2017;54(8):1059–71. DOI: 10.1016/j.im.2017.06.002.
- [23] Falk S. Mobile-Assisted Language Learning: An empirical study on the use of digital mobile devices in the context of foreign language teaching. Tubingen: Narr Francke Attempto Verlag; 2019.
- [24] Lombardi G. The use of augmented reality in teaching Italian L2. *Ital LinguaDue*. 2016;8(1):103–23. DOI: 10.13130/2037-3597/7566.
- [25] Sun PP, Mei B. Modeling preservice Chinese-as-a-second/foreign-language teachers' adoption of educational technology: a technology acceptance perspective. *Comput Assist Lang Learn*. 2022;35(4):816–39. DOI: 10.1080/09588221.2020.1750430.
- [26] Allayeva GZh. Development of digital technologies as a factor of sustainable development of the economy of the Republic of Uzbekistan. In: 1st ECLSS International Online Conference on Economics and Social Sciences; 2020 May 20-21; Samarkand. Samarkand: Samarkand Branch of Tashkent University of Economics; 2020. P. 463-469.
- [27] Sadykov ShS. The main directions for improving higher education in the Republic of Uzbekistan in the context of digital transformation of the economy. *Open Educ*. 2021;25(1):40–7. DOI: 10.21686/1818-4243-2021-1-40-47.
- [28] Chen L, Chen P, Lin Z. Artificial intelligence in education: A review. *IEEE Access*. 2020;8:75264–78.
- [29] Ratheeswari K. Information communication technology in education. *J Appl Adv Res*. 2018;3(1):45–7. DOI: 10.21839/jaar.2018.v3iS1.169.
- [30] Salah J. Some remarks and propositions on riemann hypothesis. *Mathem Statist*. 2021;9(2):159-165.
- [31] Nasimovna NA. New pedagogical technologies in teaching english language to students with no specialized foreign language. *Am J Pedagog Educ Res*. 2022;6:76–9.
- [32] Kerimkhulle S, Kerimkulov Z, Aitkozha Z, Saliyeva A, Taberkhan R, Adalbek A. The Classification of Vegetations Based on Share Reflectance at Spectral Bands. *Lect Not Networks Syst*. 2023;724:95-100.
- [33] National digital educational architecture HEMIS [Internet]. HEMIS; 2023 [cited 2024 Jan 21]. Available from: <https://hemis.uz/>.
- [34] Asadchykh OV, Filonova VO, Fedotova YS, Dybska TS, Bukriienko AO. Cognitive features of hieroglyphic writing in the context of perception of culture and language. *Asia Life Sci Supp*. 2020;22(2):427-440.
- [35] Trus I, Gomelya N, Halys V, Radovenchyk I, Stepova O, Levytska O. Technology of the comprehensive desalination of wastewater from mines. *East-Eur J Enter Tech*. 2020;3(6-105):21-27.
- [36] Loxha A. Do remittances reduce poverty in kosovo? - A counterfactual analysis. *South East Eur J Econ Bus*. 2019;14(2):117-132.
- [37] Ginters E, Dimitrovs E. Latent Impacts on Digital Technologies Sustainability Assessment and Development. *Adv Intell Syst Comput*. 2021;1365:3-13.
- [38] al-Matrudi AR, al-Rubayan A. Problems of distance education faced by students with learning difficulties from the point of view of teachers. *J Arts Psychol Educ Stud*. 2022;1(14):77–139.
- [39] Ginters E, Mezitis M, Aizstrauta D. Sustainability simulation and assessment of bicycle network design and maintenance environment. In: 2018 International Conference on Intelligent and Innovative Computing Applications, ICONIC 2018 (8601225). Plaine Magnien: Institute of Electrical and Electronics Engineers; 2018.
- [40] Pirahandeh M, Kim D-H. High performance GPU-based parity computing scheduler in storage applications. *Concurr Comput: Pract Exper*. 2017;29(4):e3889.
- [41] Faure E, Shcherba A, Lavdanskyi A, Makhynko M, Khizirova M. Three-Pass Protocol on Permutations: Implementation Example and Security. *CEUR Workshop Proceed*. 2024;3654:110-125.
- [42] Vallejo A, González A. Teacher training experience in the creation of digital resources in H5P: toolbox for interactivity. *Virtuality Educ Sci*. 2022;13(25):120–34.
- [43] Nugroho A, Atmojo AEP. Digital learning of English beyond classroom: EFL learners' perception and teaching activities. *J Engl Educ Linguist Stud*. 2020;7(2):219–43. DOI: 10.30762/jeels.v7i2.1993.
- [44] Asadchykh OV, Smovzhenko LH, Kindras IV, Romanov II, Pereloma TS. Academic language as an object of teaching foreign languages to philology students. *Astra Salv*. 2022;2022(1):671-689.
- [45] Naumovets AG, Paliy MV, Vedula YuS, Loburets AT, Senenko NB. Diffusion of lithium and strontium on Mo(112). *Prog Surf Sci*. 1995;48(1-4):59-70.

- [46] Kerimkhulle S, Obrosova N, Shaninin A, Tokhmetov A. Young Duality for Variational Inequalities and Nonparametric Method of Demand Analysis in Input–Output Models with Inputs Substitution: Application for Kazakhstan Economy. *Mathem.* 2023;11(19):4216.
- [47] Abdymanapov SA, Muratbekov M, Altynbek S, Barlybayev A. Fuzzy Expert System of Information Security Risk Assessment on the Example of Analysis Learning Management Systems. *IEEE Acc.* 2021;9:156556-156565.
- [48] Salah J, Al Hashmi M, Rehman HU, Al Mashrafi K. Modified Mathematical Models in Biology by the Means of Caputo Derivative of a Function with Respect to Another Exponential Function. *Mathem Statist.* 2022;10(6):1194-1205.
- [49] Arifi F. Stature and its estimation utilizing arm span measurements of both gender adolescents from southeast region in Kosovo. *Sport Sci.* 2017;10(1):92-95.
- [50] Aizstrauta D, Ginters E. Using Market Data of Technologies to Build a Dynamic Integrated Acceptance and Sustainability Assessment Model. *Proced Comp Sci.* 2016;104:501-508.

Інтеграція традиційних і цифрових освітніх технологій: точки дотику та відмінності у викладанні іноземної мови

Наргіза Бабаніязова

Узбецький державний університет світових мов
100138, вул. Кічік Халка Йолі, 21А, м. Ташкент, Узбекистан

Анотація

Актуальність. Використання цифрових освітніх технологій може призвести до більш ефективного та інтерактивного навчання, пропонуючи нові можливості для викладачів та студентів. У світлі впровадження цифрових технологій в освіті уряд Республіки Узбекистан активно розробляє нові ініціативи, видає укази та постанови, в яких підкреслюється важливість ретельного вивчення інтеграції традиційних і цифрових методів навчання в освітню систему країни.

Мета. Таким чином, метою даної статті є виявлення спільних та відмінних рис між традиційними та цифровими освітніми технологіями у викладанні іноземної мови з метою створення найбільш ефективної освітньої моделі.

Методологія. Методологія наукової роботи базується на аналізі та синтезі, а також порівнянні.

Результати. Результати роботи показали, що в сучасному світі знання іноземної мови є необхідним, а розуміння того, як найкраще використовувати наявні освітні ресурси в процесі викладання мов, є критично важливим як для самонавчання, так і для приватних викладачів та навчальних закладів. Хоча цифрові технології пропонують низку переваг, серед яких розширення доступу до освіти, миттєвий зворотний зв'язок та персоналізація траєкторії навчання, традиційні методи все ще зберігають свою цінність у створенні та реалізації освітнього процесу. Дослідження показує, що оптимальною освітньою моделлю є збалансований підхід, який поєднує сильні сторони як традиційних, так і цифрових технологій. Розуміння спільного та відмінного між проаналізованими технологіями дає можливість створити більш ефективне та привабливе навчальне середовище, що в кінцевому підсумку підвищує освітній рівень, покращує якість володіння іноземною мовою.

Висновки. Дослідження виступає додатковим інструментом для вивчення актуальної проблеми, для розробки навчальних програм і методик викладання іноземних мов, які оптимізують вивчення мов у цифрову епоху, що визначає значущість отриманих результатів.

Ключові слова: педагогічна діяльність; порівняльний аналіз; Інтернет; професійний розвиток; ефективність; інновації.