

DOI: <https://doi.org/10.34069/AI/2024.77.05.17>

How to Cite:

Baimakhan, A.S., Karabulatova, I.S., Belgibayeva, G.K., Berdi, D.K., & Iskakova, P.K. (2024). Digital technologies in the formation of communicative competence in the situation of multicultural bilingualism and modern real/virtual urbanism. *Amazonia Investiga*, 13(77), 233-245. <https://doi.org/10.34069/AI/2024.77.05.17>

Digital technologies in the formation of communicative competence in the situation of multicultural bilingualism and modern real/virtual urbanism

Цифровые технологии в формировании коммуникативной компетентности в ситуации разноструктурного билингвизма и современной реальной/ виртуальной урбанистики

Received: March 4, 2024

Accepted: April 25, 2024

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Abstract


The present research explores the formation of communicative competence in foreign languages in the context of modern electronic and digital society. A methodology is proposed based on the use of digital educational resources that simulate virtual urban environments. The main objective is to define and substantiate this methodology, based on the contributions of computer psycholinguistics, neurolinguistics and digital neuro-pedagogy.


The central hypothesis of the study is that the understanding of the foreign language learning process, with emphasis on the particularities of neurocognitive connections, is favored by the use

Абстракт


В настоящем исследовании рассматривается формирование коммуникативной компетенции на иностранных языках в контексте современного электронного и цифрового общества. Предлагается методика, основанная на использовании цифровых образовательных ресурсов, имитирующих виртуальную городскую среду. Основная цель состоит в том, чтобы определить и обосновать эту методологию, основанную на достижениях компьютерной психолингвистики, нейролингвистики и цифровой нейропедагогики. Центральная гипотеза исследования заключается в том, что

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of computer-mediated digital didactic technologies. In this sense, various electronic educational resources are explored that allow recreating communicative situations typical of urban planning, both in real and virtual spaces. The study is based on the analysis of a variety of educational communicative situations of virtual urban planning, taking the process of learning a foreign language itself as the research object. To do this, analogous situations of the real environment of a city are compared with the simulation of a virtual urban space. Through this analysis, we seek to clarify the concepts of "communicative competence", "virtual urbanism" and "digital technologies".

Keywords: communicative competence, digital technologies, post-pedagogy, neuro-didactics, foreign language teaching, virtual urbanism.

пониманию процесса изучения иностранного языка с акцентом на особенности нейрокогнитивных связей способствует использование компьютерных цифровых дидактических технологий. В этом смысле исследуются различные электронные образовательные ресурсы, позволяющие воссоздавать коммуникативные ситуации, характерные для городского планирования, как в реальном, так и в виртуальном пространстве. Исследование основано на анализе разнообразных образовательных коммуникативных ситуаций виртуального градостроительства, в качестве объекта исследования берется сам процесс изучения иностранного языка. Для этого аналогичные ситуации реальной городской среды сравниваются с моделированием виртуального городского пространства. Посредством этого анализа мы стремимся прояснить понятия "коммуникативная компетентность", "виртуальный урбанизм" и "цифровые технологии".

Ключевые слова: коммуникативная компетентность, цифровые технологии, пост-педагогика, нейродидактика, обучение иностранному языку, виртуальная урбанистика.

Introduction

The introduction outlines the main concern of the discussed topic, which is that digital technologies immerse students as much as possible into the linguistic culture of the target language through virtual urbanism simulation tools. This allows for an introduction to the history, culture, architecture, geography and art of the target country in a virtual environment, as well as practice in simulated scenarios in a fictional "alien" city space. The authors suggest exploring how the digital representation of the target country could serve as a basis for teaching the foreign language, similar to a real visit to the target country (DeWitt & Chan, 2019). The novelty and relevance of the author's work stem from the fact that the effective use of elements of virtual urbanism in teaching a foreign language simulates authentic and realistic details of the linguistic culture being studied, thereby enhancing the effectiveness of improving students' communicative bilingual skills based on a digital analogue of the target country.

The research methodology is grounded in a rethinking of the fundamentals of teaching English as a foreign language within the context of international business, but the role of digital analogues of countries, regions, cities, and various localities as simulators for speech, linguistic, and cultural realities has not yet been adequately explored at this point. The author's hypothesis is based on the concept of a digital twin, which is formed in the fields of engineering, technology, and applied mathematics. This concept implies a set of mathematical formulas that describe both the object and the processes that occur within it (David et al., 2018; Liljaniemi & Paavilainen, 2020).

The sociotechnical approach to modern neuropedagogy, which focuses on the formation of communicative bi- and multilingual competencies among students, is based on an understanding of digital twin technologies. This approach takes into account the neurocognitive phenomenon of mediated communication, also known as the "phantom of mediated communication."

Additionally, the authors discuss the widespread view that social networks are merely a communication tool. They draw attention to the fact that social networks can also be considered a digital analogue of real-life communication within a specific linguistic and cultural context. The authors analyze in detail the

correspondence and interaction between various types of learning, including analog, interactive, and neuro-simulation learning. They note that modern digital educational innovations in the fields of bilingualism and multilingualism use multicategorical tools that are based on neuropsychological mechanisms of the human brain, such as game simulators that affect different brain centers. The game form of learning transforms personal boundaries, bringing digital language simulators closer to professional simulators using a system of punishments for violating the rules and focusing on pain zones rather than comfort zones.

Modern digital technologies have become an integral feature of modern society, which is characterized by the blurring of boundaries between different types of settlements with the priority of the very possibility of full-fledged communicative interaction.

Literature Review

The analysis of scientific publications on the problem of using artificial intelligence technologies in teaching a foreign language has allowed us to identify several areas of research within the framework of this topic. Most authors recognize the inevitability of using artificial intelligence in the educational process and call ChatGPT "Wikipedia at a new technological level", believing that the educational community will have to adapt its practice to changes (Ivakhnenko & Nikolskiy, 2023: 19).

In the scientific literature, there are many examples of the use of intelligent dialogue systems as a tool for teaching a foreign language (Kurebayeva et al, 2023; Ingerpuu-Rümmel, 2018; Islam, 2020; Makhlof, 2021; Zou et al., 2023; Zubanova et al., 2021).

The formation of communicative bi-/multilingual competence uses the achievements of digital neuro-pedagogy (Honcharuk et al., 2023; Sidun et al., 2023) Digital technologies used today in teaching foreign languages reveal a correlation between the quality of a new type of pedagogical tools and the specifics of the functioning of the human brain in the direction of the development of common cognitive connections. The postulated metacognitive approach (Byzova et al., 2019) can be useful for increasing the level of self-awareness and metacognitive functions of the brain using digital technologies for learning foreign languages (Fu et al., 2023).

According to teachers with experience in using virtual assistants and chatbots, these tools contribute to more effective learning of foreign language vocabulary and grammar, as well as improving speech skills. They also help students develop independent work skills and increase their communicative competence (Kooli, 2023; Vázquez-Cano et al, 2023).

The theoretical and methodological basis of this study was the achievements of predecessors in the field of:

- Theory & methodology of teaching computer science and information and communication technologies (Lai, 2017);
- Theory of complex graphs (Goertzel, 2021);
- The psychological theory of communication (Entina et al, 2021);
- Theories of urbanism (Bibri et al., 2023);
- Theories of pedagogical communication (Khimich & Terentieva 2023);
- Theories of student & teacher personality formation (Lawrence & Tar, 2018);
- Theories of the use of electronic educational resources (Ibáñez & Díaz, 2023).
- Theories of communication & formation of communicative knowledge (Parker, 2020);
- Skills & abilities (Temirgalinova et al., 2021);
- NLP & machine learning (Klašnja-Milićević et al., 2018);
- Neuro-didactics & neuro-pedagogics (Honcharuk et al., 2023).

A significant part of the research focuses on the disadvantages and risks associated with the use of artificial intelligence (AI) technologies in education (Illingworth, 2023). Among the main drawbacks of chatbots, as discussed in the literature, are the unreliability of generated information and the presence of false content (Dakakni & Safa, 2023). Additionally, most chatbots do not provide links to original sources, which is a significant issue as it prevents users from verifying the authenticity of data and, in principle, they do not know which sources their answers are based on. Given the already low scientific literacy levels of many modern students and the prevalence of various imitation practices, (Bibri et al., 2023; Zubanova et al., 2021)

there is an increased risk that students may not develop critical thinking skills or the ability to search for and process information. Some authors argue that the use of chatbots could lead to a decline in critical thinking abilities and a lack of independent thought. Scientists express concern about the potential negative impact of AI on learning. They worry that the overuse of technology could lead to a generation with poor critical thinking skills, as AI may open a "Pandora's box" in the learning process.

When it comes to the advantages of digital technologies in teaching English as a foreign language, there are several traditional pedagogical tools that can be variable (Fig.1).

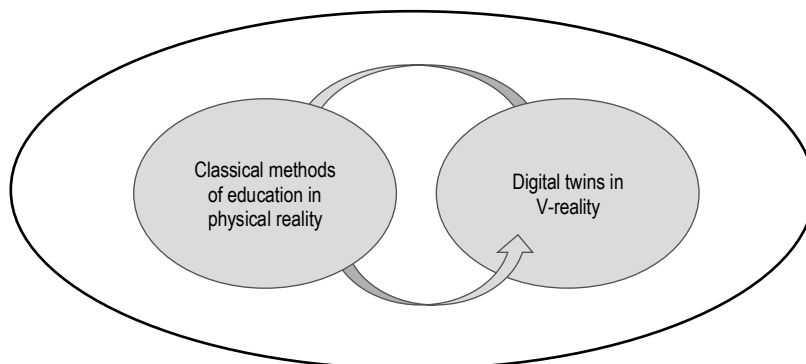


Fig. 1. Coordination of classical and digital methods in the space of educational technologies. (Compiled by the authors)

Digital technologies have influenced classical methods of forming communicative competencies with duplication in the digital space (Fig. 1). Traditionally, textbooks and workbooks act as the "gold standard" of teaching a foreign language. Digital technologies expand opportunities through online counseling, online tutoring, and digital monitoring within the framework of modern electronic online academic communication. Thus, there is a well-known blending effect at the level of linguistic and cultural competencies.

The V-reality of digital twins began to influence the recipient's experience of objective reality, making adjustments to classical methods of forming communicative competence (Fig. 1). The teacher's work on the formation of digital communicative bi-/multilingual competence is expanding through interactive cooperation, counseling, tutoring, screening, monitoring, and the inclusion of video clips within the framework of electronic online academic communication in the post-pedagogical process (Islam, 2020). For example, traditional textbooks and workbooks serve as the basis for learning both native and foreign languages (Fig.2).

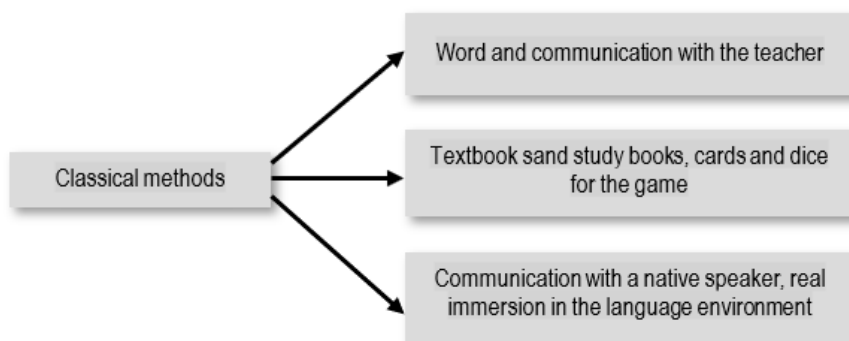


Fig. 2. The "gold standard" of the analog classical methodology of teaching a foreign language. (Compiled by the authors)

Digital counterparts of educational technologies offer more dynamic materials (such as online textbooks with VR-immersion), providing personalized deep active learning for both the student and a personalized interactive VR teacher. At the same time, new genres of learning are emerging. For example, in China, interactive recording of student/teacher handwritten texts with simultaneous online recognition on the

screen is widely used, which allows digital calligraphy to be singled out separately. This presentation of written comments, along with honing calligraphy skills, improves the student's communication skills, including writing, speaking and listening skills. Previously, the use of audio recordings and audio cassettes was commonplace to train listening skills. However, there are now many digital resources such as audio files, podcasts, and online listening that offer more diverse and accessible materials to develop these skills. For example, China has created a separate program for teaching English with the provision of linguistic and cultural pronunciation standards.

Materials and methods

Experimental and empirical material was collected during the practical part of the study at secondary school No. 81 in Karaganda (Kazakhstan), A. Yassavi Secondary School in Turkestan when teaching English in Kazakh classes and Russian-speaking groups of students studying Chinese in language schools based on Heilongjiang University (China). Such linguistic diversity in the teaching of foreign languages of various structures is due to the challenges of modernity and the active interest in English and Chinese in the post-Soviet space. A total of 104 people of middle and high school age took part in the experiment. The experiment was conducted as an anonymous survey.

The use of such subtle methods for mastering new communication skills with the help of a digital double is shown in the section on research methodology: from traditional scholasticism and interactive integrative methods to the method of linguistic digital double. The digital double is considered as a successful technique, as close as possible to reality.

Methodology

The methods used in this work include analysis, synthesis, analogy, and abstraction. The research is based on the concept of a digital twin, which allows for a comprehensive analysis of all factors that affect the quality of the learning process. The research is based on the analysis of works by domestic and foreign authors on the problem of using artificial intelligence technologies in modern education.

Within the scope of this study, the authors use the term "digital technologies for the development of communicative competence" to refer specifically to neural networks, conversational agents, and chatbots that are used in the teaching of foreign languages (such as ChatGPT). A chatbot is defined as any computer program that simulates human-like communication with users through text and/or voice interactions (Kohnke, Moorhouse & Zou, 2023) and (Zou et al., 2023).

In the course of the study, the authors developed a questionnaire aimed at identifying the attitude and practice of using artificial intelligence technologies in teaching foreign languages to students in Kazakhstan and China. The survey of students was conducted in April 2023.

The response, depending on age, ranged from 56% to 87%. Respondents were asked to list specific AI tools that they use in the process of learning a foreign language, name the advantages and disadvantages of using these technologies in the process of learning a foreign language, evaluate the quality of AI responses and express their opinion on the future prospects of AI in education. In each of the questions, it was possible to choose several answers aimed at assessing students' perception of artificial intelligence in teaching foreign languages.

In addition, there was a section for notes in the questionnaire where students could briefly describe their attitudes and/or experiences with artificial intelligence, as well as provide examples of specific products they use that rely on AI. These responses allowed for a more qualitative analysis of the survey data.

Results

Today, the level of digital communicative competence is one of the important markers of the formation of a student's brain, since each mental function has its own development program. As a rule, students studying foreign languages are focused on working with educational tools such as a workbook and a textbook on paper and electronic media. This allows the use of learning technologies in classical and mixed digital versions in terms of screening the dynamics of motivations to acquire knowledge of a foreign language. In

addition, this format allows us to trace the nature and effectiveness of methods for the formation of levels of bilingual communicative competence among students.

The most common complaints of students studying a foreign language with probabilistic "decoding" in a situation of interference and ambiguity of interpretation (table 1).

Table 1.
Neurolinguistic problems in learning a foreign language

The Identification of the problem	The vector of the problem solution	Frequency of learning a foreign language
"I can't remember", "I forgot", "I miss out", "I partially forget", "I can't learn"	These and similar statements signal the need for enhancing tasks that activate areas responsible for short-term and long-term memory	74%
"I accidentally missed it", "Oh, I didn't notice"	Explanations of this kind indicate the need for additional tasks that develop attention	67%
"I don't understand", "It's not clear", "It's too difficult for me", "It's impossible to remember quickly"	These and similar explanations draw attention to problems with thinking, information processing speed	45%
"I can't imagine", "I can't imagine it, I can't draw this picture internally"	Here it is necessary to work with the problem associated with imagination	49%

Often these problems overlap with each other, blocking motivation to learn a foreign language. The lack of visual support makes it difficult to learn a foreign language to a significant extent. This is especially true for the problem of learning Chinese, which has a different principle than the alphabetical-alphabetic structure of English, Kazakh or Russian languages.

These complaints of students are not far-fetched, but they serve as triggers for the teacher when composing tasks in learning a foreign language, which are associated with some problems of maturation of mental functions, which is important to take into account when drawing up the curriculum. Modern students differ from their teachers in living and learning conditions, using previously unknown ways to achieve their goals (Entina et al., 2021), which allowed us to conclude about the evolution of thought processes in a new generation of "digital aborigines" in contrast to the previous generation of the analog world. "Digital" generations, in addition to the different nature of the thought process, have developed other ways of concentrating attention with a high degree of intensity and combining cognitive skills, which is unusual for people formed in the pre-digital era (Karabulatova et al., 2021).

The first stage of the experiment on the formation of communicative competence consisted in checking the students' degree of formation of communicative competence before conducting experimental work. For this purpose, pre-project testing was carried out, which included a developed questionnaire of 15 questions. Based on this, the estimated allowable maximum number of points is 15 possible points, with an average score ranging from 7.2 to 7.5 points. All the subjects were divided into three groups depending on the typology of communicative competencies. These three typological groups were also considered at the level of the control group (C) and the experimental (E) group, demonstrating differences in the levels of communicative competence in the conditions of the use of digital technologies (Fig.3).

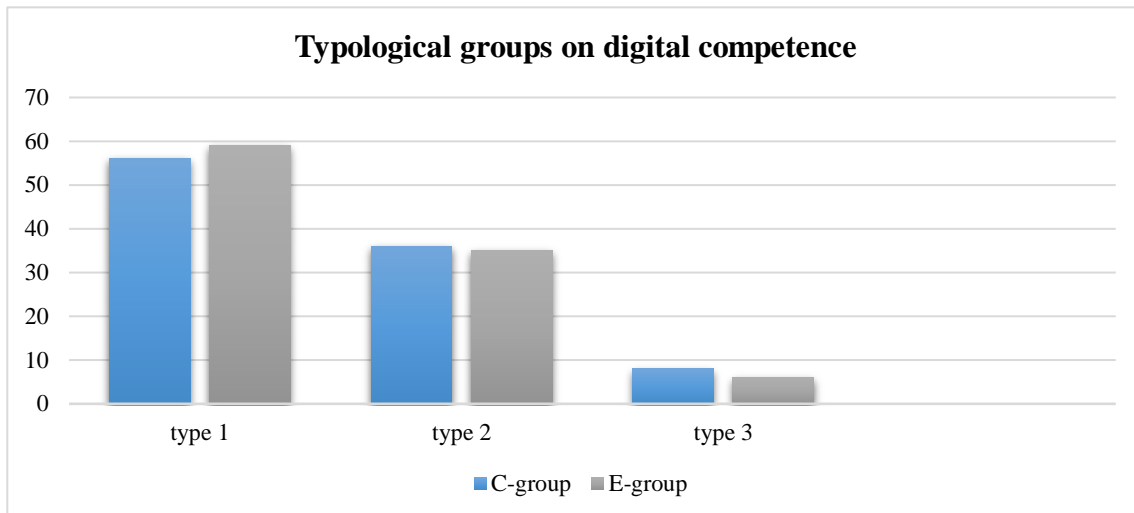


Fig. 3. The diagram of the representation of typological groups on the communicative competencies of the digital format in the control and experimental versions. (Compiled by the authors)

The first typological group combined students with fragmentary knowledge of communicative competencies and the structure of communicative activity. These students do not understand the importance and significance of communication skills in a foreign language in their present and future professional activities, do not have a vision of their life path. This group of students is characterized by an unwillingness to learn, to understand the peculiarities of the implementation of communicative skills in the conditions of digital communication, does not show interest in communicative activity in a foreign language in a digital and analog environment, representing a difficulty for teachers due to the weak expression of communicative qualities and immaturity of personal characteristics important for building mutual understanding with others. The indicators of the C-group amounted to 56% of the total number of participants. The indicators of the E-group amounted to 59%.

The second typological group brought together students who have, to one degree or another, a basic set of knowledge about communicative competencies, about the characteristics of communicative activity, about the features of the implementation of communicative competencies in digital communication. These students have an idea of how to use telecommunications in their own academic activities, but they do not attach much importance to the role of communicative activity in their future professional activities, apply communicative competencies depending on their own interests. Students of this group are characterized by the presence of such communicative personality traits as tolerance, social perception, social attraction for mutual understanding with other people. At the same time, representatives of this group show these qualities selectively, depending on their own interests. The indicators of the C-group amounted to 36% of the total number of participants. The indicators of the E-group amounted to 35%.

The third typological group consists of students who possess systematic knowledge about communicative competence as a valuable quality of personality, presenting in detail the entire structure of communicative activity within the framework of academic activities and their own professional interests. The indicators of the C-group amounted to 8% of the total number of participants. The indicators of the E-group amounted to 6%.

The second stage was implemented in the developed system of classes with immersion in the reality of digital counterparts of foreign linguistic culture, allowing to model the spheres of personal and professional space of students:

- 1) Personal space "birthday" + digital twin "VR-family" + ontology "proper names" + ontology "kinship systems" = modeling of the digital twin "Celebration birthday" through the study of the topic "Birthday: proper names and the kinship system";
- 2) Social space "going to the store" + digital double "supermarket" + ontology "consumer goods" = modeling of the digital double "customer behavior in the store" through the study of the topic in a foreign language "Shopping in the store: articles and nouns";

- 3) The sphere of intimate experiences "my day" through reconstruction "The events of my day: regular past tense verbs", or introspection "My interests: irregular past tense verbs", etc.

Dynamic monitoring in the process of formation of bi-/multilingual communicative competencies in students is shown in the table below (Table 2). This made it possible to understand the specifics of the evolution of communicative knowledge, skills and abilities based on the use of digital technologies among the younger generation of "digital aborigines".

Table 2.

Dynamics of the formation of communicative competencies among students in different typological groups

Typological group of formation of communicative competencies	Stage 1 results (%)						Stage 2 results (%)					
	C-group			E-group			C-group			E-group		
	1	2	3	1	2	3	1	2	3	1	2	3
The first typological group with a low level of competence	52	60	56	61	58	69	48	52	56	45	50	43
The second typological group with an average level of competence	36	32	40	33	38	34	40	40	36	41	32	39
The third typological group with a high level of competence	12	8	4	6	4	7	12	8	8	14	8	18

(Compiled by the authors)

The tasks of the first stage included digital technologies aimed at the formation of communicative competence using the means of basic electronic educational resources (e-mail, electronic teleconferences, IRC - Internet Relay Chat, university and other independent educational sites, public free educational sites, virtual libraries, virtual excursions, telecommunications facilities for conducting training Olympiads, contests and quizzes).

The more advanced levels of the second and third types include such special resources as the electronic learning course English learning course (Media House), demonstration software tools, as well as electronic dictionaries of the ABBYY Lingvo series, Oxford Advanced Learner's Dictionary. Digital resources such as online courses, video lectures and audio materials offer students wide access to high-quality educational content in English. Artificial intelligence programs and adaptive learning algorithms are aimed at creating individual adaptive educational systems that not only have the ability to fully analyze the level of knowledge of each student, but can also offer personalized materials and tasks for the effective development of individual needs. This allows students to develop their communication skills in a more optimal way.

"Digital aborigines" feel at ease in the linguistic and cultural space of digital counterparts, actively using mobile applications and games that allow students to increase their communicative competence (Nelson & Ahn, 2021). Such applications usually contain tasks that develop vocabulary, improve grammatical skills and simulate live communication, which provides an instant feedback effect. Some notable applications in this area are Duolingo and Rosetta Stone. The introverted accentuation of communication by "digital aborigines" has increased interest in video games, which allow the use of a variety of role models with many ethnocultural attributes. Based on this, it is believed that differences in cultural background have a great impact on players. However, modeling the video game space relies on real/unreal geography in accordance with the linguistic and geographical picture of the world, which improves communication skills. As a result, geographical, spatial competence is formed with the norms of speech and behavioral standards, ensuring the survival of an individual in an alien environment (geographical, cultural, linguistic). Consequently, communicative competence in the game is combined with environmental behavior, knowledge of historical and cultural norms and adaptation to the environment. This is also evidenced by the popular literature of the fantasy genre among the younger generation with a focus on LitRPG, promoting the concept of "game as life and life as a game". Consequently, the metaverse of video games is aimed at adapting the speech and behavioral standard of users in a stressful foreign cultural environment, which avoids the negative influence of the "friend-foe" opposition in an unfamiliar cultural background. From the point of view of pedagogy and psychology, the game is one of the priority methods of formation and

transformation of the human speech and behavioral matrix. The indisputable recognition of the gaming context as an entertaining educational process makes it possible to model the gradual development of educational and communicative skills, skills and knowledge in both native and foreign languages. Our data confirm the results of other researchers that computer games are an example of a "soft power" policy, developing cognitive skills when immersed in gaming reality using a foreign language of presentation.

Social networks reveal a larger spread. *Instagram Facebook, VKontakte, Telegram, Tick-Tok, WeChat* are used by Kazakhstani participants. Russian participants use only permitted social networks *VKontakte, Odnoklassniki, Telegram*, also bypassing restrictions in *Instagram, Facebook, Tick-Tok, WeChat*. Chinese students are guided by *WeChat, VKontakte, Tick-Tok* social networks. This allows students to come into contact with native speakers of foreign languages, practice written communication and take part in discussions on various topics. Creating an online community or using specialized learning platforms can facilitate communication and knowledge sharing between students. It can be a forum, a web portal or an application where students can communicate, ask questions, share their experiences and receive feedback from their peers or teachers. Listening to audio and watching videos in English is a great way to improve your listening comprehension and pronunciation skills. There are special platforms such as TED Talks, YouTube and language learning resources where students can find various videos and audio tutorials in English. Digital technologies such as video conferences and online platforms (Zoom, Skype and Google Meet) are effectively used for Kazakh and Russian schoolchildren studying English, which allow students to communicate with native speakers in practice, practice conversational skills and receive feedback on their pronunciation and grammar. Virtual reality technology can create an immersive learning environment where students can interact with English in a realistic situation. For example, they can immerse themselves in an English-speaking environment and communicate with virtual characters in English, which will help them develop communication skills and confidence in communication.

Discussion

The very concept of communicative competence as a certain basic characteristic of a person implies communicative knowledge, skills, abilities of an individual to consciously select language means for communication in accordance with the speech situation, adequately perceive oral and written speech and reproduce its content to the required extent, create their own logically related expressions of various genre and stylistic orientation.

Therefore, the analysis of the scientific literature on this issue regarding the understanding of the meaning of the concept of "competence" has allowed us to identify such terminological subspaces as:

- Language combination (Paramarta et al., 2022);
- Linguistic competition (Xu, 2023)
- Decisive campaign (Ingerpuu-Rümmel, 2018);
- Sociolinguistic competition (Alenazi, 2022);
- Discursive combination (Bizzo, 2022);
- Digital strategies (Ivakhnenko & Nikolskiy, 2023);
- Combinational strategies (Karabulatova et al., 2021);
- Socio-pragmatic strategies (Mikhailenko & Zharkova, 2023)
- Socio-cultural competence (Mäkipää, 2021);
- Subject-object's competence (Zubanova et al., 2021);
- Dynamic compatibility (Goertzel, 2021).

At the same time, the researchers emphasize the particular complexity of the formation of communicative competence in a foreign language, since communicative competence in teaching a foreign language is a set of knowledge of the language system and its units, their construction and operation in speech in order to formulate thoughts in the language being studied and understand the judgments of others, about the national-cultural speakers of the language being studied, about the specifics different types of discourses; this is the ability to master language means for communication in various types of speech activity in accordance with communicative tasks, to understand, interpret and produce coherent speech.

Among the countries that have achieved significant results in the formation of communicative competencies in a foreign language, primarily in English, priority belongs to such states as Finland (Mäkipää, 2021),

Estonia (Ingerpuu-Rümmel, 2018), China (Xu, 2023). However, of course, the leading role in teaching English as a foreign language belongs to Great Britain (Postolenko, 2021). Estonia is considered one of the most advanced countries in the field of using digital technologies in education not only in the post-Soviet space, but also in the global educational space, having introduced among the first not only an electronic textbook system, but also electronic portfolios for students, as well as a variety of online courses. In teaching foreign languages, they provide access to various online resources and applications for learning languages. Finland stands out especially from the EU countries, also actively using digital resources and technologies in education. They have developed a platform for teaching foreign languages called "WordDive", which offers personalized courses and trainings using interactive games and exercises. There are many online platforms and applications developed in the UK for teaching foreign languages. For example, *Duolingo*, *Memrise* and *Babbel* are popular apps that help students learn languages through games, exercises and interactive lessons. China is actively using digital technologies in foreign language education. Various online platforms and applications, such as *VIPKid* and *Talk*, offer online lessons with native speakers. English language learning apps that use artificial intelligence to evaluate and correct pronunciation are also widespread in China. Thus, China has been actively using the model of communicative language competence since 2014 (Hu et al., 2023).

At the same time, scientists point out that the leading method is focused on the use of CSE, which not only scientifically describes, but also factually evaluates the language competence of students, focusing on the clarity of intuitive parameters characteristic of each level of language competence in the category "I can". It is no coincidence that Chinese researchers emphasize that digitalization as a phenomenon of modern education does not coincide in its borders with the transformation of a student's personality under the influence of digital learning strategies.

Kazakhstan and Russia are also actively developing and implementing digital technologies in the field of teaching foreign languages. In Kazakhstan, the National platform "eTandem" provides an opportunity for the exchange of language skills between native speakers of different languages through videoconferences. There are also various educational portals and platforms in Kazakhstan that offer online resources and applications for learning foreign languages, including Duolingo, Babbel and others. Many online projects and platforms for teaching foreign languages have been developed in Russia. For example, a Digital School is a platform that offers online lessons using interactive exercises, videos and audio recordings. There are also various applications for learning foreign languages, such as BeSpeak and Skyeng, which provide the opportunity to learn with the help of online teachers. Kazakhstan and Russia are actively working to improve the accessibility and quality of teaching foreign languages using digital technologies. They also strive to develop innovative methods and approaches to make the learning process more interactive, accessible and effective for students. In addition to using digital platforms and applications, Kazakhstan and Russia are also actively developing and implementing other technologies in the field of teaching foreign languages.

Here are some examples of how digital technologies are superior to traditional pedagogical tools in teaching foreign languages:

1. **Interactive textbooks and Applications:** Digital textbooks and applications offer more interactive materials for learning a foreign language. They can contain audio and video files, exercises, games and tests that help students actively interact with the language, develop listening, reading, speaking and writing skills. Digital teaching materials have great functional advantages in distance learning, in the organization of independent work of schoolchildren and students. They are particularly in demand in practical classes due to the possibility of reducing the time spent on routine tasks.
2. **Online Resources and Video Tutorials:** There are many online resources and platforms where students can find video tutorials, audio recordings, texts, interactive assignments and other materials for self-study. They can choose lessons according to their level and interests, as well as study materials at a convenient time.
3. **Virtual classes and real-time learning:** With the help of digital technologies, virtual classes and lessons can be conducted in real time. Students can see and hear the teacher, interact with him and other students, ask questions and receive feedback directly on the screen of their device. This is especially useful for remote learning or for access to learning for those who live in remote locations or have limited opportunities to attend school.
4. **Adaptive tests and exercises:** With the help of digital technologies, it is possible to create adaptive tests and exercises that adapt to the level and needs of each student. They can offer an additional exercise

in case of an incorrect answer, skip materials known to the student and focus on weaknesses, as well as offer rewards and incentives for motivation.

5. Multimedia resources: Digital technologies offer a wide range of multimedia resources, such as audio, video, images and interactive graphics. They can be used to diversify the learning process, enrich the material and create a more realistic and stimulating learning environment.

Conclusion

However, the use of digital technologies requires clear regulation, taking into account social and age psychology. In addition, compression of the presentation of the material increases the possibilities of distraction in virtual reality, and excessive enthusiasm for the use of digital technologies transforms the user's speech and behavioral profile to one degree or another. In this regard, the digital divide is increasing not only on the basis of socio-economic inequality, but also against the background of sanctions imposed during the first digital information war, as well as taking into account the development of digital sovereignty of countries and the development of information security provisions. The digital twin is an important part of the formation of the linguistic image of the country of the studied language, which affects the perception of reality.

Firstly, digital bi-/multilingual communicative competence is formed in that priority area for a language user during a certain period of life.

Secondly, virtual reality and digital counterparts of the countries of the studied cultures help to study informally, both in a certain cohort group, and with individual training, or with independent training with a digital assistant.

Digital technologies also provide students with access to a huge number of authentic materials in a foreign language, such as videos, audio recordings, articles and books. This helps students to expand their vocabulary, improve listening and reading skills, as well as immerse themselves in the linguistic culture of the studied country.

In conclusion, digital technologies provide many advantages in the formation of communicative competence in teaching a foreign language, including accessibility, interactivity, individualization and access to a variety of materials.

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