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The Variety of Educational Communicative Situations of Virtual Urbanism as an Effective Tool for the Formation of Students' Communicative Competence in Learning Foreign Languages in Russia, Kazakhstan and China

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Abstract: The formation of foreign languages communicative competence in modern electronic and digital society is directly conditioned by the achievements of computer psycholinguistics, neurolinguistics, starting from digital neuropedagogy using the natural landscape to construct a virtual environment with a change in the speech and behavioral standard in urbanism and the priority of digital reality. The purpose of the study is to define and substantiate the methodology of digital educational resources, which gradually forms communicative competencies by immersing students in the virtual environment of urban society.The hypothesis is based on students' understanding of the process of learning foreign languages with an emphasis on the specifics of neurocognitive connections in the formation of communicative competencies using didactic computer-mediated digital technologies of various electronic educational resources by comparing real and virtual urban space. The research material is a variety of educational communicative situations of virtual urbanism. The object of this research is the process of learning a foreign language, including analog situations of the real city environment and simulation modeling of a virtual urban space. The study clarifies the concepts of *communicative competence*, *virtual urbanism*, *digital technologies*, indicating the parameters of the main classifications.
Keywords: communicative competence, digital technologies, post-pedagogy, neurodidactics, foreign language teaching, virtual urbanism

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оригинальная статья

Разнообразие образовательных коммуникативных ситуаций виртуального урбанизма как эффективный инструмент формирования коммуникативной компетентности учащихся при изучении иностранных языков в России, Казахстане и Китае

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Аннотация: Формирование коммуникативной компетентности на иностранных языках в современном электронно-цифровом обществе напрямую обусловлено достижениями компьютерной психолингвистики и нейролингводидактики, начиная от цифровой нейропедагогики, использующей естественный ландшафт для конструирования виртуальной окружающей среды с изменением речеповеденческого стандарта в условиях урбанистики и приоритета цифровой реальности. Цель – определить и обосновать методики использования цифровых образовательных ресурсов, поступательно формирующих коммуникативные компетенции путем погружения в виртуальную среду урбанистического общества. Гипотеза основана на понимании учащимися процесса обучения иностранным языкам с акцентуацией на специфике нейрокогнитивных связей при формировании коммуникативных компетенций с помощью компьютерно-опосредованных цифровых технологий дидактического характера на электронных образовательных ресурсах разного типа в ситуации сопоставления реального и виртуального урбанистического пространства. Материалом исследования стали разнообразные обучающие коммуникативные ситуации виртуальной урбанистики. Сам процесс обучения иностранному языку является объектом настоящего исследования: от аналоговых ситуаций реальной среды города до симуляционного моделирования виртуального урбанистического пространства. В работе уточнены понятия *коммуникативная компетенция*, *виртуальная урбанистика*, *цифровые технологии* с указанием параметров основных классификаций.

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

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Introduction

Modern digital technologies have become an integral feature of modern urban society when the boundaries between different types of populated areas are erased, leaving only the possibility of a full-fledged communication as a priority. Digital technologies enable the immersion in the linguaculture of the studied language using the tools of virtual urbanism, introducing not only the history, culture, architecture of the studied country in virtual space, but also modeling analog situations in the fictional space of a virtual city. At the same time, virtual urbanism in foreign language lessons is applied on the principles of reliability, realism of details, and correlation with a specific participants target group enabling to increase motivation in improving the communicative competence of schoolchildren studying a particular foreign language in a virtual space [Bibri et al. 2022].

In this regard, we can study the social-technical understanding of a modern neuropedagogy in the formation of student communicative competencies applying general principles to the understanding of digital twin technologies that can exist in the analog environment of the studied linguaculture. The precursor to contemporary digital educational advancements in the realm of cultivating bilingual and multilingual learners was the implementation of multidimensional instruments in the process of engaging with the human mind [Botero et al. 2018]. The famous mythologems *American Dream* [Bhatia, Jenks 2018], *Chinese Dream* [Li 2022], *Russian World* actively use various tools to increase the interest to their linguistic cultures in the virtual space. For example, virtual urbanism in Harry Potter films initiated the interest to the historical and cultural landscape of real England, allowing you to find *Easter eggs* in your hometown of Harbin. This approach is related to well-known computer games like *Pokémon Go*. At the same time, it is a simultaneous immersion into the English culture among the younger generation in Harbin. Similarly, Dalian reproduces an embodied version of Venice immersing in the world of Italian culture and art; respectively, it creates a festive atmosphere in the resort city of northeastern China. In this regard, I would like to note that young Harbin residents draw parallels between the realities of their city and Hogwarts, which also forms and develops the communicative competence of the younger generation open to all kinds of innovation in the situation of globalization and migration [Alenazi 2022; Karabulatova et al. 2023]. Virtual urban studies in foreign language classes can simulate an analog event from the media, Internet channels, or construct a situation without reference to a real event, the so-called interactive game event-simulacrum [Tillmann et al. 2013; Kurebayeva et al. 2023]. The observation of such a combination of reality and virtuality in the educational process allowed some scientists to suggest the use of blending as a new educational communicative technology [Kaur et al. 2021].

As a rule, a game simulator exploits a pleasure reward center but learning, even in a playful form, is always associated with tension, and overcoming one's own internal boundaries, which brings learning language simulators closer to professional simulators using a system of punishment for mistakes. It is believed that professional simulators are aimed at causing pain, rather than comfort and pleasure zones [Lee et al. 2021]. Digital technologies in teaching foreign language and culture beneficially use continuous *translation* from natural physical reality to digital, and vice versa. In this regard, there is an effect of adopting digital doubles [Islamov 2022; Shahat et al. 2021], which uses the brain's ability to connect the physical object, its visual, verbal and / or other representation together allowing the digital analog to influence objective reality.

Since learning is a rather laborious process for honing skills where the price of error can be fatal, in the situation of using English-language linguadidactics as a tool of *soft power* the effect of re-recognition of native ethnoculture arises, putting the vitality of language, culture, people and state at stake [Barabash et al. 2019; Fletcher 2022]. It should be borne in mind that the simulated digital reality is not an identical digital copy of the linguistic and cultural landscape of the studied language. The formation

of communicative competence in modern conditions is based on digital neuropedagogy [Honcharuk et al. 2023]. Digital technologies used today in teaching foreign languages reveal a correlation between the quality of new pedagogical tools and the specifics of the human brain functioning towards the development of common cognitive connections.

Methods and materials

We considered virtual games and analog games that allow you to learn foreign languages. For instance, the game Boxholm is based on another popular Minecraft game. This game has 100,000 users, who designed a smart city of the future with geographical, historical, cultural, linguistic, social realities of urban space reflected on a map of the real city with detailed topography. The study of another linguistic culture through the game *Play the City* demonstrates an inclusive approach of all user competencies. If the game *SimCity* in various versions is the main training system for urban planning, then its communicative and pedagogical potential for regional studies, linguistics, translation studies cannot be discounted.

The theoretical and methodological basis of this study was the achievements of predecessors in the field of theory and methodology of teaching computer science, information, and communication technologies [Sobchenko et al. 2022; Zdanevych et al. 2021]; theory of complex graphs [Gapanyuk et al. 2024; Goertzel 2021]; psychological theory of communication [Fajar 2020]; theories of urbanism [Bibri et al. 2022; Robison, Ridenour 2012; Ibáñez, Díaz 2023]; theories of pedagogical communication [Mikhailenko, Zharkova 2023; Sánchez-Sepúlveda et al. 2019]; theories of student and teacher personality formation [Fong, DeWitt 2019; Lawrence, Tar 2018]; theories of electronic educational resources [Bizzo 2022; Wang et al. 2024]; theories of communication and formation of communicative knowledge, skills and abilities [Sathyabalan, Christian 2022; Temirgalinova et al. 2021; Zdanevych et al. 2021]; NLP and machine learning [Klašnja-Milićević et al. 2018]; neurodidactics and neuropedagogics [Hulme et al. 2022; Karabulatova et al. 2021; Sidun et al. 2023].

In this regard, the methodology of our work was based on the application of such approaches as system activity, competence and communicative-cognitive studies. 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).

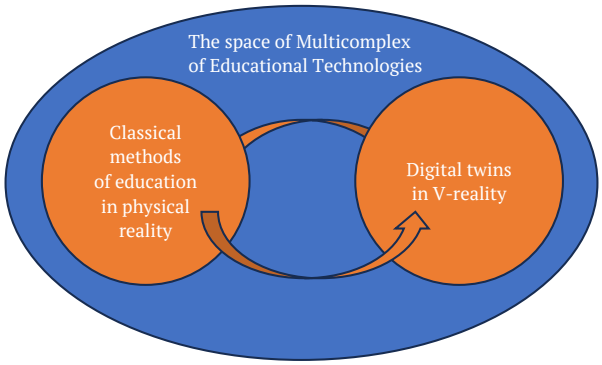

Fig. 1. Coordination of classical and digital methods in the space of educational technologies: the smile of combined technologies
Рис. 1. Координация классических и цифровых методов в пространстве образовательных технологий: смайл совмещенных технологий

Digital technologies 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 [Malyuga, Tomalin 2017]. In this regard, there is a mixture in the space of virtual reality between culture, game and real live. Digital technologies expand opportunities through online counseling, tutoring, and digital monitoring within the framework of modern electronic academic communication.

52 middle school students in Kazakh secondary schools and two groups of students from Chinese universities studying Chinese at preparatory courses (52 people) participated in the experiment. Totally, 104 people of middle and high school age took part in the experiment.

Results

As a rule, students studying foreign languages are focused on working with such educational tools as paper and electronic workbook and textbooks with a variety of educational technologies either classical or mixed digital. The latter enables screening the dynamics of motivations for mastering the knowledge of a foreign language as well as tracing the nature and methods of formation levels of communicative competence among students studying a particular foreign language.

Communicative competence is a marker of the level of formation of the student's brain, since each mental function has its own development program. When teaching communicative competencies, it is necessary to take into account that the brain matures heterochronously.

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The most common complaints of students learning a foreign language with probabilistic *decoding* are:

- *I can't remember, I forgot, I overlook, I forget partially, I can't learn* – these and similar statements signal memory problems;
- *I missed it by accident, Oh, I didn't notice* – explanations of this kind indicate problems with attention;
- *I don't understand, It's not clear, It's too difficult for me, It's impossible to remember it quickly* – these and similar explanations draw attention to problems with thinking, information processing speed;
- *I can't imagine, I can't draw this picture internally* – it is necessary to work with a problem related to imagination.

Modern students of Z and α generation differ from their teachers by living and learning conditions, their qualitatively new tasks, and previously unknown ways to achieve them [Entina et al. 2021]. Representatives of digital generations differ in other ways of concentrating attention with special intensity and a combination of cognitive skills untypical 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, with an average score ranging 7.2–7.5 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. 2).

The first typological group combined students with a fragmentary knowledge of communicative competencies and the structure of communicative activity. These students do not understand the importance of communication skills in a foreign language in their present and future professional activities, nor do they have a vision of their life path. This group of students is characterized by unwillingness to learn, to understand the peculiarities of communicative skills in digital communication, do not show interest in communicative activity in a foreign language either in a digital or analog environment. They present some difficulty for teachers due to their weak communicative qualities

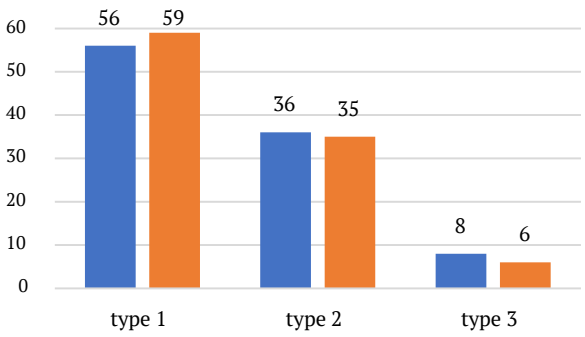

Fig. 2. The diagram of the representation of typological groups of the communicative competencies in the digital format in the control and experimental versions, %
Рис. 2. Диаграмма представления типологических групп по коммуникативным компетенциям цифрового формата в контрольном и экспериментальном вариантах, %

and immaturity of personal characteristics necessary for mutual understanding. 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 is students who have a basic knowledge about communicative competencies, characteristics of communicative activity, and their implementation in digital communication. These students have an idea of how to use telecommunication in their own academic activity, but they do not attach much importance to its role in their future profession, and apply communicative competencies depending on their own interests. Students of this group are characterized by such communicative personality traits as tolerance, social perception, social attraction for mutual understanding. 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 personality quality, 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 spaces of students:

1) personal space *birthday* + digital twin *VR-family* + ontology *proper names* + ontology *kinship systems* = modeling of the digital twin *Celebration of birthday* through the study of the topic *Birthday*: *Proper names and a 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) sphere of intimate experiences *My day* through a reconstruction *The events of my day: Regular past tense verbs*, or introspection *My interests: Irregular past tense verbs, etc*. (tab. 1).

The tasks of this stage include students' positive interest in new material, communication is characterized by excitement, the desire to actively work with initiative in the lesson. Our survey showed that 76.2% of Chinese language learners said that universities that currently offer Chinese language education abroad pay more attention to theoretical courses than practical ones.

Also at this stage, the survey conducted among students showed interest and evaluation of the effective-

Tab. 1. Thematic lesson plan of digital technologies for the formation of communicative competence
Табл. 1. Тематический план урока с использованием цифровых технологий для формирования коммуникативной компетенции

Estimated date of the lesson	Lesson topic	Applied digital technologies
03.04.2023	Birthday: proper names and kinship system	1) topic presentation: *my birthday, my family*; 2) video fragment analysis: a digital textbook, fragment from a movie; 3) interactive game on the *wheel decide* platform
06.04.2023	Shopping in the store: articles and nouns	1) audio recording analysis; online language dictionary: english, russian, chinese; 2) interactive whiteboard with reading by roles, game situations with purchases; 3) analysis of video fragments; internet platform *lecta*
10.04.2023	Events of my day: regular verbs in the past tense form	1) presentation and online language dictionary: english, russian, chinese; 2) interactive whiteboard with reading by roles; 3) analysis of typical situations in a playful way: a visit, trip to the theater, walk-through video clips; 4) work with an electronic workbook: compilation of small texts on a given topic; 5) interactive game on the *live worksheets* platform
15.04.2023	My interests: irregular verbs in the past tense form	1) presentation and online language dictionary: english, russian, chinese; 2) interactive whiteboard with reading by roles; 3) analysis of typical situations in a playful way: a visit, trip to the theater, walk-through video clips; 4) work with an electronic workbook: compilation of small texts on a given topic; 5) interactive game on the live worksheets platform
18.04.2023	Monetary systems: names of monetary units, fixed expressions for digital transactions	1) presentation and online language dictionary: english, russian, chinese; 2) interactive whiteboard with reading by roles: *bank visit*; 3) analysis of typical situations in the form of a game *communication in the bank, online order* with listening; 4) work with an electronic workbook: compilation of small texts on a given topic; 5) online testing
20.04.2023	Travel: geographical proper names, prepositions	1) presentation and online language dictionary: english, russian, chinese; 2) interactive whiteboard with reading by roles: *traveling around the country*, *conversation with a fellow traveler*; 3) analysis of typical situations in the form of a game *the most interesting places of the country*, *booking a ticket online*, *conversation with the conductor on the train / steward on the plane*; 4) analysis of video clips on the topic from feature films and documentaries with listening; 5) work with an electronic workbook: compilation of small texts on the topic: *my journey*; 6) interactive game on the platform *games to learn english*, or a choice of video game analysis using the historical and cultural potential of the studied language; 7) online testing

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ness of digital technologies that were used in the lessons. The results were summed up in an essay by students on the topic: *My ideas about the use of digital telecommunications in academic activities* (in their native and studied foreign languages).

The dynamics of the formation of communicative competencies among the participants of the experiments is reflected in the table below (tab. 2), allowing us to trace the nature of the evolution of communicative knowledge, skills and abilities based on the use of digital technologies.

The tasks of the first stage included digital technologies aimed at the formation of communicative competence using 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, telecommunication 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 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 a wide access to high-quality educational content in English. Many free and paid resources are available to help develop reading, writing and listening skills in English. With the help of artificial intelligence and adaptive learning algorithms, adaptive educational systems can analyze the level of knowledge of each student and offer personalized materials and tasks that are most effective for their individual needs. This allows students to develop their communication skills in a more optimal way.

Video games use a variety of ethno-cultural attributes, so the differences in a cultural background have a big impact on players [Bondareva, Potemkina 2021; Davies, Li 2020]. It should be noted that the simulation of the video game space relies on real / unreal geography in accordance with the linguistic and geographical picture of the world. As a result, the geographical spatial competence is formed with the norms of the speech and behavioral standard, which ensures the possible survival of an individual in an alien environment (geographical, cultural, linguistic). Consequently, a communicative competence in the game is combined with an ecological behavior and knowledge of historical and cultural norms and the adaptation to the environment. Therefore, a proper cultural adaptation can avoid the negative influence of player groups on an unfamiliar cultural background. Pedagogy and psychology considered the game an important method of influencing a person's speech and behavioral matrix.

The video game itself acts as a psychological and pedagogical complex of influence on participants for the development of neurocognitive skills embedded in communicative competence. It can:

- increase the vocabulary and understanding the word meanings with subsequent accuracy of word selection;
- improve understanding the situational speech with the ability to build feedback in a simple dialogue;
- select speech strategies for a particular context;
- improve the development of reading, listening, speaking and writing skills based on dialog communication in a video game.

As indicated by comparative video games data of a particular country, a communicative competence develops in video games (fig. 3). At the same time, today there is insufficient scientific data in the analysis of the localization of video games with a linguistic and cultural resource, and ethno-linguistic and cultural capital focused on potential players of a particular country (fig. 3). Cross-textual parallels act as connecting semantic vectors for the formation of multimodality,

Tab. 2. Formation dynamics of communicative competencies among students in different typological groups, %
Табл. 2. Динамика сформированности коммуникативной компетенции у студентов разных типологических групп, %

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 competence	52	60	56	61	58	69	48	52	56	45	50	43
The second typological group with an average level competence	36	32	40	33	38	34	40	40	36	41	32	39
The third typological group with a high level competence	12	8	4	6	4	7	12	8	8	14	8	18

Fig. 3. The architecture of ethno-cultural capital in the studies on localization of video games in the aspect ofcommunicativecompetence formation, 2013–2022
Рис. 3. Архитектура этнокультурной столицы в исследованиях по локализации видеоигр в аспекте формирования коммуникативной компетенции, 2013–2022 гг.

paratextuality, and transmediality in video games opening up new spaces for both applied linguistics, applied mathematics, and linguadidactics. These video games invariants can also be considered as elements of a communicative competence formation.

Virtual reality technology can create an immersive learning environment where students can interact with English in a real situation. For example, they can immerse themselves in the English environment and communicate with virtual characters in English, which will help them develop communication skills, and confidence. At the same time, the high level digital technologies, in particular, speech recognition technologies, allow using machine intelligence to understand and interpret foreign language words.

The first stage in the formation of communicative competence among students studying foreign languages, the implementation of the language environment was constructed through the use of grammatically correct forms and syntactic structures. At the same time, the selection of linguistic forms and language expressions was carried out in a foreign language in conjunction with the set conditions of a communicative act, which includes such parameters as the situation, the communicative goal, speaker's intentions, social and the functional role of communicants, the relationship between communicants.

Thus, the first stage of the use of digital resources in the integration of information technology and foreign language teaching focuses on the following functions:

- development of navigation skills and information search on the Internet in a foreign language, identification of linguistic and cultural methods of processing and using information;
- the ability to store big linguistic and technical information data on specific issues;
- development of computer and information technology skills;
- formation of skills for critical evaluation of Internet resources;
- formation of communicative competencies of human interaction based on global communications.

The second stage of the formation of a communicative competence of middle and senior school students is focused on the active and competent use of electronic educational resources that contribute to the formation of communicative and professional skills (the third typological group). At this stage, communication skills improved using electronic dictionaries, mastering the tools of multimedia software, professional electronic educational resources (e-mail, Internet Relay Chat, publishing your own information, mobile telecommunications, etc.).

The second stage communicative competence formation is aimed at solving such constructive tasks as designing and / or modeling the content, and ways of influencing the audience. At the same time, students show a greater degree of independence in analyzing the factors influencing the improvement of communication skills with a clear understanding of the purpose, content and methods of upcoming

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interaction. In addition, at this stage, the ability to productively use the results of analytical analysis of exemplary situations from life for modeling further communication is demonstrated.

Discussion

The sociotechnical perspective in contemporary neuropedagogical practice actively employs the notion of virtual urbanism [Kitchin et al. 2019]. The linguistic facet of this concept entails the cultivation and enhancement of students' communicative abilities in bilingual and multilingual contexts facilitated by digital twin technologies.

The very notion of *virtual urbanism* resonates with the so-called *smart urbanism* representing a re-evaluation of urban analytics in its essence. Consequently, numerous scholars have delved into the emergence of avantgarde urban epistemology, which is essentially a fundamentally novel management paradigm within the framework of the *smart city* concept – smart mentality [Vanolo 2014].

The multifaceted nature of managing a contemporary intelligent city in a virtual realm generates novel configurations of power, allowing almost any observer to contribute to the governance of virtual urbanism. The key to the success of employing this approach lies in meticulously analyzing the neurocognitive mechanism of mediated communication commonly referred to as the *phantom of mediated interaction*.

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 [Gong et al. 2021].

At the same time, the researchers emphasize a 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 of 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 [Lazareva 2015: 41].

The countries that achieved significant results in the formation of communicative competencies in a foreign language, primarily in English, are Finland [Mäkipää 2021], Estonia [Ingerpuu-Rümmel 2018], China [Guan 2023; Xu 2023]. However, of course, the leading role in teaching English as a foreign language belongs to the Great Britain [Postolenko 2021; Sathyabalan, Christian 2022]. Estonia is considered as one of the most advanced countries in the field of using education digital technologies not only in the post-Soviet space, but also globally. It was the first to introduce an electronic textbook system, 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. In the EU countries Finland stands out especially in actively using digital resources and education technologies. 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, scholars 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* [Xu 2023]. 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 [Wang et al. 2024].

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 video-conferences. 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 actively work 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 also actively develop and implement other technologies in the field of teaching foreign languages.

In addition, digital technologies provide students with the opportunity to use various applications and programs to automatise and train certain English language skills. For example, there are applications that help train pronunciation and intonation, applications for creating and practicing grammar exercises, as well as online services for checking spelling and grammatical errors. Here are some examples of digital technologies 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, 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

Virtual urbanism covers not only the urban real environment, but also the entire space as a whole, forming some simplified understanding of life as a kind of scenario variant that can be changed at any moment. At the same time, such excessive immersion in the virtual environment is fraught with cognitive dissonance in the perception of the world around us, and our place in this world, which is reflected in the displacement of acceptable ways of learning without complicating the material, without heuristic findings that stimulate the development of communication skills. At the same time, it cannot be admitted that immersion in the virtual environment of a digital twin of a city can provide significant assistance in studying the history, culture, psychology, and, of course, the language of the country. Immersion in the atmosphere of a digital double creates the possibility of full immersion in a wide variety of (both real and unreal) communicative situations related to learning a foreign language.

Digital technologies allow students to improve their communication skills through new opportunities and cooperation with people from different countries. New *smart* devices and digital technologies, such

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as chats, forums, social networks become available, allow students to practice and improve their communication skills in English, Russian, Chinese with native speakers or other students. This opens up opportunities for cultural exchange, and the development of intercultural competence.

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.

It should be noted that with digital technologies there is a need to be attentive to their use. It is important to choose high-quality and reliable resources and applications that meet the goals and needs of the student. Also, one should not rely entirely on digital technologies as the only teaching method, but rather use them in combination with other traditional methods, such as textbooks, communicating with a teacher and other students, and so on.

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. They can improve the effectiveness and learning outcomes, but it is important to consider and balance their use with traditional teaching methods, and the role of the teacher.

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Критерии авторства: А. С. Баймахан – концептуализация, написание части статьи, подготовка эмпирических материалов по Казахстану, проведение опросов в Казахстане и их последующая обработка, основная идея статьи. Г. К. Бельгибаева – первоначальная методология проекта, курирование этапа по проведению экспериментов в Казахстане, анализ материалов по цифровым технологиям в казахстанской лингводидактике, проведение аналитической работы по казахстанским материалам. И. С. Карабулатова – администрирование проекта, генерирование основного кейса, общее руководство и корректирование методологии, распределение обязанностей и контроль по исполнению задач проекта, совмещение российского сегмента с азиатскими кейсами, написание итогового аналитического кейса, общее руководство и редактирование, сведение материалов. Дзядун Ху – управление данными, подсчеты, проведение экспериментальной части в провинции Ляонин на северо-востоке Китая в г. Далянь (территория бывшей КВЖД), обработка эмпирических материалов, полученных в Даляне, сопоставление с другими данными, визуализация проекта, проверка данных. Дзиньна Цзоу – формальный анализ, проведение экспериментов в провинции Хэйлунцзян на северо-востоке Китая в г. Харбин и ряде близлежащих городов, обработка анкет, работа с архивными материалами Института русского языка Хэйлунцзянского университета, написание первоначального проекта по китайской части.

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