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Research article

Artificial intelligence in teaching Russian as a foreign language

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Abstract. Nowadays, artificial intelligence (AI) technologies and AI-tools created on their basis are dynamically integrated into education, including teaching Russian as a foreign language (RFL). The aim of this study is to systematically describe AI-tools as innovative tools for teaching RFL, as well as subjects of the learning process in the triad "learner — artificial intelligence — teacher", and to determine their language didactic potential. The research materials include academic articles on the methods of teaching foreign languages and RFL published in academic journals. The practical material in the study was the most widespread and available for a wide range of students AI-tools: chatbots and voice assistants, corpus technologies, ChatGPT. The authors used theoretical (analysis, classification, synthesis, generalization) and practical (observations) research methods. The results allowed authors to formulate the language didactic potential of AI tools, allowing students of RFL: on the basis of language practice with AI, to continue studying aspects of the Russian language, to develop speech activity, to study the culture of Russia and its regions; to participate in foreign speech communication out of class; to get the opportunity to practice with authentic language material; to develop cooperative learning skills when participating in project activities on the basis of distance learning technologies; to develop learners' autonomy skills in learning Russian.

Keywords: methods of teaching Russian as Foreign Language, technological innovations, chat-bots, ChatGPT

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Introduction

Modern society sees the processes of intensive digitalization and informatization, which permeate all spheres of human life, including language education. In 1990–2018, methodologists developed various methods of teaching foreign

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languages (FL) and Russian as a foreign language (RFL) based on modern information and communication technologies (ICT) (Azimov et al., 1994; Azimov, 1999, 2000; Stevenson & Liu, 2010). Leading among those studies are studies devoted to teaching Russian as a foreign language through ICT, conducted by scholars from Peoples' Friendship University of Russia named after P. Lumumba (Gartsov, 2009, 2010; Arkhangelskaya et al., 2006; Rudenko-Morgun & Zhindaeva, 2012; Rudenko-Morgun et al., 2016; Strelchuk & Ermolaeva, 2019; Vyazovskaya et al., 2020). At the same time, due to the limited spread of information technologies, many author's methods were used only in the specific educational institutions where they were tested and were not always implemented in other Russian universities.

The COVID-2019 coronavirus pandemic has catalyzed at least two processes significant for methods of teaching FL and RFL. First, the widespread transition to distance technologies facilitated implementation of the large corpus of language teaching methodologies already developed through ICT. Here, teachers of FL and RFL found themselves in a more advantageous position than teachers of other subjects. The pandemic allowed most teachers to perceive ICT not as supplementary, but as alternative means of instruction for learners' language practice. Moreover, recent research indicates that teaching methodology (Dunaeva et al., 2020; Strelchuk, 2021; Azimov et al., 2023). The "Education in Russian" platform (Pushkin State Russian Language Institute)¹ and the "Network Media Library of Educational Texts" (Lomonosov Moscow State University)² with its corpus of online learning resources in RFL, are getting popular in the world.

Secondly, the dynamic digitalization of society has contributed to further intensive development of AI-technologies of deep learning, natural language processing, generative adversarial network, machine learning, data science, speech recognition and others. Based on these AI-technologies, AI-tools are created that can intensify the process of teaching RFL. On the one hand, AI can take over some functions of a teacher, relieving the teacher from some routine or labor-intensive activities. On the other hand, AI-technologies have qualitatively new linguodidactic functions in terms of solving cognitive tasks. Therefore, their implementation in the process of teaching RFL will give the teacher additional opportunities for language practice and formation of all components of foreign language communicative competence, as well as the development of students' learning autonomy.

Recently, scientists have conducted studies on methodological possibilities of AI tools in teaching RFL. In particular, the following issues were studied: a system of automated control of students' proficiency in RFL and the development of an

¹ "Education in Russian" platform. URL: https://pushkininstitute.ru/users/sign_up (access date: 21.10.2023).

² Network Media Library of Educational Texts. URL: https://www.catalogue.irlc.msu.ru/general-catalogue/all/setevaya-tekstoteka (access date: 21.10.2023).

individual correction course using AI tools (Elnikova, 2020), a set of AI tools aimed at determining the level of proficiency in RFL, the formation of students' lexicalgrammatical speech skills, and the implementation of automated verification of students' performance of test tasks (Kozhevnikova, 2022), the use of chatbots and the ChatGPT in the development of students' speech skills (Kozlovtseva, 2022; Lyu, 2023), methodological potential of voice assistants in teaching RFL (Nefedov, Ogryzko, 2023). However, a number of issues related to the ability of ChatGPT to provide various types of feedback (information and referential, methodological, evaluational), as well as the linguodidactic potential of AI corpus technologies have not been systematically reflected in the methodological literature.

The aim of our study is to determine the linguodidactic potential of the most common AI tools currently used as innovative tools for teaching RFL and subjects of the learning process in the triad "foreign learner — artificial intelligence — teacher".

Methods and materials

The following methods were used in the study: theoretical (comparative, component and complex analysis of AI tools, classification, synthesis, generalization) and empirical (surveys and observation).

The theoretical material included scientific articles (Articles and Reviews) on the methods of teaching FL and RFL, published in Scopus (Q1, Q2), Web of Science (ESCI), Higher Attestation Commission (Q1, Q2) scientific journals. The practical material included the most widespread and available for a wide range of students AI-tools: chatbots and voice assistants, corpus technologies, ChatGPT. The empirical base of the study was Tambov State University named after G.R. Derzhavin. The AI tools were tested in RFL classes with second-year students in February-June, 2023. The participants of the study were students from Algeria, India, Morocco, Namibia, and Congo.

Results

The study of the scientific works on the methodology of FL and RFL teaching identified the following three AI tools that can be used in teaching RFL:

- chatbots or voice assistants (YandexGPT and GigaChat);
- corpus technologies (National Corpus of the Russian Language, etc.);
- ChatGPT.

These AI-tools can take over some functions of a teacher: a) to organize students' learning interaction with AI; b) to organize control over the formation of language skills and development of foreign language speech skills of students, the formation of aspects of their sociocultural competence; c) to prepare authentic linguistic and sociocultural material.

The AI-tools described in this paper have a significant linguodidactic potential, allowing students:

- to continue through language practice with AI studying aspects of the Russian language (vocabulary, grammar), developing types of speech activity (mainly reading and written speech), studying the culture of Russia and its regions;

- to participate in foreign language communication with a chatbot or voice assistant at home;

- to work with authentic language material (both literary and colloquial, territorial dialects, etc.) in different formats (text, audiovisual, graphic, etc.);

- to develop skills of cooperative learning when participating in Internet projects;

- to develop the skills of learning autonomy, which will allow them to build an individual trajectory of learning RFL depending on their professional and personal interests, needs and abilities.

Discussion

Modern AI technologies have made it possible to create on their basis a number of AI tools, which are capable of: a) taking over many traditional functions for a teacher (from tracking academic progress to automated control of students' written work); b) providing students with evaluative feedback when checking their written work (essays) more quickly and effectively from the position of utterance deployment; c) creating conditions for organizing students' foreign language practice. AI-technologies in the traditional process of teaching RFL students will significantly enrich their foreign language speech practice and create conditions for more effective formation of all components of their foreign language communicative competence. Let us consider in detail the most common AI-tools and emphasize their linguodidactic potential.

Chatbots and voice assistants are AI tools, which in foreign language teaching methodology are understood as "dialog-based learning programs capable of developing the learner's foreign-language oral and written speech skills by maintaining a dialogue with the learner and imitating human speech behavior algorithms based on natural language processing and machine learning technologies" (Sysoyev, Filatov, 2023a: 68). Chatbots and voice assistants are the most common AI tools used in FL and RFl learning (Kim et al., 2021; Mageira et al., 2022; Lyu, 2023). Chatbots are used for developing written skills and voice assistants are used for developing oral foreign language interaction skills. The ability of chatbots and voice assistants to maintain a written or oral dialogue with the learner allows these AI tools to be used to organize out-of-class foreign language speech practice for learners. To solve specific academic tasks on developing foreign language speech skills, interaction with a chatbot should not be

chaotic (practice for the sake of practice), but clearly structured according to the sequence of skills development and the number of requests to the chatbot.

As empirical studies show (Sysoyev, Filatov, 2023a; Sysoyev, Filatov, 2023b), foreign language practice with chatbots can develop a whole complex of oral and written speech skills. Each level of language proficiency corresponds to its own content of teaching oral and written speech. In particular, the content of teaching foreign language speech communication at B1 level may develop skills to initiate a dialog, exchange greetings, introduce oneself, make various types of inquiries in accordance with the set communicative tasks within the studied topic (for example, to ask what sights the interlocutor (chatbot) would recommend to visit in a particular city, or to explain why he/she should or should not watch a certain movie or read a book, etc.), to express his/her attitude or opinion, to agree or disagree, to justify his/her opinion, finish conversation, etc. Such speech practice with a chatbot is especially relevant when students have no opportunity to communicate with native Russian speakers.

Among Russian language chatbots, YandexGPT from Yandex and GigaChat from Sber are widespread. At this stage of technology development, they can already be used in the learning process. Figures 1 and 2 show examples of dialogs of students with Russian language chatbots.

These chatbots are available on the official websites³. Authorization is required, but you do not need to provide any other input data (GigaChat requires authorization via SberID, so we do not consider it for RFL students). They are easy to navigate, and you can set the desired profile of the interlocutor (interests, sphere of communication, etc.). Such AI tool personalization takes into account the interests and communicative needs of RFL learners. When communicating, the chatbot or voice assistant will, if necessary, address topics that are of interest to a particular learner.

One of the important aspects of introducing chatbots in teaching RFL is stages of teaching students' foreign language speech communication. There are works describing specific stages of organizing students' language practice with a chatbot (Sysoev, Filatov, 2023a; Sysoev, Filatov, 2023b). In addition, the authors note the importance of combining classroom and extracurricular work with an AI tool, when extracurricular speech practice with a chatbot is embedded in the traditional methodology of teaching RFL and the results of communication with a chatbot are a material for further work (analysis and discussion) in class. For example, in their homework students can take part in foreign language speech practice with a chatbot to further develop the skills of exchanging greetings, initiating communication on a particular topic, making requests, agreeing/disagreeing with a virtual interlocutor, justifying their opinion, expressing their opinion on the topic, etc. At the next

³ YandexGPT. URL: https://yandex.ru/project/alice/yagpt GigaChat; https://developers.sber.ru/gigachat

lesson, students can bring printed discourse of foreign language practice with the chatbot and discuss in small groups how the chatbot responded to specific requests/statements of the student, what communicative failures occurred, and how the student got out of them. In this case, foreign language practice with an AI tool is not formal, is clearly planned and can bring results in speech skill development.

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Алиса, какая твоя любимая книга?	На каникулах я собираюсь поехать в Санкт-Петербург. Какие достопримечательности ты порекомендуешь			
Я люблю книгу «Алиса в стране чудес».	мне посмотреть?			
А мне очень нравится "Гарри Поттер" Я знаю, что у многих людей есть любимые	В Санкт-Петербурге множество достопримечательностей. Некоторые из них: Зимний дворец, Эрмитаж, Исаакиевский собор, Медный всадник, Крейсер "Аврора",			
книги. Почему ты любишь "Алису в стране чудес"?	Мариинский театр, Невский проспект, Летний сад, Петропавловская крепость. Желаю приятного путешествия!			
Мне нравится эта книга, потому что она интересная и забавная. К тому же, она очень	Чем известен Эрмитаж?			
интересная и заодавная. к тому же, она очень необычная и заставляет задуматься о многих вещах.	Эрмитаж знаменит своей большой коллекцией произведений искусств. Там можно найти картины таких художников как Леонардо да			
Кому бы ты могла порекомендовать прочитать эту книгу?	Винчи, Рембрандта, Ван Гога и многих других. Хорошо, а что я могу увидеть в Зимнем дворце?			
Я бы порекомендовала прочитать "Алису в стране чудес" всем, кто любит фантастические истории и хочет узнать больше о мире, в котором живет Алиса.	Зимний дворец - это бывшее место жительства русских царей, поэтому там вы можете увидеть роскошные интерьеры. Также в Зимнем дворце есть музеи, которые расскажут вам о жизни царей и их семей.			
	Кто его построил?			
	Зимний дворец был построен по заказу Екатерины Великой.			
Fig. 1. A fragment of a discussion between a student studying RFL and the YandexGPT chatbot about his favorite book Source: screenshot taken by P.V. Sysovey	Fig. 2. A fragment of a discussion between a student studying RFL and the YandexGPT chatbot about St. Petersburg tour programs Source: screenshot taken by P.V. Sysovey.			

E.M. Filatov in the Yandex mobile app

E.M. Filatov in the Yandex mobile app

Modern chatbots and voice assistants, while providing feedback to learners, can invent information when there is a lack of it. In this regard, teachers need to warn learners about risks of getting unreliable information from an AI tool. At the same time, the intensive development of chatbots and voice assistants suggests that many of their technical shortcomings will be eliminated, and this AI tool will become a reliable assistant to learners in developing foreign language speaking skills.

Corpus technologies are one more AI tool available to a wide audience of teachers and students. A language corpus is understood as "an array of texts collected in a single system according to certain characteristics (language, genre,

time of text creation, author, etc.) and equipped with a search engine" (Sysoyev, 2010: 99). At first, these technologies belonged to ICT and allowed using the concordance program to search and compile a list of examples of the use of certain words or collocations in contexts. The scientific literature describes methods of forming lexical-grammatical speech skills through corpora (Rykov, 2003; Grudeva, Alexeeva, 2020; Boulton, 2017).

AI has significantly expanded the possibilities of corpus technologies both in teaching RFL and in students' research work. Modern corpus technologies based on AI technologies (automatic speech recognition, machine learning, natural language processing, data science) are capable of both more accurately forming text corpora according to user's detailed requirements and managing text data arrays, as well as converting spoken speech into text, visualizing search data and predicting changes in language under the influence of different factors.

Different Russian language corpora can be used in teaching RFL: the Russian National corpus⁴, General Internet corpus of the Russian language⁵, Computer corpus of Russian newspapers of late XXth century⁶ and others. The Russian National Corpus, which includes several subcorpora and is intended for solving different research tasks, is considered to be the largest at the moment. The main corpus of the Russian National Corpus consists of prose texts of various genres for the period of 300 years. It uses the most neutral markup to determine the morphological composition of a word, its forms, part of speech, syntactic function in a sentence, meaning, and the communicative situation where the word is used. Other subcorpora of the Russian National corpus include: the newspaper corpus (texts of the central mass media since the early 1980s), the corpus of poetic texts (poetic works written from the 18th century to the present day), the corpus of oral speech (scripts of everyday spoken language, as well as movies, plays, etc.), the corpus of Russian classical works, the corpus of texts of the most popular social networks (from open blogs and posts), etc.

Depending on the subcorpus, different markups are used in the Russian National Corpus (from neutral markups in the main corpus to, for example, morphological, semantic and metatext markups indicating the place of the text in the spoken language corpus). These types of markup are necessary for classifying and identifying texts according to given parameters for a targeted search of the corpus for training or research purposes. Figures 3–5 show examples of working with the Russian National Corpus.

⁴ The Russian National Corpus. URL: https://ruscorpora.ru/ (accessed: November 30, 2023)

⁵ General Internet Corpus of the Russian Language. URL: http://www.webcorpora.ru/ (accessed: November 30, 2023)

⁶ Computer corpus of texts from Russian newspapers of the late 20th century. URL: https:// www.philol.msu.ru/~lex/corpus/corp_descr.html (accessed: December 5, 2023)

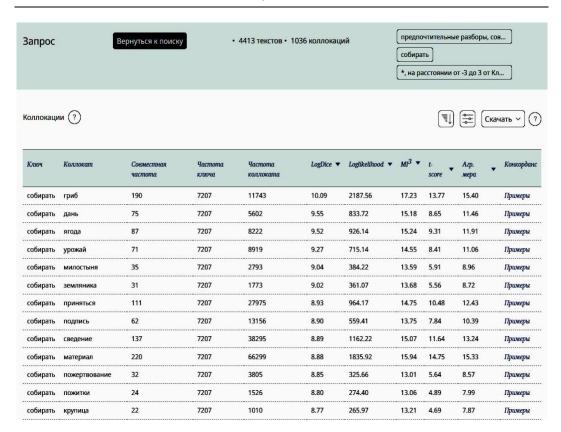


Fig. 3. Search for collocations with the word *coбиpatь* 'collect' in the The Russian National Corpus Source: screenshot taken by P.V. Sysoyev, E.M. Filatov on the RNC website: https://ruscorpora.ru/



Fig. 4. Concordance of the collocation with the keyword *собирать* 'pick' with the collocate *грибы* 'mushrooms' Source: screenshot taken by P.V. Sysoyev, E.M. Filatov on the RNC website: https://ruscorpora.ru/

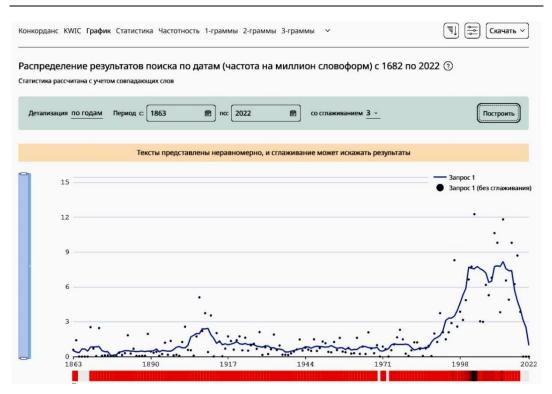


Fig. 5. Frequency of use of the word form *предприниматель* 'entrepreneur' (1863—2022) Source: screenshot taken by P.V. Sysoyev, E.M. Filatov on the RNC website: https://ruscorpora.ru/

Corpus technologies can form learners' lexical-grammatical speech skills based on the implicit approach, which includes three main stages (Solovova, 2002). At the first stage, learners independently study the language material, find patterns of its use (vocabulary or grammatical structures), formulate rules, or determine the meaning of lexical units from the context. At the second stage, the teacher tells learners a grammatical rule or the meaning of new words or collocations. Students compare and correct the rules they identified during their independent work at the first stage. At the third stage, they build lexical or grammatical skills through exercises and/or communicative tasks. Note that the implicit approach is oriented to learners with a high level of foreign language proficiency (B1/B2 and higher) and studying it as their specialty. Learning should be supervised by a teacher. In addition, corpus technologies can be used in research work when writing course papers and qualification works.

ChatGPT is now the most widespread and popular big language model developed by OpenAI. Being a generative AI, the GPT language model allows to create new content based on big data and machine learning algorithms. ChatGPT in dialog mode can provide feedback in the form of answers to given queries (prompts).

Transformer technology allows the neural network to process large amounts of data and build connections between words, sentences, and paragraphs. Depending on the content of feedback provided by ChatGPT, we can distinguish four types of feedback that can be used in teaching RFL: a) informational and referential; b) methodological and c) assessment feedback. Let us take a closer look at the content of these types of feedback.

Information and referential feedback is a material in text format on user's requests for specific reference information on a certain topic. This type of feedback can be used in direct language learning, when an RFL student needs to quickly find a specific reference material, for example, rules of grammatical tenses/constructions or punctuation rules in Russian, etc.

Many users use neural network to generate information. However, at the present stage, neural network is limited to databases, which sometimes leads to factual inaccuracies and errors in the generated texts. Nevertheless, in the nearest future, ChatGPT will become a reliable assistant to users (students and teachers) in searching and selecting materials according to specified criteria (volume, language/information complexity of the text, level of language proficiency, etc.).

The ability of ChatGPT to provide *methodological feedback* allows the teacher to delegate to the neural network some of his/her functions related to subject-thematic and calendar planning of the RFL course, development of a set of exercises for forming language aspects (phonetics, vocabulary, grammar) and tasks for speech production and reception. Figure 6 shows examples of training exercises and tasks created by ChatGPT.

GPT + Midjourney bot		Q	
文 _A Translate to Eng	glish		٩
 Конечно, вот 10 заданий для практики использования конструкции "Должен" с прилагательными в соответствующей форме, которые студенты должны заполнить: 1. Джордж (должен) говорить по-русски свободно к следующему году. 2. Анна и Мария (должен) организовать встречу с иностранными студентами. 3. Мальчики (должен) играть в футбол после уроков. 4. Каждый студент (должен) написать тест по грамматике затра. 5. Марина (должен) прочесть эту книгу для подготовки к экзамену. 6. Ученики (должен) принести свои словари на следующее занятие. 7. Каждый (должен) знать основные правила поведения в библиотеке. 8. Ты (должен) собрать свои вещи перед отъездом на канкулы. 9. Руководитель проекта (должен) принять важное решение сегодня. 10. Оля и Петр (должен) планировать свою поездку заранее. Ученики должны правильно подобрать форму слова "должен" (должна, должны), соответствующую подлежащему в предложении. 			

Fig. 6. ChatGPT creating exercises to train the grammatical form of the adjective должен (должна, должно, должны) "must" Source: screenshot taken by P.V. Sysoyev, E.M. Filatov in the Telegram-bot @chatsgpts_bot

Sample Prompt: Develop examples to train constructions with the adjectives *должен (должна, должно, должны)* 'must' + infinitive. For example: John must answer in class. Olivia must prepare for the lesson.

Figure 7 shows an example of ChatGPT creating a plan of a lesson on the celebration of Maslenitsa (Shrove Tuesday) in Russia.

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GPT + Midjourney		_	
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文 _A Translate to English			36
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План урока на тему "Празднование Масленицы в России" для учеников, изучающих русский язык как иностранного:			
Цели урока:			
- Познакомить студентов с историей и традициями праздника Масленица.			
- Развить навыки аудирования, говорения, чтения и письма. - Расширить словарный запас учащихся на тему праздника.			
Продолжительность урока: 60 минут			
Оборудование и материалы: - Презентация с изображениями Масленицы, блинов и			
праздничных гуляний.			
- Видеоклип о праздновании Масленицы.			
- Раздаточный материал с текстом о Масленице и			
упражнениями.			
- Рецепт приготовления блинов.			
- Аудиозапись с русскими народными песнями.			
Ход урока:			
1. Вступление (5 минут)			
- Приветствие учеников. - Краткое введение в тему: обсуждение того, что ученики			
знают о празднике Масленица.			
 Представление материала (10 минут) Показ презентации, раскрывающей тему Масленицы 			
- показ презентации, раскрывающей тему масленицы (история праздника, обычаи, символика блинов).			
- Представление новой лексики (скоморох, прощёное			
воскресенье, чучело Масленицы и т.д.).			
3. Аудирование (10 минут)			
- Просмотр видео о праздновании Масленицы в		\sim	/]
современной России.			

Fig. 7. ChatGPT creating a part of a lesson dedicated to the celebration of Maslenitsa (Shrove Tuesday) in Russia Source: screenshot taken by P.V. Sysoyev, E.M. Filatov in the Telegram-bot @chatsgpts_bot

Methodologists are only beginning to explore the ability of ChatGPT to provide methodological feedback. This explains why there are only a few research papers on the subject (Koraishi, 2023). In turn, software developers together with foreign language teaching communities offer lists of specific prompts for ChatGPT to create teaching materials in accordance with the topics being studied and students' foreign language communicative competence. Yet such comprehensive lists of Prompts are in English and are posted on English-language sites of online communities of foreign language teachers, such as the Classpoint and Teachermade communities. Each of them offers examples of prompts and ready-made learning exercises/tasks developed by ChatGPT⁷. Nowadays, there is no single list of samples in Russian for ChatGPT, which makes it urgent for modern methodologists to develop Internet resources in demand by the professional community.

ChatGPT *assessment feedback* allows AI to take over the teacher's functions in evaluating students' texts and written creative works (essays). In this case, the neural network can provide both quantitative (sum of points for completed tasks) and qualitative (comments and recommendations for essay revision) feedback to students. The user himself formulates a prompt for grading test assignments or creative work, laying down all the necessary criteria. Figure 8 shows an example of ChatGPT checking students' creative work and its recommendations on essay revision.

Sample Prompt: You are an RFL teacher. Your student has written a letter where he tells about his girlfriend. Analyze the letter, make recommendations, correct any mistakes, if any, and give a grade.

Essay of an RFL student⁸:

I want to tell you about my friend. I have a friend in Russia. Her name is Ekaterina. For her friends she is Katya.

She is 20 years old. Katya is a girl of average height 160 centimeters and average build. She is a very beautiful girl. She has white colored skin, large blue eyes, small nose and lips. She has long red hair. She usually wears blue jeans and a bright light-colored t-shirt. When it is cold, she wears warm clothes. She is a student. She is studying to be a doctor. She does a lot of homework and goes to university.

We like to spend our free time together. We go to movies and concerts, read books, and talk to friends. Sometimes we go to the gym where we work out on exercise machines.

Katya is a good friend. When she is in a good mood, she smiles. She is always glad to come to help in trouble. I like my friend Katya very much.

The use of ChatGPT assessment feedback cannot and should not replace the supervisory and evaluative functions of the teacher at the present stage. However,

⁷ Sample prompts for ChatGPT at the community "Classpoint". URL: https://blog. classpoint.io/how-to-use-chatgpt-100-chatgpt-examples-in-schools/ (accessed: December 3, 2023); Sample prompts for ChatGPT at the community "Teachermade". URL: https://teachermade.com/ 50-chatgpt-prompts-for-teachers/ (accessed: December 3, 2023)

⁸ The student's answers are presented in Russian, in the author's version.

the linguodidactic potential of AI in providing assessment feedback cannot be ignored either. We therefore propose to combine assessment feedback from AI with feedback from the teacher within the same methodology.

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GPT + Midjourney bot	Q	:
\overleftarrow{X}_{A} Translate to English		٩
Хд Translate to English В письме ученика наблюдаются следующие ошибки: 1. Избыточное уточнение "В России у меня есть подруга" после "Я хочу рассказать Вам о моей подруге". Это уточнение излишне. 2. Лишнее слово "есть" после "Катя" в предложении "Катя - есть девочка". 3. Опедует уточнить возраст, ведь в 20 лет Катя уже не девочка, а молодая женщина. 4. Вместо "цвета" правильней употребить "кожи белого цвета". 5. Использование слова "девочка" после "Сна чочень красива". 6. Вместо "цвета" правильней употребить "кожи белого цвета". 7. Использование слова "девочка" после "Сна очень красива". 6. Вместо "160 сантиментов" должно быть "160 сантиметров". 7. Выражение "Мы любим проводим" следует заменить на "Мы любим проводить". 8. Вместо "Катя хороший друг" нужно использовать "Катя + хорошая подруга", так как друг может восприниматься как мужской род. 9. Заменить "она всегда рада прийти на помощь в беде" на более естественный для русского языка вариант "она всегда готова прийти на помощь в беде" на более стественные улек унее комоса белого цвета". 8. кочу рассказать вам о моей подруге. Её зовут Екатерина, но для друзей она - Катя. Ей 20 лет. Катя - молодая женщина среднего тосложения. Она очень красивая. У нее кожа белого цвета, крупные красивая". Вот исправленное письмо: Я кочу рассказать		38
и на концерты, читаем книги, общаемся с друзьями. Иногда мы ходим в спортзал, где занимаемся на тренажёрах.		

Fig. 8. ChatGPT's assessment of RFL student's essay

 $Source: screen shot taken by P.V. \ Sysoyev, E.M. \ Filatov \ in the \ Telegram-bot \ @chatsgpts_bot$

In the methodological literature there are examples of how students' interaction with AI-instrument off-class in preparing a draft version of an essay in RFL is embedded in the general methodology of teaching students writing (Sysoyev, Filatov, 2024). In particular, at the stage of the draft version of the essay, students request ChatGPT to provide assessment feedback on the language, structure, and content of the essay using the criteria used by the teacher. In response to the request, the neural network offers students its evaluative comments and

recommendations for essays revision. Students then revise their essays according to the recommendations (if necessary) of ChatGPT and in small groups discuss the assessment feedback from ChatGPT and the changes that were made to the essays according to the AI recommendations. The essays are then submitted to the teacher for review. Recommending precisely to combine students' foreign language practice with the AI tool with traditional foreign language classes, P.V. Sysoyev and E.M. Filatov (Sysoev, Filatov, 2023a; Sysoyev, Filatov, 2023b) draw attention to the necessity of including in the teaching methodology a stage when in small groups students show printouts of the learning discourse with ChatGPT and discuss the results of their foreign language practice with the AI. In this case, the class discussion is a kind of control of that "invisible" for the teacher extracurricular work of the student with the AI tool.

Conclusion

AI technologies and AI-tools created on their basis are penetrating the education system. The following three AI-tools can be used in teaching RFL: chatbots and voice assistants, corpus technologies and ChatGPT.

The paper describes in detail the linguodidactic potential of each AI-tool, which allows RFL students: a) to continue on the basis of extracurricular language practice with AI to form lexical-grammatical speech skills, to develop speech skills, to form sociocultural competence; b) to study authentic language material of different genres and formats; c) to develop the skills of learning interaction in group language projects; d) to develop the skills of learning autonomy, which will allow students to build an individual route of learning RFL in accordance with their professional goals and personal interests.

The authors also draw teachers' attention to methodological aspects of teaching RFL based on AI tools. These include: a) the impossibility of denying the gradual integration of AI technologies into the process of teaching RFL; b) the transition to a new paradigm of learning in the triad of subjects of the educational process "RFL student — artificial intelligence — teacher"; c) the possibility of developing methods of teaching RFL on the basis of AI-tools oriented to students with different levels of language proficiency; d) the development of learning skills; e) the development of the ability to use AI tools for teaching RFL; f) the development of teaching RFL based on AI tools.

The prospectivity of the research lies in the development of private methods of teaching language aspects and types of speech activity based on specific AI tools, as well as in the development of methods of teaching RFL on individual routes based on AI technologies.

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Научная статья

Технологии искусственного интеллекта в обучении русскому языку как иностранному

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Аннотация. В настоящее время технологии искусственного интеллекта (ИИ) и ИИ-инструменты, созданные на их основе, динамично интегрируются в образование, включая и обучение русскому языку как иностранному (РКИ). Цель исследования системное описание ИИ-инструментов, используемых в качестве инновационных средств обучения РКИ, а также выступающих субъектами процесса обучения в триаде «иностранный обучающийся — искусственный интеллект — педагог», и определение их лингводидактического потенциала. В качестве материалов исследования использовались статьи по методике обучения иностранному языку и РКИ, опубликованные в научных журналах. Практическим материалом в работе выступили наиболее распространенные и доступные для широкого круга обучающихся ИИ-инструменты: чат-боты и голосовые помощники, корпусные технологии, нейросеть ChatGPT. В исследовании применялись теоретические (сравнительно-сопоставительный, компонентный и комплексный анализ ИИ-инструментов, классификация, синтез, обобщение) и эмпирические (опросы и наблюдения) методы. Полученные результаты позволили сформулировать лингводидактический потенциал ИИ-инструментов, позволяющий студентам РКИ: продолжить на основе языковой практики с ИИ изучать аспекты русского языка, развивать виды речевой деятельности, изучать культуру России и ее регионов; участвовать в иноязычной практике речевого общения во внеаудиторное время; получать возможность работы с языковым материалом; развивать умения обучения в сотрудничестве при участии языковых проектах; развивать умения учебной автономии,

в перспективе позволяющие им выстраивать обучение РКИ по индивидуальной траектории в зависимости от профессиональных и личностных интересов, потребностей и способностей.

Ключевые слова: методика преподавания русского языка как иностранного, инновационные технологии, чат-боты, нейросеть ChatGPT

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