Scenarios for the Use of Chatbots in Teaching a Foreign Language in the Higher Educational Institution (HEI)

Kateryna POSELETSKA [1]
Svitlana KYRYCHENKO [2]
Olha VLASENKO [3]
Iryna KOVAL [4]
Iryna POTIUK [5]
Silviia SHPENYK [6]

[1] Candidate of Science in Pedagogy, Associate Professor of the Department of German Philology, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, https://orchid.org/0000-0002-0861-7123, poseletska@gmail.com

[2] Candidate of Science in Pedagogy, Associate Professor of the Modern Languages Department, Admiral Makarov National University of Shipbuilding, Mykolaiv, Ukraine, help-english@i.ua, https://orcid.org/0000-0001-8033-6660

[3] Candidate of Science in Pedagogy, Associate Professor of the Department of Professional, Pedagogical and Special Education, Andragogy and Management, Zhytomyr Ivan Franko State University, https://orcid.org/0000-0001-7258-2108, wlasolia@gmail.com

[4] Candidate of Phsycological Sciences, Associate Professor, Departament of Foreign Language Education and Intercultural Communication, Khmelnytskyi National University, https://orchid.org/0000-0002-2048-0000, iryna-koval@ukr.net

[5] Ternopil Volodymyr Hnatiuk National Pedagogical University, https://orcid.org/0000-0002-5363-4141, i.semenyshyn@gmail.com

[6] Candidate of Pedagogical Science, Associate Professor, Department of Foreign Languages, Uzhhorod National University, silvia.shpenik@uzhnu.edu.ua, https://orcid.org/0000-0002-8953-0459

Abstract: *Nowadays, there are a huge number of applications that help to learn foreign languages in HEIs. The article gives a concept of chatbots, their application scenarios for the development of speaking skills of HEI students learning English; defines the role of chatbots in acquiring language practice; analyzes today's chatbots for learning foreign languages; investigates the functions of chatbots for modeling language behavior. Despite their imperfect intelligence, large companies (e.g., Apple, Google, and Amazon) have already placed chatbots in the center of their flagship devices. Chatbots are now filling the Internet, acting as guides, salespersons, and assistants. However, chatbots designed as communicators have yet to make a meaningful contribution. Perhaps the most natural vocation is to be a partner in learning foreign languages. In this article, we'll look at some of the chatbots developers are offering to help you learn foreign languages. Now chatbots can radically change interacting with the digital world, from reading and writing to listening and speaking. Although this reality has been possible for more than a decade, there is little direct evidence that the golden age of spoken-agent language learning opportunities has arrived.*

Keywords: *Virtual interlocutors, artificial intelligence, robot, learning English, language practice.*

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Introduction

The relevance of the topic of research in the international context of similar studies in this field is that comprehensive studies of existing multimedia teaching tools (electronic courses, programs, textbooks, etc.) have shown that they can fully form language competence of students (mastery of the phonetic, lexical and grammatical aspects of language), but the speech competence - the ability to speak the language - is formed partially.

Speech activities such as listening, reading, and writing can be developed, but not the main type - speaking. Speaking can be developed through communication with another person, preferably a native speaker. In the conditions of Ukrainian education, as a rule, this role is played by a teacher.

This article is devoted to proving how you can practice oral and written English with the artificial intelligence-based bots described above at no cost at all. The article discusses the benefits of using chatbots in HEI language practice. The article provides a list of programs of this type.

The importance of using chatbots as foreign language learning partners is reflected in the works of domestic and foreign researchers. Many researchers think that chatbots will eventually become the ideal language learning partner, allowing us to learn multiple languages anywhere, anytime and at our own pace.

Researchers of today's communication abilities of chatbots L. Viktorova (2021), V. Hrytsyshyn & N. Habrusyeva (2020) agree that communication with chatbots is often only a question-answer exchange. Therefore, in their opinion, it is necessary to fight the problem, because if the chatbot finds it difficult to continue the direction of thought, users quickly lose their interest. A. Turchyn (2020) in his research proves that at the highest level of language proficiency it is possible to use the communicative environment of the Internet (chat, forums, conferences, mail) to communicate with native speakers. According to I. Nyshchak et al. (2020), the formation of speaking in conditions of minimal participation of a teacher or other real interlocutor is one of the main problems in learning any language with the help of computer technologies. M. Mutiwokuziva et al. (2017) believes that part of the problem of forming the skill of speaking with the help of technical means can be solved at the initial stage of training, for example, teaching English with the help of special programs, chatbots (Chatbot).

The aim of the article is to provide a concept of chatbots, their use for developing speaking skills of students in HEIs who are studying English; to determine the role of chatbots in acquiring language practice; to analyze today's chatbots for learning foreign languages; to investigate the functions of chatbots for modeling language behavior.

The concept of chatbots, its functionality

In English "chatbots" are virtual interlocutors, or chatbots - computer programs designed to facilitate communication and the process of communication, capable of maintaining a dialogue with a person, using speech recognition technology or, working on preconfigured scenarios "questions - variant of the answer" (Horodyskyi, 2020).

Chatbots are now very popular applications that can perform completely different functions, such as entertaining and supporting activity on a business page or acting as a consultant.

The use of chatbots in English is widely used in the educational environment of the HEI. Due to the increasing role of information and communication technologies in a foreign language, the use of chatbots is necessary because information and communication technologies (ICT) expand the scope of the educational process, increasing its practical orientation, contributing to the intensification of independent work and increasing cognitive activity. Information and computer technologies make it possible to effectively supplement the language learning process.

With the widespread use of chatbots, many are wondering how they can help learn English.

First, there is the individualized approach, meaning that when students study in a group, they have to wait their turn to speak. Opportunities to talk face-to-face with a teacher to correct grammatical or phonetic errors are quite limited. On the other hand, communicating with a chatbot is a one-on-one English class, and at any convenient time for learners and at a reasonable price (Shevchenko, 2021).

Second, many chatbots are made as games, that is, they have game and entertainment elements built in beforehand. For example, users can get points, gems, or other prizes for practicing regularly or achieving a certain goal.

Gamification turns any language activity into entertainment, which, in turn, motivates the user to practice again and again.

Third, availability is twenty-four hours a day, so students can chat with the chatbot at any convenient time if needed, even at night. He answers these questions immediately, and you can talk to him indefinitely.

And finally, there are no evaluations and shyness, as when communicating with a live person. The bot does not judge anyone. It will not blink its eyes in surprise, which can sometimes be characteristic of humans, sigh or shake its head if a user makes a mistake. Being alone with the virtual assistant, a person will not be ashamed if he or she used the wrong verb tense or mispronounced a word. It helps to remove the language barrier and start talking quickly (Sisyak, 2020).

The role of chatbots in acquiring language practice

It should be noted that one of the most important conditions for mastering the English language is the practice of its use. In today's world, it is language practice, i.e. oral speech, that comes to the fore. In the context of today's education aimed at "improving grades" for the SFE (State Final Examination), students are most often deprived of the opportunity to practice speaking because of the lack of hours allocated in the program for the study of such an important subject in the business and cultural world. Even if you learn English with the right methodology, written and oral communication is still the most important part of learning. This is where chatbots come to the rescue with an interesting approach to language learning, previously unknown and unapproachable, but so attractive and unobtrusive.

Regarding language learning time, it is proposed to use chatbots as additional extracurricular work of students in the initial stages of language learning, because classroom hours for this, unfortunately, are not provided. But the world is changing, and in the foreseeable future the partial use of chatbots in the classroom will be justified, because ICT is used almost everywhere. It should be noted that many bots have passed the Turing test and it is difficult to guess who is a bot or a human in front of us (Fryer & Carpenter, 2006).

The design of a chatbot's personality has received special attention. At the stage of development of technologies of creation and full-fledged operation of chatbots, i.e. programs developed on the basis of machine learning technologies and neural networks to achieve certain human goals that require significant human intervention (for example, to prepare the case, to directly task certain patterns of behavior, in particular the answer-question) (Berbets, 2021; Nenko et al., 2022; Onishchuk et al., 2020; Sarancha et al., 2021).

The search for a solution to the difficult question of learning English led to the topic of chatbots as language stimulators. In simple words, you can correspond, and in some cases even communicate by voice, with smart

jobs that answer quite correctly. And another advantage of practicing English with bots is that their English is always literate and they know idioms (Satar, 2021).

Here is a list of chatbots for language practice in HEIs:

1. Mike - www.pandorabots.com - English practice interlocutor;

2. Elbot - www.artificial-solutions.com - English practice interlocutor;

3.Cleverbot - www.cleverbot.com - English practice interlocutor; with voice communication capability;

4. Zabaware-www.zabaware.com - bot interlocutor, able to pronounce phrases;

5. John Lennon - www.triumphpc.com - English practice interlocutor, the interlocutor is a famous British rock musician, singer John Lennon;

6. English version - www.p-bot.ru - English version of the chatbot.

Chatbots are now beginning to be actively incorporated into the study of English. This is largely justified, since artificial intelligence fully meets human expectations. Among the advantages, once again, are the individual approach, gamification, accessibility twenty-four hours a day and, finally, the absence of grades (Vanichvasin, 2021).

Today there are many programs for smartphones and tablets and other chatbots for computers, which you can safely use when learning any language, not only English. Speaking of disadvantages, they are insignificant, because chatbots are offered as an additional language aid. Self-learning chatbots can compensate for existing language problems very elegantly, and in the near future can overcome them completely.

Today's chatbots for learning foreign languages

Among today's chatbots there are partners for learning foreign languages, Mondly and Cleverbot stand out.

Mondly is a platform for learning 33 languages, available for use on many systems: iOS, Android and web. It is used by 50 million people in more than 190 countries. Since its release in 2013. Mondly has been gradually proving the value of "innovation", which is one of its core values.

Mondly's chatbot provides adaptive lessons that encourage users to practice what they learn in everyday situations-such as making restaurant reservations. In addition to personalized scripts for all of its languages, an important achievement of Mondly was the development of a database of key phrases (Roos, 2018).

Mondly also serves to create specific learning patterns for groups of learners capable of combining certain traits, such as similar mistakes.

These days, the Mondly chatbot strives to be the closest to real interaction as it understands spoken language, is able to respond with a human voice, change outfits based on the topic of discussion, and use gestures and facial expressions to create dynamic dialogues. The ultimate goal of chatbot technology is to promote the most realistic communication possible, keeping memories, thoughts and speaking just like a human, the ability to be a friend and someone who will help, teach and maintain an emotional connection.

Cleverbot has its own brand of artificial intelligence software, the key concept of which is context.

Cleverbot is a web application that is controlled by an artificial intelligence algorithm and will hold conversations with people in English. Later added support for several languages (Shishkina, 2015).

This program was created in 1988 by the British scientist Rollo Carpenter, who was working on the development of artificial intelligence. Carpenter and his colleagues are working on a new version of Cleverbot that understands the similarity of words, phrases, sentences, and broader intentions at a deeper level, completely independent of the letters of the words themselves. This allows the construction of raw data in similarity to the way people compose sentences.

While most chatbots today are limited in scope, Cleverbot aims to be a different interlocutor for each user, and sincerely engage users in the conversation.

Before we talk about specific strategies for using chatbot technology in foreign language learning, we would like to note that digital learning and conversational agents have already begun to address the problem (Hrytsyshyn & Habrusyeva, 2020).

The obvious solution to this problem (i.e., more reliable chatbots) will certainly come, but by then using multiple chatbots at the same time can fill the gap.

One of the main factors for the success of such an approach is to develop a clear mechanism for interacting with the chatbot groups.

Currently, most chatbots are designed to communicate with the average user. Narrowing the focus to specific types of students can greatly enhance their usefulness. This is an area that language-learning programs such as Duolingo and, mostly, Mondly are already using (Sosnina, 2013).

For standalone chatbots that are not part of language platforms, a simple feature that allows the chatbot to focus on linear questioning can be used by some students.

While simple question-answer interaction may bore adults, it would be dangerous for preschool and early elementary school students learning a new language.

In the case of chatbots, a conversational agent with a celebrity voice comes to the rescue. You can precede him, hence he can be moved to a certain degree, muscular, athlete, etc.

The introduction of the word-formation component within the dialogue with the chat-bot in HEI can be done in two ways: passive and interactive. The passive means to rely on theoretical material (lectures, tables, etc.), pre-prepared by the teacher. When the time for assimilation of the theoretical material (block pause) expires, the interactive phase begins. The chat-bot can send a message containing a question with the choice of the correct answer (blockchain) related to the topic of the formation of a new word, for example by suffixal method (Chubatyuk, 2018).

The choice of the social network as the starting platform for the introduction of a word-forming chatbot is due to the popularity of the resource and the average time spent there by users. Psychologically, messages from the chatbot will form part of the user's daily lifestyle, and the tasks sent will become part of the "online routine". Thus, the presence of a chatbot in the list of dialogs becomes a natural phenomenon.

Chatbots for modeling the language behavior

Chatbot Eliza, which simulates human language behavior, was created about 30 years ago. It was this program that started the whole family of Chatbot programs.

According to the principle of chatbot programs can be divided into two types.

The first and common type is based on the introduction of frequent speech utterances and their correspondences. The application contains language patterns and the connections between them. For example, if you write a work: "Hello!", he will answer: "Hello / Good afternoon / Hi, etc.".

The second type, which is under development, is the "verb". Such programs are based on the theoretical position that the verb is the semantic center of a speech utterance. The verb lexeme at the semantic level organizes the situation. For example, the verb "to run" in the direct sense implies the obligatory presence of an animate subject of action (who?) and the circumstance of place (where?). The program constructs language statements

according to the connection between the verb, the object and its features (Fryer et al., 2019).

As a rule, both types of self-learning programs use the experience of communicating with a person, that is, memorizing his written response to a communicative construct.

The principles by which both programs work (function) correspond to the basic theories of linguistic communication in linguistics. The first type of chat-work corresponds to the principles underlying the theory of B. M. Gasparov's theory of communicative fragments (CF). According to this theory, which does not build statements every time anew, choosing phonemes to build word forms, considering grammatical and lexical meaning, does not build syntactic constructions. The speaker's linguistic consciousness contains the CF "integral segments of speech of the stationary particles of his speech experience, which he operates in the creation of a speech utterance".

The second principle corresponds to the verbocentric theory, according to which the verb is the center of any utterance (Shishkina & Popel, 2013).

Nowadays, chatbot programs have reached a high level of execution. Outwardly, dialogues with them look quite logical and natural. These programs are the most popular in the Internet space, chatbots are launched into real chats, and the speaker can rarely distinguish whether he or she is conversing with a real person or a chatbot. Often a chatbot's presence in a chat room is not hidden, but rather flaunted, creating publicity and attracting visitors. The chat-bot is endowed by its authors with personal qualities, imitating a certain character. We can talk about the existence of such a phenomenon: people are more interested in creating a communicative space with chatbots than with real interlocutors.

Today, the most popular and "highly developed" chuck-bot is Alice (A.L.I.C.E. - Artificial Linguistic Internet Computer Entity). The robot is very simple. Its job is to find a pattern-answer to an input question. This robot belongs to the first type.

As other popular used chat-work programs of the first type we can cite Anette - a German-language chat-robot, BRIAN - a bot imitating an eighteen-year-old college student in Australia, John Lennon Artificial Intelligence Project - a bot imitating John Lennon's personality. These are chatbots such as DoBot, Elbot, GuruBot and so on, (Mutiwokuziva et al., 2017).

Chatbots are still under development.

The most common bot is ChatMaster. It is a bot of the first type, which, maybe, solves the problem of developing the skill of speaking by technical means in teaching language as a foreign language.

Of course, chatbots have no intelligence. It is rather a successful imitation of speech activity: the robot uses surface language structures, they are devoid of meaning, devoid of a reference index - not related to the experience of the "interlocutor". In essence, it's a "bound vanity."

However, chat-work is quite capable of replacing the interlocutor at the initial stage of language acquisition. There are a number of advantages of using chat-work technology in teaching a foreign language at the initial stage in the HEI (Fryer et al., 2020):

1. Opportunity for independent (without a human resource) study of speech. Students will be able to develop speaking skills during independent study.

2. If you apply the technology of voicing each cue of the chat-robot, the student learns the speech activity in a complex: speaking (creating a speech statement), writing (introducing your speech statement into the program), listening (listening to the speech statement chat-robot), reading (reading a speech statement) chat-robot).

3. Students can practice using common language genres in a variety of standard communication situations.

4. The use of chat-bot technology in the teaching process will relieve the instructor of the burden of handling standard dialogues with each student. The instructor has time to supervise everyone, but there are more creative exercises in the class than traditional training and summarizing exercises.

5. Communicating with a chat-robot allows the student to further adapt to chatting with real native speakers.

Nevertheless, there are also a number of certain disadvantages in the use of such technologies in teaching a foreign language (Shawar, 2017):

1. Students do not develop speaking skills in this sense. They do not say their statements out loud (orally).

2. A conversation with a chat-robot still does not fully simulate the standard communicative situation of direct communication with the interlocutor, when the skill of speaking and listening is used.

3. The chat-robot program may make speech errors in the language situation, inadequate response to statements.

Conclusion

The result of the study is that the article gives the concept of chatbots, its use for the development of speaking skills of students in HEIs who study English; defines the role of chatbots in acquiring language practice; analyzes today's chatbots for learning foreign languages; investigates the functions of chatbots for modeling language behavior.

At the initial stage of training the vocabulary of students is limited and includes a known, fixed in the linguistic minima calculable number of units that can be introduced into the program. The basic linguistic genres (congratulations, farewells, thanks, compliments, congratulations, forgiveness) as well as behavior in standard communicative situations, such as: "At the hospital", "At the post office", "In a restaurant", etc. The unfolding of the communicative situation is predictable and fixed. Predominantly stable expressions are used. At the initial stage of learning the student may experience a psychological speech barrier and a phenomenon called by psychologists "responsibility" in the creation of a speech utterance. As a rule, it is easier to "talk" to a computer at the first stage of language learning than to a real person.

The use of chat-robot removes a number of significant problems in the formation of speaking skills by technical means. But the use of such technology is possible only at the initial stage of learning, while the vocabulary is fixed and minimal. Chat-robot cannot produce and respond to language play, and it is the mastery of forms of language play that is the main indicator of students' language acquisition.

To summarize, we can say that the use of chatbots in the education system as a whole is only a matter of time. With the transition of education to a digital environment, there is a need to master new technologies that will contribute to the success of the teacher's work with students in HEIs. In this article the case of using a chatbot in a foreign language education to learn a foreign language vocabulary was considered: how it is possible and what it is needed for. In other areas dominated by chatbots, however, there has been significant advancement. Simple searches on the Internet show that adjusting one's home environment (e.g., heat, light, etc.) as well as navigating one's media (music, movies, etc.) takes place through interaction with one of several installed conversational agents (chatbots) such as Google, Siri or Alexa.

The results of the study lead to the creation of an appropriate project and its further implementation. Thus, it seems to us that chatbot as a means of learning foreign language vocabulary (English) in the aspect of word formation has good prospects.

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