

## The Use of Artificial Intelligence Methods in the Formation of Communicative Skills in Teaching Foreign Languages Online

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### Abstract

*Today, the theme of the use of AI in education is in the center of many researches. In fact, with the rapid development of artificial intelligence (AI) technology, it is increasingly being utilized in the field of education, particularly in foreign language teaching. The concept of education meta-universe is also gaining popularity, and the emergence of ChatGPT has revolutionized traditional foreign language teaching methods. AI technologies such as speech recognition, machine translation, and natural language processing have proven to be effective tools to help students improve their foreign language learning outcomes. However, the application of these technologies also brings some challenges and problems. This paper aims to discuss the impact of AI on foreign language teaching, analyze its advantages and disadvantages, explore its future development trend, and provide suggestions for educators to make better use of AI technologies to assist foreign language teaching.*

**Keywords:** FL (foreign language), AI (artificial intelligence), education, method, approach, challenge, digital competency.

### 1.0. Introduction

With the rapid development of AI technology, it has been widely applied in various fields around the world, including education. In China, the government has emphasized the importance of integrating AI technology into education, particularly in the context of foreign language learning. In 2018, the Ministry of Education released a plan to promote the integration of AI and education, calling for the development of AI-based education resources and applications. Meanwhile, in the United States, major tech companies like Google and Microsoft have been investing heavily in AI education technology. Google's "AI for Social Good" initiative aims to use AI to solve some of the world's biggest problems, including education (Ахмедов, 2022). Microsoft has launched several AI-powered education tools, such as Learning Tools for OneNote, which uses machine learning to improve reading and writing skills.

The concept of an "education meta-universe" has also gained popularity worldwide. The idea is to create a virtual world where students can learn and interact with each other and with AI-based virtual teachers. In this way, AI technologies have the potential to transform traditional foreign language teaching methods and offer new possibilities for language learning. In particular, AI has played an increasingly significant role in foreign language teaching. Speech recognition technology enables students to practice speaking and listening skills with accurate feedback. Machine translation technology provides immediate access to foreign language materials and facilitates communication between students of different languages. Natural language processing technology helps to identify and correct errors in written work.

However, the application of these technologies also brings challenges and potential disadvantages. For example, AI may not be able to fully replace human teachers, especially in areas such as language expression and interpersonal communication. The mechanized and standardized teaching style of AI may also lack the human touch and personalized

teaching styles that some students require. Moreover, the reliability and accuracy of AI technology can be compromised, leading to incorrect feedback and misleading information.

## **2.0. Ways of Using AI in Teaching Foreign Languages Distantly**

The application of artificial intelligence technology in foreign language teaching has started to become more and more common. The following are some typical application scenarios:

### **2.1 Speech recognition technology**

Speech recognition technology has proven to be a valuable tool in foreign language learning as it can significantly improve students' communication skills. This technology enables learners to receive immediate feedback on their pronunciation and intonation, which is essential in developing their oral expression skills. As a result, students can become more confident in their ability to communicate in a foreign language, and they are more likely to engage in conversations with native speakers. Moreover, speech recognition technology can help learners improve their listening and comprehension skills. Students can use speech recognition software to listen to recordings of native speakers, and the software can identify any mistakes in their pronunciation. This enables students to hear the correct pronunciation and intonation of words and phrases, thereby improving their understanding of the language. Speech recognition technology also provides learners with the opportunity to practice their oral expression skills using training materials and oral practice. Students can use the software to record themselves speaking, and then compare their recordings to the original recordings of native speakers. This helps students to identify areas that need improvement, and they can work on them to enhance their oral expression skills. In addition to these benefits, speech recognition technology also enables learners to interact with the language in a more natural way. Students can engage in conversation with the software, which can respond to their questions and comments. This creates a more interactive and engaging learning experience, which can help students develop their language skills more effectively. Overall, speech recognition technology is a valuable tool in foreign language learning, and its continued development will likely lead to even greater benefits for students.

### **2.2 Machine translation technology**

Understanding foreign language text and translating it into your own language are two important challenges when learning a foreign language. Machine translation technology can help students better overcome these challenges and improve the efficiency of foreign language learning. First, machine translation technology can help students better understand foreign language texts. Especially for those difficult to understand language difficulties or rare words, students can use machine translation tools to get better explanation and understanding. When students encounter difficulties in reading foreign language articles or listening to foreign language recordings, they can use machine translation tools to quickly obtain accurate translation results, so as to better understand foreign language texts. This helps students improve their language understanding abilities in the process of foreign language learning, gradually adapt to the foreign language environment, and lay a solid foundation for higher level foreign language learning. Secondly, machine translation technology can help students improve the efficiency and quality of translation. In foreign language learning, translation is an indispensable link, but translation usually requires a lot of time and effort. Through machine translation technology, students can complete translation tasks more quickly, thus having more time and energy to learn and consolidate foreign language knowledge. In addition, machine translation technology can also improve the accuracy and quality of translation, avoid errors in translation, and improve students' translation level. These can help students master foreign language knowledge faster, improve their language skills, and better communicate and cooperate with the foreign language community.

### **2.3 Natural Language Processing Technology**

Natural language processing (NLP) technology is a field of artificial intelligence that focuses on the interaction between computers and human language. It is widely used in foreign language teaching to help students better understand the language they are learning. One of the main advantages of NLP technology is that it can provide students with personalized learning materials. By analyzing a student's performance in various language areas, NLP software can generate customized learning materials that meet the student's specific needs. For example, if a student is struggling with vocabulary, the software can provide them with a list of words to practice. Furthermore, NLP technology can help students learn a foreign language in a more natural way. By analyzing authentic language data such as news articles, social media posts, and conversation transcripts, NLP software can help students learn how to use the language in real-world situations. This can make language learning more engaging and relevant for students. Overall, NLP technology has great potential to revolutionize foreign language teaching and learning. As the technology continues to develop, we can expect to see even more innovative applications that will help students learn a foreign language more effectively and efficiently.

### **2.4 Chatbot Technology**

Chatbot technology is an innovative and effective way to enhance students' foreign language skills. Unlike traditional language learning methods, which may lack the interactivity and flexibility that students need, chatbots provide a personalized and interactive learning experience. By interacting with chatbots, students can practice speaking and listening in a natural and conversational way, just like they would with a real person. Chatbots can provide instant

feedback and correction, which is particularly important for language learners. Students can receive feedback on their pronunciation, grammar, and vocabulary usage, and they can make adjustments on the spot. This can help them to improve their language skills more efficiently and effectively. In addition to providing practice opportunities, chatbots can also serve as a source of language learning materials. For example, ChatGPT can provide learners with real-time translations, definitions, and explanations of complex grammar structures. Learners can also access a wealth of conversational phrases and expressions that can help them to communicate more effectively in their target language. Chatbots can be a valuable tool for learners who may not have access to native speakers or language tutors. By engaging with a chatbot, learners can still receive conversational practice and feedback, even if they are unable to practice with a human tutor. Chatbot technology offers a promising and exciting way to improve foreign language learning outcomes. As technology continues to evolve and improve, we can expect chatbots to become even more sophisticated and effective in helping learners achieve their language learning goals.

### *2.5 Face recognition*

Capturing facial expressions, such as changes in the mouth, through face recognition technology can help students better learn a foreign language. When learning a language, students need to constantly practice speaking and listening, and face recognition technology can help students better grasp changes in speech and intonation. For example, when learning English, students need to master the pronunciation rules and phonetic features of English. Through face recognition technology, students can observe the teacher's mouth shape change and pronunciation style in real time, so that they can imitate and learn better. In addition, face recognition technology can help students better understand the facial features of a foreign language when pronouncing and intoning different words and find the key points, thus improving their oral expression and listening comprehension.

### *3.0. Methods of learning English using artificial intelligence methods*

Methods based on artificial intelligence are of undoubted interest for teachers of higher educational institutions. In the studies of Liu et al. (2021), an application for studying the concept of a foreign language is proposed, combining the study of the concept of English and artificial intelligence technologies, such as automatic generation of options and speech recognition analysis. The app is based on a WeChat mini program aimed at helping and conducting English language learning by providing various exercises such as multiple-choice and phonetic questions. To generate incorrect variants of multiple-choice questions, scientists utilize new words from WordNet. It is a large English lexical database in which word combinations are detected using statistical processing of natural language and neural network models, such as Continuous bag of words [CBOW] in Word2vec or BERT [Bidirectional Encoder Representations from Transformers]. The user's voice input is built into the speech interaction for recognition and analysis. Based on the framework, scholars expect that this application will be combined with other artificial intelligence [AI] technologies to analyze user performance and adjust the subsequent curriculum accordingly (Liu et al., 2021).

The study by Ogbonna et al. (2019) provides an example of the use of synchronous computer-mediated communication [SCMC] in English lessons at Wuhan University (China) during the COVID-19 pandemic. The goal is to identify the advantages and disadvantages of using applications with synchronous technologies in online English courses. The data set consists of ethnographic observations and in-depth interviews with the teacher and students. Thematic analysis shows that the advantages of SCMC include the availability of extensive learning resources, the availability of instant information exchange, and a relatively calm learning environment. The two main drawbacks are that face-to-face communication generally leads to the teacher showing "one person," and the limited screen size reduces eye contact between the teacher and the students. The research (Ogbonna et al., 2019) shows that SCMC can be used during and after a pandemic to stimulate student discussion and cooperation.

### *4.0. Methodology of formation of communicative foreign language digital competency*

Both voice and video blogs are widely used in various fields. Their use in learning English as a foreign language [EFL], mainly at universities, aims at improving the listening and speaking skills of students (Ogbonna et al., 2019; Zhang et al., 2021). Few studies have examined how involving EFL students in creating video blogs can help improve their conversational speech (Liu et al., 2021; McCallum, 2022). Therefore, the publication of Wang and Zou (2021) is a study of the impact of the creation of voice and video blogs on the spoken language of EFL students and their perception of digital multimodal composition based on video blogs [DMC]. Sixty-seven high school students from Guangdong Province, China, participated in the 10-week study. The data included their preliminary and post-test performance evaluations, two videos, a questionnaire, and a semi-structured interview. The research results displayed a positive effect of DMC on conversational speech based on video blogs. The students showed better fluency from the first to the second video blogs. Additionally, EFL students leading video blogs surpassed their colleagues in accuracy but lost in fluency, in which they demonstrated some significant changes (Wang and Zou, 2021).

The Russian experience of testing the methodology for the formation of communicative foreign language digital competency is focused on the use of YouTube video hosting in teaching a foreign language. Portal features included in classroom and extracurricular activities can enhance learning quality (Ezhova and Pats, 2020). By producing, sharing, and commenting on educational videos, YouTube promotes student engagement in a creative and collaborative learning environment. The advantages of the portal in teaching a foreign language are the following. A wide range of video materials – from video lessons created specifically to use in teaching a foreign language to vlogs edited by bloggers, which can also be included in the educational process – make it possible to work with authentic texts, listen to the speech of native speakers, and enter into dialogues with them. The visibility of information makes it possible to increase the efficiency of the learning process. While watching, it is possible to pay attention to articulatory features, facial expressions, and pantomime (Borshcheva and Kuzmina, 2021).

Teachers of Bashkir State University, and Financial University under the Government of the Russian Federation during the survey indicated that it is also important that the student receives information about the appearance of the communication participants and the environment in which events take place. Videos can become a means of providing background information, an idea of the life, traditions, and reality of the countries of the studied language; these contribute to the implementation of such an important requirement of the communicative methodology of language cognition as immersion in a foreign language reality and its comprehension.

### 5.0. Conclusions

In conclusion, the application of AI technology in foreign language teaching has its advantages and potential drawbacks. Educators should be aware of both aspects and make use of AI technology to enhance language learning outcomes while ensuring the proper balance between AI and human teaching methods. The future development trends of AI in language learning are promising, and continued research and innovation will help educators to make better use of these technologies. Among the wide variety of methods, competency-based approaches related to information and communication technologies [ICT] are utilized most often. The authors of the article also suggest that when language teachers conduct courses using SCMC tools or platforms, students should be given wide opportunities to express their opinions. Additionally, most teachers recognize creating instructional videos as the most effective for forming students' creative abilities. According to students, this type of activity also has the greatest learning effect and stimulates creativity, making the learning process more interesting and effective. The consideration of several relevant competency-based approaches is the practical significance of reviewing effective methods of teaching a foreign language to university students in the framework of distance online learning based on national and international experience.

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