The impact of artificial intelligence virtual oral tutoring APPs on Chinese youth's anxiety in oral English learning —— Interview research based on users of artificial intelligence speaking tutoring APPs

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Abstract

Foreign language learning anxiety is a long-standing topic that people use to guide foreign language teaching and the setting of foreign language education scenarios by studying the anxiety emotions that exist in foreign language learning. However, in today's era of artificial intelligence (AI), with the release of ChatGPT, large language model AI technology is widely used. In such a new context, various AI virtual foreign language oral coaches have emerged. Due to the short development time of the large language model technology, the foreign language training model built on this technology is still in the initial stage of development, and the research on this field is very limited. The research on the improvement of foreign language learning emotions brought by GAI is even rarer. The foreign language learning method provided by the AI coach. What help does it have for foreign language learning? Does it alleviate foreign language learning anxiety? It has become a blank in foreign language learning emotion research.

This study used semi-structured interviews with 10 Chinese young people between the ages of 20 and 40. Using the method of thematic analysis, the data of this interview were recorded and analyzed, and the conclusions reached were explained from the control value theory, and it was found that AI robots can alleviate many aspects of anxiety in foreign language oral learning, such as: communicative anxiety, situational anxiety, oral anxiety, hearing anxiety, and cognitive anxiety. It is very friendly to socially phobic people, providing emotional companionship and cognitive support for students who are lonely and helpless in foreign language oral communication, although the effect of foreign language improvement is different for different students, but it has an obvious effect on alleviating anxiety when learning foreign languages, and it is unexpectedly found that the AI robot foreign language coach also has the role of emotional companionship for learners, in addition to helping to alleviate anxiety, it can also provide positive emotional value through care, companionship, communication, etc. The findings of this paper are helpful to understand the help of AI technology on foreign language learning emotions, and to provide support for subsequent research on AI accompanying foreign language learning.

Keywords

1. Introduction

1.1 The emergence of AI oral tutoring APPs in the era of big language models

The term AI (AI) is not new. It was proposed by McCarthy in 1956, and he developed it based on the work of Turing(Cristianini, 2016), Today, the technology of AI is advancing by leaps and bounds, and the definition of AI is constantly changing. The current definition of AI is "computational systems capable of participating in human-like processes, such as learning, adapting, synthesizing, self-correcting, and using data to perform complex processing tasks"(Popenici & Kerr, 2017).The release of generative artificial intelligence (GAI) ChatGPT in 2022 and the emergence of various large language models (LLMs) have triggered a new round of AI revolution. These technologies have promoted the development of chatbots, and at the same time, a large number of artificial intelligence chatbots about language learning and communication have emerged, and foreign language learning assistance software featuring AI oral private tutoring has also sprung up, such as "Call Annie" from the United States and "Hi Echo" from China's NetEase, Inc., and Baidu Wenxin Yiyan, and other AI virtual human coaches that assist in English learning, and the foreign language learning services provided by these platforms are basically similar. Users can choose different scenarios and topics according to their own level and interests, such as travel, work, study, etc., and have natural and smooth conversations with different AI virtual human coaches and different accent styles, voice chat, or video calls, and the AI virtual human coach will give appropriate feedback and guidance according to the user's answers, so that the user feels like chatting with a real person, and the AI virtual human coach can also interpret according to the context. Call Annie, powered by GPT-3.5, adopts natural language processing and machine learning techniques to maintain a humanlike conversational flow(Wan & Moorhouse, 2024), The addition of new technologies such as artificial intelligence has made foreign language oral learning more intelligent and cutting-edge, making up for many shortcomings in traditional foreign language oral learning.

1.2 Foreign language anxiety

Anxiety is a subjective feeling of tension, worry, nervousness, and uneasiness, associated with the activation of the autonomic nervous system. Foreign language anxiety(FLA) is a specific situational anxiety response, which only occurs in the context of foreign language learning, and is different from other types of anxiety(Horwitz et al., 1986) , MacIntyre & Gardner also find that when a student experiences repeated episodes of State anxiety within language contexts, it solidifies into a situation-specific anxiety, French Class anxiety for example.(MacIntyre & Gardner, 1989), FLA as a situation-specific anxiety is a topic that has been of long-term concern. People experience a variety of anxiety, stress, and tension in the process of learning a foreign language, and anxiety often hinders personal growth and progress. What changes will FLA make in the era of artificial intelligence? Will the process of talking to an AI chatbot alleviate anxiety in special situations? This will be the main topic of research in this paper. In addition, according to Tobias's learning guidance model, a theoretical framework for analyzing the cognitive impact of anxiety on the learning process. According to Tobias, the learning process can be divided into three stages: input, processing, and output. At each stage, anxiety has a different impact on the learner's cognitive activity, which in turn affects the effectiveness and efficiency of learning (Tobias, 1979), This paper will analyze the impact of artificial intelligence foreign language oral private teaching on anxiety at different stages of foreign language learning and the improvement of foreign language learning cognition from the three stages: input, processing and output.

1.3 Research Problems

However, due to the short time since the emergence of new technologies, there is less research on the emotions of foreign language learners affected by artificial intelligence oral private tutoring apps, especially the changes in learners' anxiety. There is limited research on how virtual humans can change anxiety during foreign language speaking learning. Therefore, this article uses qualitative research methods to conduct interviews with users of virtual spoken private tutoring apps to study the impact of AI virtual spoken private

tutors on the anxiety of Chinese young people when learning spoken English as a foreign language. The following research questions are asked:

1) Will AI virtual spoken speaking private tutors alleviate anxiety in foreign language learning?

2) How does the AI spoken private tutoring APP relieve anxiety in English speaking learning?

2.   Research design and research methods

This study used semi-structured interviews to collect all data, and used targeted sampling to select a total of 10 interview subjects on China's three major social platforms (WeChat, Weibo, and Xiaohongshu), with ages ranging from 18 to 40. 0.5-1 hour interview. The interview questions covered background information, software usage scenarios, frequency motivation, learning goals and expectations, emotional impact, software functions, cognitive improvement, self-efficacy, etc.

3.   Research result

3.1   Knowledge input stage

Relieve listening anxiety, pronunciation is standard and can be listened to again and again. On the one hand, the design of the artificial intelligence foreign language oral learning platform app generally allows all conversations to be listened to repeatedly, so during the user's communication process, if he does not hear clearly what the other party outputs. Listen back again, so you don't have to worry too much about whether you didn't understand the sentence, which will affect your anxiety during the listening input stage. The foreign language pronunciation of the artificial intelligence speaking coach is very standard American or British pronunciation, which greatly reduces hearing impairment for learners and relieves anxiety to a certain extent. If you really don't understand, you can also watch the real-time translation and receive the information faster.

3.2   knowledge processing stage

Relieve cognitive anxiety, increase information and encourage positive emotions. In addition, when learners do not know much about a certain issue, or do not have a very professional understanding or know how to express themselves professionally, they can ask questions to the AI, and the AI will give a positive response and guide them to understand the issue. For knowledge in professional fields, on the one hand, learners can gain new cognitive enhancement and information increment through AI's wonderful and professional answers. On the other hand, AI answers can enrich learners' foreign language corpus and gradually transform them into their own foreign language expressions. Therefore, users do not have too much cognitive anxiety when faced with topics they do not understand. On the contrary, when users actively ask questions, they can also receive positive responses from AI and the platform, thereby further enhancing confidence and alleviating anxiety. As the interviewee Lily said: "AI is a very timely response in terms of response, and the content of the response is very good and of very high quality, so in terms of this kind of communication experience, it is very good for you. There is a positive promotion effect".

3.3   Knowledge output stage

Relieve social anxiety, a paradise for Type I people with social anxiety. "Sociophobic Type I people" comes from the MBTI personality test, which has been very popular in the past two years. This side divides people into 16 types of personality, and they are mainly divided into two categories, one is type E personality and type I personality , E-type personality is more extroverted, and I-type personality is more introverted and sociophobic. With the popularity of personality test games, many young people are also willing to take part in such tests to show off their personalities. In this study, it was found that many interviewees mentioned that this platform is very friendly to Type I people and does not require real interpersonal communication. Facing artificial intelligence coaches can make them more comfortable and stress-free. At the same time, , like the Hi, Echo platform, it will also display the personality models of the artificial intelligence coaches provided

by the platform. Currently, the three AI coaches on the platform are all E-type personalities. On the other hand, interviewees generally mentioned a phenomenon that the artificial intelligence speaking coach will actively respond to any questions from users, rather than leaving the user's conversation unresponsive. This provides positive emotional support for users to continue communicating or increase their engagement in chat, and also alleviates social anxiety in the social process. "He won't let my words fall to the ground. He will respond to whatever I say" (Interviewee xi).

Relieve situational anxiety and start chatting anytime and anywhere during your alone time. Since these artificial intelligence software platforms have no time and space limitations, you can start your foreign language oral practice training in any situation. In interviews, it was found that most people said that they would choose their own time to practice, and occasionally kill time. Use it when needed, but not in situations where other people are present. Interviewee KK: "Because there are many people outside, I feel embarrassed, so I just want to talk to them." Therefore, learners will choose to talk to AI without the presence of others, thus easing the interpersonal relationship such as the presence of others. Situational anxiety.

Relieve speaking anxiety and use technology to assist in obtaining corpus. In this interview, it was found that the AI platform used by some interviewees can provide learners with keywords on related topics. Users can organize language based on keywords, which reduces the anxiety of expression due to lack of foreign language corpus. In addition, when users face topics that they are not very good at expressing, they will choose to ask the AI from the perspective of a questioner, thus putting themselves in a safer position. Such an approach also relieves users' anxiety about barriers to oral expression. For example, interviewee KK said: I still seem to play it safe... I will throw questions to him and let him answer more... I don't have to worry about saying that I must lose a lot of things, or that I will answer a lot of things."

4.   Conclusion And Discussion

Through this study, it is concluded that artificial intelligence robots can alleviate learners' anxiety in many aspects through the design of communication methods and software APPs in foreign language communication, such as: communication anxiety, speaking anxiety, listening anxiety, cognitive anxiety, error anxiety, It is very friendly to people with sociophobia and provides emotional companionship and cognitive support to those students who are lonely and helpless in oral communication in foreign languages. Although the effect of improving foreign language varies for different students, it can alleviate the problem of foreign language learning. Anxiety has an obvious effect, and it was unexpectedly discovered that the artificial intelligence robot foreign language coach also has an emotional companionship effect on the learners. In addition to helping to alleviate anxiety, it can also provide positive emotional value in terms of life and growth in terms of non-language learning through care, companionship, communication, etc., and this emotional value can assist learners' foreign language learning skills from the side. promote.

The findings of this article not only help to understand how artificial intelligence technology can help anxiety in foreign language learning, and provide support for subsequent research on artificial intelligence accompanying foreign language learning, but also suggest that subsequent research can focus on emotional companionship and emotional stimulation of learners. direction for research.

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