



CALL RESEARCH BRIEF

Summer 2023

CALICO CALL Research Briefs are short summaries of current research and scholarship in computer-assisted language learning. Research Briefs are published three times a year, and back issues are available to members at <http://calico.org/CALL-research-briefs>

Title: Summary of effects of artificial intelligence on English speaking anxiety and speaking performance: A case study

Contributor: Dini Noor Arini

Date: 2023-04-25

Original Text

El Shazly, R. (2020). Effects of artificial intelligence on English speaking anxiety and speaking performance: A case study. *Expert Systems*, 38(1), 1-15. <https://doi.org/10.1111/exsy.12667>

Rationale /Overview of the study

Foreign language anxiety (FLA) is a common feeling among language learners indicating nervousness, tension, or unease. This study investigated the use of artificial intelligence (AI) chatbots for managing FLA during speaking practice for 48 Egyptian undergraduates enrolled in an EFL class. This study employed 8-week speaking classes using AI chatbots for the students' speaking partners and assessed both the participants' speaking proficiency and their foreign language anxiety level. Overall, this study found that AI chatbots are promising for further development to improve foreign language learning by facilitating interaction and oral communication. The findings showed that the participants experienced the three aspects of foreign language anxiety (FLA): communication apprehension (CA), fear of negative evaluation (FNE), and test anxiety (TA). However, according to this study, the engagement with AI chatbots did not lower the learners' anxiety.

Research methods

Participants: There were 48 Egyptian EFL undergraduate students (aged 18-20) involved, but 10 of them either failed to respond to the questionnaire or showed up for the research less than half the time.

Methods, Data Collection and Analysis:

Before participants began using the AI chatbot, they were given a 30-minute tutorial to familiarize them with the app. The course lasted 8 weeks and at the beginning and end of each 100-minute class session participants filled out a foreign language anxiety questionnaire. At the same time, their oral communication skills were evaluated using role-playing exercises and IELTS speaking evaluation criteria. The authors then analyzed the data to find out how AI chatbots could increase or decrease the participants' foreign anxiety level and their oral performance.

Results

This study found that due to the fear of failing the course rather than promoting their foreign language, the anxiety levels of the learners were at not so different in percentages before and after the use of AI chatbots. The study also revealed that the interaction with AI chatbots slightly increased the participants' foreign language anxiety. The big difference between total scores on the oral tests in this study showed that the use of AI chatbots in practicing speaking improved the students' oral performance. However, the author did not mention which aspects of speaking had improved. Further research is needed to fully discern the impact of AI chatbots on language learning and learners' anxiety.

Practical Implications

- The author did not consider outside variables and did not explain the difference between the effects of using AI chatbots and regular instruction in students' speaking.
- AI chatbots may have a positive effect on foreign language learning outcomes; therefore, educators, designers, and stakeholders could integrate them strategically into language classrooms in order to maximize learning outcomes.
- AI chatbots provide personalized learning, and teachers can use them to create tasks that are challenging for students yet appropriate for their skill levels.

Recommendations for Teachers

- Teachers can encourage students to reflect on their anxiety levels before and after using the AI chatbots. Students may use this to understand how AI chatbots affect their anxiety levels and choose the best coping strategies for themselves.
- To address the affective condition of the students, teachers can explore the role of foreign language anxiety as a facilitator in their language classrooms.
- Teachers can analyze their students' profiles and anxiety levels to create fun and engaging speaking courses.
- While AI chatbots can be a helpful tool for managing foreign language anxiety, they are not a substitute for human support. Teachers should provide additional support to help students manage their anxiety, such as one-on-one coaching or small group discussions.

cite as: Noor Arini, D. (2023, June). Summary of effects of artificial intelligence on English speaking anxiety and speaking performance: A case study by El Shazly. *CALICO CALL Research Briefs*. Retrieved from <https://calico.org/CALL-research-briefs>.
