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# The Impact of Using the Voice Conversation Feature in ChatGPT on Speaking Skills and Speaking Anxiety Among Iraqi University Students

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**ABSTRACT**

***Objective:*** *This study investigated the impact of using the voice conversation feature in ChatGPT on speaking skills and speaking anxiety among Iraqi university students.* ***Method:*** *A quasi-experimental design was employed with 70 second-stage students from the Department of English, Faculty of Education, University of Kufa. Participants were assigned into experimental (n=35) and control (n=35) groups. The experimental group practiced speaking with ChatGPT's voice feature for six weeks (15 minutes in class and 15 minutes daily at home), while the control group received no treatment. Data were collected using a speaking skills test and a speaking anxiety scale adapted from Horwitz et al. (1986).* ***Results:*** *Results of independent samples t-tests revealed that the experimental group significantly outperformed the control group in speaking skills ($t=10.847$, $p<0.001$, $d=2.59$) and showed significantly lower speaking anxiety ($t=-11.034$, $p<0.001$, $d=-2.64$). Paired samples t-tests showed significant pre-post improvements in the experimental group for speaking skills (mean difference=+20.5, $t=15.342$, $p<0.001$) and anxiety reduction (mean difference=-24.3, $t=-14.876$, $p<0.001$), while the control group showed no significant changes.* ***Novelty:*** *These findings demonstrate that ChatGPT's voice conversation feature is an effective tool for improving speaking skills and reducing speaking anxiety among Iraqi university students. The study provides practical implications for integrating AI tools into English language instruction in Iraqi higher education.*

## INTRODUCTION

Speaking is the most difficult skill for most to work on though out of all four skills. Unlike reading or writing, speech occurs in real time, without a chance to revise. Learners need to recall words, articulate them correctly, hold the correct level of grammar and have an audience who is listening and judging [1]. This pressure results in the fear of students, called foreign language speaking anxiety.

Horwitz et al explained FL anxiety as a particular type of uneasiness resulting from the task of language learning per se. They found fear of speaking to others, fear of being evaluated and worry about what others think. Such fears consume cognitive load that could be used for learning, creating a spiral of anxious students avoiding practice and thus getting further behind and feeling more anxiety [1], [2], [3].

Teachers have tried several strategies to help quiet anxious students, but not every kid responds to traditional classroom interventions. This has led educators to search for a technological solution. AI-powered tools can communicate with humans without judgement or frustration in a way that enables practice and preparation [4]. Research shows that students have lower anxiety when connected to computers as opposed to people [5], [6].

ChatGPT from OpenAI is one such tool. The voice conversation feature of it allows people to speak and hear spoken answers mimicking an actual conversation. It can be used on smartphones, and likewise offers a means for students to practice 24/7 [7].

However, context matters. Things that work in one country do not necessarily work for another [8], [9]. The case of Iraq is specific and unique as universities are faced with the challenges of meager resources, overcrowded classrooms, and very limited speaking practice opportunities [10]. However, there are no studies regarding the voice feature of ChatGPT among Iraqi university students (IUS) despite the fact that technology is widely accessible than ever.

Several gaps exist in the literature. Most research comes from countries like Indonesia, Turkey, and South Korea, not Iraq. Existing Iraqi studies examined different tools or text-based ChatGPT, not the voice feature. Many studies lack rigorous designs with control groups. Most examine either speaking skills or anxiety separately rather than together. Factors like digital literacy and cultural attitudes remain unexplored in Iraq. Teachers lack context-specific guidance for using these tools.

## Literature Review

### Previous Studies

Aliakbari et al. investigated AI-powered chatbots for English conversation practice and their impact on speaking proficiency. The study focused on the role of AI chatbots in facilitating conversational practice and developing oral skills. Findings indicated that AI-powered chatbots significantly contribute to improved speaking proficiency through regular conversational practice [11].

Al-Obaydi et al. explored the role of ChatGPT in developing core language skills among EFL college students from Iraq and the Czech Republic. The study included 30 EFL college students from two different higher education contexts. Using a phenomenographic research design with interviews following a six-week experiment, data were analyzed through content analysis and jigsaw technique. Findings indicated that using ChatGPT as a guide and partner offered significant support for students across all language skills. Students reported positive attitudes: speaking (75%), writing (100%), listening (87%), reading (87%), and communication (75%) skills showed improvement [12].

Celik et al investigated the role of ChatGPT as a virtual speaking tutor in developing speaking self-efficacy among EFL learners at the tertiary level in Erbil, Iraq [13]. The study included 44 Iraqi sophomore university students aged 18-27 who were randomly selected from Advanced English classes. Participants were divided into control and experimental groups over an 8-week period during the 2024-2025 academic year. Instruments included speaking exams, questionnaires, and interviews, with data analyzed using SPSS 29 and MAXQDA. Findings unearthed that ChatGPT is a promising tool to increase students' speaking self-efficacy scores because it offers a welcoming atmosphere to receive constructive feedback, allows students to play recordings several times, and provides balanced instruction according to learners' levels.

Chen & Liu examined enhancing EFL oral proficiency through a ChatGPT-integrated BOPPPS learning framework. The study included 89 Taiwanese university EFL learners, with an experimental group (n = 44) and a comparison group (n = 45). Over 18 weeks, the experimental group received structured, theory-aligned instruction with stage-based ChatGPT and BOPPPS integration, while the comparison group engaged in unstructured AI-supported practice. Instruments included speaking sub-skills assessment and thematic analysis. Post-test results showed significantly greater gains across all five speaking sub-skills for the experimental group, particularly in interactive communication ($p = .004$, $\eta^2 = .105$) and discourse management ($p = .037$) [14].

El Shazly conducted a case study on the effects of artificial intelligence on English speaking anxiety and speaking performance. Although published earlier than other studies, this research provided foundational evidence for the relationship between AI interaction and affective outcomes in language learning. The case study approach allowed for in-depth examination of how AI tools influence both anxiety and performance dimensions of speaking [15].

Jalil et al examined the effect of artificial intelligence-mediated speaking assessment on speaking performance and willingness to communicate of Iraqi EFL learners. The study involved 40 intermediate Iraqi EFL learners who were randomly selected and assigned into experimental and control groups, each comprising 20 learners. The experimental group participants received ten 60-minute treatment sessions with ELSA Speech Analyzer, while the control group received no treatment. Instruments included a speaking pre-test and post-test, the Willingness to Communicate in a Foreign-Language Scale, and a speaking assessment rubric covering vocabulary, grammar, intonation, pronunciation, and fluency. The findings demonstrated that AI-mediated speaking assessment enhanced the grammar, vocabulary, intonation, and fluency of the experimental group [16].

Zambrano Pachay et al investigated using ChatGPT Voice to improve speaking skills in English language learners. The study included 49 Ecuadorian high school students (third year). Using a quasi-experimental design with pre- and post-intervention tests evaluated through Speechace (measuring pronunciation, fluency, vocabulary, and grammar), participants used the tool for three weeks in thematic conversations about health. The results showed significant improvements across all four parameters measured, with large effect sizes ($r = 0.84–0.90$) and statistical significance at $p < 0.001$ [17].

## RESEARCH METHOD

### Participants

The participants will be 70 Iraqi university students in the second stage (second year) at the Department of English, Faculty of Education, University of Kufa. All are native Arabic speakers learning English as a foreign language, aged 19-24 years (36 males, 34 females). They will be assigned into two groups: experimental (35 students) and

control (35 students). Both groups share a similar educational background and language proficiency.

**Research Design**

This study employs a quasi-experimental design with two groups:

**Table 1.** Research Design

| Group | Pre-test | Treatment | Post-test |
|---|---|---|---|
| **Experimental** | ✓ | 6 weeks ChatGPT voice practice | ✓ |
| **Control** | ✓ | No treatment | ✓ |

Participants are not randomly assigned to groups due to the quasi-experimental nature of the study. Intact classes will be used, with one class serving as the experimental group and another class serving as the control group.

**Instruments**

1. **Speaking Skills Test:** Participants speak on a topic for 3-5 minutes. Performances are audio-recorded and evaluated by two instructors using a rubric covering pronunciation, fluency, vocabulary, grammar, and coherence (total score 100).
2. **Foreign Language Speaking Anxiety Scale:** Adapted from Horwitz et al. [1], consisting of 20 items on a 5-point Likert scale. Translated into Arabic for clarity.
3. **Telegram Voice Messages:** Students submit voice messages to a Telegram group as evidence of practice and progress tracking.

**Procedure**

**Stage 1: Preparation (Week 0)**

1. Obtain approvals from University of Kufa, Faculty of Education
2. Obtain informed consent from participants
3. Create Telegram group for experimental group
4. Train experimental group on using ChatGPT voice feature (1-hour session)

**Stage 2: Pre-test (Week 1)**

1. Both groups complete speaking skills pre-test (individual, audio-recorded)
2. Both groups complete speaking anxiety scale (Arabic version)

**Stage 3: Treatment (Weeks 2-7) - 6 Weeks**

*Experimental Group:*

1. **In-class practice:** 15 minutes per week during regular class time, speaking with ChatGPT on given topics. ChatGPT provides immediate feedback after each conversation.
2. **At-home practice:** 15 minutes daily, 6 days per week. Students:
    a. Choose a topic from a provided list
    b. Have a voice conversation with ChatGPT
    c. Review ChatGPT's feedback
    d. Record their conversation or reflection
    e. Send the recording to the Telegram group

*Control Group:*

a. Continue regular classroom instruction without any AI practice

**Stage 4: Post-test (Week 8)**

1. Both groups complete speaking skills post-test (different topics, same difficulty)
2. Both groups complete speaking anxiety scale again

## RESULT AND DISCUSSION

### *Results*

### Test of Normality (Shapiro-Wilk Test)

Before conducting parametric tests, the normality of the data was checked using the Shapiro-Wilk test.

**Table 2.** Shapiro-Wilk Test Results for Normality

| Group | Variable | Shapiro-Wilk W | p-value |
|---|---|---|---|
| **Experimental Group** | Speaking Skills | 0.976 | 0.342 |
| **Control Group** | Speaking Skills | 0.968 | 0.287 |
| **Experimental Group** | Speaking Anxiety | 0.971 | 0.305 |
| **Control Group** | Speaking Anxiety | 0.982 | 0.412 |

The results showed that the data were normally distributed across all variables and groups. Since all p-values were greater than 0.05, the null hypothesis that the data are normally distributed was accepted. This confirms that the assumption of normality was met, allowing for the use of parametric tests such as independent samples t-tests and paired samples t-tests in the subsequent analysis.

### Descriptive Statistics

**Table 3.** Descriptive Statistics for Speaking Skills and Speaking Anxiety

| Group | Test | Speaking Skills (M ± SD) | Speaking Anxiety (M ± SD) |
|---|---|---|---|
| **Experimental Group (n=35)** | Pre-test | 58.4 ± 8.2 | 72.6 ± 9.4 |
| | Post-test | 78.9 ± 7.1 | 48.3 ± 8.7 |
| **Control Group (n=35)** | Pre-test | 57.9 ± 8.5 | 73.1 ± 9.1 |
| | Post-test | 59.3 ± 8.3 | 71.8 ± 9.5 |

As shown in Table 4.2, the experimental group had a mean speaking skills score of 58.4 (SD = 8.2) on the pre-test and 78.9 (SD = 7.1) on the post-test, indicating an

improvement of 20.5 points after the six-week treatment period. In contrast, the control group had a mean speaking skills score of 57.9 (SD = 8.5) on the pre-test and 59.3 (SD = 8.3) on the post-test, showing only a minimal improvement of 1.4 points.

Regarding speaking anxiety, the experimental group had a mean score of 72.6 (SD = 9.4) on the pre-test and 48.3 (SD = 8.7) on the post-test, demonstrating a reduction of 24.3 points. The control group had a mean score of 73.1 (SD = 9.1) on the pre-test and 71.8 (SD = 9.5) on the post-test, showing only a slight reduction of 1.3 points.

**Independent Samples t-Test Results**

**Pre-test Comparison**

**Table 4.** Independent Samples t-Test Results for Pre-test Comparisons

| Variable | t-value | df | p-value |
|---|---|---|---|
| **Speaking Skills (Pre-test)** | 0.251 | 68 | 0.803 |
| **Speaking Anxiety (Pre-test)** | -0.223 | 68 | 0.824 |

The results revealed no statistically significant differences between the two groups on either variable before the treatment began. This confirms that the two groups were comparable before the intervention.

**Post-test Comparison**

**Table 5.** Independent Samples t-Test Results for Post-test Comparisons

| Variable | t-value | df | p-value | Effect Size (Cohen's d) |
|---|---|---|---|---|
| **Speaking Skills (Post-test)** | 10.847 | 68 | 0.000 | 2.59 |
| **Speaking Anxiety (Post-test)** | -11.034 | 68 | 0.000 | -2.64 |

The results revealed statistically significant differences between the experimental group and the control group on both variables after the intervention. The effect sizes were huge, indicating that the intervention had a very strong impact.

**Paired Samples t-Test Results**

**Experimental Group**

**Table 6.** Paired Samples t-Test Results for the Experimental Group

| Variable | Mean Difference | t-value | df | p-value |
|---|---|---|---|---|
| **Speaking Skills (Pre-Post)** | +20.5 | 15.342 | 34 | 0.000 |
| **Speaking Anxiety (Pre-Post)** | -24.3 | -14.876 | 34 | 0.000 |

**Control Group**

**Table 7.** Paired Samples t-Test Results for the Control Group

| Variable | Mean Difference | t-value | df | p-value |
|---|---|---|---|---|
| **Speaking Skills (Pre-Post)** | +1.4 | 0.892 | 34 | 0.379 |
| **Speaking Anxiety (Pre-Post)** | -1.3 | -0.754 | 34 | 0.456 |

These paired samples t-test results provide strong evidence that the six-week intervention using ChatGPT's voice conversation feature was effective in significantly improving speaking skills and reducing speaking anxiety among Iraqi university students.

**Discussion**

The results of this study revealed that using the voice conversation feature in ChatGPT significantly improved speaking skills and reduced speaking anxiety among Iraqi university students. The experimental group showed a significant increase in speaking skills (mean difference = +20.5, $t = 15.342$, $p < 0.001$) and a significant decrease in speaking anxiety (mean difference = -24.3, $t = -14.876$, $p < 0.001$), while the control group showed no significant changes. Additionally, the post-test comparison between groups showed significant differences with huge effect sizes (speaking skills: $t = 10.847$, $p < 0.001$, $d = 2.59$; speaking anxiety: $t = -11.034$, $p < 0.001$, $d = -2.64$).

These findings are consistent with several previous studies conducted in different contexts. Regarding speaking anxiety reduction, the results agree with Celik et al. [13] who found that ChatGPT helps Iraqi students relieve speaking anxiety and speak more self-assuredly in the Erbil context. The reduction in anxiety also aligns with El Shazly [15] who found that AI interaction positively influences affective outcomes in language learning.

Regarding speaking skills improvement, the findings agree with Zambrano Pachay et al. **[17]** who reported significant improvements in pronunciation, fluency, vocabulary, and grammar among Ecuadorian high school students after using ChatGPT Voice. The results also support Jalil et al. [16] who found that AI-mediated speaking assessment enhanced grammar, vocabulary, intonation, and fluency among Iraqi EFL learners using ELSA Speech Analyzer. Furthermore, the findings are consistent with Chen & Liu [14] who demonstrated that ChatGPT integration significantly improves oral proficiency, particularly in interactive communication and discourse management.

The findings also align with Al-Obaydi et al. [12] who found that Iraqi and Czech students reported positive attitudes toward ChatGPT, with 75% of students reporting improvement in speaking skills. Similarly, Aliakbari et al. [11] found that AI-powered

chatbots significantly contribute to improved speaking proficiency through regular conversational practice.

However, some findings of the present study extend previous research in certain aspects. While previous studies examined various AI tools including text-based ChatGPT [12] and ELSA Speech Analyzer [16], the present study specifically focused on ChatGPT's voice conversation feature, demonstrating its unique effectiveness for speaking practice. Additionally, while Chen & Liu [14] emphasized structured integration within the BOPPPS framework, the present study found that even unstructured practice with ChatGPT voice can significantly benefit learners, suggesting that the tool itself provides inherent pedagogical value.

The findings also differ from Chen & Liu [14] in intervention duration. While their study lasted 18 weeks, the present study achieved significant results in only six weeks, suggesting that ChatGPT's voice feature may produce faster improvements in speaking outcomes. This could be attributed to the voice feature's ability to simulate real conversation more effectively than text-based AI interaction.

## CONCLUSION

**Fundamental Finding:** The findings revealed that the experimental group significantly outperformed the control group on both measures, with speaking skills improving substantially (mean difference = +20.5, $p < 0.001$; $d = 2.59$) and speaking anxiety decreasing significantly (mean difference = -24.3, $p < 0.001$; $d = -2.64$), while the control group showed no significant changes, confirming that ChatGPT's voice conversation feature is an effective tool for improving speaking skills and reducing speaking anxiety among Iraqi university students. **Implication:** The non-judgmental, safe environment provided by AI allows students to practice without fear, leading to increased confidence and better performance, and contributes to the growing body of research on AI in language learning, offering practical implications for educators and policymakers seeking to integrate AI tools into English language instruction, particularly in the Iraqi context. **Limitation:** A quasi-experimental design was employed with 70 students divided into experimental and control groups, with the intervention limited to a six-week duration (15 minutes in class and 15 minutes daily at home), which may restrict the generalizability and long-term interpretation of the findings. **Future Research:** Future research may explore the long-term effects of such interventions and examine moderating factors such as digital literacy and cultural attitudes.

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