Exploring the Effectiveness of Teaching Adjacency Pairs via GPT for Iraqi First-Year College Students

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The Abstract

The **problem** formulation of this **study** originates from the often-expressed concern that Iraqi EFL learners, specifically first-year college-level EFL learners, have found it hard to participate in natural and confident English conversations.

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This study therefore **aims** to investigate the **application of ChatGPT** to effectively **teach** the understanding of adjacency pairs to improve fluency and confidence of EFL conversations for students. This study further intends to investigate the performance levels of the experiment before and after employing ChatGPT’s instruction method.

SECTION 1

1.1 The Problem and its Significance

1.1 Introduction

Speaking English proficiently is one of the biggest **struggles** that English second language speakers face. Iraqi college students may be able to grasp appropriate grammatical concepts and vocabulary quite well, but embedding fluency and confidence is a different matter altogether. **This key issue** can be attributed to a lack of opportunity to be exposed to communicative interactions and a lack of focus on constructs that specify the structure of conversations like adjacency pairs, which are critical for a continuous stream of communication while speaking.

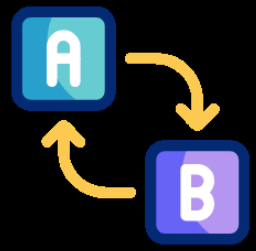
1.1 Introduction

In this respect, artificial intelligence applications, specifically **ChatGPT**, represent a new paradigm for language learning. ChatGPT **enables** users to compare and practice a broad range of adjacency pairs categorized by level and communicative context. **This technology** enables instant and contextually adequate responses that help users to acquire and build confidence to respond fluently to actual conversations.

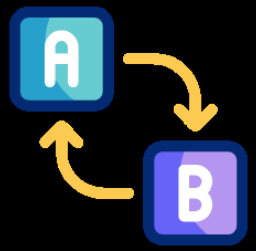
SECTION 2

Theoretical Background and Review of Literature

2.1 Adjacency Pairs

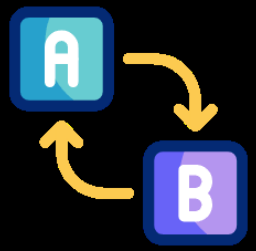


2.1 Adjacency Pairs



In a **conversation**, participants take **turns** to communicate to each other; for instance, while one participant is speaking, the other participant listens to him or her at the end of his or her utterance.

2.1 Adjacency Pairs



This pattern of turn-taking creates a concept known as **adjacency pairs** by the conversation analysts; this concept **refers** to the smallest unit of a conversation. A second utterance always relies on the first one; therefore, the two happen at the same time hence are known to be '**adjacent**.' Lukman Isgianto (2016, p. 437) asserts that according to Sacks and Schegloff (1973), the second part of an AP's existence relies on the initial one being spoken.

SECTION 3

METHODOLOGY

3. Experimental Procedure and Data Collection

This section discusses the **procedures** followed to achieve **quantitative** and **qualitative** results for this study. This experiment aimed to assess the impact of ChatGPT on learning adjacency pairs to improve the speaking fluency and confidence of the participants.

3.1 Research Design

The study embraced a **pre-test and post-test** experimental design. Purposeful sampling was conducted on thirty first-year university college students of Al-Mansour University College, Baghdad, to choose participants with similar levels of English ability who needed improvement with speaking English. This design was to test the performance difference of the participants **before** and **after** instruction with Chat GPT.

3.2 Procedure 

Initially, a listing of common English expressions was introduced to the students without revealing the experiment's specific target area. This was done to get the pre-test information by recording their spontaneous utterances. **Then**, the students were encouraged to search for appropriate answers for **25** examples of adjacency pairs on ChatGPT introduced by the teacher. This was followed by the teacher's help to construct the questions and understand the communicative context of every pair.

3.2 Procedure 

Experimental Procedure: A week of practice and familiarity with the responses generated by ChatGPT was followed by a practice test where the students made presentations of their preferred adjacency pairs to the class. A final post-test was then conducted where the teacher started conversations that featured the first part of each of the students' preferred adjacency pairs.

3.2 Procedure 

Responses to the conversations started by the teacher were noted and assessed for improvement using statistics from the responses collected. **t-test analysis** was conducted to compare scores of differences between the pre-test and the post-test results while the questionnaires provided information for a qualitative analysis of the efficiency of **ChatGPT** for improving conversational skills.

3.3

Questionnaire

For the **qualitative study**, the following questionnaire was distributed to the students in which the students were required to respond either in the positive or negative. The percentage of the positive and negative responses was calculated.

3.3

Questionnaire

Table: Table showing the responses of participants to the given statements

Number	Statement	Positive responses	Negative responses
1	Learning with ChatGPT was simple and quick.		
2.	Question formation posed a problem.		
3.	The responses were prompt and satisfactory.		
4.	One needs initial training for using ChatGPT.		
5.	It was fun to practice adjacency pairs with AI learning partners.		

SECTION 4

Analysis and Results

4.1 Quantitative Analysis

4.1 Quantitative Analysis

A **comparison** of the results of the pre-test and the scores of 30 participants after the ChatGPT-based **instruction** was carried out to **assess** improvement in performance of the students.

4.1 Quantitative Analysis

Table 2. Scores of students in the pre-test and post-test (25 adjacency pairs)

Sr. No.	Pre-test	Post-test	Sr. No.	Pre-test	Post-test
1	20	22	16	13	20
2	15	18	17	20	24
3	14	14	18	15	22
4	17	20	19	12	20
5	12	16	20	14	20
6	12	14	21	9	18
7	13	19	22	11	19
8	18	23	23	16	22
9	15	21	24	12	22
10	14	22	25	13	19
11	16	20	26	14	21
12	16	23	27	10	20
13	14	24	28	16	22
14	17	20	29	12	23
15	21	21	30	14	23

4.2 Statistical Results

Group	Mean	SD	N
Pre-test	14.50	2.87	30
Post-test	20.40	2.55	30

4.2 Statistical Results

Confidence interval:

Mean of Pre-test - Post-test **= -5.90**

95% confidence interval = between **-7.31** and **-4.49**.

Statistical values: t = **8.40**

df = **58**

Standard error = **0.702 P** (two-tailed) < **0.0001**

The difference between the means of the pre-test and the post-test is statistically significant ($p < 0.001$).

4.3 Qualitative Data

In order to supplement the **quantitative results**, a short survey questionnaire was conducted on the same participants to gather qualitative information regarding their experiences with the **Chat GPT** system after completing the training. The **responses** collected provided insight into the attitudes of the participants concerning practicing adjacency pairs with AI systems.

4.3 Qualitative Data

Table 3. Students' responses to questionnaire statements

No.	Statement	Positive Responses	Negative Responses
1	Learning with ChatGPT was simple and quick.	15	15
2	Question formation posed a problem.	17	13
3	The responses were prompt and satisfactory.	27	03
4	One needs initial training for using ChatGPT.	25	05
5	It was fun to practice adjacency pairs with AI learning partners.	28	02

SECTION 5

Suggestions and Recommendations

5.1

Discussion

5.1 Discussion

For the **general ESL/EFL** learner, the **goal** of **communicative competence** in English continues to be a daunting endeavour. Grammar knowledge and sentence formation may not necessarily guarantee the ability to communicate successfully in a communicative situation, and specifically speaking in informal settings. In informal contexts of communication, for instance, the concept of adjacency pairs gains paramount importance since it refers to pre-fabricated responses that enhance friendly and contextually appropriate communication.

5.2 Major Findings

The study produced several significant findings:

1. **Comprehensive Access**: ChatGPT offers a wide range of adjacency pairs; hence, it reduces the burden of lesson preparations for instructors.

2. **Application**: Students can access common expressions, questions, and responses that can be used for conversing on a daily basis.

3. **Flexible learning:** Students can easily go through the Chat GPT-generated adjacency pairs without spending a single minute on them since learning requires less effort.

5.2 Major Findings

The study produced several significant findings:

4. **Confidence building:** Regular practice and revision of the above expressions help to build confidence of the student to speak fluently.

5. **Convenient accessibility:** ChatGPT can be used on various devices, including mobile phones, allowing learners to practice anytime and anywhere, provided internet access is available.

6. **Autonomous learning:** Students can exercise their learning of adjacency pairs without necessarily being under the teacher’s continuous supervision.

5.2 Major Findings

The study produced several significant findings:

7. **Shortcomings:** This tool’s performance can be affected by the accuracy of user inputs. Any ambiguities or error-prone inputs can lead to inappropriate or dissatisfactory results.

5.3 Conclusion 

In the age of advancing technology, **ChatGPT** can be leveraged to the full to impart English to Iraqi college-going students who have adequate knowledge of technology and are eager to enhance their speaking skills. Busy with educational and working commitments, ChatGPT **becomes** a convenient tool for them to access at their respective times. **This study supports** that there's a **positive attitude** held by instructors as well as participants to incorporate ChatGPT for learning English, understanding the benefit of ChatGPT to supplement existing techniques with a focus on improving speaking skills.

Thank you for your attention