



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

Bushra Saadoon Mohammed Alnoori¹
Bushra Nima Rashid²

¹Al-Mansour University College, Iraq

²Al-Iraqia University/ College of Arts/ The Department of English Language, Iraq

Abstract

Language is a skill-based subject, especially the speaking aspect of language. Students at any level of education do not get the satisfaction of learning English as a second language until they are able to converse in English confidently, in formal or informal situations. Whatever the kind of situation, adjacency pairs have an important position in conversation. They are very common and essential in everyday conversation. It is necessary for ESL learners to be aware of them and know about their use to be fluent and confident while conversing in English. ChatGPT is widely used in second language teaching and learning and it is paving new revolutionary paths. An experiment was conducted by the researchers on first year college level students in AL Mansour University, Baghdad. Thirty students participated in the experiment. Their individual recordings of prompted conversational responses were considered as the pre-test. After teaching them adjacency pairs using ChatGPT, their recordings were compared with the performance in the pre-test and the scores were treated statistically. A questionnaire was provided to teachers as well as students to gain a qualitative perspective of the new technique. Results were very promising and positive.

Keywords – Artificial Intelligence, ChatGPT, Adjacency Pairs, Self-learning, conversation skills, formal/informal situations

1. Section 1

1.1 Introduction

Learners of English as a second language all over the world desire to possess proficiency in oral communication. At school or college levels, it is difficult to get enough time to develop the conversational skills of learners. Teaching conversational skills is a challenge for teachers and instructors. It requires time, practice, drilling and individual attention. Students end up learning all the grammatical rules and structures, master a reasonable amount of vocabulary, but fail to achieve the necessary fluency in speech. One important factor responsible for fluency is confidence. Confidence in turn, depends upon confidence about content and confidence about the use of language, that is grammar.

1.2 Background

English conversation skills and their development continue to pose challenges to students and teachers worldwide. Conversational skills are required for formal and informal situations. Students feel confident when they can converse smoothly with their colleagues and acquaintances. Adjacency Pairs cover a vast degree of the total conversation that takes place. Since the responses are fixed in adjacency pairs, there is no need for learners to think about their correctness. They can be adapted in several varying situations. Mastering several adjacency pairs can boost the confidence of EFL/ESL students to a great extent.

ChatGPT provides a list of adjacency pairs. They can be arranged according to difficulty level and complexity. Accessing the content from ChatGPT is a matter of minutes and can be managed by the



learners themselves without any kind of support from teachers. All that students need to do is to get acquainted with the adjacency pairs and their responses and to understand the situations in which they can be used. They can seek the help of teachers if necessary for the latter purpose.

Hence, the task becomes simple for both teachers and students. Acceptance of new technology and AI is appreciated and welcomed by all.

1.3 Importance of the Research

The need and importance of conversational skills cannot be overlooked in the world where communication in general and English communication in particular play pivotal roles in every field. Whether a situation is formal or informal, adjacency pairs are used repeatedly and can be adapted to several situations. Students pursuing studies in various fields find little time for developing conversational skills. They need something that can be quick and easily accessible, something that they can engage in according to their convenient time. Maybe, they are waiting at the bus stop or in a clinic. They can utilize this time for going through tips that can help them to develop their conversation skills in English. The adjacency pairs which make up a major portion of communication are accessible online on ChatGPT. They can be mastered by learners independently and require little or often nil guidance or support from teachers. AI is becoming very common day-by-day and most students at college level are aware about its uses. Use of ChatGPT for mastering common adjacency pairs implies making optimal use of AI and technology for self-learning, in the field of second language learning. It is a mark of being advanced and with the times.

1.4 Aims:

- To record the speaking performance of students regarding their responses to 25 common expressions.
- To present them with a list of adjacency pairs via ChatGPT.
- To test their performance of responses to the same common selected expressions.
- To treat the scores statistically and arrive at a conclusion.
- To gather information from students and teachers through questionnaires regarding their experience about the new experiment.

1.5 Population and Sample:

The experiment was conducted on 30 students from purposefully selected from the first year. The study applies to all ESL/EFL students studying in the first or second year of college, aspiring to master conversational skills.

1.6 Method:

The experimental method is used in the research. The attempt is to get quantitative as well as qualitative results. Hence, two questionnaires were distributed to the students and teachers/instructors. The pre-test / post-test design was used. The t-score was calculated based on the scores in the two tests to arrive at a conclusion.

2. Section 2

Theoretical Background and Review of Literature

(A) This section deals with the theoretical background and an explanation of operational terms.



2.1.A. Adjacency Pairs

When two or more people converse with each other, they take turns talking. While one person speaks, the other/others listen. The listener then takes the turn to speak in response to the initial speaker's utterance. The response follows the utterance immediately. They occur together, or are adjacent to each other. Hence, they are called 'adjacency pairs'. An adjacency pair is the smallest unit of conversation. "Adjacency pairs have a crucial role in the conversation process as a framework of communication (Lukman Isgianto, 2016, p 437)

In common situations like greetings or introductions, the responses are fixed. Hence, the adjacency pairs are fixed. Here is an example:

A: Hello, how are you?

B: I'm fine, thank you.

The above conversation or exchange of utterances can be described as an adjacency pair. The response given by 'B' is expected when somebody asks the question asked by 'A'. The second part of the conversation is decided by the first part. Generally, one sentence or utterance cannot lead to several responses. Hence, adjacency pairs can be defined. They are mutually dependent. According to Sacks and Schegloff (1973), adjacency pair is a basic form of speech. It is an ordered form and once the first utterance is spoken, the second is required. The first part of the pair and the second part of the pair are distinct.

Adjacency pairs include the following types of exchanges:

- question/answer – (Is it raining? / No, it is not)
- complaint/denial – (Did you see my wallet? / Sorry, no idea)
- offer/accept – (Will you have some coffee? / Sure, thanks)
- request/grant – (May I use this chair? / Certainly)
- compliment/rejection – (You won the match ! / God's grace)
- challenge/rejection – (I can eat all that stuff at one go / I don't care)
- instruct/receipt (Take the umbrella with you. / Yes, I will)

Characteristics of Adjacency pairs:

- ✓ They consist of two utterances
 - ✓ The utterances are adjacent, that is the first immediately follows the second
 - ✓ different speakers produce each utterance
- (Cambridge University Press, 2006)

A silent response does not count as an adjacency pair. The respondent must speak the response or continue the utterance of the speaker. The concept of adjacency pairs, as well as the term itself, was introduced by Emanuel A. Schegloff and Harvey Sacks in 1973. An adjacency pair is adopted in conversation analysis to describe conversational sequences in which one speaker's utterance depends on another's, i.e., a form of turn-taking. Sequence is important in adjacency pairs. Adjacency pairs are fundamental sequences. Larger sequential units can be formed where adjacency pairs are fundamental. The expansion can be an insertion between the utterance and response. Example:

A: Can you come with me?

B: Now?

A: Yes, if possible.

B: Sorry, I am busy.

The expansion can be added at the end of the response as in the following example.

A: I want to participate in the competition.

B: Contact Mr. Sharma.

A: Who is he?

B: He is the coordinator.

There can be a pre-expansion as in the following example.

A: Hey, have you heard the news?

B: No. what?

A: I am engaged.

B: That's great!



2.2.A. Chat GPT

The tide of AI is sweeping over the world. Since its advent and easy accessibility to researchers and scholars, the very face of academics is changing rapidly. ChatGPT has emerged as a notable AI language model. It has applications in almost all areas of life. It has revolutionized scientific research. ChatGPT is rooted in NLP, that is Natural Language Processing. Most scholars in linguistics are acquainted with the LAD (language Acquisition Device) that is a unique human asset which enables human beings to use language for communication. Individuals acquire the language / s to which they are exposed. The input of that language is processed in the LAD and rules are internalized, making it possible for individuals to form their own sentences from the vocabulary that they possess and the rules that they have understood. According to Chomsky, this is the way a language is naturally acquired. Artificial intelligence follows a similar procedure, but it is a machine. Hence, language elements are processed in a machine. ChatGPT has undergone several revisions, modifications and versions till date. Currently, it can comprehend and respond to complex inputs by generating relevant texts. It is free from biases. It can be adapted to specific tasks and applications. It generates language for oral and written modes.

Using ChatGPT:

It is very easy to use ChatGPT. It is available for free. It is extremely user-friendly.

- Type in brief what is needed
- The required content is visible on the screen within seconds
- It can be used directly if it suits the purpose
- If change is necessary, try other way of formulating the request
- Continue to do this until you get what you need

Example: In case the requirement is '*How to console a friend who has just lost his mother?*'

Type this question in the space below the message, 'How can I help you?'

This is what we get:

Losing a loved one, especially a parent, is incredibly painful, and being there for your friend during this time is truly kind. Here are some thoughtful ways to console them:

1. Be Present

- **Listen:** Let them talk about their feelings and memories. Just being a good listener can be comforting.
- **Avoid Over-Talking:** Don't feel the need to fill silences. Sometimes, your quiet presence is enough.

2. Offer Sympathy and Support

- **Express Condolences:** Say something simple and heartfelt like, "I'm so sorry for your loss," or, "I can't imagine how hard this must be for you."
- **Acknowledge Their Pain:** Use phrases like, "It's okay to feel however you're feeling right now." etc, etc.

However, this is not the requirement. The requirement is the actual words that one should use to console the friend or offer condolence. Hence, the message can be changed. One can type this message: 'What words to use to console a friend who has just lost his mother?'

The reply is as follows:

Express your condolences:

- "I'm so sorry for your loss. I can't imagine how hard this must be for you."
- "I'm deeply sorry to hear about your mom. Please know that I'm here for you."

Acknowledge their pain:

- "Losing a parent is incredibly difficult. If you want to talk about it or need someone to listen, I'm here."
- "I know there are no words that can truly comfort you, but I want you to know I care deeply about you."

Offer specific help:

- "If there's anything I can do, whether it's running errands, helping with arrangements, or just sitting with you, please let me know."

The requirement is fulfilled. One can safely choose one of the above expressions.

This shows that it is very simple to use.

2.3.A. Challenges and Ethical Issues in ChatGPT

Although ChatGPT is extremely useful, it needs to be used with care, attention and precaution, especially while concerned with research papers and articles. Sometimes, if the requirement is not clearly stated or misunderstood by ChatGPT, the results can be confounding, irrelevant and misleading. The information may appear to be convincing but it may be nonsensical. ChatGPT contains information received until a particular date. It may not include updates. Malicious code generation is another risk.

Too much reliance on technology is likely to affect human abilities like critical thinking and problem solving. There is a tendency towards high dependence on technology which is likely to kill creativity, imagination, interaction and skills over generations. Moreover, there are ethical issues like plagiarism which must be avoided.

2.1.B. Review of Related Literature

This section includes a review of related literature.

2.1.B. Rum Muhammad (2019) carried out a study titled 'Discourse Analysis: Analysing Adjacency Pairs of Teacher and Students' in a classroom in ELC Education, Makassar. The researcher analysed the commonly used adjacency pairs between the teacher and students in a classroom. The conversational exchanges were recorded and later analysed. The researcher found five types of adjacency pairs in the teaching process. 1. Degreeting pair which indicated discontinuation of ongoing conversation 2. Greeting pair which function in the same way as the previous pair. 3. Question – Refusal pair 4. Offer-refusal pair 5. Question-answer pair. The researcher concluded that different adjacency pairs are part of different conversational situations. It is necessary to get acquainted with the various types, which will help to improve communication and boost the confidence of speakers.

In the article titled 'The use of adjacency pairs in the selected conversations from Global level 1', Khin Dandar Win analysed adjacency pairs from selected conversations. Finegan's (1993) framework of adjacency pairs was used as a basis for analysis. It was found that the question-answer pair is the most commonly used type (64%). Second in the sequence is agreement – disagreement followed by apology-acceptance. It was found that the percentages of Invitation and Acceptance, Request for a favour and Granting-Denial, Accusation and Acceptance-Denial, summons and Acknowledgement, congratulation and Thanks were comparatively low. The researcher concluded that the use of the types of Adjacency Pairs varies depending on the purpose of the participants.

Laila U. Q. and Dewa P.W. (2021) studied the 'The 'New' Adjacency Pairs in Online Learning: Categories and Practices'. During the Corona Pandemic, there was nil face-to-face interaction between teachers and learners, and the system was replaced by online learning. This focussed on virtual meetings and written mode, in the form of chats. The attention of the researchers was drawn towards the issue of adjacency pairs in the computer mediated conversation and chats and its analysis, in order to ensure smooth and correct communication. Data were collected through the SPADA Learning Management System and everyday chat exchanges in virtual classrooms and text messages were analysed. In a live classroom, turn-taking runs smoothly and quickly, complimented by non-verbal cues which strengthen a message. However, typing a message takes some time. Yet, the researchers found that there is not much difference between the types of adjacency pairs used in computer mediated communication and all types are frequently used, like question-answer, greeting-greeting, information – acknowledgement, request – acceptance/refusal. However, there is a possibility that some types could be linguistically 'renewed' in order to suit future online communication. The article titled 'Exploring the Application of ChatGPT in ESL/EFL Education and Related Research Issues: A Systematic Review of Empirical Studies' by Chung Kwan Lo et al includes a detailed review of research studies conducted using ChatGPT in ESL/EFL teaching and



learning 1.5 years after it was launched. The application of ChatGPT in ESL/EFL programs by students and teachers is increasing constantly, which led to the need for this study. 70 studies were reviewed to find out the domains in which ChatGPT has been applied.

The researchers emphasised that when exploring future development trends in technology-enhanced learning, it is important to review the literature in the categories of (1) application domains, (2) research methods, and (3) research issues. Results indicate that students mostly used AI tools for support in writing while some studies show that AI helped to motivate second language studies. Writing skill can be supplemented by AI but it cannot take the place of a teacher. The conversation generated for role play by ChatGPT were found to be more interesting and engaging by the students, compared to text-based scripts. There were no researches available with respect to other language skills when this study was conducted. For the speaking skill, ChatGPT plays the role of a learning partner. Students preferred these partners to real life partners who make them feel conscious.

Turgay Kucuk (2024) in his article titled 'ChatGPT Integrated Grammar Teaching and Learning in EFL Classes: A Study on Tishk International University Students in Erbil, Iraq' observes that there is substantial research on the advantages and disadvantages of ChatGPT in education, however, there is nil research on its use regarding concerns with English grammar teaching and learning. The experimental method was used in the study wherein the students in the control group received text book centred grammar education while students in the experimental group received grammar education through ChatGPT. The students in the experimental group outperformed their counterparts in the control group. A qualitative aspect was also studied. Results are very astonishing. Some students opined that ChatGPT destroyed their critical thinking skill and made them dependent on AI tools. Students appreciated the constant availability of AI tools and ease of use.

No reference of any study was found by the researcher related to the teaching of adjacency pairs to ESL students in Iraq using ChatGPT.

3. Section 3

Methodology

The aim of the study is to get quantitative as well as qualitative results. Hence, an experiment was conducted for the prior objective and a questionnaire was distributed to the participants with an aim to find out their opinion regarding the use and acceptability of ChatGPT for developing speaking skills.

3.1 Research Design

The pre-test / post-test design is used.

3.2 Procedure

The students were presented with certain common expressions in the classroom without informing them about what exactly was going to be recorded. They were aware that they were part of an experiment related to speaking skill. the responses of the students were audio recorded, and later documented for the purpose of analysis. The first part of adjacency pairs was presented and the response was recorded.

When the recording of all 30 participants was completed, they were asked to find out the responses to 25 common expressions listed by the teacher by entering the desired requirement on ChatGPT. The teacher helped with the questions to be asked. The students went through the responses provided by ChatGPT. They were asked to browse the responses until they had thoroughly understood them.

A session was conducted after a week during which the students presented the first part of the adjacency pairs of their choice to their colleagues. This served as a practice session. The last session was the post-test session during which the teacher embedded the first part of the selected adjacency pairs in the conversation to which the students responded. The responses were recorded and documented. The scores in the pre-test and post-test were treated statistically for comparison to arrive at a conclusion.



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.

Table 1. 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.		

4. Section 4

4.1 Data Analysis and Observations

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

Sr. number	Pre-test	Post-test
1	20	22
2	15	18
3	14	14
4	17	20
5	12	16
6	12	14
7	13	19
8	18	23
9	15	21
10	14	22
11	16	20
12	16	23
13	14	24
14	17	20
15	21	21
16	13	20
17	20	24
18	15	22
19	12	20
20	14	20
21	09	18
22	11	19
23	16	22
24	12	22
25	13	19
26	14	21
27	10	20
28	16	22
29	12	23
30	14	23



4.2 Statistical Calculation:

Data:

GROUP	Pre-test	Post-test
MEAN	14.50	20.40
SD	2.87	2.55
SEM	0.52	0.47
N	30	30

Confidence interval:

The mean of Pre-test minus Post-test equals -5.90

95% confidence interval of this difference: From -7.31 to -4.49

Intermediate values used in calculations:

$t = 8.4049$

$df = 58$

standard error of difference = 0.702

P value and statistical significance:

The two-tailed P value is less than 0.0001

By conventional criteria, this difference is extremely statistically significant.

Observation:

The above result shows that there is significant difference between the mean of scores of pre-test and post -test. It indicates that the performance of the participants has increased significantly after the treatment, that is after implementation of AI technique.

4.3 Qualitative Data

Table 3. Table showing the responses of participants to the given statements.

Number	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

Observations: Whether the use of ChatGPT can be considered as simple and quick is difficult to decide since 50% participants responded in the positive and 50% responded in the negative. Only 3 participants failed to get prompt responses. This could be due to ambiguous questions asked by them. Grammatically incorrect statements also fail to get satisfactory responses from ChatGPT. With very few exceptions, almost all participants agreed that training is necessary especially for the purpose of question formation. Most of the students enjoyed the session with ChatGPT as a learning partner for understanding commonly used adjacency pairs.

5. Section 5

Conclusion and Major Findings

5.1 Discussion

For most ESL/EFL students, English communicative competence is considered as very challenging. Learning to construct grammatically correct complete sentences by applying grammatical rules does



not prove to be helpful while communicating with friends, colleagues or teachers especially in informal or semi-formal situations. Adjacency pairs are fixed responses, not necessarily long and complete sentences, but more often, simple fixed expressions. They are very commonly used in all kinds of situations and considered to be appropriate and polite. When students gain confidence regarding fixed responses to fixed statements / questions, adjacency pairs are handy and boost the confidence of speakers. They do not need application of grammatical rules.

5.2 Major findings

Adjacency pairs are fixed hence, ChatGPT provides an exhaustive list of adjacency pairs, saving the time and efforts of teachers / instructors.

Students can easily access the statements that they need to make in common life situations, the questions that can be asked and the responses to them.

Going through the list of ChatGPT generated adjacency pairs when time permits is simple and does not demand long hours of study, memorization of rules or hard efforts.

A quick revision periodically helps to build the confidence of learners and the confidence grows with use on various occasions.

Quick and easy responses lead to fluency in speech.

Accessing the adjacency pairs on ChatGPT is possible from all kinds of devices including cell phones (provided of course, that there is internet connection). Students can access them anywhere and anytime, in case they fail to remember what o ask or how to respond to someone.

No teacher or instructor is needed; the students can master adjacency pairs independently.

The only drawback is that ChatGPT must be asked proper questions or problems must be stated correctly and appropriately in order to get desired responses. Ambiguity in question formation or grammatical errors in questions cannot give good, desired and satisfactory results.

5.3 Conclusion

In the scenario of technology, one can make optimal use of technology for ESL/EFL students at college level since they are technically quite sound, motivated to learn and communicate in English and most of them possess necessary devices. College students are already burdened with the study of their specialization subjects and some of them earn while they learn, perhaps on part-time basis. ChatGPT helps them to learn as per their time and convenience. More and more teachers and language experts are exploring ways of using ChatGPT to solve the problems faced by EFL/ESL learners. The positive attitude of teachers and students shows their clear inclination towards use of ChatGPT and their increasing dependence upon it.

5.4 Suggestions and recommendations

It is advisable and convenient to use ChatGPT for teaching adjacency pairs to college level ESL/EFL students in Iraq. similar experiments can be carried out for students at all evels and for teaching other language skills.

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