

The Effect of Peer Interaction Enhancement on Sixth-Grade Jordanian EFL Students' Reading Comprehension and Grammatical Knowledge

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Abstract

This study explored the impact of peer interaction enhancement on sixth-grade Jordanian EFL students' reading comprehension and grammatical knowledge. Sixty female EFL students from two Al Mowaqqr schools were divided randomly into an experimental group and a control group. It employed a quasi-experimental design, over a ten-week duration, one experimental group underwent a peer interaction enhancement intervention, while the other group served as the control group, adhering to conventional teaching methods as outlined in the instructions of Action Pack 6 Teachers' Book. The experimental group used a structured approach involving peer interaction techniques for reading comprehension lessons and grammatical structures. The study utilized two pre-post tests on reading comprehension and grammatical knowledge for data collection. Descriptive statistics and Analysis of Covariance (ANCOVA) were used to analyze the data. The study revealed that peer interaction enhancement improves students' reading comprehension and grammatical knowledge through communicative activities and corrective feedback.

Keywords: Peer interaction enhancement, Sixth-grade Jordanian students, Reading comprehension, Grammatical knowledge

1. Introduction

Teaching English as a foreign language (henceforth, EFL) is essential in Jordan due to its importance for communication and education. In the present day, the skill to understand written content and effectively convey messages with correct grammar holds greater significance than before. Reading comprehension and grammatical skills are the foundational pillars of effective communication, enabling individuals to understand and convey ideas, information, and emotions accurately (Al-Jamal et al., 2013). Language skills play a crucial role in various aspects of life, from academic success to professional advancement and personal growth (Montgomery, 2023).

Reading comprehension, at its core, involves understanding and interpreting written texts. It goes beyond simply deciphering words and sentences, encompassing the capacity to grasp the underlying meaning, analyze arguments, and make connections between ideas. Strong reading comprehension skills empower individuals to navigate the vast amount of information available today, critically evaluate sources, and form informed opinions (McNamara, 2007).

Moreover, accuracy ensures clarity, precision, and coherence in written and spoken communication. Grammar provides the structural framework that organizes words, phrases, and clauses to convey meaning effectively. It enables individuals to construct grammatically correct sentences, avoid ambiguity, and accurately convey their thoughts and intentions. Without a solid grasp of grammar, the intended message can be distorted, leading to misunderstandings and miscommunication (Rajapova, 2021). However, many Jordanian EFL students struggle with reading comprehension and grammatical knowledge, which can significantly affect their academic performance and future career opportunities (Al-Sharjah et al., 2011), and Several studies have indicated that addressing this through peer tutoring will certainly impact reading comprehension and grammatical knowledge (Stevens et al., 2019).

Graham and Sean (2018) found in their review of the evidence, that the quality of instruction and learning results in reading comprehension have been very low. One possible solution to this problem is to enhance peer interaction in the classroom, as this approach has been found to improve students' language proficiency and engagement (Stevens et al., 2019). However, teachers and students often overlook the importance of peer interaction enhancement, failing to recognize its significant role in the language learning process (Adams, 2018). Traditional teaching methods, such as the teacher-centered approach, are still prevalent in Jordanian classrooms due to the lack of suitable teaching materials, insufficient teaching techniques, and evaluation instruments (Al-Qeyam et al., 2024).

Reading Comprehension holds significant importance for EFL students, as it underpins various facets of their language learning journey and overall academic achievements (McNamara, 2007). Reading is a multifaceted skill, requiring a sophisticated and interactive process for a comprehensive understanding of textual content. Proficiency in reading enables students to extract information, discern main ideas, and grasp the subtleties of language, all of which are crucial in academic pursuits. Moreover, reading comprehension is essential for EFL students to access a wide array of educational materials, including textbooks, articles,

and online resources. These skills necessitate the coordination of several cognitive processes and often entail solving intricate puzzles that involve multiple layers of context and meaning. Additionally, reading exposes EFL students to a diverse and rich range of vocabulary, allowing them to encounter new words within context, thus enhancing their comprehension of word meanings and usage (McNamara, 2007).

The increased exposure to vocabulary through reading plays a pivotal role in enhancing students' overall language proficiency and their ability to express themselves accurately and fluently (McNamara, 2007). This exposure contributes significantly to vocabulary acquisition and retention, aiding learners in building a robust linguistic foundation. In this context, explicit instruction of comprehension skills, when integrated with other language skills, proves to be advantageous for EFL across various literacy and proficiency levels (Yurko & Protsenko, 2020).

Reading Comprehension is a fundamental skill for EFL students as it not only facilitates their understanding of textual content but also enhances their vocabulary, language proficiency, and overall academic success. It is an intricate process that requires cognitive coordination and is essential for accessing a wide range of academic materials. Therefore, educators should emphasize the explicit teaching of comprehension skills alongside other language skills to support English language learners in their linguistic development (McNamara, 2007; Yurko & Protsenko, 2020).

For English teachers and students, understanding grammar is one of the most challenging concepts. It provides the ability to speak accurately and serves as the foundation of the language. EFL students must grasp the grammatical rules that constitute the English language and develop techniques to enhance their communication skills (Pudin, 2017). Teaching grammar to students as a priority is crucial due to its vital role in language learning. Failing to grasp grammar can lead to detrimental long-term consequences, such as diminished communication skills (Alsied et al., 2018). By organizing EFL language skills sustainably and structurally, effective English grammar instruction can support their linguistic growth and development (Larsen-Freeman, 2001 & Brown, et al., 1996).

Foreign language learning can benefit greatly from form-focused instruction (FFI) since language is simpler to keep in mind when it is observed (Williams, 1999; Yu, 2011) and practiced for long-term memory storage (Dahlen & Caldwell-Harris, 2013; Sanatullova-Allison, 2014; Spada & Lightbown, 2008). Observation and practice go hand in hand because cognitive processes link what is in short-term memory to what has been previously stored in long-term memory and to the learners' schemata (Ellis, 2016; Williams, 1999).

This technique, combined with the noticing hypothesis has led to FFI, which enhances learners' awareness of language forms through explicit instruction and corrective feedback (Sippel, 2017). While interaction can enhance communication skills in learners Loewen (2020) notes that interaction alone, without a focus on linguistic accuracy, does not ensure progress. FFI involves a temporary emphasis on linguistic elements within a larger communicative context, known as "Focus on Form" (FonF). Ellis (2013) differentiates this

from "Focus on Forms" (FonFs), which prioritizes linguistic structures, by emphasizing the importance of forming meaningful connections. FonF aims to direct attention to language forms only when communication breakdowns occur (Loewen, 2020). The concept of FonF, originally defined by (Long, 2001) as the selective highlighting of linguistic forms during communication problems, has expanded to encompass both incidental and deliberate, as well as implicit and explicit focuses on form, including aspects like vocabulary, phonology, and pragmatics (Ellis, 2016; Nassaji, 2016).

Extensive research has been conducted on the impact of FFI on grammatical structures. It is widely agreed that FFI leads to improved grammatical accuracy compared to the absence of instruction, as demonstrated by Lightbown and Spada (1990) in their study with child ESL learners in Canada. However, the same body of research indicates that the lack of FFI does not detrimentally impact overall comprehension. Comparisons of various FFI techniques, as examined by researchers like Cerezo et al. (2016) and Loewen (2005), reveal that multiple approaches can effectively enhance grammatical understanding. Studies focusing on learners' perceptions of FFI, including those by Jean and Simard (2011) and Schulz (1996), have explored positive attitudes towards grammar-focused instruction. Schulz (1996) discovered a more favorable view of grammar instruction among learners compared to instructors. Further research by Chavez (2007) and Loewen (2005) revealed diverse opinions among learners regarding the appeal of accuracy, while still acknowledging its significance.

Reading Comprehension is a critical life skill. It may affect how well students perform in school as well as how they function and behave in the future (Lume, & Hisbullah, 2022). Nevertheless, the inclusion of digital media in daily life both as a technique for teaching and learning and as a resource for gaining access to information determines that teachers and students need to develop skills to use information and communication technologies.

Reading comprehension stands out as a fundamental skill in acquiring technological literacy. This is because the foundation of communication hinges on the written language, as asserted by Joly and Martins (2008). *Peer interaction enhancement* asks students to work collaboratively to correct one another's output. When working in pairs, this also seeks to receive feedback in the target language by having the partners correct each other's mistakes or ask each other questions. Since using a language in real communication requires at least two people to participate in face-to-face interaction, peer interaction has recently been recognized as a crucial technique in the field of second language acquisition (Stevens et al. 2019).

In their book *Introduction to Teaching English*, Hadfield & Hadfield (2008) emphasized that interaction entails more than just putting a message together; it also entails responding to other people. This entails using language that is appropriate for the interlocutor; it also entails responding to what others say, taking turns speaking during a conversation, encouraging others to speak, changing the subject, asking people to repeat or clarify what they said, and other communication techniques. In this sense, Nunan (1995) asserts that learners who actively attempt to communicate will have an easier time learning to speak a second or foreign language.

2. Technique to Facilitate Peer Interaction

Bouzid and Bouaziz (2018) listed the following techniques to encourage peer interaction:

1. Set up the space to encourage peer interaction.
2. Start with pairs.
3. Combine pairs into foursomes.
4. Group members have numbers.
5. Remind students of their successful peers.
6. Do individual assessments.
7. Ask early finishers to assist others: (Kim and Kang, 2020; Storch, 2005).

To address this issue, peer *interaction enhancement* technique has been proposed in this study as a possible solution, as it has been found to improve language proficiency and engagement among EFL students.

3. Problem, Purpose, and Questions of the Study

Many Jordanian EFL students struggle with learning English as a foreign language (e.g., Al-Ghazo & Taamneh, 2018; Al-Qeyam & Alnajjar, 2020; Al-Qeyam et al., 2016; Al-Qeyam et al., 2024; Alnajjar et al., 2022; Bataineh et al., 2017; Ta'amneh, 2013; Ta'amneh & Al-Ghazo, 2018). Consequently, students struggle with learning reading comprehension and grammatical knowledge due to limited opportunities for interaction with native speakers and insufficient classroom engagement (Hassan and Dweik, 2021). In addition, limited exposure to English inside the classroom and insufficient opportunities for practice can hinder the development of reading comprehension (Brown, 2001). However, the teaching methods and techniques teachers use are assumed to influence students' reading comprehension and grammatical knowledge (Stevens et al., 2019; Hassan and Dweik, 2021; and Al-Sharjah et al., 2011). Furthermore, from the researchers' experience, they observed that there are weaknesses in the students' reading comprehension and grammatical knowledge. Thus, peer interaction enhancement is used as a potential solution to address these issues.

Therefore, the current study aims to investigate the potential effect of peer *interaction enhancement* on sixth-grade Jordanian EFL students' reading comprehension and grammatical knowledge to provide teachers, educators, curriculum designers, and researchers with new insights into developing the English language teaching and learning field and attempts to answer the following questions:

1. To what extent does peer interaction enhancement develop Jordanian sixth-grade students' reading comprehension?
2. To what extent does peer interaction enhancement develop Jordanian sixth-grade students' grammatical knowledge?

4. Significance and Limitations of the Study

This study may be significant since it deals with one of the FFI techniques that many educators use worldwide, part of which has been shown in previous studies, (e.g., Al-Sharjah et. al, 2011). So, considering it in Jordan may be worthwhile. Besides, to the best of the researchers' knowledge, no prior studies have investigated the impact of improving peer interaction on reading comprehension and grammatical knowledge in the Jordanian context. The significance also stems from EFL teachers' need to provide their students with a cooperative learning environment. This study provides teachers, educators, curriculum designers, and researchers with new insights to develop English language teaching. It also adds to the field of learning English as a foreign language more techniques that help learners develop their language, especially at the basic stages.

The current study is considered one of the pioneering studies in Jordan. However, it is hoped that more studies to be conducted including different techniques with different students' levels and different language skills. Besides, the application of input enhancement took place over eight weeks duration. Thus, more studies with longer time duration could be useful to investigate the effectiveness of this technique.

5. The Previous Studies

This literature review provides a comprehensive overview of the current state of research, theoretical perspectives, and practical implications, setting the foundation for this study and guiding the subsequent research methodology and analysis. This exploration seeks to contribute to the existing literature on language education, specifically within the EFL context, and shed light on the effectiveness of different techniques in fostering reading comprehension among EFL students.

Sundari (2017) conducted an in-depth study on classroom interaction in foreign language learning environments. The research involved interviews with twenty experienced English language teachers from eight lower secondary schools in Jakarta. These interviews, supplemented with focus groups and classroom observations and recordings, were analyzed using three-phase coding in line with grounded theory analysis. The study identified various aspects of classroom interaction and developed a model that includes interaction practices, teacher and student factors, learning objectives, materials, classroom circumstances, and external contexts. This model provides a comprehensive understanding of how interaction occurs in foreign language classrooms at lower secondary schools and the factors that influence it, as seen from the teachers' perspectives.

Bouزيد and Bouaziz (2018) examined instructors' perceptions of the value of peer interaction in improving English language learners' ability to understand lessons. The fundamental premise of this study is that teachers would be sympathetic to the impact of peer interaction on EFL students' understanding of lectures. A descriptive technique was used to check the accuracy of the tested hypothesis. The information was acquired via a survey given to (30) English instructors at Oum EL Bouaghi University. According to the results of the survey given to instructors, peer contact should be employed as a key approach to improving

students' comprehension.

Al-Jarrah et al. (2019) conducted a study to examine the effectiveness of educational games in enhancing English grammar achievement among eleventh-grade students in a girls' high school in East Jerusalem. A total of 62 students participated, evenly divided into an experimental group and a control group, both of which completed pre-and post-tests. The experimental group received grammar instruction through educational games for two months, while the control group received traditional teaching methods. The results showed no significant difference between the two groups in the pre-test, but a significant difference emerged in the post-test, indicating higher achievement in the experimental group compared to the control group.

Ingrid (2019) investigated if peer Collaboration-Based Learning CBL motivates students to do better on assessment ability than traditional teacher-centered learning. The findings are as follows: First, students in MICE courses (meetings, incentives, conferences, and exhibitions) and classroom activities become more engaged in and positive towards Collaboration-Based Learning (CBL) than those in traditional classroom learning. Second, CBL had a stronger impact on students' motivation to study English and may be more effective than Traditional Teacher-Centered Learning (TTCL) in terms of increasing students' positive learning motivation. Third, compared to the control group, which revealed no differences in their English oral performance under the conventional teaching technique, the overall experimental group showed a dramatic improvement in their oral communication in MICE.

Hmeidan (2021) investigated the impact of the repeated reading technique on enhancing reading comprehension and vocabulary development in sixth-grade students learning English in Jordan. The study involved 60 students from Wadi Al-Seer Secondary Girls' School, with one group of 30 students assigned as the experimental group and another group of 30 students as the control group. The experimental group received instruction using the repeated reading technique, specifically focusing on a short story. The researcher utilized two assessment tools—a reading comprehension test consisting of 10 essay questions and a vocabulary test consisting of 10 essay questions—to measure the effect of the story on reading comprehension and vocabulary development. The results indicated a statistically significant difference between the two groups in terms of their performance in reading comprehension and vocabulary.

Chiu, Chen, and Tai's (2022) study looked at how collaboration impacted two important linguistic skills: error correction and grammatical and pragmatic awareness. 32 Taiwanese English learners who were enrolled in a four-year program at the Department of Applied English, University of Technology, in central Taiwan, comprised the study's participants. There were 23 female participants and 9 male participants. The results showed that in terms of error identification, severity judgments, and rectification, peer cooperation outperforms individual effort. The facilitative effects of collaboration may have been brought on by cooperation and expert-novice interaction patterns that showed a high degree of equality and reciprocity during talks.

Al-Tarawneh (2022) looked at how teaching English as a foreign language through a

cooperative learning technique affected sixth-grade female student's academic performance and growth in reading and writing abilities. The mixed-gender Al-Mazar Second Basic School, which is associated with the Directorate of Education in the Southern Mazar District, used the semi-experimental technique in two of its courses. There were 43 pupils in the study's sample. After confirming the validity and reliability of the tool, a note card was used to assess reading and writing abilities in the English language. There were (22) female students in the experimental group and (21) female students in the control group. According to the study's findings, there are statistically significant variations between the two study groups' average performance on the observation card, favoring the experimental group that received cooperative learning instruction.

Bermillo and Merto (2022) examined the impact of Collaborative Strategic Reading on students' comprehension and motivation. They used a random sample of 70 Grade 9 students. The Collaborative Strategic Reading (CSR) group outperformed the non-CSR group in terms of reading comprehension. There was a significant difference in reading comprehension between students who were treated to CSR and those who were not. Students in both groups were highly motivated to read, but CSR was more motivated than the other group.

Al-Maharmah and Al-Saudi (2023) conducted a quasi-experimental study to assess the usefulness of blogs as teaching and learning tools for EFL students in Jordanian schools in Amman. The study aimed to address the growing importance of the English language for Jordan's international competence and workforce. Additionally, it aimed to evaluate the benefits that blogs can provide for eighth-grade students. The researchers selected a sample of 72 eighth-grade EFL students from two schools in Amman and divided them into control and experimental groups. Both groups followed the regular EFL curriculum, but the experimental group received additional support through a blog component. The study utilized a pretest-posttest design. The results indicated a significant improvement in the students' reading comprehension skills and writing competence when blogs were incorporated into the instruction.

The review of the above studies focused on three areas: peer interaction on language learning (Sundari, 2017; Bouzid and Bouaziz, 2018; Ingrid, 2019; Chiu et al., 2022), reading comprehension (Hmeidan, 2021; Al-Tarawneh, 2022; Bermillo and Merto, 2022; Al-Maharmah and Al-Saudi, 2023), and grammatical knowledge (Al-Jarrah et al., 2019; Chiu et al., 2022) in EFL learning. The studies also reflected the effectiveness of peer interaction on developing students' reading comprehension and grammatical knowledge separately.

The current study differs from the previous research by focusing specifically on the effectiveness of peer interaction enhancement in sixth-grade Jordanian EFL students' reading comprehension and grammatical knowledge. While earlier studies explore various aspects of peer interaction, reading comprehension, and grammar separately, this study narrows its scope to a specific group and examines both skills simultaneously. By doing so, it provides a more focused analysis and contributes to the existing literature by offering insights into the combined effects of peer interaction on these two key language skills.

6. Methodology

6.1 *The Participants of the Study*

The participants of this study comprised 60 female EFL students who were conveniently selected from two schools. These schools were chosen for two reasons. First, the approximate academic achievement level is determined by administering a diagnostic exam. Second, a teacher with the same qualifications and academic level was identified and volunteered to cooperate in teaching the same level class. The schools and teachers were selected based on specific criteria to minimize biases and confounding variables. The sample was then randomly divided into two groups. The first group, the experimental group, consisted of 30 female students from Maymona Bint Al-Harith Mixed Elementary School. The second group, known as the control group, consisted of 30 students from Al-Mansheya Mixed Secondary School. The random assignment of participants to these groups was intended to establish equivalence between them and minimize potential biases and confounding variables.

6.2 *Design and Methods*

This study utilizes a quasi-experimental approach. Two intact sixth-grade students in public schools were conveniently chosen to be the sample of the study. They were randomly divided into a control group and an experimental group. Data were collected using pre-posttests. The experimental group received treatment using a peer interaction enhancement technique, while the control group received a conventional way of teaching reading comprehension per the instructions outlined in the coursebook (Action Pack Sixth Grade: Teacher's Book). Both groups underwent a training period of ten weeks which includes giving pre-posttests. During this period, the experimental group followed the peer interaction enhancement technique to foster and enhance student interaction, while the control group followed the traditional teaching practices.

6.3 *Instruments of the Study*

To achieve the goals of this study the researchers used:

1. Reading Comprehension pre-post-tests were designed by the researchers and used for data collection purposes. The tests comprised three different reading passages each one followed by comprehension questions.
2. Grammatical Knowledge pre-post-tests were designed by the researchers and used for data collection purposes. The tests included thirty items focused on the grammatical structures targeted in this study.
3. Teaching Plans designed by the researchers. They were designed according to the coursebook by adding extra peer interaction enhancement tasks and instructions.

6.4 *Validity and Reliability*

To ensure the validity of the instruments used in this study, the instruments were presented to a validation jury with different academic degrees and various specializations in more than one field, including professors of TEFL, linguistics, and applied linguistics. The jury reviewed the instruments and gave their advice, comments, and feedback on the study

instruments. Their comments were taken into consideration, as this contributed to developing and improving the study tools

The reliability of the instruments was also established. The pre-posttests were applied a semester before applying this study. The test was administered to 30 students at two different points in time, with an interval of three weeks between the tests. The values of the correlation coefficient for the tests were (0.85) for the Reading Comprehension Test and (0.86) for the Grammatical Structures Test, which are appropriate values for the current study.

6.5 Instructional Procedures

In instructing the control and the experimental groups, these procedures were followed:

- Students were grouped into pairs or small groups of three to encourage discussion and collaboration.
- The instructions and expectations of the tasks were provided and clarified.
- Reading passages exercises were assigned to students that are appropriately challenging for sixth graders.
- Students were asked to read or complete the task independently before engaging in peer discussion.
- Students were encouraged to take turns responding to the tasks and actively listen to each other.
- sentence starters or discussion prompts were provided to guide the conversation and keep it on track.
- Students were asked to explain their thinking and reasoning, using evidence from the text.
- peer editing or peer feedback was used to give students a chance to review each other's work and offer suggestions for improvement.
- Students were given opportunities to reflect on their learning and discuss what they found most helpful during the peer interaction activity.

6.6 Teaching Reading Comprehension and Grammar Using a Peer Interaction Enhancement Technique

In addition to the aforementioned instructional procedures, reading comprehension was taught using a peer interaction enhancement technique. This approach was designed to leverage the power of peer collaboration to deepen students' understanding and application of reading comprehension.

- Pairing or grouping students strategically: In the peer interaction enhancement technique, students were paired or grouped based on their proficiency levels and abilities. This allowed for a balanced exchange of ideas and ensured that each student had a peer partner who could provide valuable insights and support.
- Incorporating cooperative learning activities: Rather than merely assigning reading passages or grammar exercises, cooperative learning activities were introduced to the instructional process. For reading comprehension, this might involve group reading and discussion of a

shared text.

- Promoting peer-led discussions: Students were encouraged to take on active roles in leading discussions within their pairs or small groups. This included the responsibility of facilitating discussions, asking questions, and guiding their peers through the content.
- Fostering peer teaching: Students were encouraged to teach each other. This involved explaining reading comprehension strategies or to their peers, using evidence from the text. Peer teaching not only reinforced their understanding but also provided an alternative perspective on the material.
- Self-reflection and metacognition: After peer interaction activities, students were given opportunities to reflect on their learning experiences. They discussed what they found most helpful during the peer interaction activity, which strategies were effective, and how their understanding had evolved. This metacognitive approach encouraged students to take ownership of their learning process.
- Ongoing monitoring and guidance: Throughout the peer interaction activities, the teacher actively monitored and guided group discussions to ensure that they stayed on task and that all students actively participated. This guidance helped maintain a productive and focused learning environment.

7. Results and Discussion

To answer the first research question “To what extent does peer *interaction enhancement* develop students’ reading comprehension?”, the means, standard deviations, and modified means of the pre-test and post-test were calculated for both the experimental (IE group) and control group. Table 1 illustrates these values.

Table 1. Means and Standard Deviations of the Students' Performance on the Reading Comprehension Pre-posttests

Dependent Variable	Group	N	Pre		Post		Adjusted	
			Mean	Std. dev.	Mean	Std. dev.	Mean	Std. error
Finding specific information (scanning)	Control	30	1.43	0.90	2.37	1.45	2.27	0.23
	IE		1.33	0.88	3.47	1.25	3.56	0.23
General Reading Comprehension	Control		1.40	1.25	2.17	1.23	2.09	0.21
	IE		1.17	1.34	2.33	0.99	2.40	0.21
General Reading Comprehension with pictures	Control		0.50	0.86	1.07	1.01	1.01	0.15
	IE		0.53	0.90	1.27	0.98	1.32	0.15
Reading for details (deep reading)	Control		1.70	1.09	1.70	1.06	1.68	0.16
	IE		1.63	1.30	2.80	0.81	2.82	0.16

Reading for gist (skimming)	Control	0.83	1.05	2.00	1.14	1.91	0.17
	IE	0.70	0.95	2.17	1.12	2.26	0.17
Vocabulary and structures	Control	1.87	1.14	2.80	1.67	2.76	0.20
	IE	1.70	1.09	2.90	1.09	2.94	0.20
Critical thinking	Control	2.57	1.65	3.20	1.42	3.16	0.26
	IE	2.50	1.68	4.70	1.70	4.74	0.26
Over all Reading Comprehension	Control	10.20	2.66	15.30	4.22	14.88	0.22
	IE	9.63	2.68	19.63	4.25	20.05	0.22

Table 1 shows observed differences between the adjusted mean for the experimental and control groups on the Reading Comprehension post-test, in favor of the experimental group, and this means that the experimental group outperformed the control group on the post-test. For further examination of the results Analysis of Covariance (ANCOVA) was used to analyze students' scores in the tests as shown in Table 2:

Table 2. ANCOVA of Students' Scores in the Reading Comprehension Post-Test

Dependent Variable	Source	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Finding specific information scanning	Way	23.03	1	23.03	15.22	0.000*	0.23
	Error	75.68	50	1.51			
	Corrected Total	124.58	59				
General Reading Comprehension	Way	1.30	1	1.30	1.07	0.306	0.02
	Error	60.86	50	1.22			
	Corrected Total	73.25	59				
General Reading Comprehension with pictures	Way	1.36	1	1.36	2.09	0.154	0.04
	Error	32.45	50	0.65			
	Corrected Total	58.33	59				
Reading for details deep reading	Way	18.37	1	18.37	25.32	0.000*	0.34
	Error	36.28	50	0.73			
	Corrected Total	69.25	59				

Reading for gist skimming	Way	1.78	1	1.78	2.20	0.144	0.04
	Error	40.48	50	0.81			
	Corrected Total	74.58	59				
Vocabulary and structures	Way	0.48	1	0.48	0.41	0.526	0.01
	Error	58.43	50	1.17			
	Corrected Total	115.65	59				
Critical thinking	Way	34.48	1	34.48	17.87	0.000*	0.26
	Error	96.44	50	1.93			
	Corrected Total	176.85	59				
Overall Reading Comprehension	Way	371.98	1	371.98	260.84	0.000*	0.84
	Error	71.30	50	1.43			
	Corrected Total	1322.93	59				

Statistically significant ($\alpha \leq 0.05$), $n = 60$

Table 2 illustrates that the intervention had a discernible impact on the students' results. It shows statistically significant differences in the students' scores on the Reading comprehension post-test at ($\alpha \leq 0.05$) in favor of the IE group, specifically in finding specific information scanning, reading for details, deep reading, critical thinking, and reading comprehension. Conversely, no statistically significant differences at ($\alpha \leq 0.05$) were observed in the students' performance on the post-test for general reading comprehension, general reading comprehension with pictures, reading for gist skimming, and vocabulary and structures. The statistical significance values for these areas exceeded the threshold for statistical significance.

Indeed, the results suggest that peer *interaction enhancement* positively influences specific aspects of reading comprehension, including finding specific information, reading for details, critical thinking, and overall reading comprehension. However, the effectiveness of this approach may vary depending on the particular aspect of reading comprehension under consideration.

Based on the results of the current study and the results of the previous studies reviewed above, there is evidence to suggest that peer *interaction enhancement* has a positive impact on specific areas of reading comprehension. Several studies, such as (Bouazid & Bouaziz, 2018; Bermillo & Merto, 2022; Namaziandost et al., 2020; Schalich, 2015; 2018; Ritonga, et al., 2022), have explored the effects of peer interaction, collaborative learning, and cooperative techniques on students' reading comprehension abilities, and their results indicate

promising outcomes in certain aspects of reading comprehension.

Eventually, the studies collectively imply that peer interaction can positively impact various areas of reading comprehension, including finding specific information, reading for details, critical thinking, and overall reading comprehension. However, the specific effectiveness of peer interaction may depend on the techniques used, the specific reading comprehension skills being targeted, and the particular context in which the intervention is implemented. Educators need to consider these factors when incorporating peer interaction techniques in their classrooms to enhance students' reading comprehension abilities effectively.

To answer the second question” To what extent does peer *interaction enhancement* develop student's Grammatical Knowledge?” The means, standard deviations, and the adjusted means of the Grammatical Knowledge pre-post-tests were calculated for the experimental and control groups, as shown in Table 3:

Table 3. Means and Standard Deviations of the Students' Scores on the Grammatical Knowledge Pre-Post-Tests

Dependent Variable	Group	N	Pre		Post		Adjusted	
			Mean	Std. dev.	Mean	Std. dev.	Mean	Std. error
Simple Future	Control	30	2.13	1.41	2.67	1.71	2.38	0.27
	Experimental		2.00	1.39	3.43	1.72	3.42	0.27
Simple past & past continuous	Control		2.83	1.60	6.00	2.08	6.09	0.31
	Experimental		3.40	1.48	7.53	1.89	7.44	0.31
Modals	Control		3.10	1.58	2.83	1.70	2.89	0.26
	Experimental		2.93	1.28	3.60	1.77	3.55	0.26
If Clauses - Type 0	Control		1.47	1.04	4.67	1.67	4.70	0.25
	Experimental		1.50	1.14	5.97	1.65	5.93	0.25
Overall Grammatical Knowledge	Control		9.53	3.26	16.17	4.06	16.36	0.15
	Experimental		9.83	3.35	20.53	4.43	20.35	0.15

Table 3 shows observed differences between the adjusted mean for the experimental and control groups on the Grammatical Structures post-test, in favor of the experimental group, and this means that the experimental group outperformed the control group on the post-test. For further examination of the results Analysis of Covariance (ANCOVA) was used to analyze students' scores in the tests as shown in Table 4:

Table 4. ANCOVA of Students' Scores in the Grammatical Knowledge Post-Test

Dependent Variable	Source	Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Simple Future	Way	7.93	1	7.93	3.68	0.06	0.06
	Error	116.49	54	2.16			
	Corrected Total	178.85	59				
Simple past & past continuous	Way	26.19	1	26.19	9.13	0.004*	0.15
	Error	154.969	54	2.87			
	Corrected Total	264.73	59				
Modals	Way	6.21	1	6.21	3.19	0.07	0.06
	Error	104.95	54	1.94			
	Corrected Total	184.18	59				
If Clauses - Type 0	Way	21.82	1	21.82	12.17	0.001*	0.18
	Error	96.85	54	1.79			
	Corrected Total	184.98	59				
Overall Grammatical Knowledge	Way	227.95	1	227.95	324.35	0.000*	0.86
	Error	37.95	54	0.70			
	Corrected Total	1333.65	59				

Statistically significant ($\alpha \leq 0.05$).

The results presented in Table 4 show the impact of the intervention on students' performance. The data reveals noteworthy statistical differences, at ($\alpha \leq 0.05$), favoring the experimental group in specific areas of the post-test: Simple past & past continuous, If Clauses - Type 0, and overall Grammatical Knowledge. The (F) values were recorded (accompanied by degrees of freedom), and statistical significance values signifying the significance of these differences. Notably, the effect size index was substantial indicating a high impact. Conversely, there were no statistically significant variations, at ($\alpha \leq 0.05$), in student performance on the post-test regarding the areas of Simple Future and Modals. The statistical significance values for these areas exceeded the established significance level.

This suggests that engaging in communicative exercises with peers and providing vocal corrective feedback can improve students' understanding and accurate use of the simple past tense. Collaborative activities and discussions among peers can provide opportunities for students to reinforce their knowledge of grammar. Through interactions with peers, students can engage in meaningful conversations, ask and answer questions, and receive feedback, all of which contribute to a deeper understanding and retention of grammar knowledge. In addition, the peer-dynamic assessment technique emphasizes delivering grammar instruction in a contingent, graded, and interactive manner. By incorporating peer interaction into

grammar instruction, students can engage in discussions, practice grammar rules together, and receive feedback from their peers. This interactive approach helps students identify areas of difficulty and confidently rectify them, thus enhancing their overall grammatical knowledge (Okyar and Eksi, 2019).

8. Conclusions, Implications, and Recommendations

The current study has many conclusions. First, it shows that enhancing peer interaction positively affects certain aspects of reading comprehension. Second, peer interaction enhancement improves grammatical knowledge. Third, Peer interaction enhances communication skills, confidence, and motivation, creating a more comfortable learning environment than traditional teacher-led settings. Fourth, it allows for peer modeling, where students learn by observing their peers, especially in problem-solving and critical thinking. Fifth, it promotes collaboration skills and enables personalized learning through tailored feedback. Sixth, it supports cognitive development by involving students in explaining, questioning, and reasoning, thus improving their higher-order thinking skills. Seventh, peer interaction provides immediate and less intimidating feedback, making the learning process more effective and engaging.

This implies that peer interaction is a valuable tool for educators to improve students' reading comprehension (Ritonga, et al., 2022). However, it is crucial to consider the specific techniques, targeted skills, and implementation context when using peer interaction in the classroom. Peer interaction is indeed highly beneficial in educational settings as it enhances students' reading comprehension through various means. It fosters social learning by encouraging students to participate in discussions and debates, exposing them to different perspectives and deepening their understanding. Active participation in these interactions helps (Ritonga, et al., 2022).

Moreover, engaging with peers in a supportive environment builds confidence in language use. Students often feel more comfortable making and learning from mistakes in a peer group than in more formal educational settings. This confidence is key in language learning, as it encourages students to use the language more freely and effectively.

The results of this study are consistent with the results of many previous studies (e.g. Adams & Oliver, 2019; Al-Jarrah et al., 2019; Okyar & Eksi, 2019) which found the effectiveness of peer *interaction enhancement* in improving students' grammatical knowledge. There is evidence to suggest that peer *interaction enhancement* has a positive impact on specific areas of reading comprehension. Several studies, such as (Bouزيد & Bouaziz, 2018; Bermillo & Merto, 2022; Namaziandost et al., 2020; Schalich, 2015; Ritonga, et al., 2022), have explored the effects of peer interaction, collaborative learning, and cooperative techniques on students' reading comprehension abilities.

Based on the conclusions drawn from the current study, this study recommends the following:

1. Educators, teachers, learners, and policymakers could enhance their teaching approach by exploring the inclusion of peer interaction techniques.

2. Teachers need to identify specific reading comprehension skills that students need to develop.
3. Curriculum designers can benefit from the effectiveness of peer input enhancement in supporting coursebooks with more exercises that integrate this technique with language skills.
4. Educators may investigate the effect of interaction enhancement on other language skills, for this study included reading skills and grammar.
5. The current study provides researchers with insights for further research with larger samples and longer periods since this study is limited to its sample and time.

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