

The Effect of Reciprocal Teaching on Iranian EFL Learners' Reading Skill

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Abstract

The purpose of this study was to investigate the impact of the reciprocal teaching on Iranian female EFL learners' reading in an English as a foreign language (EFL) context. In doing so, QPT was administered to 40 Iranian upper-intermediate female EFL learners and those whose scores deviated about one standard deviation below and above the mean on the test were considered homogeneous ($N = 32$). Then, they were divided into two classes. One of these classes was randomly selected as the experimental group ($N = 16$) and the other one as the control group ($N = 16$). The experimental group was provided with reciprocal teaching. The control group had the same amount of reading instruction. They were, however, taught in a conventional way without the using reciprocal teaching. IELTS reading tests were administered as the pre-tests and the post-tests to measure the reading performance. In order to compare means of test scores between groups t tests were used. The significant effect of reciprocal teaching on reading was confirmed. The present study had pedagogical implications for EFL teachers with regard to teaching reading by contributing complementary information in the form of reciprocal teaching.

Keywords: Reading Skill, Reciprocal Teaching, Strategies

INTRODUCTION

Reading skill is regarded as an important part of students' learning process (Mohammadi & Davarbina, 2015). What is more, there is an agreement that reading is the most important skill for students (Carrell, 1989). Many EFL learners, however, lack acceptable reading skill (Ahmadi & Pourhoseini Gilakjani, 2012; Mohammadi & Davarbina, 2015). Reading is considered as one of the most challenging language skills for students, since it requires them "to visually perceive words, process their phonological codes and understand the semantic meaning of a word itself as well as its meaning within the sentence" (Qutob, 2020, p. 432).

One possible solution to the problem of poor reading comprehension is the explicit teaching of reading comprehension strategies (Ahmadi & Pourhoseini Gilakjani, 2012). Selen Kula (2021) holds that not only do teachers lack enough time to spend on teaching reading strategies in a traditional classroom, but also they have limited knowledge in strategy teaching. Therefore, experimental research on reading strategies for the purpose of guiding teachers is necessary.

Reciprocal teaching is regarded as a pedagogical procedure that is meant to "teach students certain cognitive strategies that they can employ to help them better understand written texts" (Munandar, Aminah, & Arifin, 2020, p. 75). It is characterized as a kind of explicit instruction along with scaffolding, and is normally done through modeling comprehension strategies (Todd & Tracey, 2006). It teaches students how to use meta-cognitive thinking when they attempt to understand text. In reciprocal teaching, the emphasis is on teaching students "specific, concrete, comprehension-fostering strategies" which takes place primarily in the context of an interaction between the teacher and students (Rosenshine & Meister, 1994, p. 480).

In reciprocal teaching, students read a text of descriptive material, paragraph by paragraph. While reading, students practice four reading strategies: questioning, summarizing, clarifying word meanings, and predicting. In the early stages of reciprocal teaching, the teacher takes on the main responsibility for instruction by modeling the procedure of using the strategies on a selected passage (Rosenshine & Meister, 1994) through teaching each strategy explicitly using thinking aloud (Alfassi, 2004). Responsibility of learning passes from the teacher to the student over a long period of time and slowly. After the teacher's modeling, students practice the strategies by themselves, working in pairs or small groups, which assist them in passing the leadership from one student to the other (Selen Kula, 2021) and the teacher provides feedback, additional modeling, coaching, tips, and explanation (Rosenshine & Meister, 1994). The teacher, also, encourages the students, and provides scaffolding (Selen Kula, 2021). Considering this, reciprocal teaching refers to "a guided reading comprehension instruction technique, where the teacher models the required learning behaviours, after which students themselves become the teachers by forming small groups to discuss the texts and support each other's learning" (Qutob, 2020, p. 433). During the controlled and guided practice, the teacher asks students to start discussing and reacting to other students' statements. Thus, students participate through "(a) elaborating or commenting on another student's summary, (b) suggesting other questions, (c) commenting on another's predictions, (d) requesting clarification of material they did not understand, and (e) helping to resolve misunderstandings" (Rosenshine & Meister, 1994, p. 480).

Statement of the problem

Most of studies on reciprocal teaching are either about students with reading disabilities or limited to reading in first language. Nevertheless, "the diversity in student population and the demanding expectations for academic success in ESL learners necessitate the need to review the use of reciprocal teaching in SL or EFL contexts" (Dew, Swanto & Pang, 2021, p. 158).

There is no study to investigate the effect of reciprocal teaching on Iranian EFL reading comprehension in a Persian EFL context. Thus, the current study aims to address the aforementioned gap, by adapting reciprocal teaching.

Research question

The principal research question of this study was as follows:

Q1: Does reciprocal teaching have a statistically significant effect on Iranian upper-intermediate EFL learners' reading comprehension?

LITERATURE REVIEW

Reciprocal teaching

Reciprocal teaching is a socio-instructional approach that is based on Vygotsky's sociocultural theory (Selen Kula, 2021). The inspiration for it comes from the theory of Vygotsky. That is, there is instruction and ZPD in reciprocal teaching (Munandar et al., 2020).

Reciprocal teaching refers to "a dialogue that takes place between the teacher and students (or student leader and members of that the group) that results in students' learning how to construct meaning when they are placed in must-read situations (tests or assignments)" (Carter, 1997, p. 66). It is "a reading comprehension technique that supports individual and cooperative learning" (Selen Kula, 202, p. 680). It regards reading as a cooperative effort, "in which the process of comprehension is a collaborative comprehension-monitoring instructional procedures where small groups of students learn the application of four reading strategies through scaffolded instruction" (Dew et al., 2021, p. 158). These strategies include "summarizing (self-review), questioning, clarifying, and predicting" (Ashegh Navaie, 2018, p. 26).

Reciprocal teaching begins with reading a part of text by the teacher and students together. While modeling suitable reading comprehension strategies, the teacher opens a discussion about the text. During this discussion and modeling procedure, the teacher encourages students to ask questions about both the text and strategies. Therefore, students' reading comprehension as well as strategy development is improved. This process of reading, discussing, and clarifying, continues throughout the whole text. Nevertheless, when students become familiar with the process and the reading comprehension strategies, the teacher encourages them to perform the role of discussion leader. As students begin to lead the discussion process, the teacher takes on the role of facilitator, than leader (Doolittle, Hicks, Triplett, Nichols, & Young, 2006). The dialogues between the teacher and learners incorporate following strategies:

- 1) Question Generating: Questioning pushes learners one more step forward in the comprehension activity. When the students ask questions, they make sure that they can answer those questions. First, the students generate simple questions since they have to find answers to them. In the course of time, with the teacher's assistance, they can ask questions at various levels. This strategy will help the students infer new information

from the text (Vijayalakshmi, 2017). In a different version, the teacher/leader or other members of the group ask some questions prompted by the passage that they have just read, and members of the group provide answers. In fact, questioning directs students' attention to main ideas and "provides a check on their current understanding of what they are reading" (Slater & Horstman, 2002, p. 164).

2) Clarifying: When teachers work with students, they have to pay attention to the individual differences. Some students might face difficulty in comprehension. The teacher should make sure that their no doubts concerning the meaning of words and ideas in the paragraph are left. They should be provided with opportunities to read again or ask for the teacher's assistance (Vijayalakshmi, 2017). When the passage produces any problems, the teacher/leader and other members of the group clarify or solve them. Clarifying makes students active and engaged when they are reading and helps them comprehend ambiguous and confusing segments of text (Slater & Horstman, 2002).

3) Predicting: Predicting is a strategy that makes students think about what will happen in the text. That is, it is a kind of hypothesizing. The students should have appropriate background knowledge about the topic. This strategy helps them establish a connection between the new information in the text and the concepts that they have already learnt. The students make an attempt to learn the headings, phrases and important ideas that they previously knew well to predict the events (Vijayalakshmi, 2017). Based on the sections that are read, preceding segments, and the discussion that is done, the teacher/leader or other group members predict the contents of the following section of text. Predicting requires students to practice "what they have learned thus far in their reading and begin the next section of the text with some expectations of what is to come" (Slater & Horstman, 2002, p. 164).

4) Summarizing: Summarizing is the last step in reciprocal teaching. In summarizing, the readers need to identify the main idea of each paragraph. A perfect summary does not contain unnecessary details. Summarizing helps the readers with identifying, paraphrasing, and incorporating the essential information (Munandar et al., 2020). It helps the learners identify the most relevant information in the text. The text might be summarized in several ways. It can be summarized across sentences, paragraphs or whole passage. At the initial stage, students begin summarizing sentences and paragraphs (Vijayalakshmi, 2017). After all the questions are answered and all problems are resolved, the teacher/leader or other group members summarize the text. It requires students "to focus on the major content of the selection and determine what is important and what is not" (Slater & Horstman, 2002, p. 164).

Practicing the four strategies and providing mediation is a group activity in which students share the responsibility of thinking for determining the meaning of a text. This makes the task more manageable without making it simple. The group's efforts are demonstrated in the form of a discussion. Therefore, low-proficiency students are allowed to contribute and learn from the knowledge of more proficient peers. Furthermore, it exposes the learner to alternative viewpoints that challenge and clarify their initial understanding and might bring about more powerful rules and

generalizations. Learners gradually take the interrogative regulatory role of the supporting others. They are might adopt this role through self-regulation and self-interrogation (Alfassi, 1998).

It is worth mentioning that reciprocal teaching includes three main components, (a) the teaching and learning of reading comprehension strategies, (b) the discussion or dialogue between a teacher and students where the teacher shows when, where, and why to use these strategies, and (c) shift in role of the instructor and the students, that is, students model the strategies for other students. Therefore, the objectives of reciprocal teaching for students are "to learn the reading comprehension strategies, learn how and when to use the strategies, and become self-regulated in the use of these strategies" (Doolittle et al. 2006, p. 107).

It is worth mentioning that reciprocal teaching, in its first implementation, is teacher directed. At first, the teacher or some other experienced reader, including a classroom assistant or trained tutor, serves as the leader of the group, explains the strategies and models them for other members in the group. The leader's main tasks include "modeling the strategies the students are expected to learn, monitoring students' learning and understanding, scaffolding their efforts, providing students with feedback, and tailoring the session to the students' existing level of competence" (Slater & Horstman, 2002, p. 165).

In reciprocal teaching, the teacher helps students by paraphrasing or explaining their answers, sentences, and questions. During the controlled practice, the responsibility shifts from the teacher to learners, with the teacher only observing learners and helping them when they need, while learners play the thinking role. In fact, the practice changes into a dialogue: one student asks questions, another answers, and a third student might provide comments on the answer. Further, one student produces a summary and another gives comments to improve the summary. Additionally, one learner finds a difficult word and the other learners help him to guess the meaning and explain their prediction. The focus is on cooperative effort by teacher and students to attach meaning to the ideas in the text, rather than merely repeating the words. Furthermore, during the dialogue, students are provided instruction in why, when, and where these activities should be done to new text. Reciprocal teaching, therefore, has two main features. "The first is instruction and practice of four comprehension-fostering strategies: question generation, summarization, prediction, and clarification. The second consists of the use of the reciprocal teaching dialogue as a vehicle for learning and practicing these four strategies" (Rosenshine & Meister, 1994, p. 481).

Motives for reciprocal teaching

Reciprocal teaching is an effective method to teach learners how to identify main ideas from reading. At the same time, it includes discussing vocabulary, developing ideas and questions, and summarizing information (Vijayalakshmi, 2017). Moreover, reciprocal teaching has been recognized as a valuable teaching method by several scholars, reading instructors, and educators since it is a form of systematic training in strategies that assist

less efficient readers with improvement of their reading comprehension and becoming independent readers (Ahmadi & Gilakjani, 2012).

Munandar et al. (2020) lists the positive aspects of reciprocal teaching as follows:

- Reciprocal teaching makes learners creative and more imaginative. It brings about self-confidence in students.
- Reciprocal teaching is effective, helpful, and clear. It helps students to find out what the main concern of each question is, so that they can solve it more effortlessly.
- Reciprocal teaching makes students easier in learning reading comprehension in a group. Students can solve the problem by discussing it with their group members.
- The implementation of reciprocal teaching is not useful for learners with lower proficiency level.
- Reciprocal teaching "engages the students to study and solve the problems collaboratively" (p. 87).

It has also been argued that reciprocal teaching performs a significantly positive role in the English reading comprehension and meta-cognitive reading strategies of learners. It fosters the reading comprehension of learners with different proficiency. Students take advantage of the four main strategies and know what strategies to employ, and when, how, and why to use each of them. In addition, they learn to predict, ask questions, identify the gist of a paragraph, clarify unknown words, phrases, or sentences, and summarize what they have read. The four reading strategies help students resolve difficulties when they are reading texts as they plan and monitor their comprehension, and evaluate their planning and its outcome. It leads students to pay attention to their reading process, develop a plan of action, monitor their own reading to build their own knowledge, and self-evaluate their reading process. It makes students independent readers. More specifically, it "incorporates scaffolding and explicit teaching of the four main strategies, which creates an environment that facilitates productive information processing and reading comprehension" (Ahmadi & Gilakjani, 2012, p. 2058). With regard to the merits of reciprocal teaching, Carter (1997) argues that:

- Reciprocal teaching is regarded efficient in assisting students with improving their reading ability in research studies. Moreover, studies adopting reciprocal teaching have consistently shown that the technique enhances reading comprehension as measured through standardized reading tests.
- Since the technique is easily understood and learned by both teachers and students, it can be confidently argued that this technique would present a model that could be used to teach parents how to promote comprehension among their children- and consequently foster reading skills that might help students develop their skill more.
- The most striking feature of reciprocal teaching is that it is described as the process of interactive reading, where learners interact with the text as their prior

knowledge is activated. Using prior knowledge as a channel, readers learn new information, main ideas, and arguments. Besides, readers construct meaning from the text by relying on prior knowledge to parallel, contrast, or confirm what the author suggests. All good readers do the construction. "Otherwise, the content would be meaningless alphabetic squiggles on the page. Without meaning construction, learning does not take place. Reciprocal teaching is a model of constructivist learning" (Carter, 1997, p. 66).

Furthermore, when learners are engaged in comprehension-fostering and comprehension-monitoring activities; independence, perceived competence, and metacognitive awareness are other factors achieved through reciprocal teaching and reflective practices. To put it simply, "these techniques paved the way for them to set their personal goals in learning, examine the quality of their work, and monitor their progress constantly" (Badakhshan, Motalebzadeh, & Maftoon, 2021, p. 50). Reciprocal teaching has the main features of efficient intervention since significant achievements were mainly observed in the research using reciprocal teaching as treatment. Having many different uses, reciprocal teaching is adaptable to learners of various backgrounds, ages and levels of education (Dew et al., 2021).

Studies on reciprocal teaching

The study carried out by Ostovar-Namaghi and Shahhosseini (2011) investigated the comparative effect of reciprocal teaching on EFL learners' reading proficiency. Reciprocal teaching has the advantage over transmission model. They argued that differential effect of reciprocal teaching is because of the dialogical process of constructing the meaning of the text and the strategies which made the learners active. In other words, the impact of reciprocal teaching might be related to student-student interaction outside the classroom.

With the purpose of investigating the effects of strategy instruction on reading comprehension, Alfassi (1998) conducted a study that the main objective of strategy instruction was to improve comprehension monitoring. The results showed that strategy instruction was more efficient in comparison with traditional reading methods in improving reading comprehension which was measured by experimenter-designed reading tests.

Sporer et al. (2009) explored the impact of three different ways of teaching strategies on elementary-school students' reading comprehension. At both the post-test and delay test the treatment groups achieved higher scores on an experimenter-developed task of reading comprehension and strategy use than the control students who were taught traditionally. What is more, learners who experienced reciprocal teaching in small groups outperformed those in teacher-guided and conventional instruction groups on a standardized reading comprehension test.

In a study carried out by Westera and Moore (1995), a trial implementation of reciprocal teaching procedures by high school teachers was evaluated experimentally with the purpose of addressing reading comprehension deficits in a group of their students. The

findings showed the absence of student progress with insufficient spaced practice in meta-cognitive skill training and strategic resourcing for remedial comprehension instruction.

Majeed and Ahmed (2022) investigated the effect of the reciprocal teaching strategy on EFL students' reading comprehension through specifying the reciprocal teaching strategies for teaching English reading comprehension in order to find out the average level of students' performance in English reading comprehension, whether there is any statistically significant difference between the performance of the two groups in the achievement test, as well as between the recognition level and the production level of the achievement test. The obtained results indicated that the average level of the EFL preparatory school students' performance was within the theoretical mean scores of achievement in reading comprehension. There was also a statistically significant difference between the mean scores of the two groups' performance in the achievement test, i.e., the experimental group outperformed the control group. Moreover, there was a statistically significant difference between the mean scores of the students' performance at the recognition level and that at the production level. Further, their production was better than their recognition.

METHODOLOGY

The Design of the study

The present study used a quasi-experimental design and adopted a quantitative method. After being homogenous, the participants were randomly assigned to one control group and one experimental group.

In order to examine the effect of the treatment on the experimental group, the present study used control/experimental group design. Both groups took the same pre-test and post-test. They, however, underwent different treatments between the tests.

Four weeks before implementing the main study, 12 students with similar characteristics to the main sample in terms of English proficiency, gender, and age undertook a pilot study to identify and resolve potential problems of the research design. Some slight adjustments were made after the pilot study. More specifically, it was found that the experimental group needed sufficient time to feel comfortable with reciprocal teaching. Therefore, the researcher increased the number of treatment sessions for the main study.

Participants

Upper-intermediate female EFL learners in Iran made up the population of this study. To conduct the present study, 32 upper-intermediate participants were randomly assigned into one control group and one experimental group. The initial number of the participants was 40.

The participants were female students and gender was not considered a moderator variable in this study. The medium of instruction was English in these classes. All of the participants were between the ages of 16 and 24 with a mean of 18. The major motivation

for choosing upper-intermediate learners, other than convenience, was that they had a greater chance to improve their reading performance through innovative techniques.

Instruments

To carry out the present study the following materials were used:

Two IELTS reading tests were administered before and after the study as pre-tests and post-tests to measure and compare the participants' reading performance. The participants were given IELTS reading tests with different types of reading exercises. In both pre-tests and pos-tests, the groups were given a time limit of 60 minutes to complete the test. IELTS reading tests were chosen since the participants were familiar with this test, and it made the administration convenient.

American English File 4, 2nd edition (Latham-Koenig & Oxenden, 2013) was used in this study as the course-book. In both groups, reading passages and exercises were selected from the course-book.

Quick Placement Test (QPT), constructed by Cambridge ESOL and Oxford University Press, is validated in several countries. It is quick and easy to administer and there are two versions of it: paper and pen version and a computer-based one. The former consisting two parts was used in the current study. Part 1, questions 1-40, was taken by all participants and those who scored more than 35 out of 40 took the second part as well. In this study, to ensure that the participants were upper-intermediate, the QPT was administered to the initial students. Since almost all the initial students scored above 40, they were considered upper-intermediate (based on the interpretation format of QPT).

Data collection

In order to do the experiment and implement the treatment the following procedure were followed. First, to ensure that the participants were homogeneous, QPT was administered to 40 Iranian female EFL learners and those learners whose scores deviated about one standard deviation below and above the mean on the test were excluded (N = 32). In the next step, the homogenous participants were randomly placed into one control group (N = 16) and one experimental group (N = 16).

In the first session, in both groups, the teacher introduced the purpose of the study to the students and they agreed to participate in the study. In general, every session, the teacher introduced and modeled various reading strategies. Then, the participants completed reading exercises related to that particular strategy. To ensure the uniformity of instruction, both groups were taught by the same teacher (researcher). The classes were held at Novin language school in Talesh, Iran. The treatment took 17 sessions and the classes were held twice a week. Accordingly, there was approximately two months interval between the pre-test and post-test in each group. Each session took 90 minutes and about 20-25 minutes was devoted to reading skill.

In the experimental group, the participants were provided with reciprocal teaching, in the form of strategy instruction, as follows:

- 1) Predicting: The teacher asked the students to predict what they think about the reading test. She encouraged them to think about what was going to happen by asking questions.
- 2) Questioning: The teacher reminded students to ask questions about the text as they read.
- 3) Clarifying: When the students were reading, the teacher encouraged them to ask what words, phrases, and structures are not clear to them. They asked about the pronunciation and meaning of words as well as the author's opinion.
- 4) Summarizing: The teacher asked students to summarize verbally, within pairs, and then share with their group members or record their summary then read it aloud to their group. At times, each group created a semantic diagram with important points which were shared by each group member.

It is worth mentioning that although all reading strategies were practiced each session, an attempt was made to focus on one specific strategy. The activities focused mainly on practicing reading strategies and students worked in pairs or in groups. During the class, the teacher observed the students using strategies and encouraged them to complete follow-up exercises carefully. They were given support during class and instant feedback on their performance was provided.

As an illustration, in the second session, since the teacher had planned to teach the students prediction strategy, provided a short lecture followed by modeling how to predict what will happen in the text. Then, she asked the students to practice the reading passage on the book and implement the strategy. Finally, she asked the students to work in pairs and individually, completing the exercises. The teacher provided feedback when it was necessary.

In the control group, the participants had the same amount of reading instruction under the same instructional context. They were, however, taught in a conventional way without the use of the reciprocal teaching. They were provided instruction on reading traditionally. The teacher explained various typical reading strategies to the students. They were required to implement the reading strategies on the following texts. Like the experimental group, they were supposed to incorporate the insights gained from strategy instruction to their reading exercises.

In the present study, there was one dependent variable (i.e. learners' reading performance) and one independent variable (i.e. reciprocal teaching). To compare means of each test between and within the groups, *t* tests were used. In this calculation, the null hypothesis of no difference within and between group means was chosen. The alpha level was set to .05.

RESULTS

Data analysis and findings

The data were collected and processed in response to the research questions posed in chapter one. Descriptive and inferential analyses of the data are two main subsections.

Measures of central tendency and variability for the different groups are presented in descriptive statistics section. Inferences from the sample data for making judgments of the probability of observed difference between the groups are reported in the inferential statistics section

Descriptive analysis of the data

The first set of analyses was used to calculate the descriptive statistics. The descriptive statistics for the EFL learners who took QPT (N = 40), to select homogeneous participants, before the study are shown in Table 1. The mean score was 41.50 and standard deviation was 1.05. Those learners whose scores deviated between one standard deviation below and above the mean on the test (N = 8) were excluded from the study. The rest of the participants (N = 32) were considered upper-intermediate.

Table 1. Descriptive statistics for the results of QPT test

	N	Mean	Std. Deviation
QPT score	40	41.50	1.05

Table 2 sets out the descriptive statistics of the participants' reading scores on the pre-test. It indicated that the means of both groups were to some extent the same. They were 5.000 and 5.188 for the control and experimental groups, respectively. Furthermore, the standard deviations were .5477 and .4425 for the control and experimental groups, respectively. In fact, mean and standard deviation indicated that the participants of both groups performed similarly on the pre-test.

Table 2. Descriptive statistics for reading comprehension (Pre-test)

Group	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Control	16	5.000	.5477	.1396	4.708	5.292	4.0	6.0
Experimental	16	5.188	.4425	.1106	4.952	5.423	4.5	6.0
Total	32							

The next step in analyzing the results of the study was the calculation of the students' scores in lexical cohesion after the treatment on the post-test. Like the pre-test, descriptive statistics were used for this purpose. The descriptive statistics of participants' scores on the post-test are given in Table 3.

Table 3. Descriptive statistics for reading comprehension (Post-test)

Group	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Control	16	5.125	.6952	.1738	4.755	5.495	4.0	6.5
Experimental	16	5.875	.4282	.1070	5.647	6.103	5.0	6.5
Total	32							

The mean and standard deviation for both groups are exhibited in Table 3. Means were 5.125 and 5.875 for the control, experimental groups, respectively. Moreover, the standard deviations were .6952 and .4282 for the control, experimental groups, respectively. By comparing the mean and standard deviation of each group in Table 3 with the ones of the pre-test in Table 2, the striking feature is that mean difference for the groups had changed into a greater score from the pre-test to the post-test.

Inferential analysis of the data

In order to find out the difference within the groups, paired t tests were performed on the test scores of each group's reading performance. Table 4 presents the result of a paired t test of reading test score in the control group at a 95% confidence. The probability, then, is less than 5% that this difference occurred by chance alone. The average difference of -0.125 between reading test score on the pre-test and post-test was not statistically significant. This indicates that the students could not develop their reading comprehension to a statistically significant degree in the two-month period, during which they engaged in traditional instruction of reading.

Table 4. Paired-samples t test (control group)

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	pre-test post-test	-.1250	.4282	.1070	-.3532	.1032	-1.168	15	.261

Table 5 presents the result of a paired t test of reading test score in the experimental group at a 95% confidence. That is, the average difference of -0.687 between reading test score on the pre-test and post-test was statistically significant. This indicates that the students developed their reading comprehension to a statistically significant degree in the two-month period, during which they engaged in reciprocal teaching.

Table 5. Paired-samples t test (experimental group)

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 2	Pre-test post-test	-.6875	.4787	.1197	-.9426	-.4324	-5.745	15	.000

The results of an independent-samples t test of reading test score between the post-tests of the control and experimental groups, at a 95% confidence, are shown in Table 6. It demonstrates that the difference was statistically significant, $t(30) = -3.674$, at $p < .05$, 2-tailed. In other words, the average difference of -0.750 between reading test score on the

post-test of control group and experimental group was statistically significant. This further indicates that the students in the experimental group improved their reading comprehension to a statistically significant degree compared to the control group in the two-month period, during which they practiced reciprocal teaching.

Table 6. Independent-samples t test between pre-test of control and experimental groups

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
Post-tests	Equal variances assumed	2.348	.136	-3.674	30	.001	-.7500	.2041	-1.1669	-.3331
	Equal variances not assumed			-3.674	24.948	.001	-.7500	.2041	-1.1704	-.3296

Results of hypothesis testing

According to the results of t tests, the null hypothesis that teaching reading through reciprocal teaching has no significant effect on the improvement of Iranian EFL learners' reading comprehension is strongly rejected. The mean difference was statistically significant within the experimental group from pre-test to post-test and between the control and experimental groups on the post-tests. The results revealed that the experimental group improved its reading on the post-test significantly. This suggests that reciprocal teaching of reading is preferred to conventional techniques.

DISCUSSION

General discussion

The results of the statistical analysis indicated that the participants' initial reading performance (on the pre-test) was poor: the mean score for the control group was 5.00 and for the experimental group was 5.188 out of 9. These classes had not experienced reciprocal teaching. This implies that the status quo in conventional reading classrooms may be one of the chief causes of not having the desired progress in reading.

The results also demonstrated that the participants in both groups had a similar performance in terms of reading comprehension before the treatment. In other words, they were homogeneous regarding the reading skill. Nonetheless, after introducing reciprocal teaching and practicing it for a two-month period, the groups were not homogeneous anymore. The difference between the experimental group's reading performance and the control group's one was significant, with the participants in the

experimental group performing significantly better. In fact, the study revealed that employing reciprocal teaching could bring about significant positive change in EFL learners' reading performance.

It should be highlighted that the most striking and basic finding of the present study, emerged from the experimental group, was that it is feasible to hone reading performance through reciprocal teaching. Another important point worth mentioning is that as the study took two months, it might be inferred that the effect of reciprocal teaching on reading comprehension is achieved even in short term.

The result of current study is in line with several findings in the literature. It is consistent with Choo, Eng and Ahmad's (2011) study findings that reciprocal teaching improves EFL learners' overall reading performance significantly. Their study showed that reciprocal teaching in general and teaching specific strategies in particular had a significant effect on the learners' reading comprehension. Similar to their study, the current study used a pretest-posttest design and the treatment sessions took a short period.

Similarly, the present study reinforced the findings of Ashegh Navaie's (2018) study, which demonstrated the effectiveness of reciprocal teaching as a part of the process of L2 learning. Like his study, the present study indicated that reciprocal teaching is an effective technique for improving reading in a short period of time.

It can be discussed that achieving the same positive result from various studies investigating the effect of reciprocal teaching on reading comprehension in various contexts confirms that this effect is strong and apparent.

Since the participants in the control group were taught conventionally and did not lead to any significant progress in their reading performance, it is logical to argue that conventional methods of practicing reading are not efficient enough. That is, the lack of statistically significant improvement in the control group on the post-test suggests introducing viable alternatives to the reading instruction. The improvement in the experimental groups indicated that this alternative could be teaching reading through reciprocal teaching.

It should also be mentioned that since the control group performed poorly compared to the experimental group on the post-test, it can be argued that the rise in the experimental groups' reading performance was not due to normal classroom teaching. If this was the case, the participants in the control group should have had similar improvement in their reading performance. This result further confirmed that the learners' reading, in the experimental group, improved thanks to teaching reading through reciprocal teaching. Furthermore, the only difference between these two groups was the treatment. Therefore, it could be argued that the treatment itself was the only reason for progress in the experimental groups.

Pedagogical implications of the study

The findings of the current study had both micro and macro implications including in-class instruction, pedagogical design and policymaking, curriculum planning, and curriculum development. This study cast light onto the status of teaching English and the impact of the reciprocal teaching on reading comprehension in an Iranian EFL context. It provided additional insights into identifying existing challenges with regard to reciprocal teaching in taking a more realistic perspective with regard to the ELT situation in Iran.

Since no study to date, to the best of the researcher's knowledge, has been devoted to reciprocal teaching and its influence on Iranian female upper-intermediate EFL learners' reading comprehension, the implication should be considered with caution. The followings are pedagogical implications of the present study:

The results of the current study supported the idea that students' reading comprehension would improve by reading practices through reciprocal teaching. The first and profound implication of the current study is that reciprocal teaching constitutes an effective technique for improving reading performance. Therefore, reciprocal teaching can perform the role of an alternative method whenever conventional ways of reading instruction do not bring the desired effect. The result of current study is also persuasive for relevant authorities to pay prompt attention to this new aspect of reading instruction.

It could also be suggested that the main advantage of reciprocal teaching in the long term is that the learners will gradually become autonomous and might develop meta-cognitive awareness.

Moreover, it should be mentioned that the present study presented a recent type of reading instruction that is more comprehensive and effective than conventional ones. This kind of instruction can be used in reading classes where there are a few number of students in the class and the teacher has plenty of time to spend on each student's reading strategies.

Finally, for presenting reading through reciprocal teaching, teachers need specific guidelines and supports. They might need a longer time to employ strategies appropriately. That is, in order for reciprocal teaching to perform a constructive role, teacher training should be regarded as necessary.

REFERENCES

- Ahmadi, M. R., & Pourhossein Gilakjani, A. (2012). Reciprocal teaching strategies and their impacts on English reading comprehension. *Theory and Practice in Language Studies*, 2(10), 2053-2060. <http://dx.doi.org/10.4304/tpls.2.10.2053-2060>.
- Alfassi, M. (1998). Reading for meaning: The efficacy of reciprocal teaching in fostering reading comprehension in high school students in remedial reading classes. *American Educational Research Journal*, 35(2), 309-332. doi:10.3102/00028312035002309

- Alfassi, M. (2004). Reading to learn: Effects of combined strategy instruction on high school students. *Journal of Educational Research*, 97(4), 171–184.
- Ashegh Navaie, L. (2018). The effects of reciprocal teaching on reading comprehension of Iranian EFL learners. *Advances in Language and Literary Studies*, 9(4), 26–30.
- Badakhshan, S., Motallebzadeh, K., & Maftoon, P. (2021). Reflective reciprocal teaching: A technique for improving Iranian EFL Learners' reading comprehension ability. *International Journal of Foreign Language Teaching and Research*, 9(38), 39–63.
- Carrell, P. L. (1989). Metacognitive awareness and second language reading. *Modern Language Journal*, 73, 120–133.
- Carter, C. J. (1997). Why reciprocal teaching?. *Educational Leadership*, 54, 64-69.
- Choo, T. O. L., Eng, T. K., & Ahmad, N. (2011). Effects of reciprocal teaching strategies on reading comprehension. *Reading Matrix: An International Online Journal*, 11(2), 140–149.
- Dew, T. P., Swanto, S., & Pang, V. (2021). The effectiveness of reciprocal teaching as reading comprehension intervention: a systematic review. *Journal of Nusantara Studies*, 6(2) 156–184.
<http://dx.doi.org/10.24200/jonus.vol6iss2pp156-184>
- Doolittle, P. E., Hicks, D., Triplett, C. F., Nichols, W. D., & Young, C. A. (2006). Reciprocal teaching for reading comprehension in higher education: A strategy for fostering the deeper understanding of texts. *International Journal of Teaching and Learning in Higher Education*, 17(2), 106–118.
- Majeed, N. T., & Ahmed, F. S. (2022). The effect of the modified reciprocal teaching strategy on EFL 5th year preparatory school students' achievement in reading comprehension. *Journal of Tikrit University for the Humanities*, 29(2).
- Mohammadi, A., & Davarbina, M. (2015). The effect of cooperative learning techniques on reading comprehension ability of Iranian EFL learners. *International J. Soc. Sci. & Education*, 5(3), 525–531.
- Munandar, S. A., Aminah, A., & Arifin, M. A. (2020). Students' perceptions of reciprocal teaching in reading comprehension class. *Tamaddun*, 19(2), 74–92.
- Ostovar-Namaghi, S. A., & Shahhosseini, M. R. (2011). On the effect of reciprocal teaching strategy on EFL learners' reading proficiency. *Journal of Language Teaching and Research*, 2(6), 1238.
- Qutob, M. M. S. (2020). The influence of implementing reciprocal teaching in L2 classes on female students' perception of their reading skills and motivation to read. *Arab World English Journal*, 11(1) 432–443.
- Rosenshine, B., & Meister, C. (1994). Reciprocal teaching: A review of the research. *Review of Educational Research*, 64(4), 479–530.
<https://doi.org/10.3102/00346543064004479>.
- Selen Kula, S. (2021). The effects of reciprocal teaching on the perceived reading comprehension self-efficacy of 2nd-grade pupils: Reflections of the pupils and

- their teacher. *African Educational Research Journal*, 9(3), 679–686. DOI: 10.30918/AERJ.93.21.102
- Slater, W. H., & Horstman, F. R. (2002). Teaching reading and writing to struggling middle school and high school students: The Case for reciprocal teaching. *Preventing School Failure: Alternative Education for Children and Youth*, 46(4), 163–166. doi:10.1080/10459880209604416
- Sporer, N., Brunstein, J. C., & Kieschke, U. L. F. (2009). Improving students' reading comprehension skills: Effects of strategy instruction and reciprocal teaching. *Learning and Instruction*, 19(3), 272–286.
- Todd, R. B., & Tracey, C. H. (2006). *Reciprocal teaching and comprehension: A single subject research study* [Unpublished master's thesis]. Kean University.
- Vijayalakshmi, N. (2017). Impetus of reciprocal teaching in quality education. *Thiagarajar College of Preceptors*, 150.
- Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Westera, J., & Moore, D. W. (1995). Reciprocal teaching of reading comprehension in a New Zealand high school. *Psychology in the Schools*, 32(3), 225–232. doi:10.1002/1520-6807(199507)32:3<225::aid-pits2310320310>3.0.co;2-f