

The Effect of the Reciprocal Teaching Model on Developing Jordanian Students' Reading Comprehension at Mutah University

Mohammad Yousef Ahmad AlSarairoh

Ph. D Student, Universiti Malaysia Perlis, Malaysia

E-mail: mo_sar_1985@yahoo.com

Ku Mohd Nabil Ku Hamid

Senior Lecturer, Universiti Malaysia Perlis, Malaysia

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Abstract

The aim of this study is to examine the impact of using the reciprocal teaching model on Jordanians' first year students at Mutah University in the academic year 2015/2016. 176 participants took part and were arbitrarily selected and divided into two gender mixed groups; the experimental group which was exposed to the reciprocal teaching model (RT), and the control group which was taught using the traditional method (TM). A total of fourteen independent sample T-tests and paired samples T-tests were used for the purpose of comparing and analysing the scores of the pre-tests and the post-tests, and with the intention to pinpoint the effect of using RT as well as to measure the extent of such effect on the development of the students' reading comprehension skills. Through the analysis of the results and in line with the two questions of this study, it has emerged that the use of the RT model has a positive effect on the first year students' reading comprehension achievement in the experimental group; a fact that is reflected in the significant statistical difference when compared to the reading comprehension achievement of the students from the control group taught using the TM. It has also emerged that although the male students' scores are better than the scores attained by the female students, the use of the RT remains of great benefits for both; male and female students.

Keywords: Reciprocal teaching model, Traditional method

1. Introduction and Background of the Study

English language in Jordan is taught mainly as a foreign language (EFL), and one of its aims is to communicate (Al-Omari, Smadi, & Bataineh, 2015; CHE, 2000). For learners to be able to communicate effectively in the foreign language, they are required to develop the commonly known four skills associated with language learning which are; reading and listening skills (receptive skills), and speaking and writing skills (productive skills). However, Grabe and Stoller (2002) argue that the reading skill is the most crucial of all skills and requires learners to engage in its practice within the classroom context as well as in the extra extracurricular environment.

Nowadays and among other language problems and obstacles, reading represents a major problem for Jordanian EFL students. This is reflected in their performance while carrying out reading comprehension tasks, and evident in the difficulties they often experience when providing answers to designated reading comprehension questions in exam papers or assignments. Unfortunately, this ultimately leads to low achievement by learners. As previous research indicates, EFL students generally achieve marks that are less than satisfactory reading comprehension (DeFoe, 1999). This low achievement is chiefly attributed to three reasons which are; firstly, the students' limited experience in reading strategies may be a hindering factor that consequently stands in their way to develop an appropriate understanding of texts. Secondly, there appear to a number of inconsistencies in relation to the instructional methods applied by the teachers themselves. Here, it is vital to note that traditional method involves the teacher asking the students to silently read the text or part of it, and then answer the comprehension questions. After completion of the task, the teacher asks individual students to provide answers and comments afterwards only to indicate whether the answers given are right or wrong. In fact and in some cases, the latter do not allocate sufficient time for learners to carry out tasks, nor do they create the opportunity for learners to develop their language skills. Last but not least, some learners are more reluctant and less prepared to engage in higher level reading, and therefore show a little or no interest in developing the appropriate skills and strategies needed for foreign language learning (Collins and Cheek, 2000).

In broad terms, there are three models used in the teaching of reading skill: the top-down model, the bottom-up model and the interactive model. Reading is one of the complex cognitive processes which involve the reader of the text, the text in itself, and finally the interaction between them (Kern, 1989). Carrell (1989) states that during the process of reading, the reader attempts to construct the meaning of the text by interacting with it by way of using his/her previous knowledge and experience of the world, by relying upon his/her the linguistic knowledge of the sentences and the cognitive abilities. Cohen (1998) suggests that reading comprehension is complex by nature as it incorporates the process of the reader's cognition, the language proficiency and the metacognitive process. Such as; a reader may make inferences relying upon information provided within the title of the text, the previous paragraphs and/or any type of illustrations used by the author. Besides, he/she tends to monitor his/her reading behaviour through checking their understanding of the text (Grabe and Stoller, 2002). Nonetheless, when a passage appears to be complex or challenging for

readers, they may read the text more than once or re-read a part of it, and/or may ask their teacher for further clarification and assistance in aid of establishing understanding (Paris, Cross and Lipson, 1984). This strongly suggests that reading comprehension takes place only when readers understand the information presented in the text and are able to interpret it meaningfully (Grabe and Stoller, 2002).

Cohen (1998) states that for a reading process to be effective, it has to undergo three fundamental stages: the first stage is the pre-reading stage, the second one is the actual reading, and the last stage is the post reading stage. He goes on to assert that these main steps play a vital role in the reading process which is set to help readers practice various reading strategies. In the pre-reading stage, readers may apply a number of strategies such as; guessing, scanning, predicting the genre of text they are going to read or identifying any difficulties apparent in the text. In doing so, the readers read the title of the text, relate the title to the readers' schemata, and then they predict the content of the text. These strategies provide readers with an insight into how to construct a small picture about the text and offer them the opportunity to check if their predictions are correct or not (Mejang, 2004).

The actual reading stage, in this stage readers require to deploy strategies to help them with the comprehension of the text such as; self-questioning, problem-solving and self-monitoring (Allen, 2003). This implies that readers should be provided with adequate training in how to pose questions in relation to the main point of the text as in for example; asking about the topic sentence of the text, or the main idea of the text. Self-monitoring is another strategy which readers may employ to test out their reading comprehension (Allen, 2003), and comprises both; evaluation and regulation (Wenden, 1999). Such strategies are of a great value to learners in terms of assisting them in resolving the problems they generally encounter during the reading tasks.

In the last stage which is the post reading, Alderson (2000) says readers of the text evaluate the strategies that they tried to understand and comprehend the text, and reflect their understanding and comprehension. In addition, they need to undergo this evaluation by asking questions about the text to check their reading process.

Recent researches that are mainly concerned with the instruction of reading comprehension in the classroom, have found that there is a lack of use of effective strategies and instructions in the comprehension spectrum of reading (Farstrup, 2002). On this note, it is essential to direct teachers' attention to some instructional methods and strategies that potentially could help students understand the reading text, and to offer them tips and useful hints on how such instructions and strategies could be used to develop their students' comprehension skills, particularly, when the latter may at times show signs of low understanding or comprehension of the reading texts. To sum up, it is very important to acknowledge that the implementation of effective strategies and instructions is extremely beneficial to learners as through such strategies; comprehension and understanding of texts is facilitated, reading comprehension skills are gradually developed, and understanding of reading texts various genres is established and developed.

2. Reciprocal Teaching Model

Reciprocal teaching model was brought forward by Palincsar and Brown in the early 1980s, and considered as one of the most effective teaching models that serve to help readers comprehend and understand what a particular given text is about. Ever since its initiation, the reciprocal teaching model received a great deal of attention from different researchers and teachers for its utility as a major tool in improving learners' comprehension skills and driving them towards becoming independent readers. It is hence, as a model of teaching, recognised as a valuable teaching method.

Adunyarittigun and Grant (2005), Duffy (2002), Soonthornmanee (2002) and Cherryholmes (1999) report the following definition by Annemarie Palincsar and Ann Brown (1984): 'Reciprocal Teaching of Comprehension-Fostering and Comprehension-Monitoring Activities' (1999:56).

Cherryholmes (1999) also declares that the reciprocal teaching model has been designed for those students who have difficulties in reading, and claims that it is an effective model for enhancing the reading comprehension level of poor readers. He continues to argue that it *'attempts to produce the orderly consumption of organized texts. The four activities of summarizing, questioning, clarifying, and predicting were conceptualized in terms of more or less well formulated rules and procedures for bringing them about and for assessing them'* (P. 58).

Hayes (1991) defines the reciprocal teaching model as *"an adaptation of the direct reading thinking activity (DRTA) developed by Palincsar and Brown. Like the DRTA, reciprocal teaching enables teacher to use the same text with readers of different ability levels while varying the instructional support that students receive"* (P.117). Therefore, lessons should be highly interactive in their approach so as to teach students to read the text and learn from the content area material.

The purpose of this model is to instruct pupils and provide them with strategies that can be applied in a new passage. Palincsar and Brown (1984) states that RT can be characterised by three prominent features:

- Teachers use explicit instruction and scaffolding which is the basis of a comprehension-fostering model.
- Teachers use prediction, questioning, clarifying, and summarising, which are the main reading strategies.
- Finally, the model promotes social interactions among learners, and between learners and teachers, which in turn leads to improving the learners' cognitive abilities, sharing their ideas, feeling more confident, and learning from the more skilled peers.

These features are thought of as influential and play a major role in resolving any difficulties that learners may come across in comprehension. They can also lead to increasing learners' motivation and can enable them to attain a sound level of thinking. Also, founded on these features, learners could ameliorate their metacognitive awareness, and could plan ahead prior to the initiation of the reading process, as well as monitor their comprehension in the reading

process and the self evaluation stage during both; the post-reading and the actual reading stages.

2.1 Four Strategies of Reciprocal Teaching

RTM consists of four strategies which are; predicting, questioning, clarifying, and summarising. These four strategies play an important role in the comprehension process during the reading of a text and can be used either separately or together, depending on the situation, the target of the reader, and the problems he/she faces (Wiseman, 1992).

Predicting

Predicting involves triggering the students' previous knowledge and/or the hypotheses that might be presented in the reading text (Routman, 2000). According to Duffy (2002), predicting relies upon generating and using the readers' past experience and knowledge about the text through finding the comprehensive clues. This strategy works as a connective device which serves to link the reader's previous knowledge about the text with the new knowledge that he/she will acquire during the reading process.

Clarifying

Clarifying refers to the process of recognising the organisation of written materials, pointing out obstructions and difficulties that stand in the way of understanding the text and asking questions and for explanations within the discussion (Routman, 2000). Also defined as a strategy, clarifying is used by readers during the comprehension monitoring process, particularly, when they are confused or face comprehension problems (King and Johnson 1999). In a reverse order, Ledaree (2002) asserts that readers monitor their comprehension when they use the clarifying strategy to find out the extent of comprehending what they have read. To sum up, clarifying is a strategy that is used by readers to help them attain or question any information that appears to be ambiguous or unfamiliar in the reading text. Hence its importance and its major role lay in the fact that it lures student into engaging in with the process of comprehension monitoring during and after the reading of the text.

Questioning

Questioning strategy refers to the information that is needed to construct a cogent question (Routman, 2000). Such a strategy requires readers to formulate questions so as to detect the significant information in the text and with the primary purpose of figuring out the main idea within the text. As a strategy, it allows readers to examine how much they understand the text and enables them to specify the necessary information, as well as develop their reading comprehension in a constructive manner (Andre and Anderson, 1979; Rosenshine, Meister & Chapman, 1996).

Summarising

The last reading strategy of the reciprocal teaching model is summarizing; it means to retell what others have told from what you have read while focusing only on the main points of the text, and to predict the proceeding section of the text (Routman, 2000). In this strategy,

readers are asked to point out the main idea in each passage they read and ignore unrelated details as they are not considered to be characteristics of a good summary. A positive aspect of summarising is that; it enables readers to use the various text structures such as; main ideas, headings, topic sentences...etc in order to produce a good summary of the text they have read. More specifically, in the summarising strategy, readers should extract the main idea of each paragraph and the purpose of the whole text. By summarising the main ideas of each paragraph in the reading text, readers are firstly able to link the knowledge they have acquired in the current paragraph, and secondly, able to predict the information to come in the following paragraph for the purpose of checking out how accurate their predictions are in both paragraphs (Greenway, 2002). The prediction of the readers is continuing and interrelated process as it starts from the first paragraph and continues to the next until the whole text is completely read (Lysynchuck and Pressley, 1990).

Application Phases of RTM

As for the structure and the sequence of a typical RTM lesson, in a small group of students, the classroom teacher appoints a student to act as a teacher for the group. The latter's role is to direct the group through planned dialogue in which the four strategies of RT are orderly discussed. Then the lesson proceeds while adhering to the following phases:

- Phase 1: the classroom teacher initiate the discussion by asking the students in the group(s) to make predictions about what they are going to read.
- Phase 2: at this stage, the classroom teacher may ask the students to independently read a small part of the text or he/she may read the selected part of the text to the whole class.
- Phase 3: in this phase, the classroom teacher acts as a facilitator helping students with generating questions. down words or phrases that they are unfamiliar with
- Phase 4: at this point of the lesson, the student- acting teacher asks members of the group to note down phrases or words that they are unfamiliar with, or to highlight parts of the text that are unclear about. This activity is carried out collectively by the group for the purpose of clarifying the meanings of the listed unfamiliar words and phrases.
- Phase 5: once again the classroom teacher resume the leadership and asks a student(s) to provide a summary of the section of the text that has been read.
- Phase 6: in this phase, the process starts again with the student-acting teacher assuming control of the group and the sequence of the lesson following the model presented by the classroom teacher. The student-acting teacher asks the rest of the group to make prediction about the proceeding part of the text prior to continuing to read.

In this study, the six phases of implementing the RTM mentioned above were orderly followed in the teaching of the experimental group.

In view of the above discussion about RT and its main strategies, it is safe to conclude that this model of teaching is of significant to both, teachers and students. For the former, it provides a framework for the teaching of the required skills for improving comprehension,

offers a way of evaluating students' comprehension skills and pinpointing any pertinent aspects that need to be further developed, and can be adapted to be applied across the curriculum. Moreover, it can be used to a great effect for all students, regardless of their abilities, in group tasks, individual tasks or a whole class lesson. For students, it is an opportunity that is presented to them to develop their overall comprehension skills and to benefit from the support that emerges from their peers and the teacher. Noticeably, it is a positive step towards active learning and encourages learners' autonomy.

2.2 Reciprocal Teaching Related Studies

Clark (2003) conducted a study in which fifteen students of mixed abilities took part, and was aimed at investigating the impact of using Reciprocal Teaching model and exploring the development of the reading comprehension skills. The results of this study shows that 90% of the participants claimed to have benefited from the use of this model and voiced their preference of using such a model as opposed to the traditional method. In addition, 40% of the students stated that using the Reciprocal Teaching model, has immensely helped them improve their comprehension in the reading text. Clark concluded that RT model is a mechanism that can be used by students in group discussions to help them organise ideas that they produce and reflect on their understanding.

On the university level, Hart and Speece (1998) studied the impact of using RTM on this level. Their study was conducted in a community college in Maryland, USA and involved fifty students who were enrolled in 2 sections: the control and the experimental. In regards to the results, the overall results of the study reveal that the experimental group achieved much better than the control group that used the traditional method, in the strategy acquisition and the reading comprehension. Although both groups had the same level of study skills perception, the results interestingly indicate that weaker readers who were taught by using the reciprocal model benefited a great deal and more so than the weaker readers in the control group in the strategy acquisition and the reading comprehension.

Hasan (1994) carried out a comparative study to show the differences between reciprocal teaching model and the translation technique used by ESL students at Kuwait University. The results of this study show that the students who were exposed to the RTM had a better achievement rate than those who were taught using the traditional teaching in the reading performances. Furthermore, the reciprocal teaching group, according to the researcher, had more of the opportunity to use English as a tool of communication than the control group.

Similarly, Ratanakul (1998) conducted a comparative study to examine the differences between reciprocal teaching and the translation technique in Thailand. Sixty Nursing students studying English as a foreign language at Mahidol University participated in this study. The participants were divided into two groups: a controlled and experimental. The control group exposed to the translation technique, whereas the experimental group was exposed to the RTM. The researcher also made use of the Pre-test and the post-test stages for the purpose of analysis. The results of this particular study reveals higher scores among the experimental group's results compared to the results of the control group. In addition, the attitude towards the reciprocal teaching model was more positive than the attitude towards the translation

technique used by the control group.

The results of the above studies clearly demonstrate the effectiveness and the positive impact the reciprocal teaching model has on the achievement level in comprehension among L1 (first language speakers) and L2 (second language speakers) groups and at various ages. These studies also highlight the scale of the problem that reading comprehension present to both; high school and university students, and how this problem is overcome by using the reciprocal teaching model in a way that the readers' achievement in the reading comprehension is vastly improved.

In broad terms, most ESL and EFL contexts are mostly set for higher education students and despite the fact that there are fewer studies which studied the impact of the RT on high school students, the results shown in the reading comprehension are positive. Finally, most of the students who participated in the experimental groups of the reciprocal teaching model showed overall better results and positive attitudes.

Reciprocal Teaching Model as a method has proved to be of immense benefits, and a number of studies have pointed out its effectiveness and success in the classrooms setting in terms of enhancing the reading comprehension skills of the students, particularly, in the middle and elementary stages of education. However, in this present study, the researcher will carry out an investigation on first year students at Mutah University to examine the effectiveness of this model on the development of reading comprehension skills, to unravel how it enhances comprehension, and to explore any potential differences in reading comprehension between male and female students, and those between students in association with their General Secondary Certificate.

In first language classrooms, several studies have been conducted on the Reciprocal Teaching Model for the purpose of testing and examining its effectiveness on different levels of proficiency and language skills. In such studies students from the primary schools and colleges are considered (Fillenworth, 1995; Palincsar and David, 1990). Lederer (2000) has studied the effect of the reciprocal reading comprehension on students with learning disabilities. All of these studies in the first language have demonstrated the positive effect of using the RTM on the reading comprehension of the students.

In Jordan, however, only a small number of studies have studied on the effect of using the RTM. In their research, Omari and Weshah (2010) investigate the extent to which Jordanian teachers use the reciprocal teaching model in public schools. The sample of their study consisted of 523 teachers, and as for data collection, the researchers used a 30-question questionnaire to which participating teachers responded. The results yielded in their study shows that the overall mean rating of using this model by Jordanian teachers is moderate leading the researchers to conclude that:

‘the overall mean ratings of using the RT method by Jordanian teachers were moderate. Independent sample T-test results indicated that there were statistically significant ($\alpha < 0.05$) in the mean ratings of teachers in favor of the secondary school teachers. However, the One Way Analysis of Variance (ANOVA) results indicated no statistically significant differences

in the mean ratings of teachers that can be attributed to teachers' specializations' (ibid: 26).

Statement of the Problem

Most of the previous studies stated above examine the effect of using the reciprocal teaching model in the first language classrooms, while some other studies focus on examining the reciprocal teaching model's effect on EFL classrooms. Nonetheless, the results in both cases demonstrate positive effect on the comprehension of the students'. Based on the above, the researcher adapts Plainisar and Brown's reciprocal teaching model to apply for the teaching of first year students at Mutah University (Jordan) so as to examine the effect of the model on the students' reading comprehension.

Purpose of the Study

The principal aim in this study is to provide an insight into the use of the reciprocal teaching model on Jordanians' first year students at Mutah University and to examine the impact of such model of teaching.

Research Questions

The present study is set and attempts to provide answers to the following questions:

- Does the use of Reciprocal Teaching Model have any effect on the achievement in the reading comprehension skills among first year university students?
- Are there any significant differences, resulting from the use of the Reciprocal Teaching Model, between male and female students in terms of the reading comprehension skills achievement among first year students of the English 99 Course at Mutah University?

Significance of the Study

This study aims at investigating the effectiveness of the reciprocal teaching model in developing Jordanian students' reading comprehension and understanding of the reading texts at Mutah University. As a research, it is highly significant as it seeks to find out an effective instructional teaching model that is adequate enough to assist in the development of Jordanian students' reading comprehension skills. In so far as the data collected for this study is concerned, it might act as a drive and a motivational factor that may lead researchers and teachers to devise an effective instructional teaching model in the reading comprehension area. It is also hoped that the results of this study are taken into consideration by teachers of reading as they may help to trigger the latter's awareness in respect to the effectiveness of teaching models that are geared to enhance the development of reading comprehension.

Definition of Terms

The terms below are used in this study and defined as follows:

- Reciprocal teaching model: it is a model which has been initiated by Plainisar and Brown (1984) and it consists of 4 main strategies; prediction, clarifying, questioning and summarising. This model, with its strategies and steps, identifies the roles of both; the teacher and the students in each strategy.

- Jordanian first year students: they are those students, male and female, who study English (E99) at Mutah University in Jordan.
- Traditional Method: it is a method in which students assume a passive role in learning and offers no opportunity for students- students or teacher-students interaction.

3. Methods and Procedures

The aim of this study is to investigate the impact of using RTM on first year University students in Jordan through their achievements in the reading skill focusing students' gender. The achievement in the reading comprehension by male participants is compared to that attained by female participants.

The population of this study consists solely of first year male and female students studying at Mutah University in Jordan. 176 participants enrolled on a course labelled E-99 took part in this study and were using “Total English” textbook as required in their program of study. This coursebook is written by Richard Acklam and Araminta Grace and published in 2005. The course itself is a compulsory module for all students at Mutah University. The participants in the study were arbitrarily selected and separated into two groups; the experimental group and the control group, and as in the words of Gay and Airasian (2003), ‘*all the individuals in the defined population have equal and independent chance of being selected*’ (p.117). By implementing a random selection of the samples in this study, the researcher conforms to the notion that such an approach is effective in preventing researchers from engaging in a biased process of selection (Rosenthal and Rosnow, 2008). The experimental group is a mixed-gender group and comprises 90 students, and likewise, the control group is made up of both male and female participants and consists of 86 students. In terms of location and the temporal circumstance, this study was carried out at Mutah University in the academic year 2015/2016.

A Reciprocal Teaching model was devised to examine the effect of its application on the readers' comprehension. “College Reading: English for Academic Success”, authored by Cheryl Benz and Myra M. Medina (2006), was used prior to the initiation of the reciprocal teaching model as a pre-test stage of the reading comprehension so as to demonstrate the participants' proficiency in reading. The experimental group was taught for a period of four weeks during which the students were instructed through the use of the reciprocal teaching model during the reading process. Conversely, the control group was instructed through the use of traditional method of teaching.

After the pre-test stage, a post-test was set for both groups to investigate the following;

- whether the reciprocal teaching model has any impact on improving the participants' reading comprehension,
- to check whether there are any significant differences in the level of achievement in the reading comprehension skills between first year male and female students at Mutah University,

Mutah University was carefully selected as a prime location for this present research due to

its use of the coursebook ‘Total English’ in the teaching of English as a foreign language in the E99 module. All necessary and required procedures in this study were followed and permission was sought from the university and granted by the English Department. Moreover, the researcher conducted a workshop that lasted for the period of one week for the purpose of training the teacher in charge in the implementation of the Reciprocal teaching model. To ensure that the reciprocal model principles and stages were adhered to, the researcher attended some classes to observe how the procedures were being used within the teaching process.

The E99 course is a remedial course which aims at helping students acquire the primary skills of the English language to expand their knowledge and proficiency in the field concerned. To achieve the above-mentioned goal, the course focuses on developing the students’ vocabulary and grammar which can be activated through various communicative skills such as; speaking and making dialogues related to some social situations relevant to their daily lives.

4. Instruments

This study relied upon the use of three main instruments; the reading comprehension achievement test, the pre-test and the post-test. To test the reading comprehension achievements of the first year students at Mutah University, the reading comprehension achievement test was conducted using the ‘College Reading: English for Academic Success’ textbook by Cheryl Benz with Myra M. Medina, 2006.

The pre-test and the post-test were conducted after the nature of their design was shown to the teacher who was involved in the teaching process, and who was aware of the difficulties that students might have during the course as an accumulative experience of teaching English to students. Then, the EFL instructors at Mutah University approved both; the tests’ questions and all the texts used in this study, as they found them to be extremely useful and suitable for the students. The process of demonstrating and consulting these experts (teacher in charge and EFL instructors) was the initial stage prior to producing the fine and final copy of the pre-test questions which was later on made ready and issued to the students.

The key aim of the pre-test and the post-test was to measure the students’ achievement in reading comprehension. This was conducted as follows:

First, the researcher prepared and conducted the pre-test to assess both; male and female students’ overall reading comprehension achievement in general within a population among students who were enrolled on the E99 module at Mutah University for the academic year 2015/2016. These students constituted the sample and were divided into two groups; the control group and the experiment group. The test was conducted for both groups, and the test papers were collected and later on marked in preparation for the next step of the process which is the post-test phase.

Second, after having collected the data and the scores of the pre-test, a general idea was formulated in regard to the students’ level in reading comprehension in both groups, and the data from the pre-test was used to prepare the post-test. The post-test was conducted after the researcher had applied the reciprocal teaching model on the experimental group for a period

of four weeks and obviously after the pre-test was carried out. The aim of the post test was to measure the overall reading comprehension achievement of the students in the experimental group after the use of the RTM by way of; comparing the results obtained from the posttest to those recorded for the pre-test. It was also aimed to evaluate the effectiveness and the impact of the RTM on the experimental group reading comprehension in comparison with the control group which was taught by the traditional method.

For the experimental group, “College Reading: English for Academic Success” by Cheryl Benz and Myra M. (2006) was used during the lessons that fostered the reciprocal teaching model. This particular book is not used for teaching by the Language Center faculty at Mutah University. Nonetheless, the teachers who were involved in the reciprocal teaching model workshop that was formerly organized and conducted by the researcher, agreed to its use during a consultation session. The texts used from this book were carefully selected and shown to the EFL faculty teaching experts within the university who agreed on the suitability of the book and the texts to the level of students on the E99 module. In more specific terms; the texts selected from “College Reading: English for Academic Success” met the needs of the reciprocal teaching model in the sense that they allow students to predict, make questions, clarify and summarise. At the same time, these texts allow the teacher to model dialogues and demonstrate the appropriate use of the reciprocal teaching model for the benefits of students to improve their reading comprehension skills, and same materials were used for both groups.

Two texts were chosen from “College Reading: English for Academic Success” and both texts included twenty questions in total: ten questions for each text.

The first text is entitled “Science and Technology” and consists of 500 to 600 words. The researcher prepared ten questions on the text which were shown to the teaching experts for evaluation to see if they could be used to measure the students’ level accurately. Each question about the first text was awarded ten marks; making up a total of one hundred for the ten prepared questions. Similarly, 100 marks were allocated for ten questions about the second text which was, as previously indicated, chosen from the same book and was used for the purpose of measuring the level of both groups after applying the reciprocal teaching model on the experimental group. The questions were once again shown to the same experts for evaluation in the same manner as it was conducted in evaluating the questions for the first text.

The students were given 60 minutes to read the texts, and then to answer the questions that followed. Multiple choice questions were used in both; the pretest and the post test. In respect of the use of multiple choice questions, Benz and Medina (2006) state that It is *‘one type of reading comprehension exercise that is used frequently on test’* (p.117).

The procedures followed in the pre-test for the population of the study were as follows:

A copy of the test was given to each student by the examiner and all the students were asked to write down their ID numbers and the branch of study they are affiliated with. After having explained the content and the marking scheme of the test, the students were asked to silently commence reading the text relevant to the test paper. On completion of the silent reading, the

examiner instructed the students to answer the questions and asked them not to resort back to the text during this process. It was explained that each correct answer was worth ten marks. Once the pre-test was conducted and completed, as a second step, the researcher applied the reciprocal teaching model for a period of four weeks on the students who were selected randomly to form the experimental group. By the end of the four weeks, preparation for the post-test took place in readiness for it to be conducted for the whole sample. As for the purpose of such a test, the aim was to determine if there were any significant differences in the achievement in the reading comprehension of the students who were exposed to the RTM (experimental group), compared to that of those who were taught via the use of the traditional method (control group). In the post-test, the second text “MICHELANGELO’S DAVID”, which was also selected from “College Reading: English for Academic Success” book, was used. Besides, the researcher asked the examiner to adhere to the same procedures that had been applied in the pre-test phase to maintain the consistency element within this research.

5. Participants

All participants who took part in this study were students selected from two first-year classes who were enrolled on the E99 compulsory module at Mutah University in the academic year 2015/2016. Also, the participants are native speakers of Arabic and of a mix gender (male and female students). They were 176 participants; they were in control and experimental group.

The population and the sample of this study are all of students who study English as a Foreign Language (EFL). In line with Mutah University’s curriculum standards, the E99 is a mandatory module for all the students at the University. It is also important to point out here that this research constitutes a case study since it fits in within the definition of such a type of study as defined by Gay, Millis and Airasian (2009) who argue that; it is ‘*a qualitative research approach in which researchers focus on a unity of study known as a bounded system (e.g., individual teachers, a classroom, or a school)*’ (p.426).

6. Sampling

The two classes selected performed a pre-test, and then an experimental group was randomly selected from those two classes. The experimental group consisted of 90 male and female students who were taught by using the RTM instruction for the duration of four weeks. Subsequent to performing the pre-test, the post-test was conducted in both groups; the experimental and the control group that was instructed using traditional teaching methods.

It is noteworthy to mention that all the students in both groups were consulted about taking part in this study and gratefully agreed to participate. They were also assured that any scores and data that might occur in the experiment would be kept confidential.

In so far as the confidentiality of the study is concerned, this research focuses on two key elements; the participants’ confidentiality, and their responses.. After conducting the pre-test and the post-test, the papers were marked, made ready for analysis and kept away from the students to maintain confidentiality. Gay, Mills and Airasian (2009) define confidentiality

vis-à-vis the purpose it serves by stating that '*perhaps the most basic and important ethical issues in research are concerned with protection of participants, broadly defined, which requires that research participants not be harmed in any way (i.e., physically, mentally, or socially) and that they participate only if they freely agree to do so (i.e., give informed consent)*' (p.20).

6.1 Procedures of Applying the Reciprocal Teaching Model

The instruction of reciprocal teaching model involves four key stages which are; inducting the model, describing the strategies of the model, the actual reading and applying the strategies.

The first stage (*inducting the model*): In this stage, the teacher asks the students to assume their role in the classroom and informs them that this new model relies upon the use of discussions between students while taking into account that each student is given the opportunity to take part and to lead the discussion.

The second stage (*describing the strategies*): Here, the four strategies of the reciprocal teaching model are introduced by the teacher and explained to the students. The teacher then focuses on explaining what is meant by predicting, questioning, clarifying, and summarising respectively. In predicting, the teacher ensures that students understand that this strategy is used to help them build up some expectations in the sense that they are required to envisage what the text might be about and what its aims might be. Through such a strategy, the teacher acts as an additional motivational factor prompting students to read the text as they wish to find out if their expectations and predictions are correct or not while they are proceeding further with the reading. In questioning, the teacher informs the students that every question they ask about the text, ultimately, helps them to get closer to understand what they read. Hence, the teacher encourages and allows the students to ask questions, particularly, those in relation to the significant parts of the text during the reading. After questioning, the teacher is to clarify any misunderstanding or misconception that is assumed by the students. Subsequent to the introduction of the three strategies mentioned above, the teacher goes on to introduce the final strategy of the RT model which is summarising. The students are made fully aware of the importance of summarising as a strategy as it enables them to further develop and enhance their understanding of texts they read.

The third stage (*starting the reading/actual reading*): here, both the teacher and the students read the passage silently. However, the teacher may first demonstrates the use of the predicting strategy and ask the students to only read the title or/and the subheadings in the text to predict the forthcoming events. Afterward, the teacher demonstrates to the students the use of questioning and how to formulate questions about the text, and introduces the concept of clarification and its benefit in countering any difficulties encountered by students during their reading of the text. Finally, the teacher asks the students to summarise all the information they have read and points out that their summary should be no more than a paragraph with the main ideas of text.

The fourth stage (*applying the four strategies on students*): Once the teacher demonstrates to

the students the use of the four strategies of the RTM, the latter should be able to make predictions, ask questions, ask for clarification and summarise the main ideas of the text. Therefore, students are strongly advised to collaborate with the teacher in steering a discussion in order to unravel whether their predictions are right or wrong. In addition, they should attempt to provide answers to the questions they have initially made about the text and use the discussion as an opportunity for clarifying misunderstanding and countering difficulties in comprehension. Finally, they should end the discussion with a summary that covers only the main ideas of the text and ignores the small details. The discussion process is a procedure where participants assume the role of the teacher in leading the discussion. This does not suggest that the role of the class teacher stop at this point as he/she should pay more attention to students who might not be able to generate questions about the text, and help them through this process in constructing pertinent questions to the text. The teacher should re-read the text and specify the main ideas in the text. It is also important to state that if the students show any signs of inability in respect of making questions or predicting, then they will fail to use the model.

7. Findings and Discussions

To answer these questions, the class teacher taught the experimental group using the RTM, whereas the control group was taught using the traditional method. An independent sample T-test was used to find out if there were any statistical significant differences in the achievement of students' reading comprehension. The students on the E99 course who participated in this study were divided into two groups; the control group and the experimental group. The control group, as previously mentioned, was taught using the traditional method, whereas the reciprocal teaching model was used to teach the experimental group. The reading comprehension achievement test was used for the two groups and in both; the pre-test and the post-test.

7.1 Findings Related to the First Question

To answer the first question of this study; "Does the use of Reciprocal Teaching Model have any effect on the achievement in the reading comprehension skills among first year students at Mutah University?", two independent sample T-tests are carried out to measure the equality means of the overall results achieved in the reading comprehension achievement tests by the students of both groups; the experimental group and the control group, and as documented in the pre-test and post-test scores. A further two paired samples T-test are conducted to compare the results of the pre-test and the post-test scores; focusing on each group individually so as to assess whether there is any significance difference in the means scores where there is no change in the instruction condition as opposed to where RT is used. According to the T-test results of the pre-test where both groups are compared, the mean score for the experimental group is 66.22 and its standard deviation is 18.99. Conversely, the mean score for the control group is 65.69 and its standard deviation is 20.20. The T-value of 0.178 shows that the difference in the results of the two groups are statistically insignificant at $\alpha = .05$. This is a clear indication that both groups appear to have been of similar level in their reading comprehension achievement prior to using the reciprocal teaching model

(table1).

Table 1. An Independent Sample T-test for the Equality of Means for Both Groups of the Pre-test Scores

Group	N	Mean	Standard Deviation	T	df	Sig.
Experimental	90	66.22	18.99	.178	174	.859
Control	86	65.69	20.20			

For the assessment of whether there is any significant difference in the control group students' reading comprehension where there is no change in the instructional method, a paired sample T-test comparing the scores achieved in the pre-test against those achieved in the post-test is carried out. This test results reveal no significant difference in the means scores as this is indicated to be 65.6977 in the pre-test with a deviation of 20.2072, and 66.5116 with a standard deviation of 16.5755 in the post-test (Table2). 7

Table 2. Paired Samples T-test for the Equality of Means for Control Group Pre-test – Post-test

Group	N	Mean	Standard Deviation	T	P
Control Group pre test	86	65.6977	20.2072	-	0.773
Control Group post test	86	66.5116	16.5755	0.316	

As for the experimental group, a similar test is conducted to assess any significant difference in the means scores that might be attributed to the intervention of the RT model. The results in this test clearly illustrate a significant difference in the mean scores for this group; with a mean of 66.2222 and a standard deviation of 18.9960 recorded for the pre-test, and a mean of 80.6667 and a standard deviation of 16.9467 for the post-test (Table3).

Table 3. Paired Samples T-test for the Equality of Means for Experimental Group Pre-test - Post test

Group	N	Mean	Standard Deviation	T	P
Experimental Group pre test	90	66.2222	18.9960	-7.114	0.000
Experimental Group post test	90	80.6667	16.9467		

In respect of the comparison of the post-test scores of the two groups, the analysis of the results yielded shows a mean score of 80.66 with a standard deviation of 17.01 for the experimental group. On the other hand, the results for the control group in the post-test demonstrate a mean score of 66.51 with a standard deviation of 16.57. During this process, an independent sample T-test is carried out to identify any differences between the two groups in their reading comprehension achievement in the post test. In the view of the t-value of 5.58,

the results of this test show that statistically, there is a significant difference between the achievements in the reading comprehension of both groups in favour of the experimental group (table4).

Table 4. An Independent Sample T-test for the Equality of Means for Both Groups of the Post-test Scores

Group	N	Mean	Standard Deviation	t	df	Sig.
Experimental	90	80.66	17.01	5.58	174	.000
Control	86	66.51	16.57			

Based on the results illustrated above, and in response to the first question; “Does the use of Reciprocal Teaching Model have any effect on the achievement in the reading comprehension skills among first year students at Mutah University?”, evidence strongly suggests that the use of the reciprocal teaching model has substantially led to improving the reading comprehension achievement of the first year students enrolled on the E99 module at Mutah University. It is therefore safe to conclude that the use of the reciprocal teaching model appears to have more of an effect on the first year students on the E99 module in their reading comprehension achievement than the traditional method.

7.2 Findings Related to the Second Question

The second question of this study is; “Are there any significant differences, resulting from the use of the Reciprocal Teaching Model, between first year male and female students in the reading comprehension achievement in the English E99 Course at Mutah University?”. This question seeks to unravel if gender can be considered as a major factor influencing the outcome of using the RT or not.

In response to this question, six independent sample T-tests and four paired samples T-tests are carried out to identify any differences between the male and female students’ reading comprehension achievement scores in both groups in the pre-test and the post-test.

The first independent T-test is set to compare the pre-test scores of the male participants in the experimental group to those of the male students in the control group. The results, with a T-value of 0.578, indicate that there are no significant differences between the two groups at this stage as reflected in the means scores. For the experimental group, the mean score is 65.2273 with a standard variation of 19.8235, whereas for the control group, the mean score is 62.5581 with a standard deviation of 23.1036 (see Table 5). Hence, both groups appear to be of similar level of proficiency in the reading comprehension amid the use of the traditional method in developing their reading skills.

Table 5. An Independent Sample T-test for the Equality of Means for the Male Gender in Both Groups of the Pre-test Scores.

Gender	N	Mean	Standard Deviation	T	P
Male in Experimental	44	65.2273	19.8235	0.578	0.564

Male in control	43	62.5581	23.1036		
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The second independent T-test is concerned with comparing the post-test scores of the experimental group against the scores of the control group. Interestingly and with a T-value of 6.43, the results show that experimental group is significantly better in the post-test as indicated; with a mean score of 88.1818 and a standard deviation of 15.8881 as opposed to a mean score of 64.6512 and a standard deviation of 18.8881 for the control group (Table 6). This in fact demonstrates the effectiveness of the RT in developing learners reading comprehension skills compared to the traditional method.

Table 6. An Independent Sample T-test for the Equality of Means for the Male Gender in Both Groups of the Post-test scores

Gender	N	Mean	Standard Deviation	T	P
Male in Experimental	44	88.1818	15.8881	6.43	0.000
Male in control	43	64.6512	18.1723		

In focusing on the differences between the pre-test and the post-test scores in individual groups and from a gender point of view, four paired sample tests are carried out. In the first paired samples T-test, the scores achieved in the pre-test are compared to those achieved in the post-test in the male population of the control group. The results of this test reveal that with a T-value of 0.513, there is no substantial improvement in the reading comprehension of the male students in this group. The mean score recorded for the pre-test is 62.5581 with a standard variation of 23.1036, and 64.6512 and 18.1723 respectively for the post-test (Table 7). This is a clear indication that although there appears to be some kind of difference between the scores of both tests, it is nonetheless minimal and not of any great significance. This comes as a no surprise as the conditions for both tests are the same.

Table 7. Paired Samples T-test for the Equality of Means for the Male in the Control Group Pre-test to Post-test.

Group	N	Mean	Standard Deviation	T	P
Control Group pre test	43	62.5581	23.1036	-	0.611
Control Group post test	43	64.6512	18.1723	0.513	

The second paired samples T-test focuses on the comparison between the scores achieved in the pre-test and those attained in the post-test within the male population of the experimental group. The results show a significant difference with a mean score of 65.2273 and a standard deviation of 23.1036 for the pre-test, and 84.5455 and 18.1723 for the post test. The T-value 7.710 appears to be quite high which is a clear indication that the use of the RT has in fact considerably led to improving the male students' reading comprehension in the experimental group (table 8).

Table 8. Paired Samples T-test for the Equality of Means for the Male in the Experimental Group Pre-test to Post-test

Group		N	Mean	Standard Deviation	T	P
experimental pre test	Group	44	65.2273	23.1036	-7.710	0.000
experimental post test	Group	44	84.5455	18.1723		

The third independent sample T-test is carried out to compare the scores attained by the female participants within both groups in both; the pre-test and the post-test. The mean score for the experimental group is 67.1739 and the standard variation is 18.3379, whereas for the control group, the mean recorded is 68.8372 and the standard deviation is 16.5053. With a T-value of -0.44, evidence suggests that the difference between the performances of female students of these groups is insignificant at this stage (Table 9).

Table 9. An Independent Sample T-test for the Equality of Means for the Female participants in Both Groups of the Pre-test Scores

Gender		N	Mean	Standard Deviation	T	P
Female in Experimental	in	46	67.1739	18.3379	-0.44	0.651
Female in control	in	43	68.8372	16.5053		

In contrast, this difference becomes more significant and prominent when comparing the mean score achieved in the post-test to those achieved in the pre-test through the fourth independent sample T-test. The results for this particular test show that the female students' achievement in the experimental group is much better and improved than in the female population of the control group. For the experimental group, the mean is 73.4783 and the standard deviation is 14.7900 as opposed to 68.3721 and 14.7890 respectively for the control group. Yet again, this places the RT in a more favorable position than the traditional method (Table 10).

Table 10. An Independent Sample T-test for the Equality of Means for the Female Gender in Both Groups of the Post-test Scores

Gender		N	Mean	Standard Deviation	T	P
Female in Experimental	in	46	73.4783	14.7900	1.62	.032
Female in control	in	43	68.3721	14.7890		

The third paired samples T-test focuses on the comparison of the scores attained in the pre-test and the post-test by the female population of the control group. The mean score in the pre-test is 68.8372 and the standard deviation is 16.5053, whereas for the post-test, the mean

score is 68.3721 with a standard variation of 14.7890. The T-value is relatively low at 0.147 which suggests that there is no significant statistical difference between the female students in the control group as indicated in the comparison between the scores of the pre-test and the post-test within the control group (Table 11).

Table 11. Paired Samples T-test for the Equality of Means for the Female in the Control Group Pre-test to Post-test

Group	N	Mean	Standard Deviation	T	P
Control Group pre test	43	68.8372	16.5053	0.147	0.884
Control Group post test	43	68.3721	14.7890		

The fourth paired samples T-test is set to compare the scores achieved in the pre-test against those achieved in the post-test by the female students of the experimental group. The results of this test show that there is a significant difference between the means scores of the pre-test and the post test. For the former, the mean is 67.1739 and the standard deviation is 18.3379, whereas for the latter, the mean is 73.4783 with a standard deviation of 14.7900. This implies that the use of the RT is quite effective in improving female learners' reading comprehension (see Table 12).

Table 12. Paired Samples T-test for the Equality of Means for the Female in the Experimental Group Pre-test to Post-test

Group	N	Mean	Standard Deviation	T	P
experimental Group pre test	46	67.1739	18.3379	-3.950	0.000
experimental Group post test	46	73.4783	14.7900		

The fifth independent sample T-test focuses on the comparison of the pre-test scores achieved by the male students against those achieved by the female students within the experimental group. The results of this test indicate that in the experimental group, the female students are slightly better than their male counterparts with a mean score of 67.1739 and a standard deviation of 18.3379 as opposed to 65.2273 and 19.8235 respectively (Table 13).

Table 13. An Independent Sample T-test for the Equality of Means for Both Genders of the Pre-test Scores in the Experimental Group

Gender	N	Mean	Standard Deviation	T	P
Male in the Experimental	44	65.2273	19.8235	-0.484	0.630
Female in the Experimental Group	46	67.1739	18.3379		

The final independent sample T-test carried out in the treatment of the second hypothesis of this study concentrates on the comparison of the post-test scores achieved by the male students versus the female students within the experimental group. On this occasion, the male students' scores are much better than those of the female participants as the recorded mean score for the former is 88.1818 and the standard deviation is 15.881 as opposed to 73.4783 and 14.7900 respectively for the latter. This is a clear indication that the RT is beneficial to both; the male and female learners in the experimental group irrespective of the variation in the level of improvement between the two genders (Table 14). This variation in the results in this test may be due to the possibility that the male students were more motivated as a result of being instructed using the reciprocal teaching model than the female students. This also may suggest that the male students executed the role of the teacher and applied the four strategies of the reciprocal teaching model more effectively as this was apparent in the brief conducted observation.

Table 14. An Independent Sample T-test for the Equality of Means for Both Genders of the Post-test Scores on the Experimental Group

Gender	N	Mean	Standard Deviation	T	P
Male in the Experimental	44	88.1818	15.8881	4.547	0.000
Female in the Experimental Group	46	73.4783	14.7900		

8. Conclusion and Recommendations

This study is initially set to respond to two hypothesizes in relation to the use of the reciprocal teaching model in higher education setting. The first hypothesis investigates the effect of the RT on the achievement in the reading comprehension skills among first year students at Mutah University and examines the extent of this effect in terms of developing the reading comprehension of the students participants involved in this research. The second hypothesis is set to address any significant differences in the reading comprehension skills between first year male and female students of the English E99 Course at Mutah University.

These aims are achieved through the various procedures incorporated in this experiment such as; conducting the pre-test to assess the students overall reading comprehension skills, and

the posttest subsequent to the use of the reciprocal teaching model (RT) by the teacher while instructing the experimental group for a period of four weeks. During such a period, this group was introduced to RT and implemented its four strategies; predicting, questioning, clarifying and summarizing, whereas the other group - the control group- was instructed using the traditional method (TM). This was done to serve as a point of comparison between the two groups in the development of their reading comprehension skills during the analysis stage of the post-test results so as to determine whether RT has any effect on the reading comprehension of the students exposed to it or not.

For the first hypothesis and in view of the independent sample T-tests and the paired samples T-test carried out, both groups; the experimental and the control group appear to have been of almost a similar level in their reading comprehension achievement prior to the use of the reciprocal teaching model (pre-test). However, as a result of the intervention of the RT model, the experimental group's overall achievement in the reading comprehension is significantly improved in comparison to the pre-test results for this group and in comparison to the control group achievement in the post-test. Therefore, it is safe to argue that undoubtedly the use of the reciprocal teaching model has a positive effect on the first year students on the E99 module in their reading comprehension achievement as opposed to the traditional method.

In the treatment of the second hypothesis, a number of tests are used leading to the conclusion that the use of the RT is in fact beneficial to both; the male and female learners in the experimental group. However, the results in this study reveal a higher level of improvement in the male population of this group compared to that of the female participants. Nonetheless, the post-test scores reveal that the female students in the experimental group are considerably better in the reading comprehension than the female students in the control group. Thus, once again, the use of RT proves to be vital for the improvement of learners' reading comprehension abilities regardless of their gender.

Overall, the results in this present study support the findings of some previous studies (Hart and Speece, 1998; Hansan, 1994; Clark, 2003; Ratanakul, 1998), and further emphasise the effectiveness of using the Reciprocal Teaching model at different educational levels; primary school, high school and university, and its major contribution towards enhancing students' overall reading comprehension skills and raising their achievement.

Based on the results of the present study, the study proposes the following recommendations:

1. The Reciprocal Teaching Model should be used as an alternative model and alongside other teaching methods in relation to the reading comprehension.
2. Teachers should be trained in the use of the Reciprocal Teaching Model so as to be able to effectively apply it in the teaching of reading.
3. Other researchers should conduct further research to investigate and further study the Reciprocal Teaching Model and its effects in their quest for effective methods for developing the English reading comprehension level of EFL students.

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