Chapter V

Discussion and Conclusion

The purpose of this study was to investigate the effects of reciprocal teaching on English reading comprehension in an engineering classroom. This chapter presents the results of the study and their implication in bringing answers to the four research questions.

To investigate the effects of reciprocal teaching on the English reading comprehension of first year engineering students, and whether reciprocal teaching enhanced both proficient and less proficient participants’ reading ability, the pretest and posttest mean scores of the Reading Comprehension Test were analyzed using the dependent t-test. To find out whether reciprocal teaching significantly increased the reading ability of the participants in the experimental group over the reading ability of the participants instructed through skill-based teaching (the control group), the posttest mean scores of both groups were analyzed using the independent t-test.

Moreover, the mean scores of the pre-questionnaire and post-questionnaire of the experimental group were analyzed using the dependent t-test to find out whether their use of the metacognitive reading strategies increased after reciprocal teaching. The participants in this study were composed of 600 first year engineering students at six engineering colleges under the Anna University affiliation at Chennai, Tamilnadu. The students were divided into an experimental group instructed through reciprocal teaching and a control group instructed through
skill-based teaching. Both groups were taught by the researcher with the same materials as part of the course Technical English – II (HS211) in the second semester of the academic year 2007.

This study performed a triangulation of the data collected from the Reading Think Aloud Sheet of the participants in the experimental group working in cooperative groups. Moreover, after the instruction, the participants of the experimental group were interviewed on the four key reading strategies they used and their opinions on group work. All the qualitative data supported the findings from the quantitative data.

The results from both types of data then provided evidence that corroborated the research hypotheses as they were formulated from the research questions.

This chapter is divided into three sections: the first examines the results presented in chapter four, the second discusses the implications of these results, and the third offers suggestions and recommendations for future research on reciprocal teaching.

**5.1 Discussion on the findings**

The results indicated that reciprocal teaching had a significantly positive effect on the English reading comprehension and metacognitive reading strategies of engineering students. The posttest mean score of the experimental group was significantly higher than that of the control group at 0.05 level. Reciprocal teaching also enhanced the reading ability of both the proficient and less proficient students.
Moreover, the students in the experimental group employed significantly more metacognitive reading strategies after reciprocal teaching at 0.05 level.

**The effects of reciprocal teaching on English reading ability**

Regarding the quantitative findings, the first one revealed that the participants in the experimental group significantly improved their reading ability after being taught through reciprocal teaching.

In this study, the participants were trained to employ the four key strategies and to know what strategies to use, and when, why, and how to use each of them. They learned to predict, to generate questions, to identify the main idea of a paragraph, to clarify unclear words, phrases, or sentences, and to summarize their reading. The four key strategies helped them overcome difficulties when reading texts as they planned and monitored their comprehension, and evaluated their planning and its outcome. For these reasons, it can be concluded that the participants in the reciprocal teaching group benefited from practicing all four main strategies and their processes. Therefore, reciprocal teaching is a kind of reading instruction that facilitates the teaching of English reading comprehension.

This finding is in accordance with studies from Clark (2003), Cotterall (1990), Palincsar and Brown (1984), Rattanakul (1998), Smith (1998), Song (1998), Soonthornmanee (2002), and Wisaijorn (2003) at various levels of learning, from primary schooling to university, and with their investigation of the use of reciprocal teaching in training students in reading. They all found that reciprocal teaching improved students’ reading comprehension.
The effects of reciprocal teaching on the English reading ability of the proficient and less proficient students

The finding suggests that reciprocal teaching enhanced both proficient and less proficient students of the experimental group. Indeed, both types of students gained significantly higher scores in reading comprehension after receiving instruction through reciprocal teaching.

Concerning the present study, the proficient students in the reciprocal teaching group also knew how to monitor their comprehension. However, they needed explicit training and more practice (Billingsley & Wildman, 1988). In this study, they were offered more opportunities to practice through the metacognitive processes and to use the reading strategies. They constantly planned, monitored, and evaluated themselves through the reciprocal teaching procedure. This may be the reason why the proficient students performed better after reciprocal teaching.

Baker & Brown (1984) and Block (1992) state that proficient readers are aware of and can control their cognitive activities while they are reading. They use various types of strategies and use them in a more efficient way, and when their reading comprehension breaks down, they know how to work through it.

With respect to the less proficient students, they benefited more from reciprocal teaching than the proficient ones; indeed, the students in the low proficiency group exhibited more improvement than the students who already had good reading ability before the treatment. This result is supported by Palincsar and Brown (1984) who examined the effect of reciprocal teaching on the reading comprehension of less proficient students and found that after treatment, the
students made significant gains in reading ability. Three reasons could explain this. First, the less efficient readers might not be aware of the value of the reading strategies, of what strategies to use, and of how and when to use them. Though they may know them, they might not utilize those strategies actively, whereas the proficient students might already know them and may be eager to use them efficiently in their reading. Second, these strategies must be instructed in a step-by-step fashion. After practicing, the participants of this study knew what the four strategies were, and when, why, and how to use them. Then they had enough practice before working in their own group. Third, they worked in cooperative groups of participants with mixed abilities, so that the weaker students learned from their friends. In turn, the proficient students learnt how to act as leaders and how to cope with comprehension failure. In such a group setting, they were not embarrassed to ask questions on the points they did not understand and to share their ideas and experiences with their friends.

**The effects of reciprocal teaching and skill-based teaching on English reading ability**

As suggested by the finding, the posttest mean score of the students taught with reciprocal teaching was higher than those receiving skill-based teaching. This finding emphasizes that reciprocal teaching was more effective in improving English reading ability than skill-based teaching. In this study, skill-based teaching, an approach widely used by technical university teachers, was assigned to the control group. Reciprocal teaching was assigned to the experimental group as a new technique to promote reading strategies, and because it differs from skill-based teaching, with which the students are very familiar, the participants needed to pay more attention in order to learn this new approach.
The metacognitive reading strategies students employed prior to and after reciprocal teaching

From the finding, it can be seen that the participants in the reciprocal teaching group used all the metacognitive reading strategies more frequently after instruction. Only one item, Selective Attention ("I selected relevant information to help me understand the texts"), was more frequently used after the instruction without any significant difference at 0.05 (see Appendix G, Item 12). The participants in the experimental group knew how to find the main ideas, but they felt more confident if they understood all the sentences in a paragraph.

As for the use of the ten metacognitive strategies, it was found from the questionnaire that the participants employed them more often after they studied through reciprocal teaching. Reciprocal teaching, which consists of four main reading strategies (Predicting, Clarifying, Questioning, and Summarizing), can promote other metacognitive reading strategies like Verification Prediction, Self-management, Goal Setting, Note Taking, Inferences, Selective Attention, and Self-evaluation.

In this study, the participants used the three parts of the metacognitive processing: planning, monitoring, and evaluating (Cohen, 1998; Pressley, 2002). Through planning, the readers organized their reading before actually getting into a text. Examples of this taken from Appendix J, question 1, include these statements from the participants themselves:

"Set a goal to find main idea. First, look at the title to guess what the text is about."
“If there are questions in the text, I will read them in order to set a goal and find the answers”

“Set a goal before reading such as finding the main idea, clarifying some words, and summarizing.”

The participants designed a goal before reading and organized what they should do while reading and after reading. The students used Predicting as instructed from reciprocal teaching, which promoted their use of Prediction, Background Activation, Self-management, and Goal Setting. They predicted by using their background knowledge and they also planned before reading by using Self-management, and Goal Setting. While reading, they controlled those steps or planned and checked their prediction. They used all four main metacognitive reading strategies, which also promoted the other metacognitive reading strategies: Self-management, Goal Setting, Note Taking, Inferences, Selective Attention, Summarizing, and Self-evaluation. In post-reading, the four main reading strategies also influenced Self-evaluation and Selective Attention. Moreover, they read the text with concentration to develop an awareness of the kind of problems that would occur and of the way to solve them. Again, the following are some examples of the planning that the participants mentioned (from Appendix H, Questions 1 and 7):

“Find the main idea, read roughly one time. Reread and underline the important details.” “Circle unknown words or the sentences I don’t know.”

“Ask questions about the content of the text and clarify unknown words.” “Use knowledge and concentrate in reading.”

“Reread when I do not understand.” “Summarize the content of the passage.”
Finally, they evaluated their planning. They checked whether the reading strategies they used solved their reading problems or whether they needed to adapt these strategies. Below are examples of what they said about their evaluation (from Appendix H, Question 8):

“I checked my understanding of the content.”

“I reread the passage if I did not understand it.”

“I tried to summarize the content of the passage to see whether I comprehended the passage.”

When they did not understand the text, they were aware of the problems and sought ways to solve their comprehension breakdown. They reread the passage to clarify some key words and summarized the content to check their understanding. Some students consulted their friends in the group, used dictionaries, or consulted the teacher for hints (see Appendix H and Question 9).

In the experimental group, the participants improved their metacognitive reading strategies through the metacognitive process. Reciprocal teaching is one of the reading strategy instructions that improves readers’ metacognitive awareness. It leads students to think about their reading process, develop a plan of action, monitor their own reading in order to construct their own knowledge, and self-evaluate their reading process (O’Malley & Chamot, 1990; Wang, 2003). In the end, they are able to become independent readers, which is the goal of teaching reading for EFL students.

The results of this study indicated that the students in the experimental group employed the metacognitive reading strategies more often after the
instruction than they did before. The difference is significant and stands at 0.05 level. These findings suggest that the metacognitive reading strategies raised the participants’ awareness of the reading task and improved their performance in reading comprehension. Moreover, this study found that both metacognitive awareness and reading comprehension improved with metacognitive training.

To sum up, reciprocal teaching provides effective metacognitive reading strategy instructions because it incorporates scaffolding and explicit teaching of the four main strategies, which creates an environment that facilitates productive information processing and reading comprehension. What follows below gives more explanation on the reasons why the participants in the reciprocal group performed better and which reasons have to do with the three key features that form the theoretical base of reciprocal teaching: scaffolding and explicit instruction, the four main strategies, and social interaction.

*Scaffolding and explicit instruction*

The students in the reciprocal teaching group improved their reading comprehension and metacognitive strategies following the teacher’s scaffolding. They reached a high level of ability with the help of the teacher (Pressley, 2002; Rogoff, 1990; Pearson & Fielding, 1991; and Graves & Graves, 2003). In reciprocal teaching, the teachers support their students’ development through explicit instruction. This type of instruction transfers the metacognitive strategies from the teacher to the students. (Vacca & Vacca, 1989). Explicit instruction helps students understand the rationale behind the use of the four main strategies. It shows them what to do, as well as why, how, and when to do it. In other words,
explicit instruction helps them internalize the four main strategies and increase their metacognitive awareness. It also assists them in developing independent strategies for coping with reading comprehension breakdown (Vacca & Vacca, 1989).

In this study, the researcher discussed what the four key strategies are and why they are important. Following this, he demonstrated how and when to use them. Then, the students practiced each of them as the researcher modeled a mixture of the four strategies and the procedure of reciprocal teaching, showing what strategies to use, and how and when to use them in the reading passage. He then transferred the leading role to the students, something that helped them to be less dependent on her (Maloch, 2002). Finally, the students worked in cooperative groups in which they were able to apply the four main strategies; this helped them master the self-monitoring strategies (Dewitz, Carr & Patbery, 1987). As a result, they were able to internalize the strategies and take responsibility for their own reading.

Regarding the dialogues between the leader and the other members of the working groups, the participants in the experimental group knew the roles they had to play and they knew the process of reading. Moreover, they were aware of how and when to use the four key strategies to complete their reading task. This awareness was a direct result of the teacher’s scaffolding and explicit instruction.

**The four main strategies**

In this study, the participants used four main metacognitive reading strategies: predicting, questioning, clarifying, and summarizing to foster and monitor their reading comprehension.
Predicting

With predictions, reading comprehension improved when students were required to draw connections between their own background knowledge and new learning (Pearson & Fielding, 1991). Moreover using background knowledge determined the goal and hypothesis on a reading text. This increased motivation and interest which are vital elements for enhancing comprehension (Armbruster, Anderson & Ostertag, 1987). The participants wanted to know if their predictions were correct so they read consciously to confirm their hypothesis.

In the experimental group, the participants predicted what the content of the passage they were going to read was about. For instance, they predicted the content of the passage “Media” from the title:

\[ S_1: \text{Let’s look at the title. What do you think it is about?} \]
\[ S_2: \text{Newspapers} \]
\[ S_3: \text{May be about TV & Newspapers} \]
\[ S_2: \text{Multimedia} \]
\[ S_1: \text{Let’s check.} \]

Predicting helps students activate their relevant background knowledge (Palincsar & Brown, 1984; Duffy, 2002). Moreover, when students make predictions about a reading topic and use their prior knowledge, they are more likely to comprehend the text (Wiseman, 1992).

In this study, in their reading, the participants first had a general look at a paragraph to see its overall content and to verify whether their predictions were correct. They planned what to do before reading. This motivated them to be more
involved in their own reading. Moreover, they knew that predicting helped them improve their reading ability. For example, from the answers they gave to interview question 2, it can be seen that the students viewed predicting as a means to improve their reading because it gave a more complete picture of the text. One student stated, “Prediction helped me improve my reading ability because most of the titles are related to the content of the text. Though they did not give much information on the text, they helped me guess the direction of the text” (from Appendix H, Question 2).

*Questioning*

Questioning helps readers find the questions they should ask themselves to get to the main point of a paragraph. This requires them to integrate control processes. To gain the information on a text, they must activate their prior knowledge, access reading strategies and text information, rehearse new information, and employ strategies.

The ability to generate appropriate questions can enhance reading comprehension, because it fosters active reading and promotes an ongoing processing of information. Creating questions helps readers in two ways: a) it helps them determine a purpose for reading and guides them towards identifying the most important information; b) it requires them to construct answers as they read (Andre and Anderson, 1979). Asking questions on the content of a paragraph is a means of enhancing reading comprehension. In other words, it helps readers to identify the key elements of a text.
In this study, the students in the reciprocal teaching group created and answered questions while reading. The participants realized that “questioning helps me understand the content of the text.” (from Appendix H, Question 5). In an example from the Reading Think Aloud Sheet, it can be seen that the participants improved their asking questions.

In conclusion, questioning is a metacognitive strategy that helped the participants in the experimental group to plan their reading. It also helped them to self-monitor their asking questions: if they were not able to give clear answers to clear questions, they reread the information and clarified their understanding. As a result, questioning involved them in more active comprehension.

**Clarifying**

Clarifying is a metacognitive strategy which critically evaluates a text by focusing on key terms and ideas (King & Johnson, 1999). When comprehension breaks down, readers may reread or move ahead in the text in order to find ways to clarify any ambiguous information. Clarifying requires the readers to identify the parts of a text that are clear. It also activates comprehension monitoring, which helps them eliminate reading obstacles by rereading, using context clues or word formation, consulting the teacher or peers, and using dictionaries.

In the experimental group, the participants tried to clarify unknown words, reference terms, and some confusing sentences. As an example, here is a dialogue:

S1: “Multimedia”, what does its mean?

S2: Media

S3: You see the words “media”, that is “medium”, means “channel”.

S1: It means medium to reach people.
Moreover, as gathered from the interviews, it can be seen that all the participants agreed that clarifying is an important strategy to comprehend a passage; they also knew how to use it effectively (see Appendix H, Question 6).

To sum up, the participants in the experimental group used clarifying when they faced problems with comprehension. They cleared up their understanding by asking questions to sort out ambiguities, by rereading, reading further, consulting dictionaries and friends, and asking the teacher for hints. Clarifying is one of the metacognitive strategies that helped these students to improve their reading comprehension.

**Summarizing**

Summarizing helps readers focus on important information. Readers instructed in summarization have greater recall of information. (Rinehart et al., 1986). This strategy fosters a metacognitive process wherein they are conscious of making meaning (Lysynchuck et al., 1990). Baker and Brown (1984) note that summarizing is a means of self-assessing understanding.

In this study, the students developed this skill. The first day of working in groups, most students’ summaries were left incomplete and contained too many details. But later on, they better summarized the main ideas of all the paragraphs and connected them in their own words, and this they did concisely and for the whole passage. Moreover, they all agreed that summarizing helped them better understand a passage.

In conclusion, and as can be seen from above, the metacognitive strategies instructed through reciprocal teaching helped the participants in the experimental
group improve their reading comprehension. These four key strategies increased the awareness of their own thinking and reading process. They knew what to do and how to do it before reading, while reading, and after reading. They planned, monitored, and self-evaluated all throughout the reading process. In other words, they set the purposes of reading and built hypotheses on what they were about to read. Then, while reading, they tested these hypotheses. They controlled their thinking process and awareness to comprehend a passage. They also tried to solve the problems they faced while reading. Finally, they evaluated their own comprehension. The participants in the experimental group successfully conducted these reading processes.

**Social interaction**

After the teacher modeled the four main strategies and the reading processes to complete the reading task, the students worked in groups of six. Each group included students of mixed abilities. Working in groups, the students learnt from the other members by sharing, discussing, and through peer tutoring. They regulated their own rules on the basis of what they had learnt from this social setting and internalized this knowledge. They engaged in a process of transformation through group discussion. For example, some proficient students made these statements about working in groups (from Appendix G, Question 11).

“It is good to work together. We have harmony and feel relaxed.” “We can share our knowledge and experience. It’s not boring.”

“Everyone can give comments and practice to be a leader. I learn from friends and adjust myself to be a good leader.”
Some less proficient students noted the following (Appendix G, Question 11).

“Working in groups helps us complete our task easily, supports our understanding, and gives us a chance to be a leader.”

“Working in groups like we work in our real life while I was a follower, I learned how to be a good leader from my friends.”

“It’s good. Help each other; practice to be a good leader and members of the group. It encourages me to tell more.”

“It decreases my shyness and makes me feel bold enough to share my ideas.”

In brief, social interaction in reciprocal teaching starts from the teacher as an expert and is directed at the students. Then through the working groups, it transfers to student-to-student interaction. According to Soranastaporn and Ratanakul (2000), reading comprehension in a foreign language is enhanced through the collaborative nature of communication. Students assist each other according to their abilities. Working in groups, the less proficient students learn more, gain more experience, and increase their confidence. On the other hand, the proficient students gain more confidence and are eager to work on becoming good leaders and on guiding their group towards the goal of completing the reading task. In this social setting, teacher and peer support enhanced the actual ability of the participants in the reciprocal teaching groups and facilitated the development of their potential.

The results from this study show that both proficient and less proficient students in the experimental group gained from reciprocal teaching. Their posttest
mean score is significantly higher than their pretest mean score, at 0.05 level. Moreover, the posttest mean score of the reciprocal teaching group is higher than the one of the control group, also at 0.05. The reason for this may come from the benefits this group gained from the three features of reciprocal teaching—the four main strategies, scaffolding and explicit instruction, and social interaction.

5.2 Implications

5.2.1 Theoretical Implications of the Study

This study investigated the effects of reciprocal teaching and of its four key metacognitive strategies of predicting, questioning, clarifying, and summarizing. This study found that reciprocal teaching significantly improved the English reading comprehension of both proficient and less proficient students. In addition, the results confirmed that the participants in the reciprocal teaching group used metacognitive strategies more often after the instruction. The findings of this study suggested that reciprocal teaching was one of the reading strategy instructions that supported students’ metacognitive training through the planning, monitoring, and evaluating processes. In the reciprocal teaching model, the participants gradually learnt to read.

They were trained through explicit teaching and guided practice, and with sufficient practice in each step of the reciprocal teaching procedure. Once used to the procedure of reciprocal teaching, they were offered opportunities to practice on their own in cooperative groups. They learned not only from the teacher, but from friends too. They regulated their own rules and read consciously using the four key reading strategies through the three processes of metacognitive strategy.
Based on the findings previously discussed, reciprocal teaching is one of the reading strategy instructions that can be used in technical university classrooms or in any EFL classroom to help students improve their English reading comprehension and metacognitive awareness.

5.2.2 Methodological Implications of the Study

This study used both quantitative and qualitative data collection. The data from the Reading Think Aloud Sheet, and interviews were triangulated with the mean scores of the pretest and posttest. The results derived from the different data corroborated each other.

The quantitative data showed a significant difference in English reading comprehension before and after reciprocal teaching instruction, and a significant difference between reciprocal teaching and skill-based teaching. The positive effects of reciprocal teaching on the participants’ English reading ability were confirmed through the quantitative data.

On the other hand, the analysis of the qualitative data was specifically important in explaining some results of the quantitative data. The quantitative data in this study were obtained from the pretest and posttest, and from the pre-questionnaire and post-questionnaire. The results revealed that reciprocal teaching had positive effects on the English reading comprehension of the students in the reciprocal group who also increased their use of the metacognitive strategies after the instruction. The results from the interviews, and the Reading Think Aloud Sheet helped explain why and how the quantitative data pointed to these specific results. In short, both quantitative and qualitative data collection contributed to a
better understanding and a clearer explanation of the effects of reciprocal teaching on English reading comprehension.

5.2.3 Pedagogical Implication for Reading Strategy

The findings of this study offer many vital pedagogical implications for teachers, students, and educators in an EFL reading context. The most obvious pedagogical implication is that reciprocal teaching is one of the reading strategy instructions which, through proper training on metacognitive strategies, best enhances the student readers’ reading comprehension and metacognitive awareness. In practice, these findings can be applied in English reading classrooms as follows:

1. Reciprocal teaching is quite a new technique for Indian technical students. To teach the engineering students and to apply the four main reading strategies of reciprocal teaching, the teachers should provide appropriate explanations, explicit modeling, and on-going guidance. Reciprocal teaching requires the teachers to model explicitly and step by step the process and the use of the metacognitive strategies. The students have to know what the four key strategies are and when, why, and how to use them. They need a lot of time to practice each strategy and they need consistent practice of all of them.

   Time is also a concern when learning is involved. Students should be given enough time for each step. Since it is not always easy for them to accept and understand the four main reading strategies and the steps of reciprocal teaching, they need time to implement them all, to work in groups, to adjust to the leading role, even with the help of their friends, to get used to the steps of reciprocal
teaching in general, and to ultimately internalize and use them automatically in their individual reading.

In addition, the teachers could help the students to understand the process and procedure of reciprocal teaching by checking their understanding in their native language in order to make sure that they understand and know these processes and procedures. This would help students to be confident to work on their own in cooperative groups.

2. The teachers should increase their students’ responsibility by gradually decreasing their prompts and modeling, as their role changes to facilitators. Moreover, they need to be flexible and attentive to help each student. If the learners have problems, the teachers should provide support and guidance to ensure success during the teaching activities.

3. To help students while they are working in cooperative groups, the teachers should circulate around the room and listen to the students’ interactions. If the learners need help, they should be taught in their groups using appropriate mini-lessons.

4. For the reading texts used in a reciprocal reading course, teachers should choose materials based on their readers’ ability, interest, and level of learning. The students might be given a shorter passage at the beginning and, with enough practice, they might be given a longer passage to help them feel more comfortable in their learning.

5. In order to supervise their students’ use of the four key metacognitive reading strategies, teachers should provide them with a Reading Think Aloud
Sheet, a worksheet for readers to record the four main strategies they use while reading. Moreover, teachers can record their students’ group interaction and dialogue while they are working. The results from the Reading Think Aloud Sheet could be used to evaluate the learners’ understanding of the reciprocal teaching procedures and to define what their problems are. Knowing what their students can and cannot do would help the teachers solve their reading problems. Thus, the teachers should give their students feedback, suggestions, and evaluation on their work after the lesson. This would help the students improve and be more aware of what to do while working in groups.

6. In the present study, the proficient and less proficient students gained greater benefits from reciprocal teaching. They improved not only their reading comprehension, but also their metacognitive strategies, because they received sufficient training in the four key strategies. This helped them increase their metacognitive awareness: they learned what to do when their comprehension broke down. After more reading and more practice, they will eventually become independent readers and reach the goal of teaching reading. Therefore, the teachers need to adjust reciprocal teaching to fit their students’ ability, academic grade, interests, and environment.

In brief, reciprocal teaching can help students become more aware of metacognitive strategies through explicit instruction with social interaction, so they can learn gradually and control their own learning process (Brown, 1980). Reciprocal teaching has been shown to offer greater advantages over skill-based teaching. It is one of the successful metacognitive reading strategy instructions for
EFL students. Therefore, reciprocal teaching should be taken into consideration in order to adapt its implementation in the English reading class.

5.3 Recommendations for Further Studies

This study investigated the effects of reciprocal teaching on the English reading comprehension and usage of metacognitive strategies of engineering students in Anna University affiliated colleges, Chennai. Through the analysis of its results, reciprocal teaching is shown to have advantages over skill-based teaching and to improve students’ reading comprehension and metacognitive strategies. Thus, it would be interesting to perform further studies on reciprocal teaching in relation to other aspects of its method. The following are then recommendations for further studies:

1. The findings of this study point to the positive impact of reading strategies on the participants’ reading comprehension and metacognitive strategies. Since the researcher had chosen colleges around Chennai city alone, further studies could be involved colleges covering large area to get the statewide result of Reciprocal Approach.

2. Other studies should be conducted with participants from different levels of learning such as students from Tamil medium students, higher semester students, students at risk of academic failure, disabled students, and drop-outs. It would be interesting to see whether reciprocal teaching would still be beneficial to these other groups.
3. This study compared the effects of reciprocal teaching and skill-based teaching on English reading ability. Reciprocal teaching should be compared to other teaching methods so as to consider which one provides more advantages for the improvement of the English reading comprehension of engineering students.

4. Other studies should be conducted with other types of classroom management. Some of these different settings could include comparing between teaching a whole class and teaching in groups, comparing working in groups and working in pairs, and teaching in class with extra-curricular teaching. The results will show which types of classroom management improve engineering students’ reading ability and which types of classroom management suit which types of students.

5. This study focused on the skill of reading. It would be worth exploring if reciprocal teaching could be successfully applied to other language skills including listening and speaking. According to the reciprocal teaching processes, when working in groups, the students’ roles involve mainly speaking and listening. As a result, it might be beneficial to evaluate whether reciprocal teaching affects students’ listening comprehension and speaking ability.

6. As we know, the teachers themselves are one of the main factors in the outcome of teaching. Further studies could focus on teacher training on reciprocal teaching. The teachers could be observed and interviewed for their roles in the classroom, and monitor the correlation between their role and their learners’ improvement.